EU-Japan Centre
for Industrial Cooperation
日欧産業協力センター

SUSTAINABLE BUILDING AND CONSTRUCTION SECTOR IN JAPAN AND ANALYSIS OF OPPORTUNITIES FOR EUROPEAN FIRMS

1-Shimizu Construction (i-Mark), 2-Tama Home, 3-Sekisui House

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Executive summary

1 - This study on "**SUSTAINABLE BUILDING AND CONSTRUCTION SECTOR IN JAPAN AND ANALYSIS OF OPPORTUNITIES FOR EUROPEAN FIRMS**", conducted between October 2014 and March 2015 for the EU-Japan Centre for Industrial Cooperation in Tokyo, aims to tackle trade issues between Europe and Japan in the building and construction materials (BCM) sector. It includes an analysis of the Japanese market potential, market obstacles and difficulties, opportunities for aligning regulations and standards, and cooperation related to market access. The study furthermore focuses on four products: tiles, ceramics, insulation products and wooden products, while providing several advices for European SMEs wanting to develop their business and exports to Japan.

2 - The study was conducted according to the terms of reference, with results as described below:

- The activities and their outcomes are detailed in the present report ;
- They have been presented at a workshop organised at the EU Delegation in Tokyo on 18 March, 2015, for EU and Japanese institutions, BCM companies, practitioners, experts and authorities within the sector ;
- They have permitted to establish and develop connections within a panel of experts, practitioners and representatives of companies, entities and institutions, both from the EU countries and from Japan.

3 - The methodology of the study included (i) systematic research of information and interviews, (ii) assessment of the current situation for EU countries exporting BCM products to Japan and (iii) various questionnaires and a comprehensive survey in two steps: first questionnaire targeting EU BCM companies exporting to Japan and Japanese BCM importers, and second questionnaire for suppliers/ purchasers/ specifiers of EU BCMs in Japan.

4 - The main findings of the study can be summarized as follows:

4.1 – Better awareness of where Europe and Japan resemble and differ is prerequisite when targeting mutually profitable, long-term and harmonious business relations. Improved understanding will facilitate the use of common specifications and alleviate difficulties to export BCM from Europe. On this matter of common specifications, support of regulatory entities from Europe and Japan is crucial.

4.2 – Among the most prominent areas for advancement, mutual recognition (or alignment) of standards and ability to undertake within Europe tests conform to Japanese standards is a necessity. Fostering cooperation on this issue is at the early stages, following the signature on 13 November, 2014, of an agreement between CEN/CENELEC (EU standards) and the Japan Industrial Standards Committee (JISC). EU authorities are required for continuous monitoring and support to ensure progress, since this agreement will lead to promising results in the EU BCM sector.

5 - This support could comprise the following steps:

- ✓ Establish a 'road map' for mutual recognition in the BCM domain;
- ✓ Increase the number of EU laboratories accredited to undertake tests under Japanese Industrial Standard JIS ;
- ✓ Increase the number/range of standards and the respective tests covered by the agreement;
- ✓ Negotiate the progress on these issues with Japanese authorities and ministries :
  - o the Ministry of Agriculture, Forest and Fisheries (MAFF) for the Japanese Agricultural Standards (JAS);
  - o the Ministry of Economy, Trade and Industry (METI) for the Japanese Industrial Standards (JIS);
  - o the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) for the Building Standard Law (BSL).

These actions can reduce time and costs associated with entering the Japanese market and facilitate access by EU BCM companies, in particular by SMEs having limited resources.

6 - This administrative process should be accompanied by an increased number of schemes of cooperation between EU and Japanese institutions in the building and construction material sector. Cooperation schemes already exist at the EU Member State level, and the EU as a whole can take advantage of increased information exchanges.

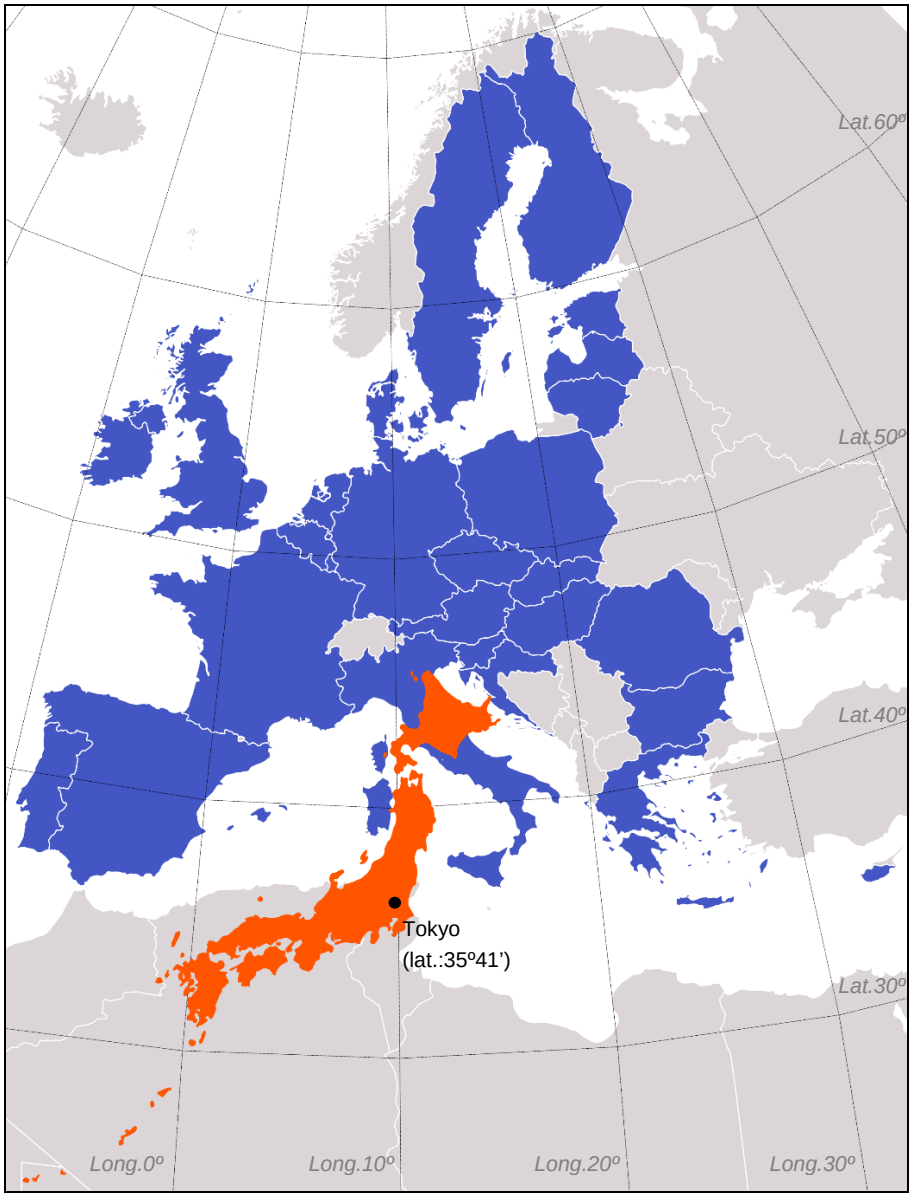
7 - Efficient tools already exist to help EU companies to explore the Japanese market, like for instance the Gateway to Japan programme. These initiatives should be developed and complemented by a comprehensive supporting framework, including:

1. Creation of an EU building and construction materials (BCM) label ;
2. Support to EU companies by the Gateway to Japan programme and by JETRO ;
3. Creation of interacting contact points [1] in order to develop possibilities for business partnerships :
   - inside EU entities : provision of information on the EU supply of BCM and on characteristics of the local market;
   - inside Japanese entities : provision of information on standards in Japan and on local professional associations and structures) ;
4. Dissemination of information on business opportunities related to public markets and to important projects ;
5. Initiatives toward free trade and more competitive market system, both for BCM and for architects.

[1] - In Japanese *Madoguchi*.

8 - The study has furthermore permitted to identify promising sectors for the EU BCM:

- green and environmentally-friendly products;
- wood products;
- products for retrofitting houses and buildings;
- landscaping and decorative products, such as stone, tiles and ceramics;
- doors and windows;
- heat resistant products, such as paint and insulation.



Sources: Ingerosec (datum: ETRS89-32N)

Figure 1 – Map of Japan overlaid onto Europe

Acknowledgements

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List of terms / glossary

Institutional Names

ANDR	Agency for Natural Resources and Energy
ANSI	American National Standards Institute
APEC	Asia-Pacific Economic Cooperation
BPSA	Building Performance Standardisation Association
BRI	Building Research Institute
CEN	European Committee for Standardisation
CENELEC	European Committee for Electrotechnical Standardisation
EU	European Union
IBEC	Institute for Building Environment and Energy Conservation
IEC	International Electrotechnical Commission
ISO	International Organisation for Standardisation
JACIC	Japan Construction Information Center
JaGBC	Japan GreenBuild Council
JBDPA	Japan Building Disaster Prevention Association
JETRO	Japan External Trade Organisation
JISC	Japan Industrial Standards Committee
JMA	Japan Meteorological Agency
JSBC	Japan Sustainable Building Consortium
MAFF	Ministry of Agriculture, Forestry and Fisheries
METI	Ministry of Economy, Trade and Industry
MHLW	Ministry of Health, Labour and Welfare
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
MOE	Ministry of the Environment
MOFA	Japanese Ministry of Foreign Affairs
NIES	National Institute of Environmental Studies
NIST	National Institute of Standards and Technology
UIA	International Union of Architects

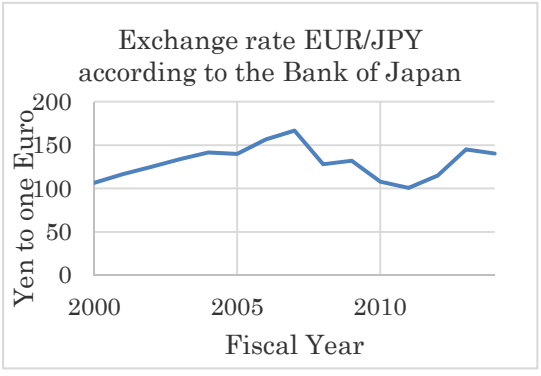
Names, policies, techniques and schemes

B2B	Business-to-business
BCM	Building and construction materials
BEE	Built environment efficiency
BELS	Building an energy-efficient labelling system
BSL	Building Standard Law
DPEB	Designated Performance Evaluation Body
CASBEE	Comprehensive Assessment System for Built Environment Efficiency
CLT	Cross-laminated timber
FDI	Foreign Direct Investment
FY	Fiscal year
HS	Harmonised (Commodity Description and Coding) System
JAS	Japan Agricultural Standard
JIS	Japan Industrial Standard
MoU	Memorandum of Understanding
OPEB	Overseas Performance Evaluation Body
PFI	Private Finance Initiative
RC	Reinforced Concrete
ROCB	Registered Overseas Certifying Body
SME	Small- and Medium-sized Enterprises
SRC	Steel-Reinforced Concrete
SV	Supervision
ZEB	Zero-Energy Building
ZEH	Zero-Energy House

Exchange rates applied

Bank of Japan, average value by fiscal year (April to March of the following year)

Year	Yen to 1 Euro	Year	Yen to 1 Euro
2000	106.55	2007	166.66
2001	116.51	2008	127.96
2002	125.08	2009	132.00
2003	133.74	2010	107.90
2004	141.61	2011	100.71
2005	139.83	2012	114.71
2006	156.50	2013	145.05



The average value of 140.31 was applied for 2014 (average value from 2014/01/01 to 2015/01/01).

Sustainable building and construction sector in Japan and analysis of opportunities for European firms

1 Introduction

「国境の長いトンネルを抜けると、雪国であった。」

Kokkyō no nagai tonneru wo nukeru to, yukiguni de atta

'The train came out of the long tunnel into the snow country.'

"Un long tunnel entre les deux régions, et voici qu'on était dans le *pays de neige*."

Yasunari Kawabata, *Yukiguni*, 1948

Above is the first sentence of *Yukiguni*(1), one of the most famous masterpieces by Yasunari Kawabata, a Nobel Prize winner for literature in 1968 and a Japanese citizen. Regarding the English and French translations that follow however, those speaking two or all the above languages may well perceive the sentences, while similar, as far from identical in terms of wording, structure or meaning. This is a regular issue for translations or adaptations to or from the Japanese language, which sometimes result in considerable misunderstandings, hinder working relations and incur delays and even additional costs.

However, differences between the EU and Japanese systems go beyond language alone and also extend to business etiquette. One example is how ratified documents are demarked: in Europe, this frequently involves signing by hand at the end of a document[2], while a seal or stamp is affixed to the top of documents in Japan with the end of the text indicated by 以上 (*ijō* – 'everything relevant is included before this sign' or 'that is all').

Although the two systems differ, they are both coherent within their domain, which means a code is required to translate/transfer/adapt from one system to the other and harmonise them. Regulations and standards are a key element in this process for BCMs from Europe.

1.1 Presentation of the report

> **Comprehending where Europe and Japan resemble and differ from each other is key to understanding and efficiently entering the market and the first step when targeting mutually profitable, long-term and harmonious business relations. Improving understanding makes it easier to use common specifications and eases the difficulties of exporting building and construction materials to and from Europe. In this regard, support from regulatory entities on both sides is important.**

This study on "**The sustainable building and construction sector in Japan and analysis of the opportunities for European firms**", undertaken between October 2014 and March 2015 for the EU-Japan

[2] - Hence the German verb *unterschreiben*: write below.

Centre for Industrial Cooperation in Tokyo, aims to tackle trade issues between Europe and Japan in this sector.

This study considers the above issues because a seller and a client, beyond agreeing on price of a product, must have a common understanding of the background, characteristics and performance of a product, to trade on a sustainable basis.

1.2 General data about Japan

1.2.1 Land

Buildable land is located in coastal areas and valleys.

Japan is an island country, located between 20 and 45 degrees latitude (equivalent to southern Algeria and Turin, Italy respectively) and with a total land area approaching 378,000 km²; representing 0.3% of the world's land mass. From north to south, Japan's territory includes the main islands of Hokkaido, Honshu, Shikoku, Kyushu and Okinawa and more than 6,800 smaller islands of various sizes.

Japan is located in a volcanic zone near major tectonic plate boundaries and is prone to earthquakes: over 10% of global earthquakes occur in Japan and the surrounding region and the country counts 110 active volcanoes. Steep mountainous regions and hilly terrain comprise about 75% of the total land area. Excluding forests and inland bodies of waters, only 114,000 km² (30.2%) of land are habitable.

Source : **(43)**, adapted by Ingerosec

Figure 2 – Main islands of Japan

1.2.2 Climate

The various climates of Japan have spawned the development of local standards to cope with regional discrepancies and created several niches while complicating any overall approach to the market.

Japan has a temperate marine climate with four distinct seasons, an annual average temperature between 10 and 20 degrees centigrade and 1,000 to 2,500 mm of annual precipitation. There is a month-long rainy season in early summer around June, followed by a hot and humid summer. Typhoons hit Japan on several occasions each year, causing storm and flood damage from summer until autumn. Winters are generally cold with heavy snow on the east coast (facing the Sea of Japan), but clear and dry weather dominative on the west coast (facing the Pacific Ocean). The annual average humidity is 70% nationwide, ranging from 78 to 62% depending on the prefecture, as shown in Figure 3.

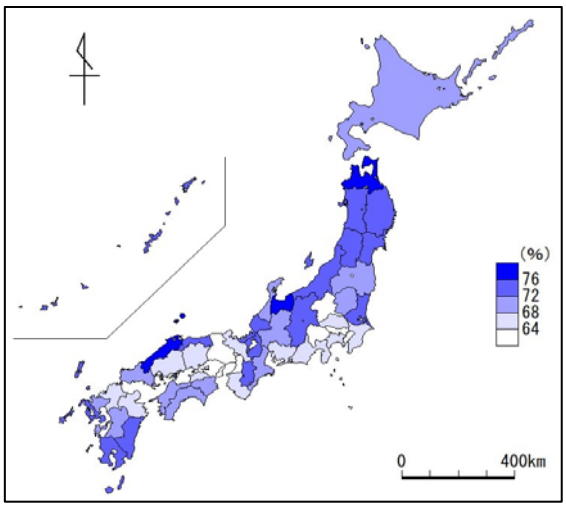


Figure 3 – Annual average humidity by prefecture (46)

Figure 4 shows that climates in Japan (left chart) tend to have high humidity in combination with high temperatures and low humidity with low temperatures. This relationship generally differs to most EU climates (right chart), where high temperatures are usually accompanied by low humidity and vice versa. This means the heat index (the human-perceived equivalent temperature) is more extreme in Japan than temperature figures alone depict and comparing to equivalent EU locations is not so straightforward.

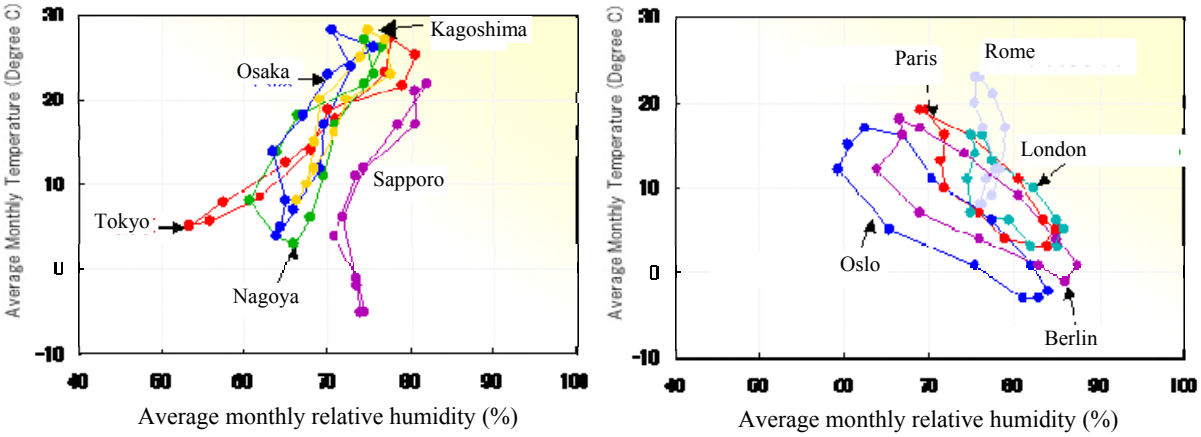


Figure 4 – Comparison of average temperature and humidity for Japanese & EU cities

Local climatic conditions vary dramatically from north to south of Japan as shown in Table 1.

Table 1 – Temperature, precipitation, snow and solar radiation (period 1981 - 2014)

Observing Station		Temperatures (°C)			Precipitation (mm/year)			Snow (cm/year)			Solar Radiation (MJ/m²/month)		
Name	Latitude	Annu-al Mean	Mean Daily Max.	Mean Daily Min.	Mean Value	Min. Value	Max. Value	Mean Value	Min. Value	Max. Value	Mean Value	Min. Value	Max. Value
Sapporo	43°03.6'N	9.0	29.4	-10.6	1126	725	1672	12	5	19	12.2	4.9	18.9
Tokyo	35°41.5'N	16.3	33.7	0	1539	880	2042	12	0	92	12.2	7.8	16.6
Kanazawa	36°35.3'N	14.7	33.8	-2.3	2443	1601	3318	204	34	688	n.a.	n.a	n.a
Kyoto	35°00.8'N	15.9	35.7	-1.2	1494	881	2061	14	0	79	n.a	n.a	n.a
Takamatsu	34°19.0'N	16.3	34.8	-1	1114	766	1619	3	0	42	13.6	7.6	18.7
Kagoshima	31°33.3'N	18.5	34.7	0.7	2281	1530	4022	4	0	33	13.9	8.8	18.3
Naha	26°12.4'N	23.1	33.1	12.4	2080	1331	3322	0	0	0	14.3	8.7	21.0

Source: (2), adapted by Ingerosec, observing stations are shown on the map on the right.

The heterogeneous climatic characteristic[3] together with the hilly relief have led populations to adapt differently, spawning strong regional cultures. Considering that local Japanese entities (prefectures and cities) have far greater autonomy than in

[3] An example of such local variance is the maximum snow loads for Hokkaido Island that range from 0.43 to 30 kN/m² (scale 1 to 70).

centralized-type systems (see infra point 5.2.2.), local standards have been developed and applied alongside national standards.

1.2.3 Extreme natural events

> **The ability to withstand deformation and spread of fires is a particularly key requirement for buildings in a country regularly stricken by earthquakes and other extreme events.**

Under the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), the Japan Meteorological Agency (JMA) oversees disaster prevention and mitigation efforts. The following sections detail the main events having occurred in recent years.

1.2.3.1 Earthquakes and tsunamis

Earthquakes and subsequent fires have caused enormous loss of life and property in Japan. For instance, the Great East Japan Earthquake on 11 March, 2011, off the Pacific coast of Tohoku prefecture, had a magnitude of 9.0 on the moment magnitude scale (MMS), being used to measure the size of earthquake by seismologists. The earthquake and resulting tsunami were extremely destructive, claiming 20,960 fatalities or missing persons, 127,291 homes destroyed and 272,810 homes damaged.

Since 2011, more than 50 earthquakes over magnitude 6.0 have occurred in Japan, the most recent of which was a 6.7-magnitude earthquake that struck Nagano prefecture on 22 November, 2014, injuring 41 people, destroying 34 houses and severely damaging 20 houses. JMA have predicted that a large scale earthquake with a magnitude of around 8.0 is likely to hit the Tokai region in a near future and that strong shaking and tsunamis are expected to affect areas from Tokyo to Kyushu.

1.2.3.2 Typhoon and floods

Japan is hit by typhoons each year, particularly during the period July to September. The typhoons also bring heavy rain, resulting in flooding and landslides, which damage property and kill or injure people. Last year, on 20 August, 2014, heavy rain in combination with typhoons caused flash-flood landslides in Hiroshima that killed 74 people and destroyed buildings.

1.2.3.3 Volcanic eruptions

There are 110 active volcanoes in Japan. On average, 15 volcanic events (including eruptions) occur every year, some of which seriously affect human life. On 27 September, 2014, Mount Ontake, which is located 100 kilometres northeast of Nagoya and 200 kilometres west of Tokyo, erupted killing 57 people. Several volcanoes are also close to populated cities and their eruptions may affect people and buildings. The most famous is Mount Fuji, located about 150 kilometres west of Tokyo: if an eruption occurred, it could cover Tokyo under a 10-cm layer of ash, overload buildings and cause considerable destruction.

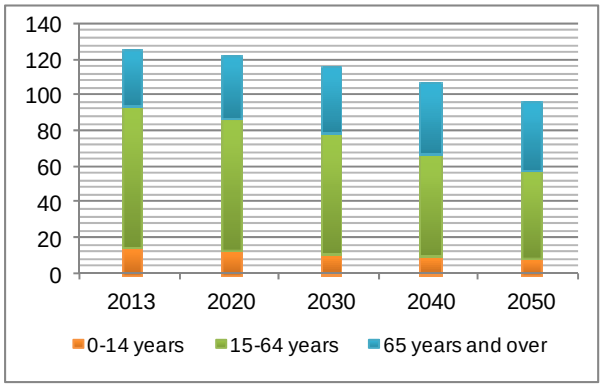
1.2.4 Population

Despite declining trends, the population of Japan is about 25% of the EU total, with three times higher density and huge but stable urban centres.

Japan's total population in 2013 was 127.30 million (10th largest in the world). However, the prevailing trends show a continuous decline in the total population, a falling birth rate (1.43 per thousand), a decrease in the average number of people per household (2.42 in 2010) and a rapidly ageing population.

Population projections from 2013 are shown in Figure 5.

The older demographic (65 years and over) comprised 31.9 million people in 2013, namely 25.1% of the total population and is expected to exceed 30% in under a decade, putting it far ahead of the total in Western countries.



Source: (3), adapted by Ingerosec

Figure 5 – Evolution of the Japanese population until 2050 (million inhabitants)

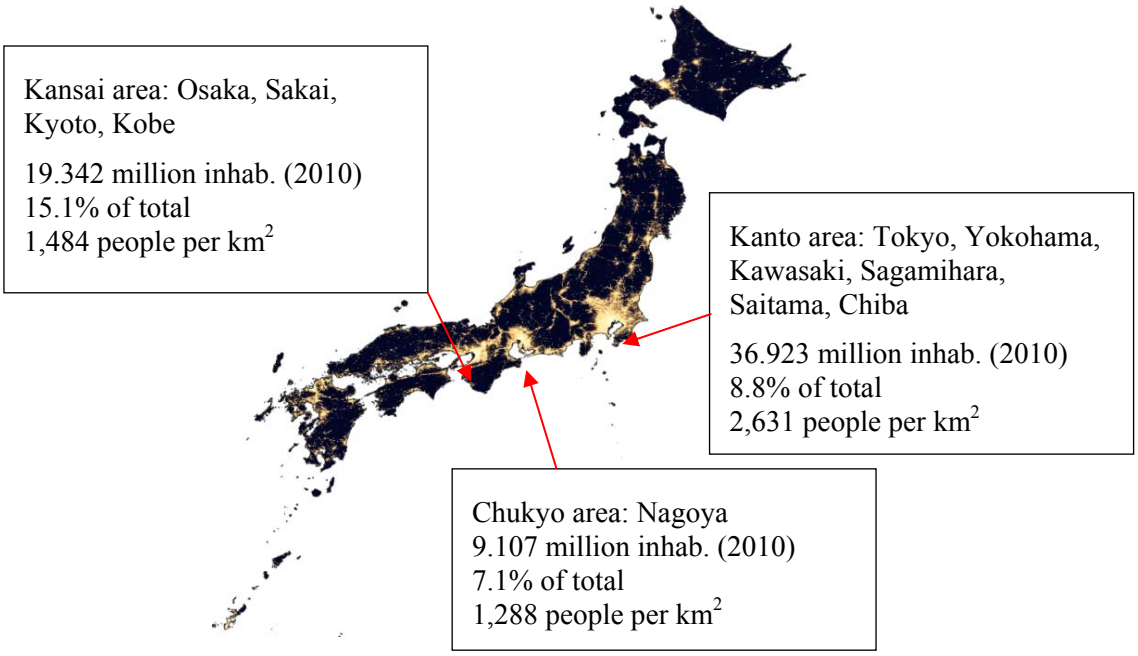
The population of Japan is set to shift from about a quarter of the EU population as of 2012 to less than 20% of the same by 2050, assuming virtually constant EU population over the period (3). However, the limited land surface means the density of population in Japan was almost three times higher than in Europe in 2013, as shown in Table 2 below.

Table 2 – Comparison of population densities between the EU and Japan (2013)

	Japan	EU-28	EU largest	EU smallest
A: Land Area (thousand km^2)	378	4,493	632.8 (France)	0.3 (Malta)
B: Habitable Land Area (thousand km^2)	114	n.a.	n.a.	n.a.
B/A: (%)	30.2	n.a.	n.a.	n.a.
Population Estimate (millions)	127.298	505.675	80.524 (Germany)	0.421 (Malta)
Density of Population in 2012 (persons per km^2)	343	116.3	1,327.4 (Malta)	17.8 (Finland)
Highest Density of Population in 2012 (persons per km^2)	6,016 (Tokyo)	21,516 (Paris)	n.a.	n.a.

Source: (4), adapted by Ingerosec

The three major metropolitan areas on Honshu Island are Kanto (area of Tokyo metropolis), Chukyo (Nagoya) and Kansai (Osaka), which constituted 51.0% of the total Japanese population in 2010 and thus have a strong economic influence on business in Japan. A new linear train line (maglev) is under construction between Tokyo and Nagoya, and it will eventually extend to Osaka. The train line is likely to boost the economy of these major metropolitan areas. Other major cities include Sapporo (1.914 million), Fukuoka (1.464 million), Hiroshima (1.174 million) and Sendai (1.046 million).



Source: **(5)**, adapted by Ingerosec

Figure 6 – Satellite view of Japan at night (urban areas appear in yellow)

The internal migration from rural areas tends to partly offset the decline in population of the main urban centres. In 2013, the net-migration for all three major metropolitan areas (Tokyo, Nagoya and Osaka) was positive and counted 89,786 persons (6).

1.2.5 General economic situation

Despite low growth, Japan remains one of the world best-performing economies.

Japan's industrial structure has undergone a major transformation since the end of World War II with a shift from primary and secondary industries to tertiary. In 2010, primary industry accounted for 4.2% of employed persons, secondary industry for 25.2% and tertiary for 70.6%. In 2012, the average number of people employed per establishment was 10.2, while establishments with fewer than ten persons accounted for 78.7% of the total. The number of overseas affiliates in the manufacturing industry was 10,425 for FY2012 and the overseas production ratio was 20.3%, an increase of 2.3% on the previous year. Japanese government anticipated that the manufacturing industry in Japan will continue to expand its overseas presence and business in future.

In 2013, Japan's GDP reached 525.3 trillion JPY (3,621 billion EUR), third-highest in the world after the United States and China.

To end deflation and economic stagnation, the Japanese Government devised "Abenomics" in January 2013: a strategy including the following "three arrows":

- First "arrow": monetary policy to set a consumer price index annual growth rate of 2% as a "price stabilization target" and quantitative and qualitative monetary easing to double the monetary base over two years;
- Second "arrow": emergency economic stimulus package of approximately 10 trillion JPY;
- Third "arrow": growth strategy promoting private investment (not yet fully implemented).

On 1 April, 2014, the consumption tax rate was increased from 5 to 8%.

Changes have been observed in the economic conditions of Japan showing recovery, including weakening of the yen, increased stock prices and continuing deflation, but this will have to be confirmed in coming years.

1.2.6 Administrations

> **Any efficient approach to the market should include contacting suitable counterparts at two levels of administration: central and local.**

The administration in Japan includes two levels: central and local governments.

1.2.6.1 Central government

The Japanese governmental system is divided into three independent branches: legislative (the Diet including the House of Representatives and the House of Councillors), executive (cabinet and ministries) and judicial. The cabinet exercises its executive power based on the laws and budgets adopted by the Diet.

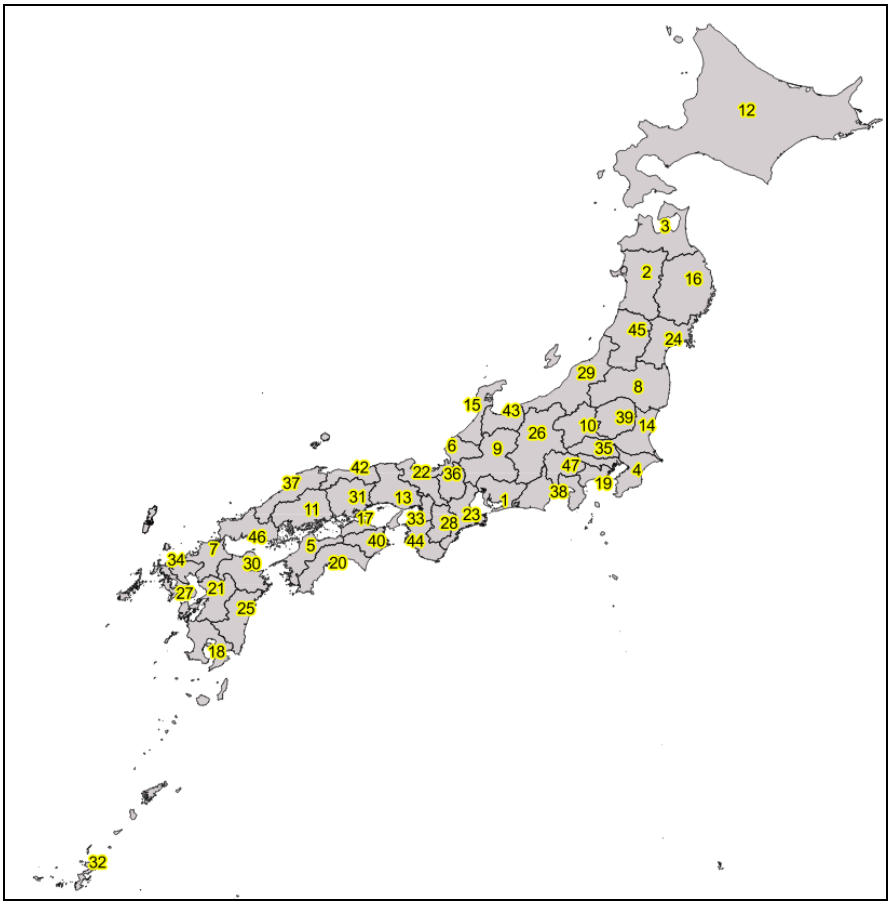
As for building and construction materials, the main ministries involved are:

- The Ministry of Land, Infrastructure, Transport and Tourism (MLIT), in charge of building and construction regulations;
- The Ministry of Economy, Trade and Industry (METI), in charge of material production and trade (import/export);
- The Ministry of Agriculture, Forestry and Fisheries (MAFF), in charge of forestry management and wood production;
- The Ministry of Health, Labour and Welfare (MHLW) and the Ministry of the Environment (MOE) in charge of the aspects of BCM under their jurisdiction.

1.2.6.2 Local governments

There are two levels of local government in Japan within each prefecture: prefectural and municipal. As of 5 April, 2014, Japan had the following:

- 47 prefectures;
- 20 “Cabinet-Order designated cities”, which are municipalities with 500,000 or more inhabitants and with administrative and fiscal authority equivalent to those of prefectures;
- 770 cities (*shi*), 745 towns (*cho*, smaller in size) and 183 villages;
- 23 wards (*ku*) of Tokyo prefecture.



Source: Ingerosec

1	Aichi	11	Hiroshima	21	Kumamoto	31	Okayama	41	Tokyo
2	Akita	12	Hokkaido	22	Kyoto	32	Okinawa	42	Tottori
3	Aomori	13	Hyogo	23	Mie	33	Osaka	43	Toyama
4	Chiba	14	Ibaraki	24	Miyagi	34	Saga	44	Wakayama
5	Ehime	15	Ishikawa	25	Miyazaki	35	Saitama	45	Yamagata
6	Fukui	16	Iwate	26	Nagano	36	Shiga	46	Yamaguchi
7	Fukuoka	17	Kagawa	27	Nagasaki	37	Shimane	47	Yamanashi
8	Fukushima	18	Kagoshima	28	Nara	38	Shizuoka		
9	Gifu	19	Kanagawa	29	Niigata	39	Tochigi		
10	Gunma	20	Kochi	30	Oita	40	Tokushima		

Figure 7 – The 47 prefectures of Japan

2 Building and construction materials markets overview

2.1 Short overview of the Japanese market for building and construction materials

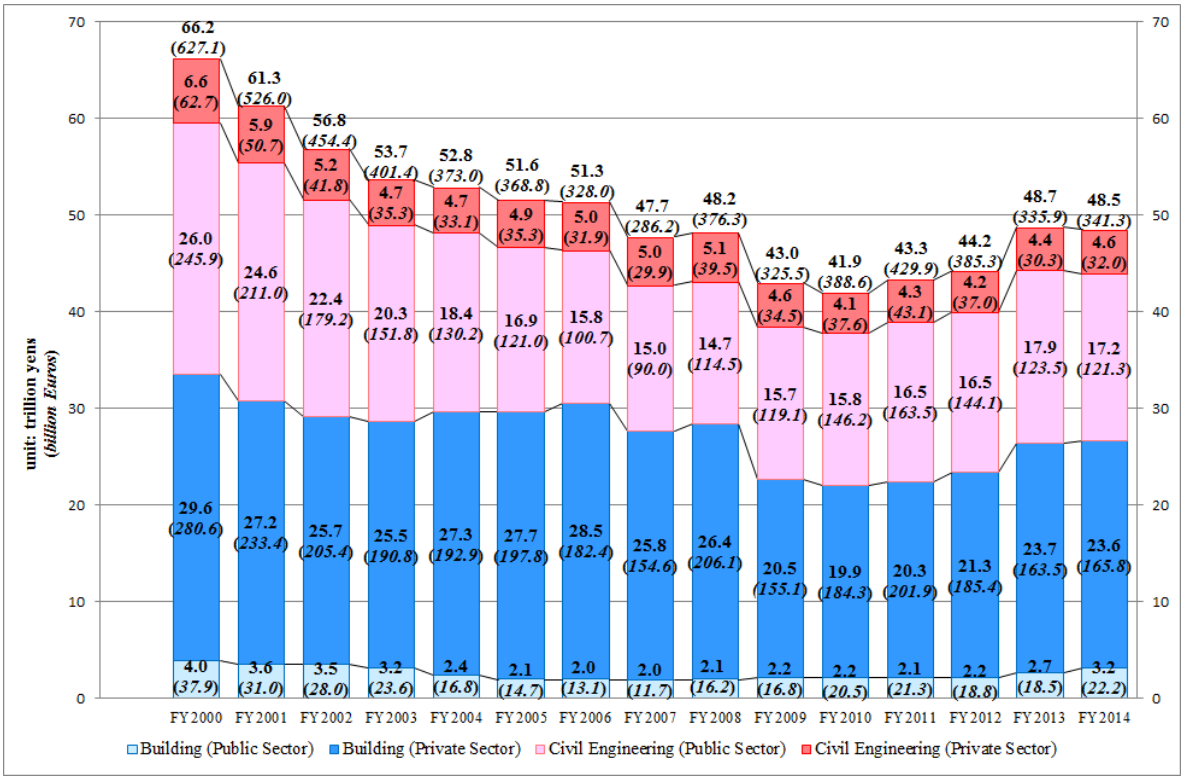
2.1.1 Japanese market size and characteristics

Regaining strength since 2010, investments in construction reached 48.7 trillion JPY (347 billion EUR) in 2013, half of which was dedicated to buildings. Dwellings constitute about 60% of investments in buildings. Building materials in order of preference are wood, reinforced concrete and steel.

2.1.1.1 Whole construction market

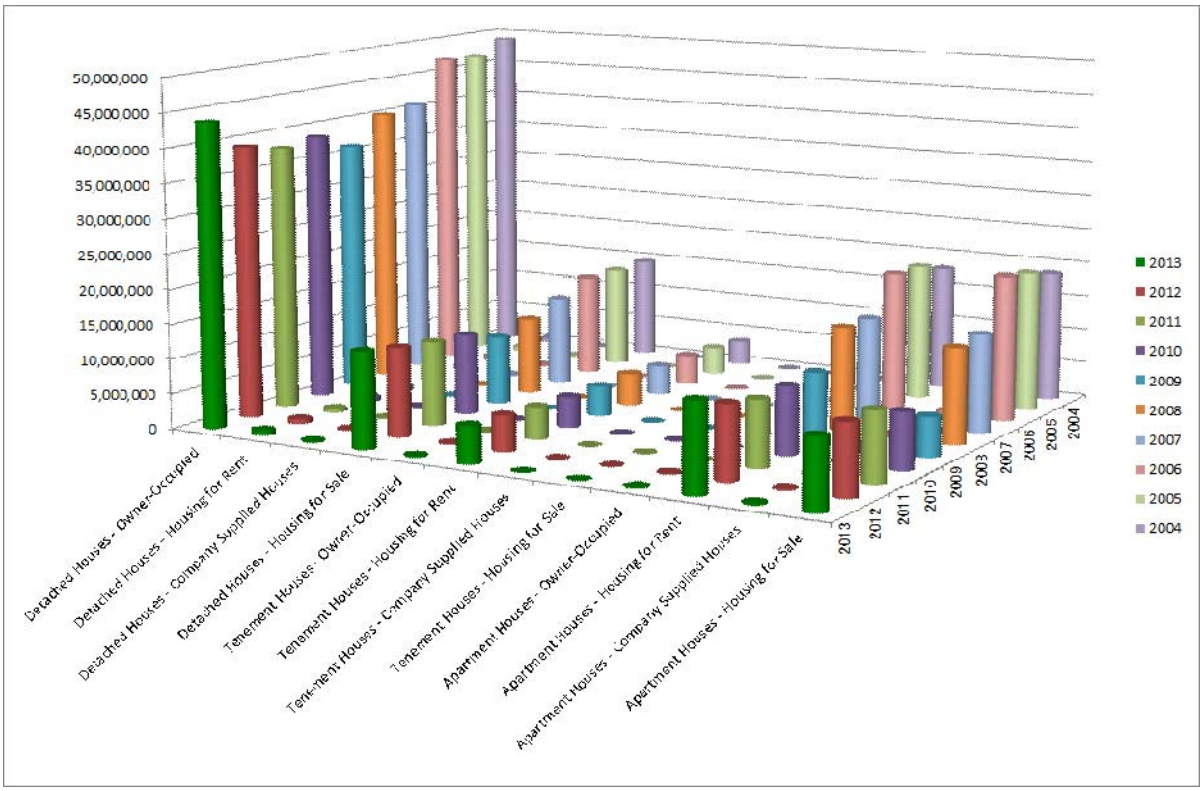
Comprising about 10% of both GDP and all employed persons, the construction industry is one of the core industries in Japan (7). During the 2013 fiscal year, investments in construction amounted to 48.7 trillion JPY (335.9 billion EUR at current prices), which represented an increase of 10.2% compared to the previous fiscal year. A similar level is expected for FY 2014.

Within this amount, building construction investments, show in the Figure 8, amounted to 26.4 trillion JPY (182 billion EUR) (54.2% of the investments in construction, with an increase of 12.7% from the previous fiscal year), with private investments totalling 23.7 trillion JPY (163.5 billion EUR and 89.8%) and public investments amounting to 2.7 trillion JPY (18.5 billion EUR and 10.2%).



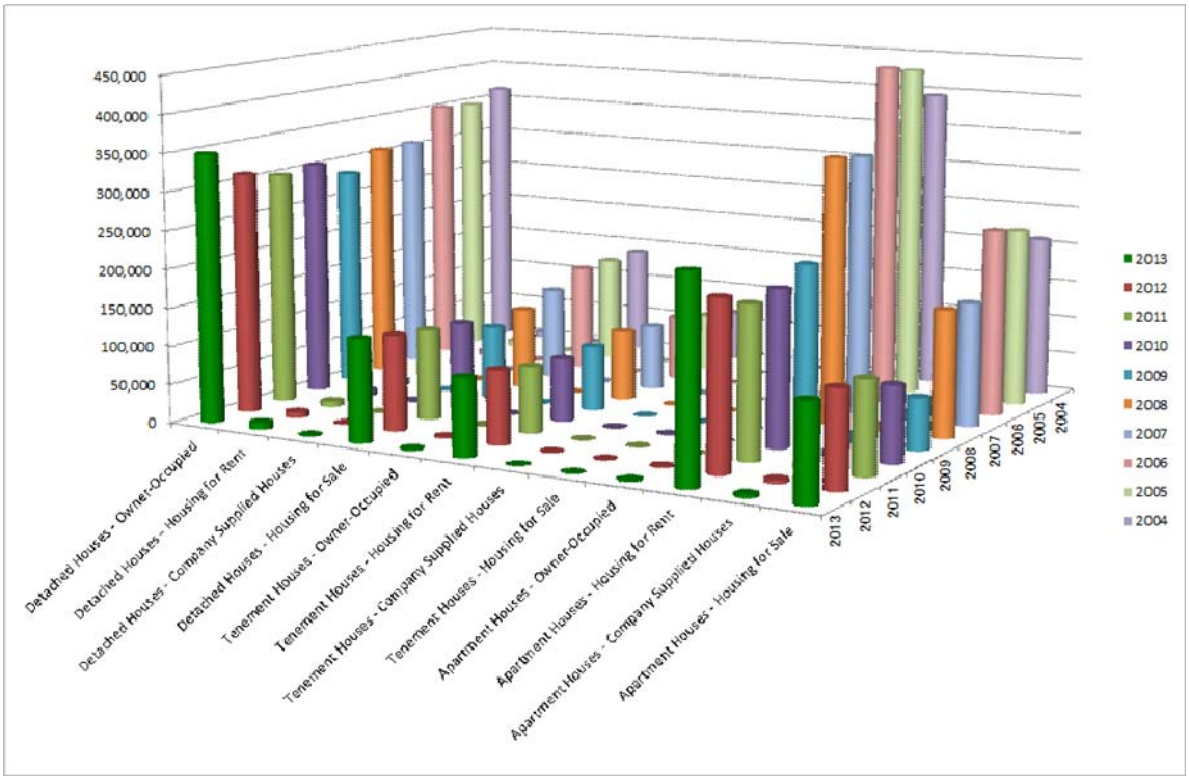
Source: MLIT, adapted by Ingerosec

Figure 8 – Investments in construction: Building and Civil Engineering



Source: MLIT, adapted by Ingerosec

Figure 9 – Number of homes per occupancy type



Source: MLIT, adapted by Ingerosec

Figure 10 – Surface of buildings constructed per type

2.1.1.2 Building construction market

Construction of 147.67 million m² of building surface was started in 2013, representing an increase of 11.4% on the previous year. 62.1% of the planned surface housing of new construction was housings, while 37.9% comprised non-residential buildings. 42% of the surface for wooden structure types; 34.9%, steel frame types; and 20.2%, reinforced concrete types.

The floor space of buildings for medical, healthcare and welfare use was 10.7 million m², which was an increase of 14.9% compared to the 2012 fiscal year and a level similar to the 2011 fiscal year.

Non-residential building construction has been quite consistent during the past few years. The distribution of floor area use in 2013 is shown in Figure 11.

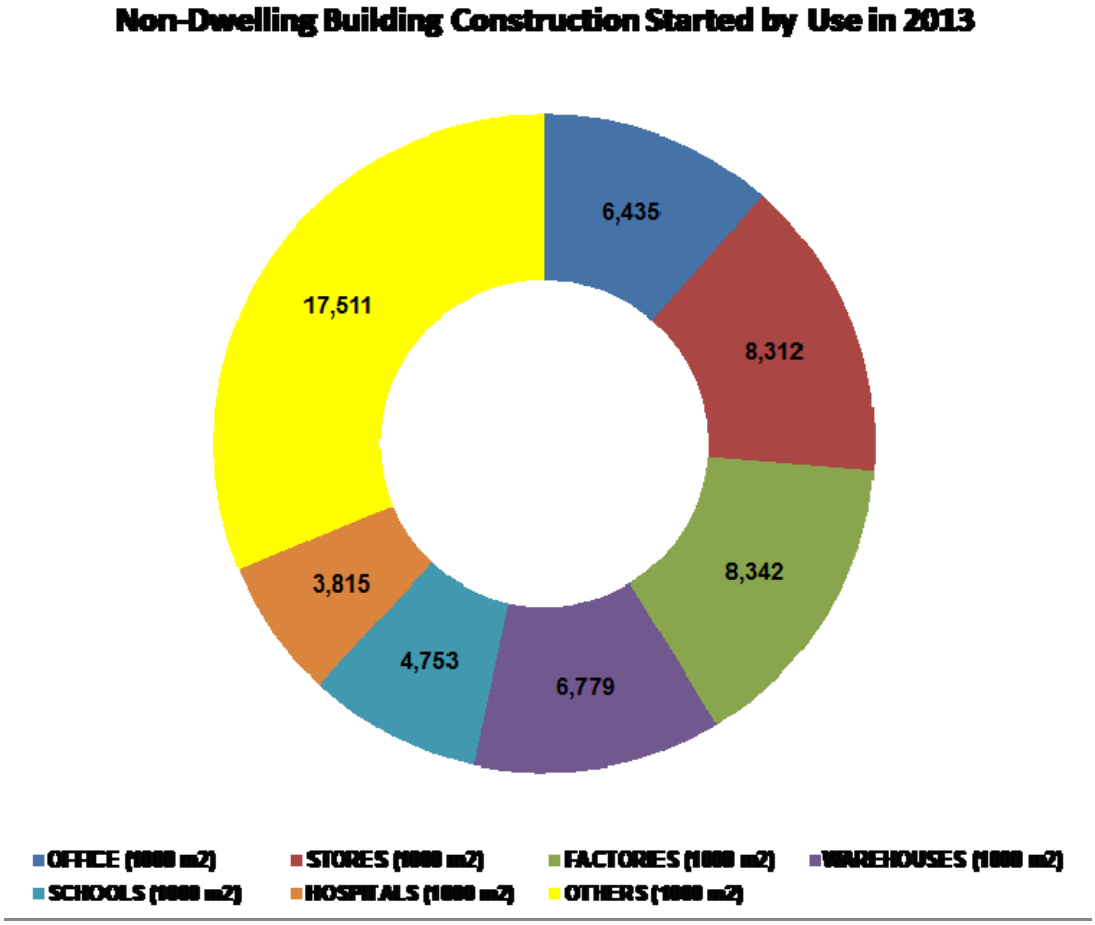


Figure 11 –Non-residential building construction started by use in 2013

The number of residential constructions started (including apartments) totalled 0.98 million housing units – an increase of 11.0% from 2012 – comprising 36.2% for owned houses, 36.4% for rental units and 26.9% for built-for-sale units.

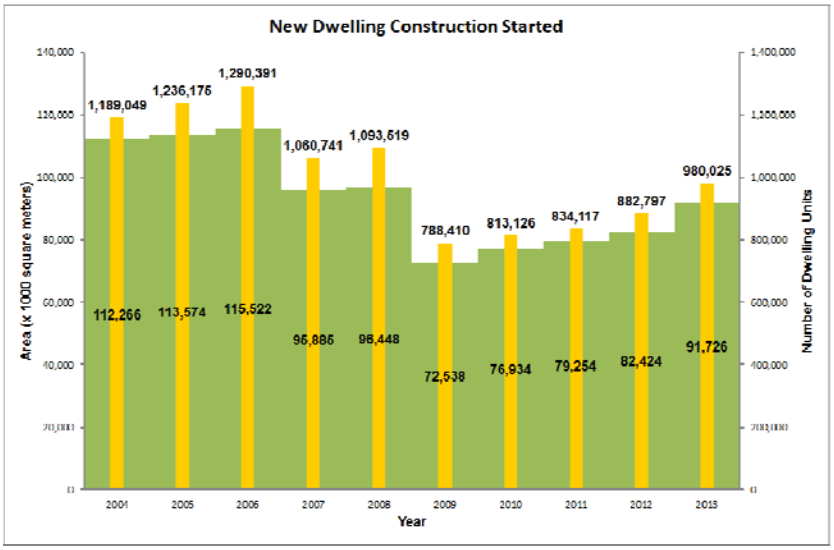


Figure 12 – New residential construction started

The structural types of residential constructions started in FY 2013 comprised a mixture of wooden structure buildings (56.1%), reinforced concrete buildings (26.7%) and steel frame type buildings (16.6%). At less than 0.1%, concrete block-type constructions are virtually unheard of in Japan.

2.1.2 The general organisation of the Japanese market

> **In Japan, prime contractors are liable for structural integrity and waterproofing for a decade after construction, which makes the use of durable construction materials by subcontractors a key advantage.**

The *construction sector* is defined by the Construction Business Act (*Kensetsugyoho*) as a business related to undertaking construction works from either the prime contractor or sub-contractor perspective.

Construction work is divided into 28 categories by MLIT, each of which requires a specific licence from MLIT or a prefectural government. 28categories are the followings: General civil engineering; General building; Carpentry; Sheet metal; Plastering; Glazing; Scaffolding; Earthwork and concrete; Painting; Waterproofing; Masonry; Interior finishing; Roofing; Machine & equipment installation; Fittings; Heat insulation; Electrical; Telecommunication; Tiles, Bricks & blocks; Landscaping and gardening; Well-drilling; Steel structure; Joinery; Reinforcement steel; Plumbing; Paving; Water facilities; Fire-protection facilities; and sanitation facilities. These work categories are contracted as a single package by prime contractors and then subcontracted to specialists or subcontractors.

Prime contractors will usually subcontract to small-scale specialists or subcontractors once the contract has been signed with clients/owners and oversee construction planning, quality management, schedule management, cost management and coordination with clients/owners. Prime contractors are liable (under Civil Code) for the integrity of structures and waterproofing for a decade-long period following construction and to arrange insurance for that purpose. Accordingly, guaranteeing structural durability for a certain period is a strong selling point, even if not legally necessary.

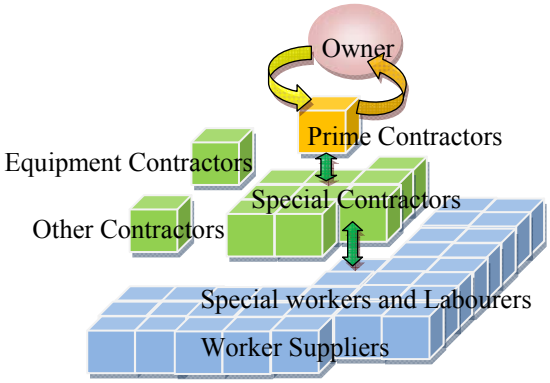


Figure 13 – Japanese market organisation

The number of workers in the construction industry was 5,030,000 in 2012, comprising 8% of the entire working population of 62,700,000.

In 2012, the number of construction companies in Japan was 470,000, 99% of which had capital of less than 1.3 million EUR. Nearly half (43.6%) of these companies and individuals business operators had capital of less than 65,000 EUR. These small-scale companies and business operators are distributed all over Japan. Companies and individuals with localized activities adopt appropriate construction methods, materials and equipment for the local geography, geology and climate conditions.

Accordingly, it is important for exporters or importers of EU materials to also consider small-scale, local practices when approaching the market.

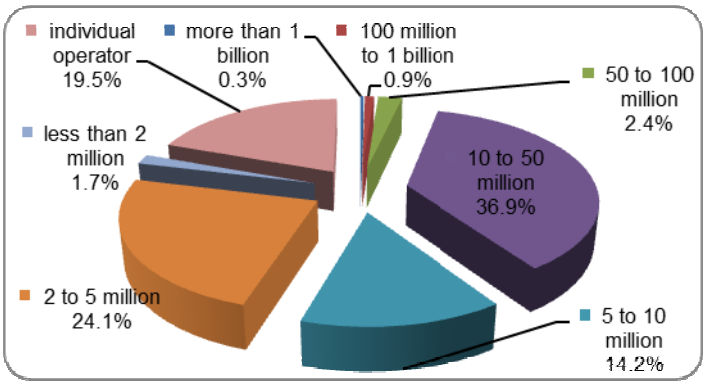


Figure 14 – Capital size of Japanese construction companies (JPY)

The market comprises approximately 60% private investment and 40% public investment, while building construction of houses, offices and factories constitutes 84% of private investments and 55% of total construction investment. It is thought that Japan's ageing population will influence market trends due to the increased need for suitable facilities, including renewal of buildings and facilities, urban renovation, environmental facilities, waste management facilities, telecommunications and welfare and medical facilities.

2.1.3 Public procurement system

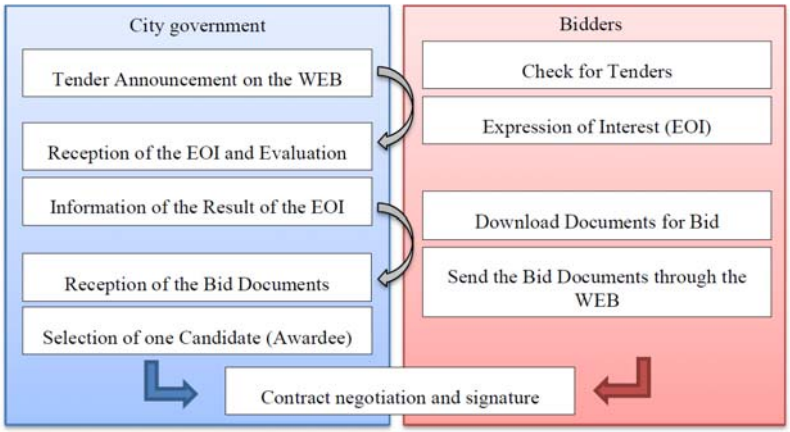
Cost- and technical-based evaluation is the standard procedure for public procurement.

The Cost and Technical Bid System (CTB) procurement system is applied by MLIT for public works under its jurisdiction and involves competitive bidding, evaluated based on cost and technical score. The system has been adopted for quality assurance and to prevent collusion. The previous system was based on the Public

Account Law, which was initially devised over a century ago, from French and Belgian public procurement systems.

In that system, bidders' prices were prioritised to utilise the national budget effectively, while in the late 1990s, the MLIT began to review the public procurement system by introducing electronic bidding and evaluation methods that put more weight on quality.

All this spawned the CTB, which applies European-style PFI tendering to achieve an appropriate balance of specification- and performance-based procurement.



Source: Fujinomiya City, adapted by Ingerosec

Figure 15 – Typical tender procedure flow chart for public building construction work

2.1.4 Japanese market players

'Super' general contractors are major market players in the construction industry. However, building individual houses mainly relies on SMEs. Most building materials are specified by architects and, to a lesser extent, by clients/owners and contractors.

2.1.4.1 Contractors and construction companies

The main market players in the construction sector in Japan are incorporated construction companies that fulfil the role of prime contractor. These general contractors are subdivided into four categories by enterprise size: super-large, large, mid-sized and small/local.

The average annual turnover of the top five super-large contractors exceeds 1,000 billion JPY (7 billion EUR), see Table 3. Approximately 80% of their turnover comes from building construction and the rest from civil works.

Table 3 – Turnover and profit of the largest general contractors (Fiscal Year 2013)

Contractor	FY 2012		FY 2013	
	Rank	Turnover (million JPY)	Rank	Turnover (million JPY)
Obayashi Corporation	2	1,448,305	1	1,612,756
Taisei Corporation	3	1,416,495	2	1,533,473
Kajima Corporation	1	1,485,019	3	1,521,191

Shimizu Corporation	4	1,416,044	4	1,497,578
Takenaka Corporation	5	921,188	5	1,020,956

Source: Balance sheets of the listed companies, adapted by Ingerosec

The category of "large contractors" comprises about 15 companies with annual sales between 200 to 600 billion JPY (1.4 to 4 billion EUR). There has been consistent difference between these contractors and super-large contractors for many years. Contractors in this category have similar attitudes towards business to super-large contractors and also undertake large-scale construction as prime contractors, but their share of civil works is smaller and their revenue mainly comes from building construction, such as office buildings, hospitals, administration buildings, factories and public facilities.

Contractors' clients are mainly private developers or owners. Private sector construction is based on a design-build tender style where competitive bidding is prioritised. As mentioned in 2.1.2, prime contractors will subcontract works after signing the contract, so the main task of prime contractors is to manage construction and projects.

Small and local contractors can undertake building design as well as construction. The designs are either provided by contractors or independent architects and occasionally by owners/clients. In cases where the contractor undertakes building design, it tends to minimize construction costs by balancing economic design and client satisfaction. If a client insists on using European products, contractors will accept or propose appropriate alternatives.

Table 4 – TOP 10 Contractors' Building Ranking (Fiscal Year 2013)

Rank	Name of Design Office	Sales of Buildings (MM JPY)	Total Sales (MM JPY)	No. of first -class Architects
1	DAIWA HOUSE	1,076,933	1,429,886	2,370
2	SEKISUI HOUSE	1,009,336	1,155,802	2,435
3	SHIMIZU CORPORATION	995,429	1,253,060	Unavailable
4	OBAYASHI CORPORATION	915,707	1,208,677	2,131
5	TAISEI CORPORATION	822,050	1,196,176	Unavailable
6	TAKENAKA CORPORATION	733,854	900,848	2,544
7	KAJIMA CORPORATION	690,020	1,046,007	2,253
8	DAITO KENTAKU	545,774	563,343	1,385
9	TODA CORPORATION	314,871	409,513	1,047
10	HASEKO CORPORATION	285,019	422,221	675

Source: "NIKKEI ARCHITECTURE", 10 September, 2014

The above list shows that, if limited to building construction, large home builders like Daiwa House or Sekisui House sell more than "Super-large" general contractors. These home builders employ numerous in-house first-class architects to satisfy their technical and commercial needs, which means that all design, technical specifications and technical adaptations to satisfy their customers can be done without any assistance of external resources.

These home builders also manufacture some major building materials like insulation systems.

2.1.4.2 Architects

Architects are market players and can be distinguished based on the type of organisation and activities involved. There are well-known international architects; innovative architects that partake in design competitions; large-scale, private architecture firms; and small, independent architecture firms that sometimes comprise only few employees.

As designers, they are fully responsible for building design in terms of selection of materials and equipment (on this point please also refer to 5.2.1.2.).

Table 5 – TOP 10 Architectural Design Offices (Fiscal Year 2013)

Rank	Name of Design Office	Design + SV Sales (MM JPY)	No. of first-class Architects
1	NIKKEN SEKKEI LTD	35,072	783
2	NTT FACILITIES, INC.	25,743	700
3	MITSUBISHI JISHO SEKKEI INC.	15,773	318
4	NIHON SEKKEI, INC.	14,507	443
5	YAMASHITA SEKKEI INC.	9,314	284
6	KUME SEKKEI CO., LTD.	9,245	320
7	JR EAST DESIGN CORPORATION	8,617	244
8	AZUSA SEKKEI CO., LTD.	7,433	252
9	ISHMOTO ARCHITECTURAL & ENGINEERING FIRM	6,743	201
10	AXS SATOW INC.	6,409	171

Source: “NIKKEI ARCHITECTURE” published 10 September, 2014

2.1.4.3 Material suppliers

Materials are generally procured by specialized subcontractors, who arrange also logistics and freight for imports. They are responsible for selecting materials not specified by prime contractors or the prime contractors’ assigned architect.

General contractors and home builders are also often suppliers of building and construction materials through dedicated companies in their enterprise groups.

2.1.4.4 Selection of materials

Materials are generally selected by owners, architects or contractors. The proportion of decisions made by owners, architects or contractors for the focus construction materials is shown in Table 66.

Table 6 – Selection of construction materials by decision-maker

Construction material	Decision-maker			
	Owners	Architects	Contractors	Others
Tiles and bricks	20.8%	73.5%	4.9%	0.8%
Clay or ceramic roof tiles	25.9%	57.0%	15.8%	1.3%
Metallic roofing materials	5.8%	72.7%	19.8%	1.7%
Cement roof tiles	8.2%	74.0%	18.1%	0.3%
Insulation materials	6.6%	52.2%	38.6%	2.6%
Wooden exterior insulation	10.5%	67.5%	18.1%	3.9%

Source: (8), adapted by Ingerosec

Materials are mainly specified by architects. Noteworthy is the fact that owners of buildings participated in the selection of tiles, bricks and clay/ceramic roof tiles than other materials. This involvement is likely due to their aesthetic tastes and the need for client satisfaction. In contrast, where less expensive roofing materials were adopted, owners were less involved and decision-making was left to architects or contractors. The percentage of contractors specifying insulation materials is higher than other materials because such insulation is usually integrated into panelling.

2.1.5 Legal and regulatory issues

Legal and regulatory issues are dealt with hereafter in chapter 5.

2.1.6 Local building material products and trends

> **Gathered in professional associations by product type, the building materials sector is developing towards energy efficiency, energy management and seismic resistance.**

2.1.6.1 Associations of private entities

Public-service corporations exist in the construction materials sector, for instance: the Japan Building Material Association(*Nihon Kenchiku Zairyo Kyokai*), which was founded in 1934 and currently includes about 300 members, comprising private companies, such as construction material producers, sellers and installers (head office in Tokyo, five branches in Japan). This association aims to propagate most kinds of construction materials, including imported kit houses and materials offering advantages such as performance, durability, economy, homogeneity and environmental friendliness. This association organises a biannual construction material forum called Kenten since 2009 and sends missions overseas to exchange with similar foreign organisations. In 2013, one such mission attended Batimat exhibition in Paris.

The Japan Ceramic Tile Association (*Zenkoku Tairu-Gyo Kyokai*) is another such association, headquartered in Aichi prefecture and with members including 238 installation companies, 54 sellers/traders and 17 producers. This association aims to improve the quality of ceramic tiles, including their production, distribution and installation.

The Roof Wall Technical Association (*Nihon Yane Gaiso Koji Kyokai*) is an organisation mainly comprising roof and exterior wall installers. Its membership is divided nationally into three groups: east, central and west Japan with 25, 24 and 20 registered companies respectively.

The Insulation Material Council (*Dan-netsu Kenzai Kyogikai*) comprises groups for plastic foam, fibre and openings and a total of 11 sub-organisations of producers and insulation business associations. Each organisation has its own membership of insulation producers and material installers.

2.1.6.2 Material products and trends

The Building Performance Standardisation Association (BPSA, *Kenchiku Seino Kijun Suishin Kyoukai*) is the designated performance appraisal institution in the building and construction sector, with 25 member entities: 26 Japanese, 1 German (Fraunhofer Wilhem-Klauditz institute), 1 Korean (KTR) and one Swedish (SP Swedish National testing and Research Institute). This association aims to promote the implementation of performance standards for buildings, which are specification codes based on Japan's Building Standard Law. BCM products should be selected by architects or contractors to meet these performance standards.

The construction market is now very environmentally aware. In particular, the incentive to obtain ISO 14001 certification has risen since MLIT included it as a criterion for the Management Matter Examination (*Keiei Jiko Shinsa*).

Bureau Veritas, a French certification company, has been designated as a performance appraisal institution by the BPSA in Japan, and offers technical assessments of buildings for carbon emissions.

Certification is issued following a CASBEE examination (Comprehensive Assessment System for Built Environment Efficiency). CASBEE has been developed by the Institute of Building Environment and Energy Conservation (IBEC), under the leadership of MLIT and is the main means of evaluating the environmental efficiency of buildings in Japan. CASBEE is becoming a popular method for design self-evaluation because of its five-tier grading system. The grades received (S, A, B+, B-, C) are based on reduction of environmental loads, such as effective application of energy conservation measures and reduction of resources utilised. Improvements made to environment quality, such as environmental amenity and scenic beauty, are also considered in the grading. IBEC publishes guidelines for environmentally symbiotic housing and issues certification for Lifecycle Carbon Minus housing.

The Japanese market is not only interested in passive energy-saving concepts but also those of positive energy. METI has a policy of promoting Energy Management Systems (EMS) that encompasses:

- Home Energy Management Systems (HEMS);
- Mansion Energy Management Systems (MEMS)[4];
- Building Energy Management Systems (BEMS);
- Factory Energy Management Systems (FEM);
- Community Energy Management Systems (CEMS);

The Agency for Natural Resources and Energy (ANRE) within METI started a subsidy program in September 2013 for HEMS and BEMS and aims to ensure all homes are equipped with HEMS by 2030 (on these issues, please also refer to chapter 8).

EMS utilise IT and sensor technologies to control electric devices and equipment. The systems aim to save on energy and ultimately reduce CO_2 emissions by integrating data collection, visualising energy consumption (electricity and gas) and managing photovoltaic panels, electricity storage and consumption.

[4] For *mansion,* please read 'apartment building'.

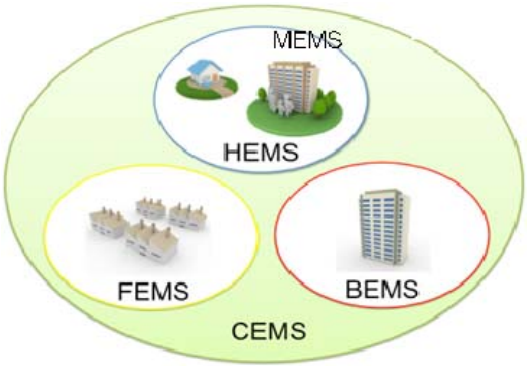


Figure 16 – Scope of Energy Management Systems (EMS)

2.1.7 Performances of other countries

China is the main exporter of building materials to Japan, followed by Canada and Malaysia and wood is the most imported product type.

The Japanese market appeals, not only for EU companies. Companies from other countries have exploited their geographical proximity, relatively cheap labour, favourable exchange rates and product quality to promote their products there, as shown in Table 7.

Table 7 – Main countries exporting building materials to Japan

Value of exports in million JPY (million EUR) by fiscal year (1 April to 31 March)

Country	Products	2012	2013	2014 (8 months)
China	Stones, wood (incl. plywood), cement blocks and tiles, ceramics and tiles, glass and aluminium	182,896 (1594.4)	236,438 (1630.0)	157,798 (1111.3)
Canada	Wood (rough, sawn, continuously shaped, particle board, prefabricated buildings)	99,523 (867.6)	137,099 (945.2)	83,472 (587.8)
Malaysia	Sheets for veneer, wood continuously shaped, fibreboard of wood, plywood and cement blocks and tiles	86,604 (755.0)	103,838 (715.9)	67,601 (476.1)
USA	Wood (rough, sawn, prefabricated buildings) and glass	62,721 (546.8)	97,342 (671.1)	54,674 (385.0)
Indonesia	Sheets for veneer, wood continuously shaped and plywood	63,390 (552.6)	80,934 (558.0)	53,708 (378.2)
Philippines	Builders' joinery, cement blocks and tiles, ceramics and tiles	56,158 (489.6)	79,746 (549.8)	51,853 (365.2)
Thailand	Aluminium products	33,280 (290.1)	45,590 (314.3)	32,787 (230.9)
Russia	Sawn wood and sheets for veneer	30,372 (264.8)	47,289 (326.0)	26,324 (185.4)
New Zealand	Wood (rough, particle board, fibreboard)	22,474 (195.9)	26,604 (183.4)	16,911 (119.1)
Taiwan	Glass	6,614 (57.7)	7,599 (52.4)	5,719 (40.3)

Korea	Prefabricated buildings, cement blocks and tiles, glass	4,323 (37.7)	6,285 (43.3)	5,083 (35.8)
Average exchange rate to JPY: 1 EUR =		114.71	145.05	142

Source: Japanese customs website

Logistics are particularly important when it comes to sending products to Japan.
Japan is central to the seaports around the Pacific Rim from which the products arrive, as shown in Figure 17 while Europe appears on the periphery of this world map.

Figure 17 – The world map centered on Japan(9)

2.2 Short overview of the EU market for building materials

EU countries represent all aspects of building materials, from wooden products in northern Europe to ceramics in southern Europe. Quality, diversity and low environmental impact are key advantages to be utilised in promoting and increasing exports to the well-established, yet demanding, Japanese market.

2.2.1 EU construction market size and trend

Slowly recovering from the crisis, the European construction market showed positive growth in 2014 with building renovations representing nearly half of the market.

In 2014, the construction market production for the countries listed in Table 8 reached 1,206 billion EUR (169 trillion JPY). The main construction activity is building renovations (45%), followed by civil engineering (21%), new housing (18%) and new non-residential (16%).

Table 8 – Construction sector production in EU countries

Country	Production (billion euro)	Share
Germany	285	24%
France	200	17%
United Kingdom	177	15%
Italy	163	14%
Spain	63	5%
The Netherlands	60	5%
Poland	44	4%
Belgium	39	3%
Sweden	34	3%
Austria	32	3%

Country (contd.)	Production (billion euro)	Share
Finland	29	2%
Denmark	27	2%
Czech Republic	16	1%
Portugal	15	1%
Ireland	9	1%
Hungary	9	1%
Slovak Republic	4	0%
Total	1206	100%*
**Data unavailable for other EU-28 countries*		

Source: (10), adapted by Ingerosec

As of 2014, the European construction market was reportedly growing again after a crisis of several years that saw the market decrease by 20%. However, economic growth is expected to remain weak in the following year due to a strong monetary policy, coupled with constraining objectives on the state budget balance and concerns over the risk of deflation.

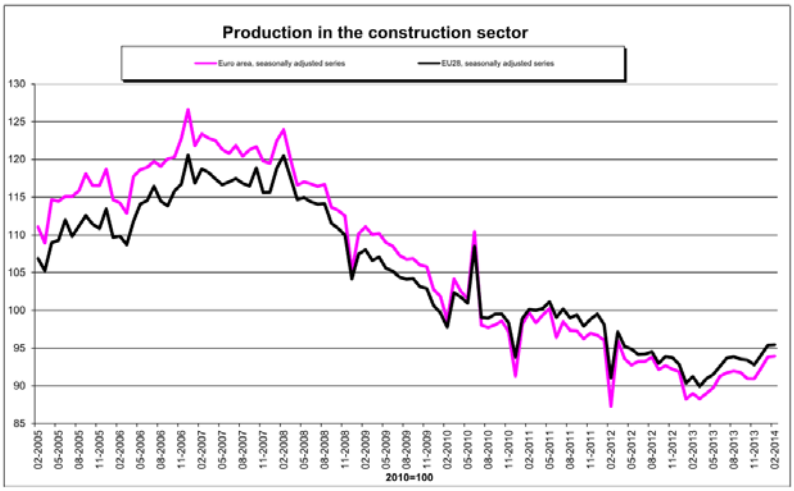


Figure 18 – Euro area and EU-28 construction sector evolution from 2005 to 2014 (11)

2.2.2 EU construction market organisation and players

> **The organisation of the construction market in Europe has evolved towards the creation of big structures and conglomerates having an important role on the international scene**

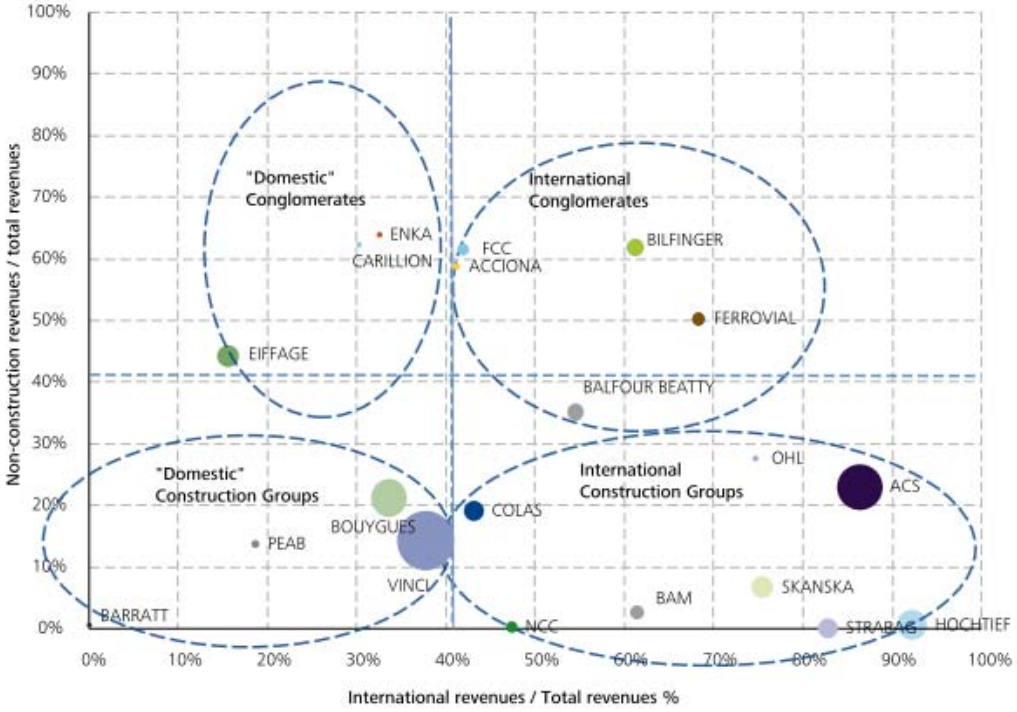


Figure 19 – Performance of companies in 2013 showing internationalization and diversification (12)

The current EU construction sector is the result of huge market restructuring, which occurred between the late 80s and early 90s, when regional companies merged into a few national companies and then, in turn, into international companies. At the same time, international activities of companies, particularly in Africa and the Middle East, faced difficulties that often necessitated creating joint ventures, which later became permanent links.

In addition, the opening of the eastern European markets (roads, railways and buildings) offered significant potential for these bigger companies to find permanent work, develop and increase their activities sustainably and find new partners/open subsidiaries in those regions.

At the end of the 1990s the market in EU countries was restructured around a few key players. These companies then diversified their activities by adding financial services, because developing Public–Private Partnerships required greater knowledge of legal and financing issues; by including services related to operation and maintenance, such as parking lots and street maintenance and diversifying into new sectors, such as telecommunications.

The market now appears to revolve around four categories: domestic conglomerates, domestic construction groups, international conglomerates and international construction groups, as shown in Figure 19. A ranking of companies by revenue is compiled annually by the magazine Engineering News Record (ENR)**(13)**, as shown in Table 9, Table 10 and Table 11 in subsequent pages.

Table 9 – Top International Export Contractors (13)

The list of the "Top 250 International Contractors", published annually by ENR in August, ranks the 250 largest world construction contractors, both publicly and privately held, based on general construction contracting export revenue—generated from projects outside each firm's respective home country.

RANK		FIRM	2013 INTERNATIONAL REVENUE (USD MIL.)
2014	2013		
Europe's ten biggest (and ranking)			
1	1	Grupo ACS, Madrid, Spain	44,053.8
2	2	HOCHTIEF AG, Essen, Germany	34,845.0
4	4	VINCI, Rueil-Malmaison, France	20,292.6
6	6	STRABAG SE, Vienna, Austria	15,392.0
7	7	BOUYGUES, Paris, France	14,789.0
8	9	Skanska AB, Stockholm, Sweden	14,141.1
10	11	Technip, Paris, France	12,243.0
11	8	Saipem, San Donato Milanese, Italy	12,137.6
14	**	Ferrovial, Madrid, Spain	7,416.5
16	16	Bilfinger SE, Mannheim, Germany	6,853.5
The ten biggest in Japan (and ranking)			
27	32	JGC Corp., Yokohama, Japan	4,822.0
44	65	Chiyoda Corp., Yokohama, Kanagawa Pref., Japan	2,957.7
45	47	Obayashi Corp., Tokyo, Japan	2,889.0
54	50	Kajima Corp., Tokyo, Japan	2,386.8
70	57	Toyo Engineering Corp., Chiba, Japan	1,884.7
75	67	Shimizu Corp., Tokyo, Japan	1,580.7
88	70	Takenaka Corp., Osaka, Japan	1,236.5
90	76	Taisei Corp., Tokyo, Japan	1,150.0
91	75	Taikisha Ltd., Tokyo, Japan	1,109.7
97	80	Penta-Ocean Construction Co. Ltd., Tokyo, Japan	952.3
The five biggest from other countries (and ranking)			
3	3	Bechtel, San Francisco, Calif., USA	*23,637.0*
5	5	Fluor Corp., Irving, Texas, USA	*16,784.3*
9	10	China Communications Construction Group Ltd., Beijing, China	*13,162.5*
12	12	Construtora Norberto Odebrecht, Sao Paulo, SP, Brazil	*9,877.1*
13	15	Hyundai Engineering & Construction Co. Ltd., Seoul, S. Korea	*8,707.8*

Table 9 shows that European companies top the chart of international contractors by revenue (37 out of the top 100 and 9 out of the top 15 companies). The first Japanese general contractor, Obayashi, ranks 47th, which

shows that the major Japanese construction companies are not yet generating much revenue internationally (Note: JGC, Chiyoda and Toyo Engineering are mainly active in the petrochemical sector).

Table 10 – Top Global Design Firms (13)

The Top 150 Global Design Firms list established by ENR ranks the 150 largest world design firms, both publicly and privately held, based on total design-specific revenue, regardless of where the projects were located. The following data are extracted from the 50 first positions in the ranking

RANK		FIRM	FIRM TYPE	2013 TOTAL DESIGN REVENUE IN USD MIL
2014	2013			
The five biggest in the world				
1	1	AECOM Technology Corp., Los Angeles, Calif., USA.	*EA*	*7,240.9*
2	4	Jacobs, Pasadena, Calif., USA.	*AEC*	*6,820.2*
3	2	Worley Parsons Ltd., North Sydney, NSW, Australia	*EC*	*5,535.1*
4	3	URS Corp., San Francisco, Calif., USA	*EAC*	*5,270.0*
5	5	*AMEC, Knutsford, Cheshire, U.K. (EU)*	EC	5,041.0
The ten biggest in the EU (and ranking)				
5	5	AMEC, Knutsford, Cheshire, U.K.	EC	5,041.0
9	8	Fugro NV, Leidschendam, The Netherlands	GE	3,358.0
10	10	ARCADIS NV, Amsterdam, The Netherlands	E	3,341.0
15	14	Atkins, Epsom, Surrey, U.K†	EA	2,459.5
20	21	Mott MacDonald, Croydon, Surrey, U.K	E	2,011.6
26	24	ARUP Group Ltd., London, U.K.	E	1,556.2
28	29	Technip, Paris, France	EC	1,512.0
30	28	Ramboll Group A/S, Copenhagen S, Denmark	E	1,389.8
31	27	Tecnicas Reunidas, Madrid, Spain	EC	1,363.1
33	50	AF AB, Stockholm, Sweden	E	1,300.7

Table 10 shows that US companies dominate the top of the global design firm ranking with 10 EU companies present in the top 50.

The first Japanese company, Nippon Koei, appears in 67th position.

Table 11 – Top World Construction Contractors(13)

The Top 250 International Contractors list established by ENR ranks the 250 largest world construction contractors, both publicly and privately held, based on total construction contracting revenue, regardless of where the projects were located.

RANK		FIRM	2013 TOTAL REVENUE (USD MIL.)
2014	2013		
World's biggest five global contractors			
1	3	China State Construction Engineering Corp., Beijing, China	97,870.2
2	1	China Railway Construction Corp. Ltd., Beijing, China	96,195.0
3	2	China Railway Group Ltd., Beijing, China	88,944.0
4	6	China Communications Construction Group Ltd., Beijing, China	54,181.7
5	5	VINCI, Rueil-Malmaison, France (EU)	54,107.0
The ten biggest global contractors from the EU (and their rankings)			
5	5	VINCI, Rueil-Malmaison, France	54,107.0
6	4	Grupo ACS, Madrid, Spain	51,029.3
7	7	HOCHTIEF AG, Essen, Germany	37,012.8
8	8	BOUYGUES, Paris, France	35,993.0
15	16	Skanska AB, Stockholm, Sweden	18,446.5
16	15	STRABAG SE, Vienna, Austria	18,023.0
17	**	EIFFAGE, Asnieres-sur-Seine, France	16,941.0
25	32	Technip, Paris, France	12,399.0
26	21	Saipem, San Donato Milanese, Italy	12,310.2
27	27	Bilfinger SE, Mannheim, Germany	11,301.7
The five biggest global contractors from Japan (and their ranking)			
18	17	Obayashi Corp., Tokyo, Japan	16,154.0
21	22	Shimizu Corp., Tokyo, Japan	13,121.1
22	20	Kajima Corp., Tokyo, Japan	13,069.9
24	23	Taisei Corp., Tokyo, Japan	12,839.0
38	31	Takenaka Corp., Osaka, Japan	8,910.7

Note: as indicated: global contractor = all countries (own country + international markets)

Table 11 shows that Chinese companies dominate the top of the global contractor ranking, which likely reflects the size and dynamic of the Chinese domestic market. EU companies constitute one-third of the top 15 companies and Japanese companies rank considerably higher when taking the domestic market into account, which reflects the lucrative nature of the latter in Japan.

When comparing the size of companies, it is interesting to note that the total revenue of the top EU ranked global contractor, Vinci, is more than three times higher than the turnover of the top Japanese global contractor, Obayashi and in terms of international revenue alone, is seven times higher.

2.2.3 Building and construction material products and trends

Environmental trends, supporting wooden frame construction, include energy efficiency and green construction.

Most European countries strongly advocate implementing the Kyoto protocol. Between 1990 and 2004, the EU managed to reduce its greenhouse gas (GHG) emissions by 0.6%, led by Germany (-17%) and the UK (-14%). Meanwhile, North American emissions increased by approximately 20%. Consumer awareness of environmental issues is paramount in purchasing decisions, as reflected in the trends of energy efficiency and green construction that illustrate the importance of environmental issues related to home-buying behaviour.

It is estimated that one-third to one-half of all GHG emissions are attributable to building construction and operation costs. Consequently, the EU has implemented an energy-efficiency directive for buildings that prescribes that all new buildings must undergo an energy audit and have an energy rating awarded.

Table 12 – Estimated market share of wood for housing construction in selected European countries

Table 1
Estimated market share of house construction in wood in selected European countries
Source: AFCOBOIS, INSEE (France); German Federal Statistical Office (Germany); Department for Communities and Local Government, UKTFA (UK); ITFMA (Ireland); USDA (Denmark, Poland); QWEB from various sources for other countries

Country	Timber frame residential housing starts	Timber frame market share in total starts	Reference year
Ireland	28,000	30%	2006
UK	47,500	21%	2006
Belgium	8,244	18%	2004
Switzerland	7,200	18%	2004
Austria	6,300	15%	2004
Germany	17,959	12%	2005
Denmark	2,000	>10%	2006
Poland	3,000	5%	2006
France	12,000	3%	2006
Spain	3,150	<1%	2004

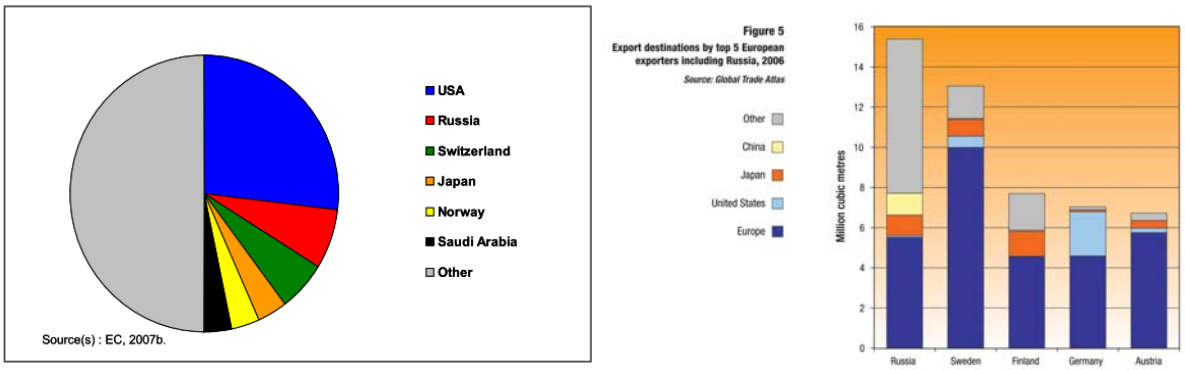


Figure 20 – Destination of EU ceramics in 2005 (left) and top 5 EU ceramics exporters in 2006 (right)

3 View of EU-Japan trade in the construction sector

Data relating to EU-Japan trade for the construction sector was mainly taken from the following sources:

- Eurostat(14);
- Statistics Bureau of the Ministry of Internal Affairs and Communications of Japan(4);
- Trade Statistics of Japan by the Ministry of Finance (15);

EU-Japan trade has been analysed in order to show general trends as summarised in Table 13.

Table 13 – Imports, exports and part of exchanges in total and with EU-28 by year

		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
JAPAN EXPORTS (billion EUR)	Total	417.3	454.8	478.2	515.1	521.2	531.3	416.3	580.7	591.4	621.6	
	To the EU	72.6	74.9	74.4	78.4	79.3	76.5	58.4	67.3	70.6	65.0	56.6
	%	17.4%	16.5%	15.6%	15.2%	15.2%	14.4%	14.0%	11.6%	11.9%	10.5%	
JAPAN IMPORTS (billion EUR)	Total	339.0	366.0	414.7	461.2	454.0	518.4	395.7	522.5	614.5	689.5	
	From the EU	41.0	43.5	43.7	44.8	43.7	42.4	36.0	44.0	49.1	55.6	54.0
	%	12.1%	11.9%	10.5%	9.7%	9.6%	8.2%	9.1%	8.4%	8.0%	8.1%	

Source: (14), adapted by Ingerosec

Despite an overall increase in volume of the European exports to Japan, the proportion of imports from Europe as a proportion of the total imports have been gradually declining and constituted only 8.1% in 2012.

3.1 EU-Japan trade data by country for building and construction products

The evolution in annual sales of building materials in Japan is summarised in the following table:

Table 14 – Annual sales of building materials in Japan

	2000	2005	2010	2011	2012	2013
Annual sales (billion JPY)	26,806	22,226	15,058	15,518	15,951	16,962

Source: (4), adapted by Ingerosec

Since statistical data hinders efforts to clearly distinguish the total of building and construction products and other manufactured goods, several products clearly definable as building construction materials were examined: stone, prefabricated buildings, cement blocks and tiles, ceramics and tiles, wood and others related to insulation. Data for 2014 corresponds to the January to November period, which means that corresponding values is not comparable to previous years.

3.1.1 Stone

The trade data between the EU and Japan and the change over the last few years for raw and processed stone are summarised in Table 15. Following a large decrease from 2000 to 2010 (see decrease in building material sales), exports from the EU to Japan have remained relatively stable since 2010. Italy, Portugal, Spain, Greece and Sweden/France represent 90% of EU exports to Japan.

According to data from Japanese customs, EU countries represent between 9 and 26% of the volume of Japanese imports for raw stone and between 1.4 and 2% of the volume of Japanese imports for processed stone, but more than 40% of the financial value of Japanese imports.

Table 15 – Export of raw stone from the EU to Japan by year

	2000	2005	2010	2011	2012	2013	2014
Total Export (thousand euro)	24,636.1	14,995.0	3,933.9	4,058.8	3,123.7	4,116.1	2,365.7
Italy's portion of the total	33.5%	22.0%	38.9%	52.1%	35.4%	23.3%	45.1%
Spain's portion of the total	31.4%	47.6%	25.9%	25.6%	38.9%	40.9%	24.3%
Greece's portion of the total	4.4%	11.4%	11.7%	5.1%	2.5%	7.0%	7.7%
Sweden's portion of the total	6.7%	5.9%	5.2%	3.5%	1.5%	6.5%	7.6%
Portugal's portion of the total	12.2%	7.5%	6.9%	5.7%	13.6%	8.9%	5.3%
Above five countries' portion of the total	88.2%	94.4%	88.7%	91.9%	91.9%	86.5%	90.0%

Source: (9), adapted by Ingerosec

Table 16 – Export of processed stone from the EU to Japan by year

	2000	2005	2010	2011	2012	2013	2014
Total Export (thousand euro)	52,932.1	29,106.2	8,696.6	10,087.3	11,133.1	10,724.7	10,219.3
Italy's portion of the total	70.9%	63.2%	58.8%	55.1%	55.0%	65.0%	51.0%
Greece's portion of the total	6.7%	10.2%	13.7%	9.8%	12.4%	10.1%	14.0%
Portugal's portion of the total	6.1%	9.9%	11.3%	10.2%	11.4%	11.1%	12.7%
Spain's portion of the total	7.8%	9.0%	8.1%	4.8%	8.1%	4.8%	9.4%
France's portion of the total	5.4%	1.6%	2.4%	13.6%	3.2%	3.2%	4.9%
Above five countries' portion of the total	96.8%	94.0%	94.3%	93.6%	90.1%	94.3%	91.9%

Source: (14), adapted by Ingerosec

The previous tables and the interviews carried out with building materials importers show that European exporters cannot compete on prices for stones, but a market still exists because Japanese customers are willing to pay for the "European image" of their purchase (stone from 'this place' in Europe) and therefore are ready to order European stone, mostly from southern Europe. At the same time, the customers are requesting European designs as well as raw products, which means demand for processed products sometimes exceeds that for raw products. Recently some European stones were imported to Japan via China where raw stones were processed.

3.1.2 Prefabricated buildings

After a large decrease from 2000 to 2010, exports from the EU to Japan remained relatively stable since 2010 for the five countries representing 95% of EU exports to Japan: Finland, Sweden, the Netherlands, Germany and Estonia.

According to data from Japanese customs, EU countries represent between 25 and 30% of the volume of Japanese imports for prefabricated buildings and a similar proportion of the financial value.

Table 17 – Export of prefabricated buildings from the EU to Japan by year

	2000	2005	2010	2011	2012	2013	2014
Total Export (thousand euro)	73,246.8	59,716.7	38,315.6	41,271.3	43,935.3	50,695.1	34,825.9
Sweden's portion of the total	41.5%	39.9%	54.1%	48.6%	48.3%	50.6%	51.3%
Finland's portion of the total	50.1%	46.4%	32.3%	34.9%	28.9%	32.4%	24.1%
The Netherlands's portion of the total	1.5%	3.5%	1.7%	1.5%	6.2%	3.5%	8.1%
Estonia's portion of the total	0.7%	3.6%	5.9%	6.4%	7.2%	6.1%	6.1%
Germany's portion of the total	0.9%	0.7%	1.0%	0.7%	1.7%	2.1%	5.9%
Above five countries' portion of the total	94.7%	94.1%	94.9%	92.1%	92.3%	94.7%	95.5%

Source: (14), adapted by Ingerosec

Log houses from north and west European countries compete with those from Canada and China. Even given the fact that the ratio of imports at the beginning of 2014 remains similar to previous years, with the weakness of the yen, European products are less competitive and more expensive than those of competitors. This factor will affect European imports to Japan in addition to Japanese policy on using local wood products.

3.1.3 Cement blocks and tiles

After a significant decrease from 2000 to 2010, exports from the EU to Japan have remained relatively stable since 2010 for the eight countries representing 95% of EU exports to Japan: Italy, the United Kingdom, Spain, Belgium, Austria, the Netherlands, Finland and Germany.

According to data from Japanese customs, EU countries represent between 1.7 and 2.1% of the volume of Japanese imports for cement blocks and tiles, but more than twice the proportion of the financial value.

Table 18 – Export of cement blocks and tiles from the EU to Japan by year

	2000	2005	2010	2011	2012	2013	2014
Total Export (thousand euro)	13,102.7	6,643.1	2,250.7	2,979.1	2,122.4	2,306.3	2,515.1
Italy's portion of the total	34.2%	45.4%	14.7%	12.8%	24.3%	21.1%	9.1%
UK's portion of the total	22.6%	18.9%	8.4%	16.1%	17.9%	16.1%	20.5%
Spain's portion of the total	14.2%	14.9%	17.8%	3.4%	13.5%	11.8%	17.3%
Netherland's portion of the total	0.4%	11.3%	39.8%	27.1%	12.4%	5.4%	16.6%
Austria's portion of the total	4.9%	0.0%	12.9%	10.8%	15.3%	25.9%	12.9%
Finland's portion of the total		0.2%	0.2%	0.7%	2.7%	1.9%	10.0%
Germany's portion of the total	0.9%	1.4%	1.3%	2.2%	6.4%	11.1%	9.3%
Belgium's portion of the total	17.8%	0.5%	0.6%	21.0%	0.1%	1.4%	0.7%
Above eight countries' portion of the total	95.0%	92.6%	95.6%	94.1%	92.6%	94.8%	96.5%

Source: (14), adapted by Ingerosec

Since price is an important criterion for such products, the application of European products will remain marginal compared with Asian competitors: China, Malaysia and the Philippines.

3.1.4 Ceramics and tiles

Exports from the EU to Japan have remained relatively stable since 2000 for the four countries representing more than 90% of EU exports to Japan: Italy, Spain, the Netherlands and France, with most (more than 80%) coming from Italy.

According to data from Japanese customs, EU countries represent between 12 and 20% of the volume of Japanese imports for ceramics and tiles, but more than 40% of the financial value.

Table 19 – Export of ceramics and tiles from the EU to Japan by year

	2000	2005	2010	2011	2012	2013	2014
Total Export (thousand euro)	34,518.9	39,974.3	24,348.9	27,844.4	33,010.7	35,706.4	37,551.8
Italy's portion of the total	61.9%	68.9%	78.8%	79.9%	84.3%	82.6%	85.3%
France's portion of the total	4.8%	16.7%	10.3%	8.3%	6.8%	7.5%	7.0%
The Netherland's portion of the total	5.5%	4.3%	1.8%	2.5%	2.5%	1.9%	1.6%
Spain's portion of the total	18.0%	2.6%	0.8%	0.5%	0.5%	0.4%	0.2%
Above four countries' portion of the total	90.1%	92.5%	91.6%	91.2%	94.1%	92.4%	94.2%

Source: (14), adapted by Ingerosec

As in the case of processed stone, Japanese importers are interested in European design of ceramics and tiles, so niche markets still exist, despite the higher prices of European products.

3.1.5 Wood products

Exports from the EU to Japan have remained relatively stable in EUR since 2000, with a slight increase in recent years. Three types of products represent about 95% of all exports: sawn wood, particle board and builders joinery. For sawn wood, the main exporting EU countries are Finland, Sweden and Austria, with recent development of exports from east European countries, like Romania, Latvia and the Czech Republic.

For builder's joinery, the main EU exporting countries are the same as for sawn wood, with exports also recently emerging from east European countries, like Estonia and Romania.

For particle board, the main EU exporting countries are Austria, Belgium and Germany, with exports also recently emerging from Poland and Romania.

According to data from Japanese customs, EU countries represent about 27% of the financial value of Japanese imports for wood products, although this proportion varies from one product to another. In 2013, the proportion of Japanese imports from the EU for wood products was 0.6% for rough wood, 37.6% for sawn wood, 2.6% for veneer sheeting, 9.9% for wood continuously shaped, 42.9% for particle board, 2.8% for wooden fibreboard, 1.0% for plywood, 68.2% for densified wood and 27.0% for builder's joinery.

Table 20 – Export of wood products from the EU to Japan (in thousands of EUR) by year

Type of wood product	2000	2005	2010	2011	2012	2013	2014
Rough wood	13,600.9	8,511.5	6,638.6	8,922.0	7,899.7	6,785.1	4,284.9
Sawn wood	586,687.3	621,487.8	613,757.3	650,947.7	6,750,56.4	910,968.1	557,757.8
Veneer sheeting	6,648.7	15,195.6	3,120.3	3,256.9	3,437.5	2,957.0	2,463.5
Wood continuously shaped	21,332.8	9,136.7	6,893.2	11,919.2	14,090.0	13,356.4	10,134.5
Particle board	32,759.3	61,082.8	47,910.6	68,738.4	65,174.5	67,596.3	57,359.7
Wooden fibreboard	10,223.0	1,410.0	1,140.5	1,553.3	1,495.8	1,388.5	2,000.8
Plywood	7,295.2	9,449.1	5,166.1	4,647.1	4,607.3	5,101.0	5,193.0
Densified wood	966.7	1,175.7	754.0	918.5	771.8	674.8	877.2
Builders Joinery	171,450.6	174,436.5	211,826.8	251,245.2	219,263.2	255,778.6	207,763.1
Total of above products	850,964.5	901,885.7	897,207.4	1,002,148.3	991,796.2	1,264,605.8	847,834.5

Source: (14), adapted by Ingerosec

Japan is a significant wood importer and, despite taxes, considerable potential remains to export European wood products to Japan. EU products face rivalry from Canada or the USA in particular, but remain competitive.

3.1.6 Other products

Other products include a considerable volume of glass and aluminium products, with about 28 million EUR of exports from the EU to Japan in 2013. Exports from Japan to the EU exceeded this amount for glass products alone.

According to data from Japanese customs, EU countries represent between 1 and 7% of the financial value of Japanese imports, except for plaster panels, where they represent about 20% but for a smaller amount.

Table 21 – Export and import of other products from the EU to Japan (in thousands of EUR) by year

Type of product	2000	2005	2010	2011	2012	2013	2014
Glass products export to Japan	19,829.1	19,261.2	17,946.4	17,838.5	17,420.1	16,671.1	18,482.9
Glass products imported from Japan	61,936.0	52,531.6	40,483.8	42,999.5	39,766.2	31,547.4	29,904.5
Aluminium products export from EU	14,917.2	11,667.1	5,343.1	6,559.7	7,377.6	11,538.7	16,909.8
Balance two products	-27189.7	-21603.3	-17194.3	-18601.3	-14968.5	-3337.6	5488.2

Source: (14), adapted by Ingerosec

The other products represent various niche markets where specific technical products[5] are of interest: here again, the "European image" of high technology and high quality is important to differentiate European products.

[5] Water resistant mortars materials, gravel surfacing honeycomb sheet, water proofing roof sheet, designed form work products, etc.

3.1.7 Ranking of most preferred makers by architects

Result of a Questionnaire Survey by "Nikkei Architecture" published on November 25, 2014.

Ranking scores are based on four major aspects: quality (functionality, durability, ease, energy reduction), design (design, variety, order-made), cost (cost performance, purchasing price, variety), technical support (accessibility to information, availability of samples, after-service).

1) Tiles and Bricks

These materials are selected 20.8% by the owner, 73.5% by the architect and 4.9% by the contractor (remaining percentage unknown).

Table 22 – Most preferred suppliers for Tiles and Bricks

	Name of Maker	Want to Use	Already Used	Still Unused
1	LIXIL	92.9%	86.9%	6.0%
2	TOTO	87.6	79.1	8.5
3	Danto	70.9	59.6	11.3
4	ABC Trading	61.7	44.0	17.7
5	Advan	59.6	47.9	11.7
6	Nagoya Mosaic	57.4	45.0	12.4
7	Nittai Kogyo	44.7	35.5	9.2
8	Kunishiro Taika Kogyo-sho	43.9	24.8	19.1
9	Hirata Tile	38.3	23.8	14.5
10	KY Tile	32.7	24.5	8.2

These are traditional Japanese roof tile manufacturers producing traditionally at local areas.

2) Clay Roof Tiles

These materials are selected 25.9% by the owner, 57.0% by the architect and 15.4% by the contractor (remaining percentage unknown).

Table 23 - Most preferred suppliers for Clay Roof Tiles

	Name of Maker	Want to Use	Already Used	Still Unused
1	Sanshu Noyasu	34.5%	21.5%	13.0%
2	Tsuruya	26.9	20.2	6.7
3	Maruei Togyo	21.1	11.2	9.9
4	Toyo Kawara	15.7	6.7	9.0
5	Shintou	13.9	9.9	4.0

6	Showa Yogyo	11.7	2.7	9.0
7	Ebisu Kawara Kogyo	11.2	3.6	7.6
8	Marushika Ceramics	9.0	2.7	6.3
9	Marusugi	7.6	4.0	3.6
10	KawaraTora Kogyo	7.2	1.8	5.4
10	Kimura Yogyo-Jo	7.2	0.9	6.3

3) Insulation Materials

These materials are selected 6.6% by the owner, 52.2% by the architect and 38.6% by the contractor (remaining percentage unknown).

Table 24- Most preferred makers for Insulation Materials

	Name of Maker	Want to Use	Already Used	Still Unused
1	Asahi Kasei Kenzai	73.2%	57.3%	15.9%
2	Asahi Fiber Glass	70.0	58.1	11.9
3	Achiles	59.9	44.5	15.4
4	Dow Chemical (Foreign Origin)	55.1	43.2	11.9
5	Nichiasu	54.2	44.1	10.1
6	Sekisui Kagaku Kogyo	48.9	33.9	15.0
7	Kaneka	41.0	29.1	11.9
7	Japan Rockwall	41.0	27.8	13.2
9	ABC Trading	40.1	24.7	15.4
10	Mag Isover (Foreign Origin)	33.5	24.7	8.8

4) Wooden Structure Exterior Insulation Materials

These materials are selected 10.5% by the owner, 67.5% by the architect and 18.1% by the contractor (remaining percentage unknown).

Table 25- Most preferred makers for Wooden Structure Exterior Insulation Materials

	Name of Maker	Want to Use	Already Used	Still Unused
1	Asahi Kasei Kenzai	47.6%	21.2%	26.4%
2	Achiles	38.9	16.0	22.9
3	Dow Chemical (Foreign Origin)	32.5	13.9	18.6
4	Asahi Fiber Glass	32.0	14.7	17.3
5	Kaneka	29.5	12.6	16.9
6	Sekisui Kaseihin Kogyo	25.6	11.7	13.9

7	Showa Denko Knezai	19.5	6.5	13.0
8	Toho Leo	18.2	6.1	12.1
9	Mag Isover (Foreign Origin)	13.0	6.1	6.9
10	Nohara Sangyo	12.1	5.2	6.9

3.2 EU-Japan data by country for foreign direct investment (FDI)

The Japanese Government wants to double foreign direct investments (FDI) in Japan up to a value of 35 trillion JPY by 2020 and attract manpower and technology to the country. The Ministry of Foreign Affairs promotes Japan's appeal as an investment hub via its diplomatic missions and in cooperation with JETRO(16). JETRO offers assistance to possible foreign investors, including information on all aspects of doing business in Japan, providing expert consultation on administrative procedures for FDI, supporting meetings with regulatory agency officials, relaying requests for regulatory reforms to the Japanese Government and offering free temporary workspaces in business areas nationwide (see Annex B).

The development of FDI between Japan and the EU in recent years is summarised in Table 26 and 27.

Table 26- Flows and stocks of FDI (in billion USD) by year

FDI	2000		2005		2010		2011		2012		2013	
FLOWS	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.
Total JAPAN	8.23	31.53	3.22	45.46	-1.36	57.22	-1.70	108.81	1.76	122.36	2.36	135.05
JAPAN - EU	3.91	10.97	1.86	7.87	0.13	8.36	4.54	36.05	-3.01	29.02	1.40	31.00
STOCKS	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.
Total JAPAN	50.32	278.44	101.32	388.20	214.72	830.46	226.22	957.70	206.30	1,040.46	170.60	1,117.2
JAPAN - EU	23.71	54.80	35.76	92.14	82.24	182.19	94.29	215.48	81.27	237.80	68.46	259.15

Source: (17), adapted by Ingerosec

Table 27- Main European countries for EU-Japan FDI stocks (percentage of EU total) by year

FDI STOCKS	**2000**		**2005**		**2010**		**2011**		**2012**		**2013**	
% of EU tot.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.	In.	Out.
U.K.	10.2	39.7	8.5	26.3	11.4	20.8	16.9	22.4	19.0	22.7	19.2	26.1
Netherlands	30.9	30.4	32.6	37.5	44.9	41.7	42.4	39.4	38.9	39.7	40.4	37.2
France	29.6	5.6	30.1	12.3	23.3	8.9	21.7	7.3	22.2	8.4	20.8	6.9
Belgium	0.7	-	1.3	8.4	0.1	7.8	0.2	6.8	0.3	6.7	0.0	7.5
Germany	16.4	7.5	16.5	6.7	12.2	8.4	10.2	7.8	10.3	7.1	9.4	6.6

Source: (17), adapted by Ingerosec

Tables show that the EU FDI in Japan represented 40% of all FDI entering Japan at the end of 2013, but the amount has been decreasing since peaking in 2011. At the same time, Japanese FDI entering the EU represented 23% of Japan's total FDI at the end of 2013: a stable proportion of Japan's total FDI that has been increasing since 2000.

It is unsurprising that Japanese companies have been obliged to seek development overseas considering the general weak economic condition of the Japanese market over the past 15 years.

Major EU partners for FDI include the United Kingdom, the Netherlands, France, Belgium and Germany with more than 5% of inward (total EU FDI entering Japan) or outward FDI (total Japanese FDI entering the EU). These countries all have long histories of economic and diplomatic relationships with Japan.

4 Existing market access issues in Japan for the construction sector trade

4.1 Results of surveys and previous studies

The construction sector and construction materials in Japan have been covered in several publications in previous years. Nevertheless, assessment is difficult because the concept of 'building materials' is only vaguely defined and also because the construction sector comprises various fields, which are unrelated to buildings, like the petrochemical and energy sectors.

Among the documents compiled and referred to for this study (in English), the following were of key interest:

- *Assessment of barriers to trade and investment between the EU and Japan*(18) listed a number of issues where barriers existed and surveyed EU companies established in Japan. Several themes and questions from that survey were also adapted and included in the questionnaire made for the building and construction materials sector.
- *Government Procurement in Japan – Obstacles and Opportunities for European SMEs* (14), particularly the section entitled 'The role of insiders (industrial associations)' states that "When dealing with the barrier of standards and licenses, due attention should be paid to the role of industrial associations as well and international membership of these associations should be duly promoted to create a level playing field."
- *A Quick Look at Housing in Japan*(20) is an annual report providing updated information on legislation and findings of surveys of the sector[6].
- *Market study on construction & Building Technologies Japan 2013*(21) contains general data on the local market, including imports of several products. (This report is distributed to participants in the Gateway to Japan missions in the construction sector).
- *Taking Action: The EBC Report on the Japanese Business Environment 2014*(22) is an annual white paper publication that contains a section entitled 'Construction: issues and recommendations'. In 2014, the first topic of the 'Key Issues and Recommendations' was "Harmonisation of building material standards and contractor qualifications".

The above publications indicate that issues related to standards are some of the most important issues facing companies and their representative institutions. This study therefore targeted various audiences to verify these issues and receive feedback and opinions on them.

Note: surveys/questionnaires are included in the Annex C.

[6] The Building Centre of Japan re-publishes the English version of the Building Standard Law every two years to communicate changes in the Japanese version of the legislation.

Table 28- List of surveys and interviews undertaken during the study

No.	Entities surveyed	Period	Comments
1	EU Member States' Diplomatic Missions to Japan	Nov. 2014	Questionnaire (English version, two pages) sent to representatives of the 28 EU Member States' commercial sections in Japan. 11 responses received (response rate around 40%). Survey undertaken with the support of the EU-Japan Centre for Industrial Cooperation.
2	Participants to Japan Home and Building Show 2014	Nov. 2014	One-page questionnaire in E/J to companies and associations from the EU, Japan and other countries present at the Japan Home and Building Show 2014 exhibition (Tokyo Big Sight). 67 respondents, 20% of the companies participating in the exhibition[7].
3	EU companies exporting to Japan & Japanese companies importing EU products	Nov-Dec. 2014	Delphi-type questionnaire (English and Japanese versions, 18 and 23 pages, respectively). Responses were received from 11 out of 180 recipients, representing an overall response rate of approximately 6%.
4	Suppliers/purchasers in Japan of EU BCM, mainly architects (from the EU and Japanese) living in Japan	Jan. 2015	Delphi-type questionnaire (English and Japanese versions, 18 pages). Responses from nine companies, including two companies run by architects from the EU.
5	Companies participating in the Gateway to Japan Programme	Feb. 2015	Survey originally realized by the Gateway to Japan programme (EU Commission), as an ex-post evaluation of the result of the Gateway missions in the BCM domain
6	Companies participating to Kenchiku + Kenzai ten (Architecture + Construction Materials exhibition)	March 2015	"Kenchiku + Kenzai ten" is the other "big" exhibition in the BCM domain, held in March this year. Contacts have been established with around ten selected participants.
7	Interviews	Oct. 2014/ March 2015	In addition to these collective actions, 24 individual interviews were realized by the study team during this study.

Source: Ingerosec

[7] The Japan Home and Building Show annual exhibition held in autumn at the Tokyo Big Sight (Tokyo city centre area), is one of the two biggest exhibitions of building and construction materials in Japan. The other main exhibition, held in spring (March-April), also at Tokyo Big Sight, is Architecture + Construction Materials Exhibition (*Kenchiku + Kenzai ten*).

The responses to the surveys, questionnaires and interviews highlighted several issues and common concerns regarding the positioning of EU BCM in Japan:

Most of the companies surveyed and contacted were SMEs, should it be from the Japanese side or from the EU side. As most of the surveys were made at random, this shows that the structure of the BCM domain is quite similar for the entities of the EU and Japan.

This has to be put in parallel with the fact that several EU companies are active in Japan in "niche markets", such as mosaic tiles and log houses for instance. What happens as a niche on a broader scale actually often constitutes the core business of some SMEs, underlining the importance of the Japanese market for EU SMEs.

a - General business issues:

As per the markings proposed in the surveys, the general openness of the market averaged half marks, which indicates a mid-open or mid-closed market, but roughly 50% of the Japanese companies surveyed indicated that there were no difficulties specific to imported products.
From that perspective, competition with non-EU products from Australia, Canada, China, Russia (log houses for instance) and the USA was mentioned.
The mode of selling BCM products to Japan varies, including, ex-works directly from the place of manufacture to a trading company.
A decrease in business was noted in August 2014 after the increase in consumption tax in Japan.

b– Standards

The main requests and complaints emitted, during surveys and interviews, concerned Japanese standards: lack of clear standards; problems with certification and understanding of fire regulations (which depend from the city level); certification of JIS is most often necessary, but imported products sometimes benefit from MLIT approval, even if not JIS-compliant;

The regulatory environment appears burdensome with technical standards being the most important difficulty faced. Regulatory standards for fire resistance were frequently mentioned. Almost 60% of EU companies would like harmonisation with EU standards, whereas Japanese companies favoured internationalization of standards. Compliance with standards appears a definite advantage;

Information on standards appears difficult, regardless of whether in Japanese or English. Some companies also complained over a lack of information dissemination when standards changed;

Regarding the assessment procedures, the use of international standards was praised in half the responses, while mutual recognition of procedures was mentioned as an alternative. Only a few issues with compliance assessments were noted, but where they were, they were found to have a large effect.

Some companies also favoured the possibility of passing the tests in Europe in selected EU laboratories and testing offices;

Complying with local standards or labelling is considered a definitive advantage on the local market. From this perspective, Japanese companies indicated that compliance with Japanese standards could also be an advantage elsewhere. The use of Japanese standards for accessing international markets, South-East Asia in particular, should be studied further, while possession of labelling is more or less important depending on the size and reputation of the company on the local market.

Simplification/internationalization and/or mutual recognition of standards is a key issue. The possibility to use EU standards and/or results of tests performed in selected EU centres is important. This would reduce cost of transport to testing laboratories and facilitate management of the test data.

c – Import Duties

No tariff "barriers" were mentioned in most responses, except in one case where they were considered tolerable. Despite import duties existing for some products (see infra), several companies indicated that the EU products that they imported were price-competitive, even with products from Asian countries;

Different standards and import taxes apply for composite wood (3.9%), but no import duties for log houses, since they are not considered wooden materials. Furthermore, no JAS certification is necessary for solid wood.

d – Prospection of market - Presence in exhibitions

The Gateway to Japan programme provided good support to some companies, at least one of which succeeded in establishing a local office locally over the last years[8];

Collective booths – from countries such as Austria, Germany and Italy and cities such as Oulu and Rovaniemi in Finland – were present at the Japan Home and Building Show 2014, as companies with their own individual booths – such as EU companies from Estonia and Spain (via an importer).

The following points were highlighted:

- The need to find a middleman or local dealer to cope with language problems;
- Reliability of products is an advantage on the local market;
- Most companies selling in Japan have made promotional material in Japanese (except for those selling ex-works);
- Apart from EU and Japanese companies, there are companies founded, incorporated and developed in Japan by EU nationals, which can play a specific and significant role in imports of BCM from the EU to Japan.

e – Various issues

Among other issues, problems of "subventions" or "government assistance" were indicated and concurred by meetings and interviews undertaken at the time of the survey;

All surveyed participants responded positively on the necessity of an "European image" for EU BCMs. The product range available on the Japanese market is usually the same as in Europe (rather than tailored to the needs of Japanese clients);

The importance of the JPY/EUR exchange rate was emphasized in most responses from EU companies. Those who described it as unimportant were usually companies located in niche markets, where product specification outweighs cost.

As a conclusion from the surveys:

BCMs from the EU have a positive image, but no federative logo or label yet.

No specific problems/difficulties/barriers regarding product imports have been mentioned, but issues with the general system complexity and related procedures. Although such issues also apply to Japanese companies, the difficulty is more important to EU companies, due to problems with knowledge of the Japanese language,

[8] On the issue of facilitating the establishment of commercial entities in Japan, it is important to note that the Japanese Government will relax visa requirements for foreigners launching businesses in Japan from April 2015 (51).

knowledge of Japanese business practices and knowledge of local businesses in each city/prefecture, and taking into consideration the overall duration of procedures in Japan.

The duration of the process of standard compliance and certification for a new product has to be pointed out: two years is considered average. This is significant because a Japanese company, over two years, would generally promote products by participating in trade shows, visiting potential buyers and registering with associations. Such promotion, as a means of testing the market, requires a permanent presence/representation in Japan.

The cost of procedures is important and affects the ability to profit from trade, so any variation in the exchange rate will influence imports.

These points have to be duly considered to gain a complete and objective view of the system when looking to increase the presence of EU BCMs in Japan.

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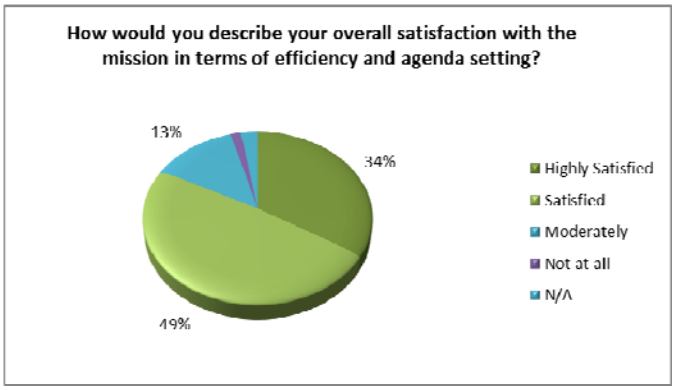
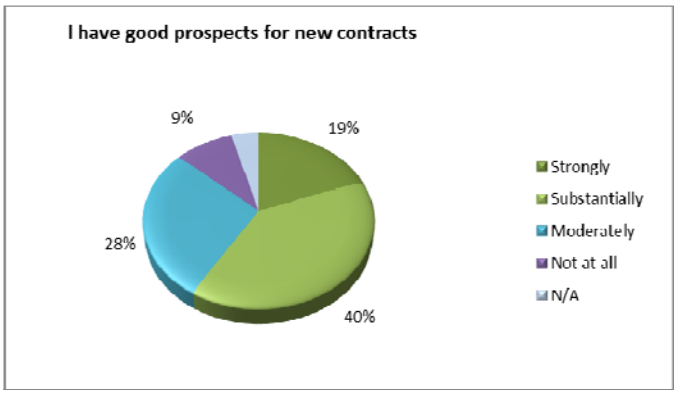
f– Focus on the Gateway to Japan Programme

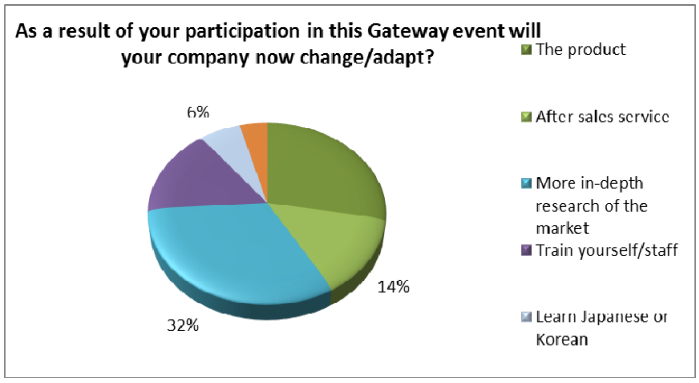
Surveys of EU companies that participated in the Gateway to Japan mission in 2014 were undertaken by the EU Gateway Programme:



Companies were mostly satisfied or highly satisfied with their missions and improved their understanding of the Japanese market.



Prospects for signing contracts were good or very good for most companies, but few managed to do so during their missions.



The missions led to further in-depth research of the market (32%)

Overall**, 91% of participants** are willing to participate again in the Gateway to Japan programme. The following subsequent actions were considered: sending information or product samples, new missions to Japan and inviting contacts to Europe.

4.2 Tariff measures or barriers

4.2.1 Taxation system and tariff duties

Construction materials imported to Japan are subject to customs duty and consumption tax.

4.2.1.1 Consumption Tax

Consumption tax is imposed at a flat rate of 8% on almost all goods imported into or manufactured in Japan. The amount of consumption tax payable on imported goods is calculated based on the customs value of the goods plus customs duty.

An increase in the consumption tax rate to 10% was planned to be effective on 1 October, 2015, but has be delayed until April 2017 following elections in the Lower House of Parliament on 15 December, 2014.

4.2.1.2 Tariff Duties

The tariff duties imposed on imported construction materials are defined in accordance with the harmonised commodity description and coding system (HS - Harmonised System) of tariff nomenclature developed and maintained by the World Customs Organisation.

Japan's Tariff Schedule annexed to the Customs Tariff Law provides the general rate. However, a temporary rate for certain products may apply instead of the general rate, which includes a World Trade Organisation rate (WTO Concession Schedule), an Economic Partnership Agreement rate or a preferential rate (Generalized System of Preferences for designated developing countries).

The most recent tariff rates applied can be obtained from the Japanese Customs' website (23). Inquiries regarding customs formalities can be obtained from a customs counsellor or using the Advance Classification Ruling System. Information on the system is given in English on the Customs website, although the form to be completed is in Japanese.

4.2.2 Comments on tariff duties for European construction materials

The HS classifies goods in 21 sections (I to XXI) and 97 Chapters (1 to 97). Construction materials are mainly covered in the sections and chapters shown in Table 29 (see complete list of sections and chapter titles in Annex A).

Table 29 - Sections and chapters concerning construction materials' tariff duties from the harmonised commodity description and coding system

SECTION	CHAPTERS
V: (Mineral products)	25, 26 and 27
VI: (Products of thechemical or allied industries)	28, 29, 32, 34, 35, 38
VII: (Plastics and articles thereof; Rubber and articles thereof)	39, 40
IX: (Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, ofesparto or of other plaiting materials; basketware and wickerwork)	44, 45, 46
X: (Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard; paper and paperboard and articles thereof)	47, 49
XIII: (Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware)	68, 69, 70
XV: (Base metals and articles ofbase metal)	72, 73, 74, 75, 76, 78, 79, 81, 83
XX: (Miscellaneous manufactured articles)	94

Chapters in bold in the above table focus more specifically on construction materials related to insulation products, wood products, ceramics and tiles.

An investigation into tariff rates collected showed the following:

- Rates for duties on Ceramics are defined by the section **69** (*Ceramic Products*) and vary from 0 to 2.1%;
- Rates for duties on stone are defined by sections **25.15** (*Marble, travertine, ecaussine and other calcareous building stone*), **25.16** (*Granite, porphyry, basalt, sandstone and other building stone*) and **68.02** (*Worked building stone (except slate) and related articles*). Stone is duty-free;
- Rates for duties on wood products are mainly defined in sections **44.03** (*Wood in the rough, whether or not stripped of bark or sapwood, or roughly squared: free of duties*), **44.07** (*Wood sawn or chipped lengthwise, sliced or peeled, whether or not planed, sanded or end-jointed, of a thickness exceeding 6 mm: duties between 0 and 6%*), **44.08** (*Sheets for veneering (including those obtained by slicing laminated wood), for plywood or for similar laminated wood and other wood: Duties between 5 and 6%*), **44.09** (*Wood (including strips and friezes for parquet flooring, not assembled) continuously shaped: Duties between 3.6 and 7.5%*), **44.10** (*Particle board, oriented strand board (OSB) and similar board (for example, waferboard) of wood or other ligneous materials: Duties between 5 and 7.9%*), **44.11** (*Fibreboard of wood or other ligneous materials: Duties 2.6%*), **44.12** (*Plywood, veneered panels and similar laminated wood: Duties between 6 and 10%*), **44.13** (*Densified wood, in blocks, plates, strips or profile shapes: Duties 7%*) and **44.18** (*Builders' joinery and carpentry of wood, including cellular wood panels, assembled flooring panels , shingles and shakes: Duties between 0 and 5%*);
- However, in accordance with section **94.06** (*Prefabricated buildings*), prefabricated wood houses are duty-free (information given by suppliers of EU log house exported to Japan);
- Rates of duties for insulation products: glass wool is duty-free.

Other products are too diverse to be properly mentioned.

4.3 Non-tariff measures and/or non-regulatory issues

4.3.1 Language problems

The language of Japan is Japanese.

Japanese is considered a complex language[9]. EU exporters must consider this point when undertaking business. All information must be translated by a professional translator. While registered translation businesses suffice for general communications, trained translators specializing in building and construction materials should be sought.

The potential for miscommunication in prose makes tabulated and diagrammatical information even more important. Presenting such information clearly and logically is vital to successful written communication.

Face-to-face meetings should not be underestimated as a means of promoting products to non-English speaking counterparts, whether via VoIP (Voice over Internet Protocol video) calls or in person. Indeed, Japanese business practice tends to favour such discussions when making transactions. The advantages are that confirmation can quickly be sought and body language or sketches can be used to assist verbal communication.

Generally, counterparts are not expecting perfect Japanese, but products that can meet their needs, which means explanatory material delivered to them for that purpose must be clear and unambiguous.

4.3.2 Cultural differences

Japan has developed a unique civilization in an archipelago separated from other landmasses by 150km of sea. In addition, the island country was isolated from foreign influences for two centuries. Nowadays, Japan is closely connected internationally, but maintains its singular social and business cultures.

掻き寄せて	*Kaki yosete*
結べば柴の	*musubeba shibano*
庵なり	*iori nari*
解くればもとの	*hodokureba moto no*
野原なりけり	*noharanarikeri*

Branches
Gather and tie them
There is a hut
Untie them, you will have
The plain as before

For instance, reality is often considered more as a juxtaposition of pieces than a harmonious whole:

As shown in this poem (*Tanka)* quoted by Junichiro Tanizaki (1886-1965), (24), the traditional world view centres on a coherence between segment panels, combined to build a new entity.

This juxtaposition of elements is namely key to the Japanese urban landscape. It lacks the same components as European thinking and distinguishes between such aesthetic values as ‘gleam’ and ‘shine’ (Tanizaki, *op. cit*.).

The traditional Japanese meal is another good example: “nice overall presentation but no determined order in the way dishes must be dealt with and eaten.”[10]

[9] Reference must be made at this point to the famous film *Lost in Translation* (Sofia Coppola, 2003), which epitomises the linguistic and (inter)cultural shock sometimes experienced when visiting Tokyo, Japan.

[10] Quoted from *L’Empire des Signes* (39).

Another significant difference in perception between the EU and Japan relates to the home environment. Traditional Japanese houses are hot in summer and cold in winter. In summer, houses are left wide open to allow natural air to flow through. In winter, houses are generally cold and rooms are heated one by one when occupied.

Heating is via air-conditioners or other portable space heaters to heat rooms, or radiant heaters or *kotatsu (*low heated tables with a blanket, as shown in Figure 21) to heat individuals. Central heating systems remain rare outside Hokkaido.

Heating systems have been further developed in ways differing from Europe, such as heated toilet seat systems and Japanese-style baths, called *ofuro*, with self-regulating heating systems to maintain the water temperature.

Figure 21 – The Japanese *kotatsu* (25)

Japanese housing and Japanese culture in general, values the harmony with the environment, even if the surrounding environment is cold, noisy or humid. European- and Western-style housing has grown in popularity, but remains in a minority. Demand for cooling systems has been strong for almost three decades and most houses and apartments now have at least one air-conditioning unit.

There are also numerous examples of cultural differences among practices related to professional and business practices[11], such as the need to be on time, or slightly early, for appointments. Such practices can ease transactions and provide benefits such as additional time to become familiar with counterparts.

From that perspective, exchanging business cards when first meeting is an important tradition, because it is how names, positions and companies are explained. Business cards, to a lesser extent, indicate status and reflect the person, so should be treated with due respect and should not be written on, twisted or bent(26). Several Japanese characters exist for the same pronunciation of a name, which is challenging even for native speakers. Names are vital for creating rapport, so business cards are useful for reference and a sufficient quantity of them should always be brought to meetings.

The following two points can be of interest to exporters when preparing their presentations and written material:

In Europe, charts are read from left to right and from top to bottom, just like most modern Indo-European and Uralic languages. The Japanese language can be read in any direction, but is traditionally read vertically, from top to bottom and right to left and commonly adopts a horizontal style, from left to right and from top to bottom. This flexibility of writing direction means chart space can be used efficiently, but can be disorientating to those unfamiliar with the language and poses difficulties for translators with regard to word positioning and orientation.

[11] Regarding business practices in Japan, reference is made in particular to the comprehensive publication by the EU Gateway to Japan Programme entitled *Doing Business in Japan 2014* (EU Gateway Programme, 2014), particularly p. 19 and "Business etiquette in Japan".

Presentations are a common way to introduce products, whether at conference, exhibitions, or face-to-face meetings with clients. However, another significant difference is the approach to slideshow presentations. The European style tends to involve showing key points and information to back up the presenter, whereas the Japanese style tends to show most, occasionally all, of the presenter's speech.

Japanese counterparts often have the feeling that European presentations are too sparse and may question matters afterwards that were already covered verbally during the speech. Japanese language contains many words with identical pronunciation (homophones), so displaying language is a common way of explicitly conveying meaning and a good presentation should leave little to question.

Use of an interpreter to assist with presentations is necessary, but care should be taken as their role is limited to what is said by the presenter, which means visual elements cannot be fully conveyed.

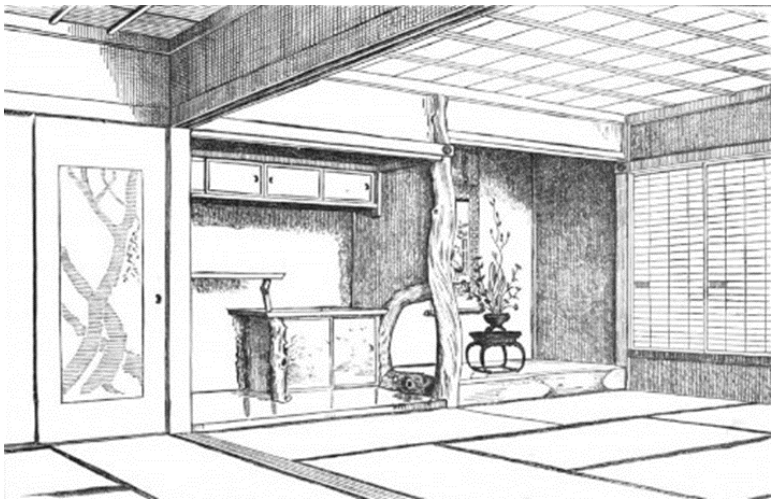


Figure 22 – *Chigai dana* and *tokonoma* in a traditional Japanese house (27)

Typical Japanese houses are made of wood, while European houses are made of masonry. Evolution in construction technologies mean wood is now often replaced with steel, as artisanal masonry with concrete.

4.3.3 Regulatory differences

The regulatory system in Japan is coherent and must be considered as a whole, and not considered part by part when compared to other systems. Several features distinguish it from others, as highlighted in the following:

- In Japan, if there is no existing regulation, then such activities are either not undertaken or prohibited. In most of EU countries, the contrary prevails.
- The national level regulatory conditions are not the only benchmark. Other local levels, including prefectures, cities and even districts within cities, can be involved often in regulatory processes.
- Laws and regulations can also be suspended after disasters and other major events. Two such examples include the aftermath of the Great Hanshin earthquake (1995) and the Great East Japan earthquake (2011), when the enforcement of standards was suspended to accelerate the process of reconstruction, only for temporary housing up to 2 years period.
- In addition to the law, consensus of the various parties involved in a project is also important. It is quite common practice, in parallel with the official authorisation process, to seek approval from those affected by construction before a project starts and compensate for disturbances that building or construction processes may induce.

- Both mandatory and optional standards exist, but numerous cases of exemptions or exceptions exist within the criteria.

The above features are technical but also cultural, from a broad perspective, because they have to be properly understood by foreign (and also domestic) companies looking to do business in Japan. From that perspective, the support of a local expert is of great value.

There is additional enforcement of technical requirements by entities other than MLIT, as described below:

- Hospitals: Regulated by the Ministry of Health and Welfare
- Schools: Regulated by the Ministry of Education (Monkashou). Hence schools are recommended to be built in wooden structure.
- Japan Railways (JR): JR own regulations, (inside ticketing gates buildings are controlled by JR regulations, not by MLIT ones). JR has their own architects in the company.
- Nihon Telegraph and Telephone (NTT), Japan Post: Own regulations as well

4.3.4 Absence of specific regulations

One problem often faced by importers is the fact that no unique and comprehensive document of regulation exists in any domain, in terms of technical requirements, product applicability or what can/cannot be done. It is quite common practice in Japan for standards to have more restrictive scopes and precise areas of application, which means that several regulations may have to be taken into consideration in parallel for a domain.

For new technologies, ministries often create promotional structures, assisted by renowned university professors, where potential producers can participate (in cases with competing technologies, similar competing associations exist.).

Associations create technical guidelines for new products, which can ultimately be endorsed by the state and become regulations. While awaiting such endorsement, the corresponding local market will be established, based on the positions and interests of various players[12].

4.3.5 Specific local conditions

Japan Inc. (as sometimes seen from abroad) is often only a mere theory. The various regions of the country have their local markets, features and players.

Some associations announce that they are an “all-Japan association” not because they are exclusively reserved for Japanese membership, but because they are proud to have achieved membership and/or to have representatives from all the various regions of Japan.

This singular feature also comes from the fact that BCM are often transported by sea. Then local ports (Niigata, Hakodate, Osaka and Fukuoka etc.) become regional distribution centres (50 in total in Japan).

[12] As shown, the associations are key players in their markets, both to clear new issues or to deal with existing ones. A comprehensive list of professional associations has been prepared in the scope of this study (see Annex D). They are good sources of information for foreign companies, although most of the information is in delivered Japanese.

5 Regulatory system in Japan for construction materials

5.1 Law on building construction and BCM certification

Materials used for building construction must conform to building regulations under Japanese law. The central government (national assembly, cabinet and MLIT) legislates the building regulatory systems and the building codes (technical requirements) that are enforced nationally.

Building regulations are administrated by local governments for prefectures, cities, municipalities, towns and also wards in Tokyo. Criteria in the building regulations determine the figures to be used for structural calculations, such as snow accumulation, wind pressure and seismic force; "specific external finishing restricted zones" for fire prevention; and specific procedures for construction work, like interim inspections. Local governments may in some cases impose more stringent or accept more lenient regulations or criteria than the national standard, subject to certain constraints.

The main laws relating to building regulations are listed in Table 30, an overview of which is presented in the following sections:

Table 30- Main building regulation laws

Field	Restrictive Laws (mandatory)	Promotional Laws (optional)
Building Design	Kenchikushi Law	
Structural Safety	Building Standard Law	Seismic Retrofitting Law
Fire Safety (Fire extinguishing equipment, etc.)	Building Standard Law	
Fire Safety (Fire extinguishing equipment, etc.)	Fire Service Law	
Hygiene	Building Standard Law	Building Management Law
Accessibility	Barrier-Free Law	
Energy Saving		Energy-Saving Law

Source: Ingerosec

5.1.1 Building Standard Law (BSL)

> **The Building Standard Law is the preponderant legal document that defines the regulatory system for building construction, as well as the technical requirements and certification process for BCM (an English version is available).**

5.1.1.1 General overview

Enacted in 1950 and periodically revised (most recently on 27 June, 2014), the BSL applies to all buildings throughout Japan and provides minimum standards concerning sites, construction, equipment and use of buildings. The BSL is enforced through administrative procedures and all buildings must conform to requirements determined by the BSL and documents under the same.

The technical requirements of the BSL cover fields such as structural safety, fire safety and hygiene. However, the BSL does not cover all aspects of buildings: for example, fire extinguishing equipment is covered by the Fire Service Law.

The BSL and related documents specify basic zoning codes, which indicate mandatory requirements for design and construction of every building. The requirements vary depending on the zone where the building is constructed. Zones and areas are designated by the city planning. These requirements stipulate the regulations to be used for buildings, such as height regulations, from the perspective of landscape/cityscape and others.

The Building Center of Japan (*Nihon Kenchiku Center*, (28) provides an English translation of the BSL together with the BSL Enforcement Order, BSL Enforcement Regulation, Ministerial Order Concerning Designated Qualifying Examination Body and 74 Notifications of MLIT (price:10,000 JPY excluding VAT). They include all amendments enforced up to 1 January, 2013.

Like other Japanese regulations, the BSL and related documents give general performance criteria and specific detailed application guidelines for particular cases, which are easy for technicians to apply.

For example, as a performance requirement, the BSL states that a building's principal structural elements must withstand the heat of a fire, of an intensity that could occur inside the building, until the fire has been extinguished. Compliance with the fire resistance performance requirement can be verified in two ways:

- Using specific provisions (those deemed to constitute sufficient fire resistance, such as thickness of concrete cover to steel bars in reinforced concrete) or the ordinary verification methods stated in the BSL and MLIT notifications ((1) calculation of the fire duration considering the volume of combustible material, size of opening, etc., (2) calculation of heat-resistance duration for principal structural elements in accordance with typical structural cases and (3) verification that (2) exceeds (1));
- Use of an advanced means of verification for new structural types. However, in this case, since no details are given for this method, it shall be discussed with a "Designated Performance Evaluation Body" before requesting approval by the Minister of MLIT. These verification methods are likely to increase the time and cost of the structural design, without any guarantee of approval.

The same process applies for structural resistance and other requirements. This verification procedure reduces chances of innovation and increases costs for European makers willing to introduce new technologies to Japan, but the same procedure also applies to their Japanese competitors. This is further explained in Section 5.1.3, relating to BCM certification.

5.1.1.2 Structure and contents of the BSL

The structure and contents of the BSL are detailed in Table 31.

Table 31- Structure and contents of the BSL

Item	Content
BSL	The Building Standard Law (law No. 201, enforced on 24 May, 1950, most recently amended by Law No. 92 of 2014, enforced on 27 June, 2014) has 106 articles and specifies the building lifecycle from construction to demolition, including the design, construction administration, control of design and construction conformity, relations between site and construction, construction safety and equipment, use of buildings within city planning areas, approval of buildings and building construction materials, and equipment and maintenance obligations. This law does not contain specific criteria, but refers to enforcement orders to be imposed by related ministries.
Enforcement orders	The Building Standard Law Enforcement Orders (Cabinet order No. 338, enforced on 16 November, 1950 most recently amended by No. 239, enforced on 20 July, 2014; and MLIT

Item	Content
	order No. 13, enforced on 26 April, 1999, most recently amended by No. 76, enforced on 13 September, 2013) stipulate provisions for the performance-based design of buildings and their corresponding evaluation systems. The orders mainly deal with the following: ▪ Detailed rules for compliance inspections (interim and final), confirmation and certification, allowed inspectors, periodic reports, "Designated Confirmation and Inspection Body", "Designated Structural Calculation Review Body", "Designated Approval Body", certification of "type-approved products", "Recognized Approval Body" and "Designated Performance Evaluation Body"; ▪ General requirements for building structures (minimum criteria for openings, ventilation systems, safety measures for asbestos and formaldehyde, room dimensions, sound insulation, stairs and sanitation facilities); ▪ Minimum criteria for structural strength and design. The order deals with minimum/maximum dimensions or characteristics for typical building structures (wooden, masonry, reinforced hollow concrete block masonry, steel, reinforced concrete, steel-encased reinforced concrete and plain concrete), loads and external forces to be applied to structures, their combinations, material and allowable strength; ▪ Technical criteria regarding fire-resistive and quasi fire-resistive performance and fire protection (including fire compartments, fire doors and walls and roofs); ▪ Technical criteria regarding evacuation facilities (including corridors, escape stairs and entrances/exits, smoke exhaust, emergency lighting systems), interior finishing and equipment (including plumbing, ventilation, elevators, escalators and lightning conductors); ▪ City zone planning is required based on BSL, which dictates the requirements for land use or building type, building design (including its height and shadow) and fire-protection or quasi fire-protection; ▪ Rules for easing restrictions for particular structures.
Enforcement Regulation	The BSL Enforcement Regulation deals with the procedure for compliance inspections and documents to be attached to inspection applications.
Notifications of MLIT	Notifications of MLIT stipulate particular methods or products for building construction in accordance with the provisions of the BSL Enforcement Order articles. These notifications deal with structural safety (41 notifications), with fire resistance and fire prevention (21 notifications) and others (12 notifications). These notifications give detailed criteria for building design, particularly cases with reference to Japan Industrial Standards (JIS), Japan Agricultural Standards (JAS), or with particular values given in the notifications. For example, notification No. 2464 of 26 December, 2000, directly specifies the design strength for carbon steel of various types, without referring to a JIS.

Source: Ingerosec

5.1.2 Other laws and regulations related to building and BCM

Complementary regulations apply in addition to the BSL, the contents of which have to be reviewed for specific domains or application purposes.

In parallel to the BSL and related documents, MLIT has a list, available online in Japanese, of 21 related applicable laws concerning:

- **Architect Act** (Act No. 202 of 1950/05/24, last revised by law No. 92 of 1014/06/27), including Enforcement Order (No 201 of 1950) and Enforcement Regulation (No. 38 of 1950);
- **Act on the Rational Use of Energy** (Law No. 49 of 1979), including Enforcement Order (No. 267 of 1979) and Enforcement Notification (No. 74 of 1979);
- **Wastewater Purifier Act** (Law No. 43 of 1983), including Enforcement Order (No. 310 of 2001), which is a ministerial ordinance on technical standards for purifying water tanks and installation and ministerial ordinance to authorise models for purifying water tanks;
- **Act for Promotion of Smooth Mobility of Old and Disabled Persons (**New Barrier-free Law**)** (Law No. 91 of 2006), including Enforcement Order (No. 379 of 2006);
- **Act on Promotion of Construction of Specified Designated Building for smooth use by Old and Disabled Persons** (*Heartful* Building Law) (Law No. 44 of 1994), including Enforcement Order (No. 311 of 1994) and Enforcement Regulation (No. 26 of 1994);
- **Act on Promotion of Improvement of Resistance to Earthquake of Buildings** (Law No. 123 of 1995), including Enforcement Order (No. 429 of 1995) and Enforcement Regulation (No. 28 of 1995);
- **Fire Service Act** (Law No. 186 of 1948), particularly Articles 9, 9-2, 15 and 17;
- **Outdoor Advertisement Act** (Law No. 189 of 1949), particularly Articles 3 to 5 (limited to parts related to the prohibition or restriction of the installation or posting of advertisements);
- **Port and Harbour Act** (Law No. 218 of 1950), particularly Article 40, paragraph 1;
- **High Pressure Gas Safety Act** (Law No. 204 of 1951), particularly Article 24;
- **Gas Business Act** (Law No. 51 of 1954), particularly Article 40-4;
- **Parking Place Act** (Law No. 106 of 1957), particularly Article 20;
- **Waterworks Act** (Law No. 177 of 1957), particularly Article 16;
- **Sewerage Act** (Law No. 79 of 1958), particularly Article 10, paragraphs 1 and 3 and Article 30, paragraph 1;
- **Act for Regulation of Residential Land Development, etc.** (Law No. 191 of 1961), particularly Article 8, paragraph 1 and Article 12, paragraph 1;
- **Act on Improvement of Urban Distribution Centres** (Law No. 110 of 1966), particularly Article 5, paragraph 1;
- **Act on the Securing of Safety and the Optimisation of Transaction of Liquefied Petroleum Gas** (Law No. 149 of 1967): particularly Article 38-2;
- **City Planning Act** (Law No. 100 of 1968), particularly Article 29, paragraphs 1 and 2; Article 35-2, paragraph 1; Article 41, paragraph 2 (including having amended Article 35-2, paragraph 4 of the same act as required); Article 42 (including cases applicable to Article 53, paragraph 1); Article 43, paragraph 1; and Article 53, paragraph 2;
- **Law on Special Arrangements for Countermeasures against Aircraft Noise around Specified Airports** (Law No. 26 of 1978), particularly Article 5, paragraphs 1 to 3 (including cases applicable to paragraph 5 of said Article);
- **Act on the Promotion of Safe Use of Bicycles and Overall Promotion of Parking Measures for Bicycles, etc.** (Law No. 87 of 1980), particularly Article 5, paragraph 4;
- **Act on Countermeasures against Damages from Specific Urban River Flood** (Law No. 77 of 2003), particularly Article 8.

5.1.3 Certification of building and construction materials

> **While JIS and JAS are applicable in most cases, additional requirements provided in BSL notifications shall be considered. Some European institutes already act as JIS or JAS certification bodies. For cases not covered by JIS and JAS standards, products can be certified by obtaining MLIT approval after testing carried out by a designated performance evaluation body in Japan.**

5.1.3.1 General aspects of BCM certification

Requirements for Building materials, products or construction methods are specified in the building codes (BSL, BSL Enforcement Order and MLIT notifications) and related standards (JIS and JAS).

If (European) materials or products follow the given specifications, they can be applied in construction without much technical or regulatory difficulty.

One key aspect of the BSL is the requirement for fire, weather and earthquake resistance. Weather and earthquake resistance include the ability (of fixation systems for roofing, interior and exterior materials, etc.) to resist detachment under wind, vibration or impact loading. Experience of earthquakes in Japan shows that fires occurring after seismic activity may have a similarly devastating effect. Avoiding propagation of fire is therefore crucial and all fire-resistant parts of a building must remain functional after an earthquake. The BSL, however, proposes a process to introduce new building materials, products or construction methods following particular approval by the Minister of MLIT. This approval is given after evaluation by a designated performance evaluation body (DPEB), such as the Building Center of Japan (28). According to the Building Performance Standardisation Association, there are 26 Japanese bodies and three overseas bodies (one German, one Swedish and one Korean), all for formaldehyde only (29). (refer to Annex K)

Any foreign body is not prevented from applying free of charge to be recognized as an overseas performance evaluation body (OPEB) and application guidelines and criteria are given in English on MLIT Website (30). However, most of the application documents must be written in Japanese, and performance evaluation reports have to be translated into Japanese.

It is possible to use tests from overseas testing organisations contracted with Japanese DPEB, in which case testing is undertaken overseas under approved procedures, followed by performance evaluation of the results in Japan.

Each DPEB or OPEB has a designated scope of work and a list of services/items that it can evaluate. However, the list of services and accredited bodies may vary in time and must be checked before an evaluation is made. For example, the English version of the MLIT website announced that BCJ is undertaking performance evaluations of formaldehyde-emitting building materials, but the more updated Japanese version of this website announced that BCJ no longer undertakes such evaluations (30).

After performance evaluation by a DPEB or an OPEB, a performance evaluation report must be submitted to MLIT together with an application for ministerial approval.

5.1.3.2 Japan Industrial Standards (JIS) and Japan Agricultural Standards (JAS)

As referred to in the notifications of the BSL, JIS and JAS are applicable in many cases.

The Japanese Industrial Standards Committee (JISC), established within the Ministry of Economy, Trade and Industry (METI), is responsible for adopting and revising JIS. As of the end of March 2013, a total of 10,399 JIS had been published in Japanese, some of which also in English. An evaluation of the consistency between JIS and international standards (ISO and IEC) made by JISC at the end of March 2013 found the results shown in Table 32:

Table 32 - Consistency between JISs and international standards (ISO and IEC), March 2013

(1) Total number of JISs	10,399 standards
(2) Number of JISs with corresponding international standards	5,725 (55%)
(3) JISs identical to international standards (IDT)	22% (40% of point (2))
(4) JISs modified from international standards (MOD)	31% (57% of point (2))
(5) JISs derogating from international standards (NEQ)	47%

Source:(31), adapted by Ingerosec

JISC fosters cooperative relationships with international standardisation organisations: CENELEC and CEN in Europe, NIST and ANSI in USA, and with Asian organisations. On 13 November, 2014, CEN/CENELEC and JISC signed a joint cooperation agreement to promote the harmonisation of standards. This follows the first MoU with CEN signed in June 2008 and with CENELEC in October 2005.

Harmonisation of JIS and CEN standards can be an important step for the building construction material sector. However, this sector is not considered a priority for Japan, so persistence from European authorities will be necessary.

For the civil engineering and architecture division, 662 JIS were valid as of 20 January, 2015, with 207 (31%) published in English. The JISs are accessible from the Japanese Standards Association (JSA) online store, also available in English (32).

JASs are established by the Ministry of Agriculture, Forestry and Fisheries (MAFF) and deal with wooden building and construction materials. The ten existing standards are available in Japanese on the MAFF website (33). Seven out of ten JASs have been translated into English and can be purchased from the Japan Plywood Inspection Corporation (JPIC) by direct inquiry.

Building materials and products used in important parts of the buildings must conform to JISs, JASs and/or must be approved by MLIT.

The building materials and products considered as important from the viewpoint of structural safety, fire safety or sanitation perspectives, as per the following:

- Elements necessary for structural resistance, including those used in foundations, columns and bearing walls;
- Parts for fire-resistive, quasi fire-resistive or fire-preventive construction;
- Opening fire protection assemblies specified in Article 109 of BSL or part thereof;
- Interior or exterior parts of buildings specified by the Minister of MLIT as important for safety or fire prevention;
- Partition walls, removable floorboards, floors of the lowest floor, small beams, pent roofs, small stairs, outside stairs, balconies or other parts similar thereto, other than principal building parts specified by the Minister of MLIT as important for safety or fire prevention;
- Building equipment or related parts (excluding equipment subject to certification as specified in the Fire Service Law, electrical appliances as defined in Article 2 paragraph 1 of the Electrical Appliance and Material Control Law, etc.).

Manufacturers, resellers or processors wishing to display the JIS mark on their products need to acquire JIS certification from an accredited certification body. The certification process includes auditing of the quality management system (a review of the submitted documents and on-site audit) and tests of product compliance to the corresponding JIS. After acquiring certification, a “Certification Maintenance Surveillance” is

implemented by the accredited certification body at the frequency defined in the certification agreement (at least every three years).

The list of accredited certification bodies can be obtained from the JISC Website (34). As of 11 November, 2014, there were 24 accredited certification bodies, including two from Korea and one from Australian.

Most building products are covered by JIS, except several forestry products: logs; sawn lumber; glued laminated timber; structural lumber for wood-frame construction; finger - joint structural lumber for wood-frame construction; laminated veneer lumber; structural panels; plywood; flooring; and cross-laminated timber. These forestry products are covered by JAS under the responsibility of MAFF.

The JAS certification system allows business entities, such as producers or manufacturers or others who have been certified by a Registered Certifying Body (RCB), to label their products with the JAS marks. Any certifying body from any country can apply to be a registered overseas certifying body (ROCB).

The list of RCBs and ROCBs can be obtained from the MAFF website (33). As of January 2015, there were three RCBs and 10 ROCBs, of which one is the Norwegian Institute of Wood Technology(NTI), located in Oslo, Norway (Website: http://www.treteknisk.com/fullstory.aspx?m=1463). A representative of NTI participates in the JAS Technical Committee.

5.2 Market organisation from legal aspects and material procurement

5.2.1 Market organisation from legal aspects

> **Legal procedures for obtaining building permits and construction permit give the architect significant influence in the choice and specification of the BCMs.**
>
> **The market, therefore, is organised around architects.**

5.2.1.1 Building permit and inspection of construction

A building owner must apply for a building permit to assess whether the plan for the building conforms to technical regulations based on laws. This applies for all cases where a building is to be constructed, extended, rebuilt or relocated. An application must be made for on-site inspection to:

- A building official in the designated administrative agency in charge of building control in the area, or
- The designated confirmation and inspection authority.

The procedure for building permits and inspections is presented in Figure 23.

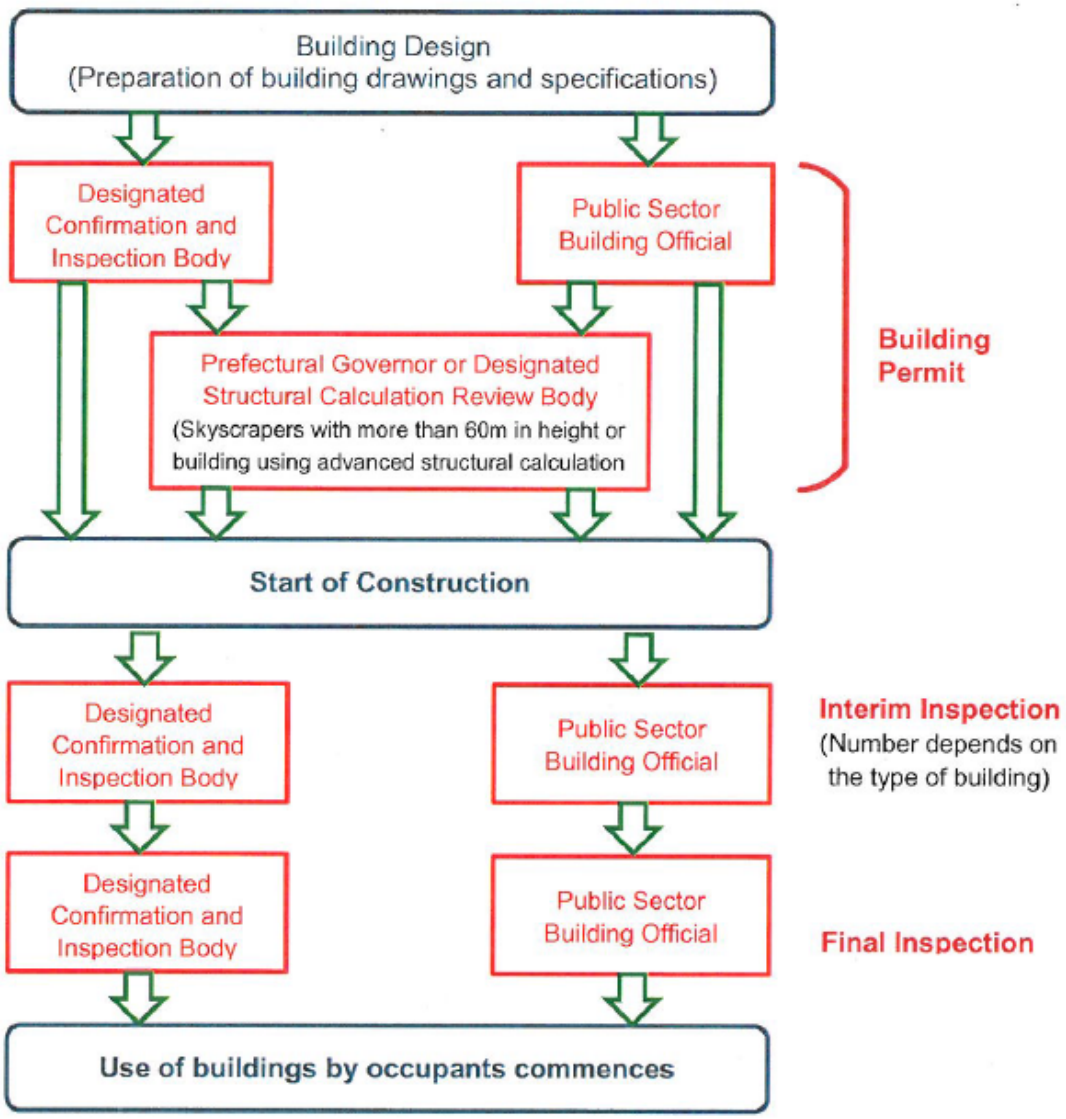


Figure 23 – Process for building confirmation and inspection

As of 1 April, 2014, there are 452 designated municipalities and local governments: 47 prefectural and 88 city ward agencies designated under Article 4, paragraph 1, of BSL; 143 city ward agencies designated under Article 4, paragraph 2, of BSL; and 174 city ward and 23 Tokyo ward agencies designated under Article 97-2 of BSL.

In addition, there are 125 designated confirmation and inspection authorities.

5.2.1.2 Architect prerogatives

In accordance with the Architect Act (*Kenchikushi Ho)*, only licensed architects (*kenchikushi*) can perform building design and construction supervision, except for small buildings (limited to two stories and with total floor area of less than 100 m^2 for wooden structures or less than 30 m^2 for non-wooden structures).

The services provided by the licensed architects include:

- Design and building permit acquisition, particularly preparation of drawings and specifications complying with technical requirements;
- Construction supervision, particularly verification that construction works conform to drawings/specifications and report findings in writing to the owner/client.

The types of licence for architects and their corresponding scopes of work are given in Table 33.

Table 33- Architect licences and scope of work

Type of Architect Licence (Issuance by)	Scope of work (what scale of construction can be designed or supervised)
First-Class Architect (Minister of MLIT)	Any building, regardless of its structure, scale or use, with the exception of the limitations given in the following lines:
Structural Design First-Class Architect	Licence necessary for wooden buildings with height exceeding 13m or with a height to eaves exceeding 9m, steel buildings with four stories or more and reinforced concrete buildings with a height exceeding 20m.
Mechanical, Electrical, Plumbing (MEP) Design First-Class Architect	Licence necessary for buildings with total floor area exceeding 5,000 m^2 and three or more stories.
Second-Class Architect (Prefectural Governor)	Buildings with total height of less than 13 m and height to eaves of less than 9m and any of the following: • General purpose wooden structures with one story, or more if the total floor area is less than 1000 m^2, • Any wooden structure if the total floor area is less than 500 m^2, • Any non-wooden structure if the total floor area is less than 300 m^2.
Wooden Building Architect (Prefectural Governor)	Any wooden buildings with total height of less than 13 m and height to eaves of less than 9 m if the total floor area is less than 300 m^2.

Source: (35), adapted by Ingerosec

The Architect Act was revised on 28 November, 2008. A first-class architect has to be licensed by the Minister of MLIT and authorised to undertake design or supervision work. A second-class architect has to be licensed by the prefecture's governor and authorised to undertake design or supervision work. There is also a Wooden Building Architect licence (*Mokuzo Kenchikushi*) specifically for buildings made of wood. On 30 September, 2013, the number of registered first-class architects was 352,453, second-class architects was 742,122 and wooden building architects was 17,203 (35).

Applicants must satisfy education and experience requirements in order to apply for first- and second-class Architect licences.

Diplomas in architecture or civil engineering and education certificates must be submitted for application and years of experience can be counted for the following types of work: work in which the applicant can acquire knowledge of design or supervision work; building design, building work supervision, guidance supervision of building work, technical control of whole buildings, carpentry, equipment installation, auditing of compliance with related laws, or similar work.

Table 34- Prerequisites for obtaining First- and Second-Class Architect licences

Applicant	Major	First-Class Architect	Second-Class Architect
University Graduate	Architecture or Civil Engineering	More than two years	0 to two years
3-year College Graduate	Architecture or Civil Engineering	More than 3 years	
2-year College Graduate	Architecture or Civil Engineering	More than 4 years	

Applicant	Major	First-Class Architect	Second-Class Architect
Second-Class Architect (Qualified)		More than 4 years as second-Class Architect	
Others admitted by the Minister of MLIT Building Equipment Engineer		4 years	0 year
High School Graduate	Architecture or Civil Engineering		3 to 4 years Civil Engineering
Without Technical Education			More than 7 Years

Source: (35), adapted by Ingerosec

Architects are in charge of selecting about 50 to 75% of BCMs and products for projects. The remaining materials are selected by owners/clients or contractors, as shown in Section 2.1.4.4. In this context, information on available products and their quality/characteristics should be given to architects to sell European products in Japanese market.

Large construction companies generally have an architectural department with first-class architects and are thus allowed to design buildings and manage construction. The supply of materials for construction is generally carried out through another company within the business group or corporate alliance (so-called *keiretsu*). This system has existed since the end of the Second World War. Trading companies are often controlled by the same shareholders as construction companies.

For example, Taiko Trading Co., Ltd., a trading company connected with Kajima Corporation, one of the big five general contractors, supplied them with 645 million EUR of construction materials in 2013.

Sales of building construction materials and products to those contractors should therefore be carried out through the corresponding trading companies.

Owners of buildings, developers and home builders, may request specific building materials based on their own opinions when leasing or selling properties. For example, one of the biggest home builders builds nearly 15,000 housing units per year. They will be a potential client for European products.

One other channel for selling building construction materials and products is the public sector or the former public sector (e.g. the Japan Post), which owns numerous buildings, such as schools and post offices. However, public tenders take place on a regional level, such as tenders for primary school construction which, by law, must be carried out at the prefectural level.

5.2.2 Regional and local variations

In a state organisation close to a federal system, local application of national regulations is particularly important for defining BCM requirements.

Japan has an administrative structure resembling a federal system: the prefectures are like states with similar prerogatives. The laws are national but local authorities (prefectures, cities, districts, etc.) can make them stricter or more lenient. Technical standards are enacted on a national level, but local application must take the following into consideration:

- Urban planning laws, which constitute the rules for applying the Building Standard Law;
- Local regulations by prefectures or cities;
- Fire safety regulations, which vary depending on the city, since cities are the regulatory body for fire brigades.

Regional consortia are sometimes created to apply the identical regulation for specific purpose. For example, a *kyogikai* (coordination body between local stockholders) exists for 9 prefectures in Kyushu. Similarly:

- The regulations of Tottori prefecture resemble those of Hyogo and Osaka prefectures.

- In Tokyo, each of the ward (ku) authorities defines the specifications of materials accepted for the doors (wood, metal).

- Tajima city in Gifu prefecture is renowned for its tile production and there is a local incentive to use local tiles.

- Recently, local conditions for the Tohoku region become complicated after the earthquake, with many banned wood products and prefectures give incentives to use local wood for building materials. Some JAS regulations have been cancelled for Iwate and Akita prefectures.

The Japanese Alps split central Honshu, the main island, longitudinally into two parts with varying amounts of rain and snow, generally there is more snow on the side of Japan facing the Japan Sea. This aspect of climate difference induces diverseness of markets.

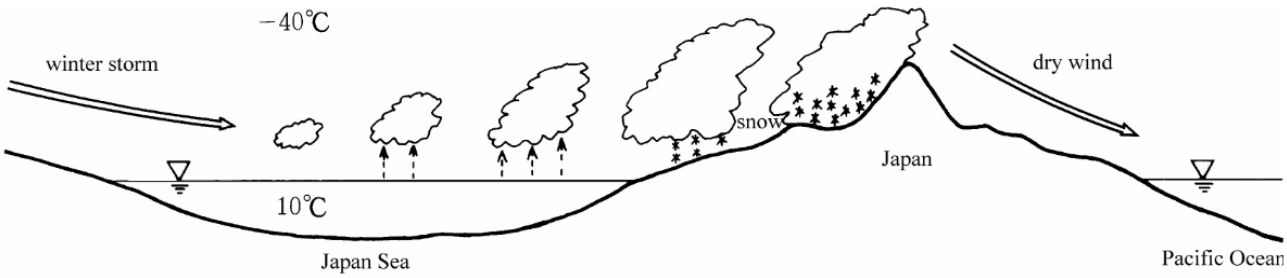


Figure 24 – A typical snowfall mechanism in Japan (36)[13]

Recently, local conditions are troublesome with many unused forestry products therefore several prefectures offer incentives to use local wood as building material.

This tendency is becoming common in many prefectures in Japan, hindering the transfer of wood between prefectures. One example of such incentives is the fact that although quality certificates for wood products (JAS-compliant) are required for wood produced outside the prefecture, this certification is not required for wood produced inside the prefecture.

Due to these local variations in regulations, no uniform requirements for building construction materials or products can be expected and sellers must check local conditions in each case. This is an imposition for both EU and Japanese companies and requires a local presence or partnership all over Japan.

For European companies, targeting a specific area or region for product sales can limit the requirements.

[13] - The Japanese Alps split central Honshu, the main island, longitudinally into two parts with varying amounts of rain and snow, generally more on the side of Japan facing the Japan Sea. This range of local climates induces various markets.

5.2.3 Legal specificities and incentive laws

Japanese houses' overall energy consumption is said to be about 60% of houses in the EU. And the Energy Conservation Law is scheduled to be updated in 2015 to assess the energy performance of building envelopes.
There are national incentives to promote the use of wood products in construction and local incentives tend to promote local wood production.
Ceramic and tile products must follow stringent requirements for earthquake- or typhoon-proof design conditions.

According to data from MLIT, the residential and non-residential building sectors represented 34.5% of the total energy consumption in Japan. Between 1990 and 2013, there has been an increase in energy consumption of 20.0% for the residential building sector and 44.6% for non-residential buildings. The increase in energy consumption is high compared to other sectors: a decrease of 0.7% for the transportation sector and 12.5% for the industrial sector for the same period.

According to research by the Jyukankyo Research Institute (37), the mean value of energy consumption for houses in Japan was 44 GJ per household per year in 2012, which is about 60% of the EU's energy consumption. The proportions of energy consumption by use are 45% for lighting and home appliances, 26% for water heating, 19% for space heating, 7% for cooking and 3% for space cooling. Regional differences exist with southern Japan having a lower consumption (36.6 GJ in Kyushu) and northern Japan having a higher consumption (68.7 GJ in Hokkaido and 59 GJ in Tohoku and Hokuriku). In Hokkaido, the space heating consumption per household per year is at a level similar to Europe.

A survey of room temperature during several days in winter in a warm region (Kochi prefecture, Shikoku Island) shows that the average temperature in the living room was 16 degrees centigrade and the average temperature of the bathroom and bedroom was only 7 degrees centigrade, which explains the proportionally low consumption level for space heating.

After the Great East Japan earthquake in 2011, electricity resources were scarce and energy had to be saved. The Japanese population took measures to reduce consumption, such as reducing the heating time in winter for 15% of the population or replacing standard lighting with low-consumption lighting. There is widespread awareness of the need to reduce energy consumption in Japan, which helps boost the energy efficiency of buildings.

Improving energy-saving performance in housing and buildings is considered an urgent task by the Japanese Government. The Energy Conservation Law introduced in 1979 focused on assessing building equipment performance. A new revision of this law, scheduled to come into effect in 2015, will add the building envelope performance assessment and thus requests owners to consider with thermal insulation.

According to the housing energy-efficiency standard in the Energy Conservation Law, there are eight regions, each with different insulation and glazing requirements, divided according to the regions' climates. For example, it is requested as standard to have insulation products and other specified products.

Table 35- Comparison of insulation differences for north and south Japan

	City of Asahikawa (Hokkaido, North of Japan)	City of Naha (Okinawa, South of Japan)
Heat Loss Coefficient	1.6 W/m².K	3.7 W/m².K
Wall Insulation	Glass wool 150 mm	Glass wool 100 mm
Ceiling Insulation	Glass wool 260 mm	Glass wool 180 mm
Window	Triple sash or double sash with double glazing	Single sash with single glazing

Source: MLIT

The proportion of new buildings that conform to the housing energy-efficiency standard was estimated at around 88% in 2010 for buildings and around 60% in 2011 for houses. There are incentives (subventions, tax reductions, loans with reduced rates) if the energy consumption of the building has been reduced to 10% below the energy-saving standard.

Japanese Government policies are improving step by step and the Housing Quality Assurance Act introduced a Housing Performance Indication System, which includes evaluation of thermal performance.

In addition to the CASBEE (Comprehensive Assessment System for Built Environment Efficiency) system, a Building Energy-efficient Labelling System (BELS) was introduced on 1 April, 2014; aiming to show energy-saving performance to consumers and targeting Zero-Energy Houses (ZEH) or Zero-Energy Buildings (ZEB) for all new constructions by 2030.

The implications of the regulatory system for insulation products, wood products, ceramic and tiles are addressed in the following sections.

5.2.3.1 Insulation products

Insulation performance requirements are not specified under the Building Standard Law, which means there is no obligation to use insulation products. The Rational Use of Energy Act, enforced in 1979 and revised in 2008, requests owners to make energy-saving efforts, but compliance can be satisfied by installing equipment such as solar panels and efficient air-conditioners.

Accordingly, thermal insulation of houses has not really developed in Japan and building architects or owners must consider the following:

- Cost: the cost of the house construction has to be low because the cost of land is high, so ordinary insulation materials are generally preferred by many owners. For example, if one house in the centre of Tokyo costs 713,000 EUR in total, the price of the land itself being around 80% of the construction cost, and the cost of constructing the house is limited. Average selling price of detached house within 23 wards of Tokyo is 48.6 million JPY in February 2015 according to real state website data (www.shinchikuikkodate.jp/souba/). Only owners who are environmentally conscious use natural or environmentally friendly types of costly insulation materials;
- No necessity: the consumption of Japanese houses for heating is 40% less than European houses because several rooms are not heated on a permanent basis. Central heating systems are not popular in Japan and air-conditioners are commonly used in summer for dehumidification of rooms. The general opinion of owners is that extra insulation is somehow wasteful. In fact, most Japanese people value the harmony with environment even if it is cold, and winter is supposed to be cold, as they say.

  They tend to bear the coldness, and feel that it is somehow wasteful to heat the rooms that are not occupied. The general public is aware of the necessity of insulation, but in terms of energy conservation rather than comfort. Energy consumption is relatively lower than in European houses, so it is hard to consider the benefit of upgrading insulation based on a cost-effectiveness criterion at first.

  What is of concern to local architects is "Moisture", condensation formed in the internal face of the wall, caused by humidity or moisture. Not only the climate characteristics of Japan (high humidity / high temperature in summer) but also structure of houses, heating systems and living style increase the condensation which gets more severe in the winter.

  Performance of moisture absorbed insulation then decreases accordingly, and this can in addition decay wooden structures. Of course, provisions are taken by means of air sealing / air tight construction, but durability of these measures and products concerns the architects.

  If Japanese architects seem sometimes not aggressive to adopt high performance insulation moisture/ condensation products and systems, above mentioned is one factor to be considered at first place."

- Product suitability for Japan's climate: insulation products must be meticulously checked for durability under conditions of low humidity and low temperature (winter) and high humidity and high temperature (summer). Specific tests shall be necessary for product approval, while there is a need to combine with other products, such as trans-humidity sheets capable of adapting to temperature changes, to solve suitability issues;
- Fire resistance: insulation products must be fire-resistant.

Japanese architects and owners are currently seeking the "passive house" concept, but change of public opinions will take time and effort. At the same time, European concepts have to be accepted to Japanese lifestyles. For example, Japanese architects are interested in a passive house system from the EU, but there remain concerns over whether it can be applied directly in Japan as it is.

A MLIT committee is preparing a revision of the Rational Use of Energy Act. The first press release in January 2015 shows that the revision will include the following:

- Impose new compulsory regulations to be applied to houses and buildings with floor areas of less than 300 m², which are not yet covered by the regulation. The compulsory regulation will enter into effect by 2020;
- Require the computation by 2020 of energy consumption, in the form of energy loss per 1 m² of wall surface, for all buildings.

Comments and opinions on these revisions have been collected from people in the industry, from local traditional groups and from environmentally radical groups.

When this revision becomes mandatory, the market for insulation products will be set to widen.

5.2.3.2 Wood products

Most of traditional Japanese buildings and newly built detached houses are wooden structures of three major types: post-and-beam wooden construction method, light-frame wooden construction and wooden prefabricated construction. Furthermore, the utilisation of wooden materials in building construction is encouraged by the Japanese Government policy through the following:

- *Act to Promote the Use of Wood in Public Buildings*, enacted in May 2011, which promotes the use of wood as a building material and for building interiors;
- "Guidelines for the use of wood" that were introduced for use in design stages to promote cooperation with local governments, the use of local materials and the development of local wooden house production systems;
- Updated regulations with fire safety for wooden buildings, including allowances for construction of three-story wooden structures, even for public buildings like schools, if special measures are taken, like using non-combustible finishing materials;
- Development of large-scale wooden buildings using cross-laminated timber (CLT). BSL should be amended in 2015 to allow the design of such buildings.

BSL and related documents specify requirements for wood quality, protection, minimal dimensions and construction characteristics. Fire resistance shall be ensured by methods such as a special cover, like a metal lath with mortar finish for exterior walls and the use of plasterboard for room partitions.

To establish design criteria, notifications by MLIT refer to the Japan Agricultural Standards (JAS) for wood quality and quality control. There are ten JAS available listed below, without currently no official English translations:

1. JAS for sawing;
2. JAS for structural lumber for wood-frame construction;
3. JAS for glued laminated timber;

4. JAS for orthogonal aggregated board;
5. JAS for vertical continuous wood-frame construction;
6. JAS for veneer laminated wood;
7. JAS for structural panel;
8. JAS for structural plywood;
9. JAS for wooden flooring;
10. JAS for raw material.

Compliance with JAS requirements shall be confirmed by testing and verified by certification. There is at present no registered overseas certifying body (ROCB) within the EU, so testing of EU wood products has to be undertaken in NTI laboratory in Norway, that is a ROCB, or in Japan.

Japanese companies generally prioritise wood products from Japan, but purchase wooden materials also from overseas, in which case they focus on price and often buy materials from South-East Asia. On the other hand, there is a significant cooperation and an agreement concluded between Japan and Canada for wooden products.

According to interviews, MAFF is putting pressure on MLIT to promote the use of wooden tiles for footways. However, there are problems due to durability, so MLIT may have an interest of coating products for wood tiles.

The Plan for Promotion of Use of Wood in Public Buildings was created based on the Act for Promotion of Use of Wood in Public Building of May 2011, which was formulated to promote the use of wood as a building material and for building interiors. In November 2013, the government's implementation progress for this act was published. In addition, in cooperation with local governments, guidelines for incorporating wood at the design stage were published in June the same year.

MLIT is working to support building of long-life quality wooden housing by promoting the development of wooden houses and buildings utilising local materials. The ministry also supports the development of large-scale wooden buildings, which utilise cutting-edge design and construction technology, as well as the development of leading companies and regional wooden house production systems.

5.2.3.3 Ceramics and tile products

There are no direct requirements for ceramics and tiles as a material, so EU products can, in principle, be widely used. However, there are indirect requirements that will limit their use, such as:

- Special technical specifications written by architects for each project. Requirements for tiles and ceramics (e.g. compliance with JIS) can be imposed;
- Roof tiles are relatively heavy and its weight will affect building costs due to the need to be resistant to earthquakes;
- Tiles and ceramics can be considered part of the anti-fire protection for buildings because they must be attached to buildings such that they can resist fires and earthquakes. Resistance tests for installation systems may be requested. In addition, outside curtain tiles are subject to periodical checks at 3-year intervals to confirm that they are securely connected. Qualified checkers must undertake the tests, such as a first-class architect or a person registered to a tile industry association or similar specified association. Previously, checking methods simply involved the practice of hammering tiles to check resistance, but currently more sophisticated methods apply, such as infrared spectroscopy;
- Anti-slip performance requirements are already in use in Europe and JIS developed last year 13 new standards for ceramics and tile testing, including strength and thermal resistance, abrasion, slip and chemical resistance;

- Resistance of connections during high winds, and typhoons must be guaranteed, because light tiles have a risk of being dislodged;
- Acceptance tests must be undertaken for various combinations of wind, rain and salt due to different conditions and depending on tile location and orientation. Testing for a single product involves various conditions and approval requirements are strict, which increases the cost of obtaining product approval for EU and Japanese manufacturers alike;
- Photographic evidence and certification must be used to justify compliance with specifications during construction.

For all these reasons, the use of roof tiles will become less popular in the near future due to the costs involved in meeting such requirements.

In the Japanese market, locally produced tiles are not profitable due to tough competition and limited demand. Consequently, merging of existing companies may occur in future. For example, a company having been created by two manufacturers handles tiles and other similar materials, also sells products from their competitors.

5.3 Technical requirements for materials

5.3.1 Resistance to fire

> **Resistance to fire is regulated by the Fire Service Law in addition to the BSL. Specifications depend on the location, scale and use of the building and are thus locally according to the City Planning Law.**

Technical requirements to secure fire safety in buildings are given by BSL and the Fire Service Law. Fire safety measures with regards to construction materials include:

- Prevention of the spread of fire from adjacent buildings: BSL stipulates requirements for fire resistance of roofing materials and external walls;
- Prevention of outbreak of fire: BSL stipulates requirements for fire resistance of interior finishing materials;
- Prevention of spread of fire within a building: BSL stipulates requirements for fire compartments;
- Prevention of structural collapse: BSL stipulates requirements for fire resistance of principal building parts.

Additional requirements to prevent outbreaks of fire, fire detection, evacuation, fire extinguishment and rescue are given by BSL and the Fire Service Law. In addition to the need for escape stairs or ladders, they specify the requirements for equipment and furniture.

Building materials that are not burned or deformed, or subject to melting, cracking or other damage hampering fire prevention, (and not generating smoke or gas detrimental to evacuation) when exposed to the heat of a normal fire, are classified in accordance with the duration of application of heat as:

- Non-combustible materials if resistant 20 minutes or more: Examples are concrete, mortar, bricks, pottery and ceramic tiles, steel and aluminium, glass and gypsum board 12 mm thick or more (and paper covering less than 0.6 mm thick);
- Quasi-non-combustible materials if resistant 10 minutes or more: Examples are gypsum board with a thickness of 9 mm or more (and paper covering with less than 0.6 mm thickness) or wood wool cement board with thickness of 15 mm or more;

- Fire retardant materials if resistant 5 minutes or more: An example is gypsum board with a thickness of 7 mm or more (and paper covering less than 0.6 mm thick).

Buildings are classified as fire-resistive or quasi fire-resistive in accordance with the fire-resistive performance of buildings parts and using a construction method specified by MLIT or a solution approved by the Minister of MLIT.

For urban areas, the City Planning Law defines the Fire-protection Zone and the Quasi Fire-protection Zone, while the Designated Administrative Agencies designate the Zone based on Article 22 of BSL in urban areas to prevent the spread of fire.

To secure time for evacuation, prevent collapse and spread of fire, the required fire resistance of buildings depends on three of their characteristics: scale (size of the building, such as two or 20 floors), use (how the building is used, such as offices or a school) and location (site of the building, such as an urban, suburban or rural setting, because fire will spread more easily in high-density built areas).

5.3.2 Earthquake considerations

Some earthquake loads are to be checked within service considerations (resistance without damage), while performance requirements for BCM depend on the building category.

Building codes state that a building must withstand dead loads, imposed live loads, snow load, wind pressure, seismic forces and other particular loads and structural safety shall be checked for the following three cases:

- (a) Deformation or vibration under dead and live load;
- (b) Resistance without damage due to rare medium-scale snowfalls, windstorms, earthquakes or other events;
- (c) Resistance without collapse due to extremely rare large-scale snowfalls, windstorms, earthquakes or other events.

The calculated sustained and temporary stresses must not exceed the allowable unit stresses specified by MLIT in BSL Enforcement Order or in the notifications for common materials, such as timber, steel and concrete. The loads to be used to calculate the sustainable and temporary stresses are as follows:

- Dead loads and imposed live loads: calculated with values given in BSL Enforcement Order, Articles 84 and 85;
- Snow and wind loads: calculated in accordance with BSL Enforcement Order, Articles 86 and 87, with coefficients given in MLIT notification Nos. 1455 and 1454 for the various regions;
- Earthquake loads: calculated as a static force corresponding to the inertia force due to seismic vibration, with formula and coefficients given in the BSL Enforcement Order, Articles 88 and 87 and regional categories, vibration characteristics of buildings and location of the concerned part (above ground level or underground) given in the MLIT notification No. 1793.

Allowable stress must be applied with a standard shear coefficient of 0.2 or more when calculating earthquake loads for both the superstructures and foundations (for a medium-scale earthquake occurring several times during the building's lifespan). However, checks must be made to ensure the building will not collapse or fail in any way during a rare large-scale earthquake (occurring once in the building's lifespan) with a standard shear coefficient 1.0 or larger. These checks must be carried out only for the superstructure. Similar checks must be carried out for extreme snow or wind in accordance with Article 82-5 of the BSL Enforcement Order.

The BSL Enforcement Order requires that roofing, interior and exterior materials, curtain walls and other similar parts of a building be fixed and not become detached during high winds or earthquakes, or other vibrations or impacts.

Structural specifications are given for standard structural types, such as wood, masonry, concrete block, steel, reinforced concrete (RC), and composite steel-reinforced concrete (SRC) and plain concrete structures.

In accordance with Article 20 of the BSL, the structural safety of the building shall be checked based on its structural category as defined by the summary in Table 36.

Table 36 – BSL structural safety categories

Category	Characteristics of buildings	
	Wooden Buildings	**Other buildings**
(1) High-rise buildings	Buildings higher than 60m	
(2) Large buildings	Building height > 13m, or eave height > 9m, other than (1)	Steel buildings with four or more stories (excluding basement) RC or SRC building height > 20m Steel building stipulated by the Cabinet order, such as steel building height > 13m, or eave height > 9m, other than (1)
(3) Medium-sized buildings	Number of stories > 3, or total floor area > 500 m^2, other than (1) & (2)	Number of stories > 2, or total floor area > 200 m^2, Masonry structures, etc., with height > 13m, or eave height > 9m, other than (1) & (2)
(4) Small buildings	Buildings smaller than (1), (2), & (3)	Buildings other than (1), (2), & (3)

The structural design and checks for buildings vary with the category of building, shown in Table 37.

Table 37- Structural design methodology by building category

Category	Structural Specifications	Structural Calculation	Checking Procedure
(1)	Durability, etc.	Time-series analysis for earthquake	Performance evaluation Ministerial Approval
(2) - h > 31m		Response and limit capacity calculation	Check by Designated Structural Calculation Review Body
(2) - h > 31m	Some provisions	Allowable unit stress Story drift angle check Horizontal load carrying capacity	Check by Building Official or Designated Confirmation & Inspection Body
(2) - h ≤ 31m	All provisions applied in accordance with the structural type of buildings	Allowable unit stress Story drift angle check Stiffness, eccentricity ratio check, etc.	
(3)		Allowable unit stress	Check by Building Official or Designated Confirmation & Inspection Body
(4)		Not required	

Building materials have to be compatible with these structural safety and earthquake considerations and have to be approved accordingly during the checking procedure. As regulatory specifications are given for standard and existing products, using the products is easy and requires no significant expense except for quality certification, compared to compulsory testing in other cases.

For new materials or methods, or building materials that differ from those specified, performance evaluations have to be carried out as explained in Section 5.1.3. This is an additional difficulty for European building products because of the related increase in price.

5.3.3 Environmental aspects

> **Enacted in 2000, the Construction Material Recycling Act makes the contractors liable for sorting and recycling construction material waste. In 2012, about 96% of materials were recycled. Recyclability is therefore a significant aspect of BCMs.**

In line with the Law on Promoting Green Purchasing, MLIT is working to procure environmentally friendly goods, particularly BCMs used in public construction work. Measures to reduce the environmental burden during the life cycle of public buildings, from planning through to construction, operation and demolition phases, are studied and environmental technologies that reduce or eliminate energy usage are incorporated in some new buildings[14]. Insulated glazing technologies are also to be used.

According to the 2013 edition of the MLIT White Paper on Land, Infrastructure, Transport and Tourism in Japan, construction waste accounts for approximately 20% of all industrial waste, and 75% of all illegally discarded waste. In 2011, the total amount of construction waste was estimated at 75 million tons. The Japanese Government promotes the recycling and re-use of construction materials, as explained in the following sections.

5.3.3.1 Construction Material Recycling Act

Enacted on 31 May, 2000, the law prescribes mandatory sorting of demolition waste or recycling of construction waste in the following cases: demolition work of buildings with total floor area exceeding 80 m^2; construction work or extension work of buildings with total floor area exceeding 500 m^2 and repair work or remodelling of buildings if the contract amount exceeds 100 million JPY. The law concerns concrete (including pre-cast forms), asphalt/concrete and wood building materials. The party ordering the materials is also liable to submit a work plan for sorting and recycling demolition waste to the prefectural government prior to commencing the work and adopt any changes recommended, if any.

5.3.3.2 Follow-up on the recycling and re-use of building materials

MLIT continues to seek higher levels of recycling, despite achieving a 96% recycling rate for 2012, which 2% above its objective of 94% and prioritises the following:

- Development of a new Construction Recycling Promotion Plan with measures to increase the recycling rate and reduce the rate of construction waste. A review started in 2014 with the establishment of a Construction Recycling Promotion Plan Study Subcommittee;
- Investigations and surveys to overcome challenges, such as dismantlement and separation of plasterboard waste or regional differences in construction material recycling;
- Development of up cycling for construction materials;
- Decrease of wasted soil from construction;
- Decrease of construction waste in future, with demolition plans proposed at the construction stage for a building;
- Promotion of a recycling society.

At the same time, the Japan Construction Information Center Foundation (JACIC) has established the construction-related materials information centre to support the recycling of materials (concrete, asphalt,

[14] - For example, the Kumamoto Government Building A includes exterior thermal insulation.

timber, soils, etc.) by collecting and diffusing information about available by-products from construction and demolition to facilitate the re-use of these by-products (38).

5.3.4 Other legal aspects for buildings

The Barrier-free law (for disabled persons), seismic retrofitting of houses and the Housing Quality Assurance Act introduce additional requirements on product design and quality and represent additional opportunities for specific BCMs developed in the EU.

5.3.4.1 Barrier-free law

Accessibility and mobility standards for buildings are mandatory for specified buildings with total floor area exceeding 2000 m², such as hospitals, theatres, assembly halls, department stores, hotels and homes for elderly people. Building owners are also encouraged to strive to comply with these standards for specified buildings in addition to those previously listed, such as buildings with smaller total floor areas, schools, offices, apartments and factories.

These accessibility and mobility standards for buildings include requirements on stairless approaches, entrance doors, elevators, lavatories and wide hallways allowing wheelchair access. For example, building entrances must be wider than 120 cm, interior and elevator doors must be wider than 90 cm and hallways must be wider than 180cm.

5.3.4.2 Seismic retrofitting law

After the Great Hanshin-Awaji Earthquake in Kobe, a law to promote buildings with improved resistance to earthquakes was established and enforced in 1995, with a target of having 90% of buildings earthquake-resistant by 2015. The law obliges building owners to have seismic assessments and retrofitting done. This law was accompanied by subsidies to encourage building owners and empowered local governments to order building owners to retrofit a building if there was a risk of collapse according to the BSL.

The law was amended on 29 May, 2013 and enforced on 25 November, 2013, following the 2011 Great East Japan Earthquake and considering the possibility of offshore megathrust earthquakes hitting the southwest coast from Kyushu to Shizuoka (Nankai, Tonankai and Tokai earthquakes) or directly hitting the Tokyo metropolitan area. The amendment was made undertaking the topic of seismic assessments and publicising results as a requirement and includs stricter regulations. At the same time, more subsidies were made available. As explained by the Japan Building Disaster Prevention Association (JBDPA), the amount of subsidies (total for national and local governments) vary with the type of use and with the location of buildings, but could cover up to 100% of assessment costs and 80% of seismic retrofit costs(39).

The target decided by MLIT for 2020 is to increase the amount of earthquake-resistant housing to 95% from an estimated 90% in 2015, which means seismic retrofitting of about 2.5 million homes. Techniques used for seismic retrofitting include internal or external bracing (with or without dampers), infill walls, base isolation, dampers and various other strengthening(39).

5.3.4.3 Measures against sick building syndrome and asbestos

Regulations in the BSL for building materials and ventilation restrict the use of building materials containing chemical substances, such as formaldehyde. Measures are required if the indoor concentration of airborne chemical contaminants is excessive after completing construction. Air quality is one of the parameters to be evaluated in accordance with the Housing Quality Assurance Act.

At the same time, asbestos removal when renovating old buildings is mandatory. A system for qualifying investigators of structures containing asbestos was created in 2013 and promotion of asbestos removal in existing buildings through grants was developed.

5.3.4.4 Housing Quality Assurance Act

The Housing Quality Assurance Act obliges sellers of newly built housing and properties to be liable against defects for a decade. A voluntary labelling system was established to specify housing performance for criteria such as structural stability; fire safety; mitigation of degradation; consideration of maintenance and management; heat, air, light and visual and acoustic environment; and considerations for the elderly.

Housing performance evaluation bodies designated by MLIT evaluate housing performance on request and issue housing performance evaluations (evaluation documentation with a seal).

6 EU-Japan cooperation potential regarding technology and regulations

Differing standards and regulations and complexity of interplay between actors in Japan are considered hindrances by many European companies with the development of their business in Japan in mind. Cooperation in this domain between the EU and Japan can pave the way for smoother and increased trade of EU building and construction materials.

The market in Japan, all sectors considered, is more driven by scientific and technical considerations than by direct commercial approaches. Associations of professional companies are often used as intermediary structures by ministries when new technologies or products are planned or prototype projects made.

Accordingly, technical and regulatory cooperation (including participation in professional associations) is often a prerequisite to gain a position in an emerging niche of the BCM market in Japan and this paragraph will therefore consider the same themes as for B2B cooperation.

In particular, regulatory cooperation should be encouraged, because having standards that are compatible or even favourable to products is a definite advantage.

6.1 Needs and opportunities for non-regulatory areas of cooperation

Further to regulatory cooperation discussed in chapter 9, non-regulatory areas of cooperation often offer better possibilities for increased cooperation since they are indirectly affected by market requirements and constraints (positioning of products from a partner in the cooperation).

Therefore non-regulatory areas of cooperation must be also favoured.

EU entities ought to focus on products for which they have a comparative advantage, such as structural wood and insulation products for new structures and take into consideration the fact that in the corresponding domain in Japan the “level of science/maturity level of market” is relatively lower or at least not so developed.

As for all cooperative schemes in all domains, due care should be taken to fully monitor and limit to a reasonable level the transfer of data from one partner to the other and avoid the loss of a comparative advantage for when the local market matures regarding the new techniques or products.

This is common sense, but the “give and take” game of cooperation is not always fully mastered by companies/institutions/individuals who sometimes disclose key advantages without counterparties or even unawares. This important point has to be taken into due consideration before entering the process. It should not prevent any cooperation but merely set the rules of the game.

Cooperation is a tool for development and must be properly considered. The initial advantages/ disadvantages, what is/is not a common interest and potential for bartering must all be considered.

During this study, BCM trading companies and some architects showed interest in European products which they consider as representing an advance in technological fields or for design. However, it appears difficult for them to access information about these products, also because of the language barrier.

6.2 Most promising sub-sectors

As indicated above (and pending on the constraints mentioned) the most promising areas for cooperation in the BCM sector appear to be:

6.2.1 Where EU products have a comparative advantage

It is easier to set up schemes and a clear demand emerged during interviews with Japanese companies, in the following sub-sectors in particular:

6.2.1.1 Wood products

Japanese government wants to develop wooden houses and building construction, but lacks of material. In this regard, tests to construct Cross-Laminated Timber Buildings were conducted in Japan at the BRI to prepare for the revision of the BSL.

European wood products can have significant development potential on this important sub-sector profiting by an appealing image of Europe (some Japanese makers already use the European image or European commercial names to sell Japan-made products).

To catch this sub-sector market, technical cooperation with local companies will be an advantage for an efficient development.

6.2.1.2 Insulation products

European insulation regulations are considered superior to those in Japan and some trading companies have shown interest in developing similar systems in Japan.

Several European companies already have a presence in this sub-sector through Japanese subsidiaries, but development of European technology in Japan through cooperation is requested by some local importers.

Along with the improvement in Japanese regulation and increased requirements, this sector can have significant development potential in coming years.

6.2.1.3 Designed products

Japanese trading companies and makers show interest in developing European designed products in Japan, as the image of Europe is historically positive in Japan and is a comparative selling advantage.

This is the case for tiles and ceramics where European products can be appreciated, even if costlier than Asian equivalents. However, European designs are required frequent renewal and innovation as cheaper copies are always arriving from some Asian countries.

It is always an option for European companies to open a branch office in Tokyo, but for SMEs, the cost of necessary testing and commercial development and the required development period (2 years), is too expensive and cooperation with local partner can be a good solution. The local partner will be useful to select marketable product as Japanese and European tastes may differ.

6.2.1.4 Technological products

Japanese companies are always looking for new technologies that can create a difference from competitors in the Japanese market. Current trends include:

- Seismic retrofit of buildings with installation of dampers. European companies having such technology can try to organise cooperation with local companies to develop their products on the Japanese market;
- Retrofit of buildings with structural and insulation reinforcement. Here again, development on the Japanese market can be faster if it involves cooperation with local companies.

The aim of such cooperation shall be a showcase of the efficiency and reliability of European technologies and obtain MLIT authorisation for application. At the same time, business promotion towards architects and contractors will be undertaken.

6.2.2 Where Japanese products have a comparative advantage

A fruitful cooperation with European companies can be expected. Initial evaluation of potential sub-sectors:

6.2.2.1 Home electronics

With the ageing populations, the Japanese housing market is developing technologies to assist elderly persons. This includes the development of electronic systems to be included within houses. Japan is ahead of Europe with these ideas and technologies developed, like automatic safety control, physical control, barrier-free systems and others. These technologies may be marketed in Europe.

6.2.2.2 Sanitation facilities

Everybody in Europe regards Japanese toilets with surprise, but the technology developed in Japan also be introduced in Europe if the cost of such devices is reduced. Cooperation between Japanese and European companies can be useful to adapt these products to the European market.

6.2.2.3 Technical tiles

For instance, photo catalytic tiles and self-cleaning types can be makeable.

6.2.2.4 Energy-saving devices

With the Energy-Saving Law, Japanese makers work on reducing energy consumption by building equipment and these technologies can directly be used in Europe.

6.3 Areas for possible alignment or mutual recognition

All areas could be considered in this respect based on careful consideration of reciprocal openings in the market.

Among the most promising areas is the field of insulation products, since regulations will require buildings and houses to include more efficient insulation by 2020.

In the event that EU standards are incorporated into Japanese standards in some form, this would reduce the required effort for EU products targeting the Japanese market to be adapted and vice versa.

Accordingly careful consideration has to be taken ex ante, as it is the case for all cooperation schemes.

7 B2B cooperation potential for EU companies, focusing on SMEs

The Japanese building and construction materials (BCM) market is in a position to offer opportunities for sustainable and profitable business to EU companies in the BCM sector, provided local features and requirements are properly observed.

One point should be noted: buildings are considered as long-term consumption goods in Japan, unlike Europe where buildings are considered virtually permanent and are generally built to last over several centuries. The lifespan of most Japanese buildings (houses, apartments and offices) is one generation and it is common for them to be destroyed and reconstructed after 20 to 30 years (see Annex E, Legal service life of tangible depreciation assets).

BCM businesses must carefully consider this typical feature of the Japanese market.

7.1 Needs and opportunities for B2B cooperation

Japan imports what it does not domestically produce. If there is local demand for a product (to be checked by a study made by a professional specialized consultant), the market, as all similar markets, is open to both Japanese and foreign companies offering products of quality.

Products with a competitive advantage (in terms of technical ability or price) have a chance to find a niche market, often with an important applied multiplier compared to ex-factory prices (x3 to x5). However, this multiplier includes various components including promotion, distribution, storage costs and costs for testing. Also, it is worth noting that in Japan, after-sales service is crucial, even when not compulsory: most makers shall agree to intervene on their products even long after the sale (sometimes up to a decade later).

Considering this, the following possibilities are open to EU BCM companies, particularly SMEs:

- Sell ex-works, usually to a trader or general trading company, who will deal with transport, storage, regulatory and distribution issues. This option is relatively easy, but possibly less profitable and involving a smaller margin, since there is less work to be done;
- Find a local importer, Japanese-speaking, who is established (i.e. a member of local associations) and affiliated with an import/distribution structure (distribution either to a selected sales point or through a retailer) or selling directly to a local partner;
- Affiliate with a Japanese producer or distributor with a complementary product range;
- Establish a structure in Japan. This option is more expensive and involves a long-term investment. However, having a local office does improve communication with existing and potential buyers, control of the distribution network and access to up-to-date market trends[15] and information on regulations[16].

Business practices in Japan favour long-term and mutually profitable partnerships and improved knowledge of other companies. EU companies have sometimes been contacted by their Japanese counterparts on the

[15] A continuous exchange of information is a feature of the Japanese market (e.g. there are two daily newspapers dealing with construction related issues). A company not involved in this process will rapidly disappear from the attention of customers.

[16] The professional associations in Japan are often affiliated to authorities that develop standards and regulations. Common association activities involve the creation of working groups, seminars for members and comprehensive articles in their publications.

occasion of professional exhibitions in Europe. It is important to allocate sufficient time to potential partners, because they may have future business operations in mind.

7.2 Most promising sub-sectors, products and services

Opportunities exist in Japan in various non-niche markets, including environmentally friendly products, wood products, products for retrofitting buildings, landscaping and decorative products, doors and windows and heat-resistant products.

The Japanese market is sufficiently large to accommodate the production of most EU BCM companies considering their size.

On this issue, a company with good local promotion or partnerships can find significant business opportunities, particularly for niche markets or exclusive distribution[17]. However, these markets are very sensitive to trends, which are also a notable characteristic of the Japanese market and Japanese culture in general.

The following sectors and sub-sectors are thought to be most promising:

- Green and environmentally friendly products;
- Wood products;
- Products for retrofitting houses and buildings;
- Landscaping and decorative products, such as stone, tiles and ceramics;
- Doors and windows;
- Heat-resistant products, such as paint and insulation.

7.2.1 Green and environmentally friendly products and wood products

In 2000, the Japanese Government passed the "Law on Promoting Green Purchasing"[18] to promote the use of environmentally friendly building materials, construction machinery and construction methods for public construction works.

In May 2011, the Act to Promote the Use of Wood in Public Buildings was enacted and the Plan to Promote the Use of Wood in Public Buildings was formulated to promote the use of wood as a building material and for interiors[19]. In June 2013, guidelines were published in cooperation with local governments to promote the adoption of wood at the design stage.

Japanese wood products are expensive, making wood imports a viable option. There are opportunities for more EU wood exports to Japan, competing with North America for example, but the following issues must be taken into consideration:

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[17] There are numerous examples, of which leisure parks is just one. This niche market is sizeable, as there are over 230 leisure parks in Japan, some of which include European-style historic or folkloric buildings, such as the Dutch-influenced Huis Ten Bosch near Nagasaki (Kyushu, south Japan).

[18] The full title is the Law Concerning the Promotion of Eco-Friendly Goods and Services by the State and Other Entities. For a presentation to the international green purchasing network, see (48). The basic guidelines and other publications have been translated into English, see (49).

[19] Japan is not self-sufficient in terms of wood and in 2012 the domestic wood supply was only 19.69 million m^3 in round wood equivalent (RWE) for a demand of 70.63 million m^3 in RWE: only 27.9% of demand was met by domestic supplies. It is estimated that approximately 40% of the wood was used for building construction. Nearly 70% of Japan is covered by forests, but forestry is expensive due to very steep slopes and difficult access to trees, which makes wood imports cheaper.

- Suppliers of wood to ministries, agencies and administrative institutions must follow the Guidelines for Verification on Legality and Sustainability of Wood and Wood Products, which requires suppliers to acquire a Chain of Custody Certification from the Forest Stewardship Council (FSC) or from the Program for the Endorsement of Forest Certification schemes (PEFC);
- According to chapter 12 of the Specification for Public Building Works, which covers wooden works, the acceptable wood species stated are explicitly Japanese and North American, so these production regions have an advantage. It would be useful to request permitted European species, if any;
- The organisation of the market for wooden houses must be understood: about 30% are built by large contractors (those building more than 20 houses per year), 20% by small contractors (fewer than 20 houses per year) and 50% by very small contractors (5 or 6 houses per year). The first two categories have the capacity to design houses and staff for hire, which lessens the profits of wood suppliers. The third category has lower commercial capacity, which means a greater profit margin, but also more limited design capacities. Japanese wood suppliers generally provide typical designs to be used for construction to support these very small contractors and protect suppliers' profits.
- EU suppliers have to provide both samples of products and designs, as well as efficient after-sale service, to increase their sales towards the above very small contractors. Designs shall include structural calculations for flooring or carpentry products for example. Providing such services could imply establishing local representation agencies or structures to accompany construction work and having product stocks on site for quick delivery;
- Wood supplies for wooden houses must adhere to Japanese Agricultural Standards (JAS).

Environmental considerations, like limiting formaldehyde contents (as discussed in Section 8.4), must also be taken into account.

7.2.2 Products for retrofitting houses and buildings

Retrofitting is necessary to improve resistance to earthquakes and thermal insulation for existing buildings and houses. The size of the market is still under development because of the following:

- Demolition is often the preferred option for post-war built wooden houses;
- Reinforced concrete apartments built since the late 70s are not yet largely targeted for heavy renovation;
- Reinforced concrete buildings are often built in dense urban areas subject to stringent fire regulations, which makes it difficult for architects to specify external insulation products.

For these reasons, large Japanese suppliers are reluctant to invest in developing new products. In the EU, the renovation market is already well developed with many corresponding products. Accordingly, there are market opportunities for EU companies to use such products in Japan.

The products must meet to the following requirements:

- Provide high-performing thermal insulation with limited thickness, because high land prices means that building surfaces tend to be smaller than in the EU and make maximising internal space a priority. In addition, substantially increasing a building's external dimensions sometimes requires new building authorisation, depending on local regulations;
- Resist to fire, if necessary and resist to significant variations in humidity between summer and winter;

- Allow easy connection with windows, since the wall thickness may change after retrofitting, or alternatively provide other/special types of windows;
- Be affordable, because budgets are constrained.

Fire resistance is required for fire-resistive zones (for example, the 23 districts of Tokyo), but there is no requirement outside such zones. About 10% of the houses are built in fire-resistive zones, which means that 90% of the houses have no fire resistance requirements.

7.2.3 Landscaping and decorative products

Japanese clients are not only interested in basic products, but also in European style design, despite the higher prices. EU suppliers should consider the importance of product information and presentation to the client.

Specialized trading companies are active in the domain of BCM product imports. Japanese architects often contact them when they are looking for interesting foreign (including EU) products[20]. These trading companies have often showrooms in Tokyo area.

Also, several Japanese companies now sell their products directly over the Internet, without a showroom because architects use internet as a tool to access new products.

7.2.4 Doors and windows

Doors and windows face the following problems:

- Compliance certification must be provided by authorised institutions, such as BL (Better Living) for new designs, which means that tests must be carried out by a designated evaluation body for performance areas such as water, fire and smoke resistance;
- Tests must be carried out for each type of use the cost of which is around 2,000,000 JPY;
- The distribution system must be organised through a local company or trading company, as products must be guaranteed for a decade. Contractors thus often prefer to select Japanese companies due to the risk of foreign companies stopping business operation on the Japanese market before the end of long liability period.

7.2.5 Heat-resistant products

The Energy Conservation Law will come into force by 2020 and require a higher level of insulation for housing, which will guide an expansion of the market for insulation products. However, the following difficulties remain:

- Technical concern about the capacity of insulation products to deal with variations in humidity between summer and winter;
- Testing and presentation to architects or specifiers shall be necessary for acceptance of all products

[20] For instance, ABC Trading which distributes special bathroom flooring from the United Kingdom (www.abc-t.co.jp/english/).

It is always difficult for Japanese designers to be well-informed of the variety of EU products, such as their domains, producers and characteristics. Establishing a system providing information about EU products can be an important advantage for this purpose.

Unique features of the Japanese market shall be considered, given less energy consumption in winter for heating and more during summer for air-conditioning. The characteristic of the climate of Hokkaido resembles northern Europe and some European companies are already present there.

7.2.6 Services: APEC architects from Australia and New Zealand

APEC Architect's "Bilateral Agreement on Reciprocal Recognition of Registered/Licensed Architects in Japan and Australia to Facilitate Mobility of Architects in the Provision of Architectural Services" was made between Japan and Australia in July 2008 and APEC Architect's "Memorandum of Cooperation on Registered/Licensed Architects in Japan and New Zealand to Facilitate Mobility of Architects in the Provision of Architectural Services" was signed in July 2009.

Architects from Australia and New Zealand registered as APEC Architect can take a simplified examination in English language to become a qualified architect if they want to work in Japan under this initiative. The initiative aims to promote economic and technical cooperation within the Asia-Pacific region by facilitating the mobility of technical experts. The agreement and memorandum of cooperation allow mutual recognition of technical qualifications between participating countries and regions.

A similar agreement between the EU and Japan would allow more European architects to work in Japan. As architects specify the use of BCMs in the majority of cases, EU architects working in Japan under such agreement will have chances to introduce and promote products from the EU with which they are familiar.

One issue with such agreement is that EU architects are mostly under independent institutions from governments, whereas Japan is one of few countries where the qualification of architect is under governmental control according to Architect Act. The education system is also different. Most Asian countries' institutes of architecture are based on the Royal Institute of British Architects (RIBA) or French equivalent structures.

7.3 Specific Potential for EU SMEs

> **SMEs need appropriate support to help them when exporting, particularly to countries as distant and specific as Japan. In this regard, the long-running Gateway to Japan programme has proven efficient and relevant towards the needs of the European SMEs in the BCM sector.**

In order to explore the market, communication is extremely important and must go beyond relying on a few available website pages in English, which nevertheless is a prerequisite.

Exploration of business must also rely on promotional materials, which shall be translated into Japanese language by a translator with knowledge of the BCM sector. It is true that possessing such materials for immediate distribution during business missions or at professional exhibitions is crucial. In this market, as in others, providing samples to potential clients is important despite the logistical difficulties of conveying such materials.

In this regard, the Gateway to Japan programme can play a key role in facilitating exploration. The programme provides a selection of prepared companies, pre-departure training, support for collective

exhibitions (including logistics, promotional pamphlets in Japanese and promotional actions towards potential visitors) and support for individual meetings with selected Japanese companies[21].

This program is well perceived by its participants. However, it might not be insufficient in itself to any guarantee success in the Japanese market (to get deals) and follow-up is necessary.

In this regard, establishing a specific structure in charge of supporting these follow-up actions would be a significant advantage to help EU SMEs develop their activities in the Japanese market.

The EU Chambers of commerce in Japan, as the commercial sections of the EU member states' diplomatic missions in Japan are at the service of the EU companies to help them in this respect (please see list of addresses and contacts in Annex F).

In addition, several private companies (managed by EU nationals, non-EU nationals or Japanese experts) can represent the interests of SMEs in Japan and can assure long-term exploration of the Japanese market.

[21] JETRO was previously associated with this initiative, but now focuses more on helping foreign companies that want to invest in the Japanese market (see Annex B).

8 Environmental sustainability and environmental performance framework

Several governmental programmes have been implemented in building energy efficiency. They aim to promote indication of housing energy-efficiency performance assessment results by giving incentives (financial aid or tax exemption). However, progress is slow, particularly in the fields of building insulation materials and energy-efficient housing.

Over the last 60 years, various environmental problems have emerged in Japan due to water and air pollution. It has been aroused increasing public concern since the nuclear accident in Fukushima in 2011. The Japanese Government is well aware of the importance of energy saving and, from the 1979 Act on the Rational Use of Energy, has continuously improved its policies towards environmental sustainability and environmental frameworks, particularly for buildings.

Environmental improvements are expected with an increased implementation of energy saving in 2020, where energy-efficiency standards for newly built houses and other building become compulsory. These standards are, in addition to the promotion of energy-efficiency, of retrofitting for existing buildings and *net zero-energy* programmes.

8.1 Criteria development in Japan and in the EU for environmental sustainability

Between the 1960s and 1980s, radical industrialization resulted in water and air contamination throughout Japan and clear skies were seldom seen in industrialized, big cities. Accordingly, the first environmental sustainability policy mainly focused on purifying contaminated water, air and ground. In 1969, the National Institute of Environmental Studies (NIES) was established with its main research field being air, water and soil contamination studies.

With so-called oil shocks, buildings became shorter of energy for air-conditioning and lighting. Public transportation fees rose steeply. Having lower fuel consumption and more efficient operating mechanisms, resulting in less emissions of CO_2, became more important. Many buildings were constructed up to the end of the 20th century, which resulted in wide areas of forest becoming bare land and causing environmental crises throughout Southeast Asian countries.

Furthermore, the amount of construction waste became enormous and MLIT decreed that all construction waste had to be recycled. In particular, all concrete waste must be recycled and all waste steel bars must be handed to factories to be melted down into new steel bars.

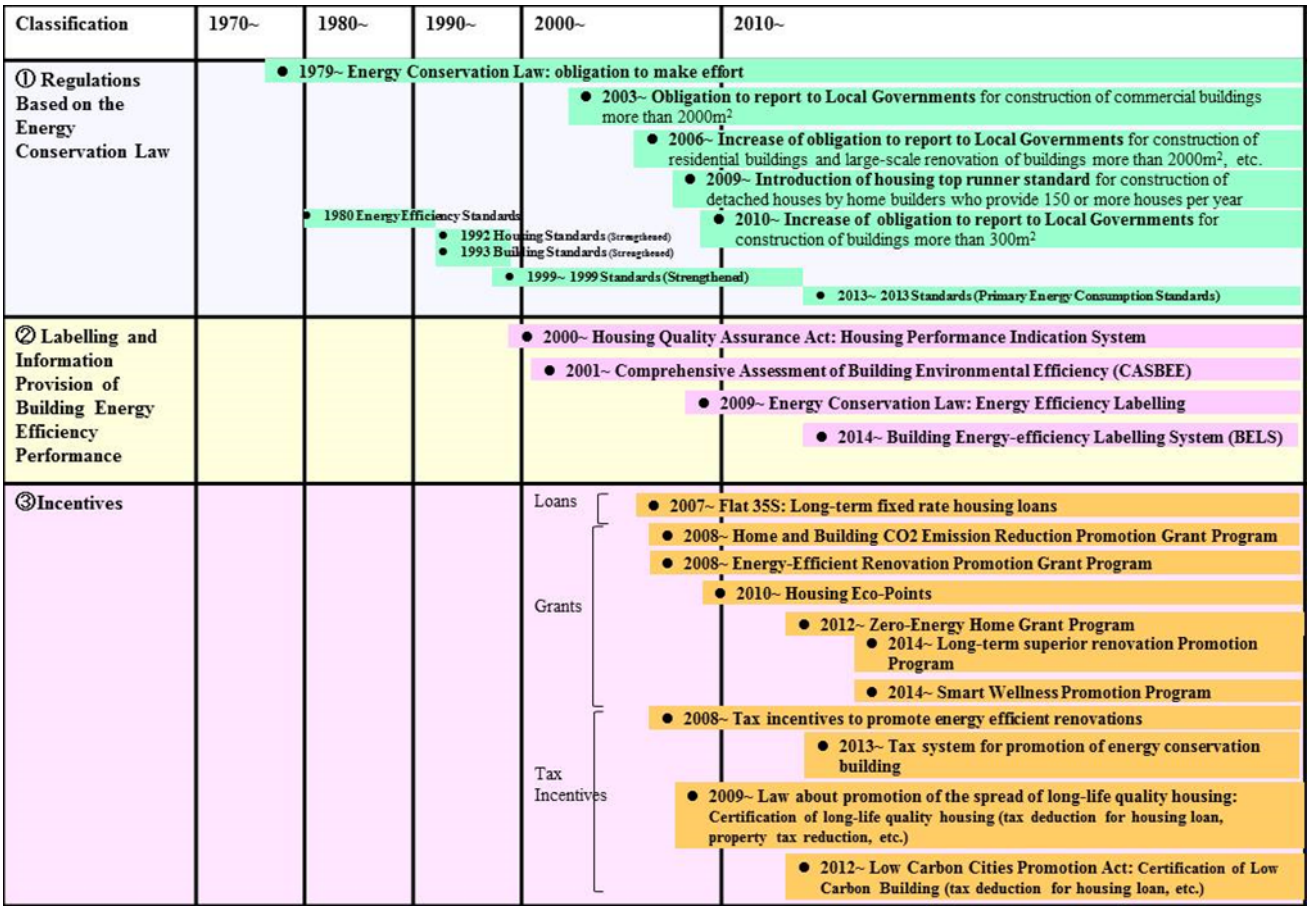
At the time, green building design labelling system was introduced to Japan, mainly from the US and Canada, and Life Cycle Assessment (LCA) studies of buildings became accepted with energy consumptions counted separately for their construction, occupation, rehabilitation and demolition.

Consequently, the Comprehensive Assessment System for Built Environment Efficiency (CASBEE) was introduced in Japan in 2001. CASBEE has four main categories: detached houses, buildings, townships and cities. The detached houses category has two groups: newly constructed and existing. The buildings category has three groups: new construction, existing and renovation.

The Building an energy-efficient labelling system (BELS) was introduced in 2014 and future improvements of the standards aim to make all public buildings *net zero-energy buildings* (ZEB) by 2020 and all newly constructed buildings net zero-energy buildings by 2030. New standards for reduced energy consumption should be established from 2016 for new houses and new buildings to accompany this policy.

As shown on Figure 25 here after, building energy-efficiency policies in Japan have three main classifications:

- Regulations based on Energy Conservation Law;
- Labelling and information provision on building energy-efficient performance;
- Incentives.



Source: document in japanese from Housing Industry Section of MLIT – 2015/1 – Translated by Ingerosec

Figure 25 – Building energy-efficiency policies in Japan

Incentives proposed to promote energy consumption reduction are as follows:

- Long-term fixed-interest housing loans with reduced rate to acquire housing with superior energy efficiency (Flat 35S);
- Subsidies (grants) with amounts varying from a third to half the additional expenses encountered for energy saving;
- Tax reduction with amounts depending on the type of building and energy-efficiency retrofitting.

8.2 CASBEE: the Japanese system for rating the environmental performance of buildings

CASBEE is an environmental rating methodology (building assessment methodology) and has been developed since 2002 in Japan. CASBEE resembles other building assessment and rating methods, like BREEAM in the UK, HQE in France or LEED in the US, which are long established and widely applied. Due to the language barrier, CASBEE is practiced only in Japan, whereas BREEAM is used in 21 countries and LEED is used in 100 countries (40). However, English edition of CASBEE is now published (41) and the CASBEE score sheet is also available online in English (42).

Figure 26 – CASBEE English edition (41) and Japanese edition (42) for New Construction

CASBEE can be used to assess every phase of the building process, various versions account for all scales of construction and type of work, as shown in Table 38 and 39.

Table 38‑ Application of CASBEE by scale of construction

Construction scale	Evaluated by
Housing and building scale	CASBEE Housing and CASBEE Building
Urban scale	CASBEE Urban Development
City scale	CASBEE City

Table 39‑ Application of CASBEE by type of work

Type of work	Evaluated by
Design	CASBEE for Pre-design
Construction	CASBEE for New Construction
	CASBEE for Existing Buildings
Renovation	CASBEE for Renovation
	CASBEE for Existing Buildings

A *Virtual enclosed space boundary* is used to distinguish a building's area from its surroundings and CASBEE assesses inside and outside this boundary separately, as shown in Figure 27.

The Built Environmental Efficiency (BEE) in CASBEE is calculated by dividing the built environment *quality* (factor Q) by the built environment *load* (factor L). As shown in Figure 27, Q comprises three categories: Q1, Q2 and Q3 and L comprises three categories: L1, L2 and L3. Each category comprises several factors evaluated from levels 1 to 5, with level 5 being the highest mark and level 1 the lowest. Level 3 corresponds to the requirements of the BSL.

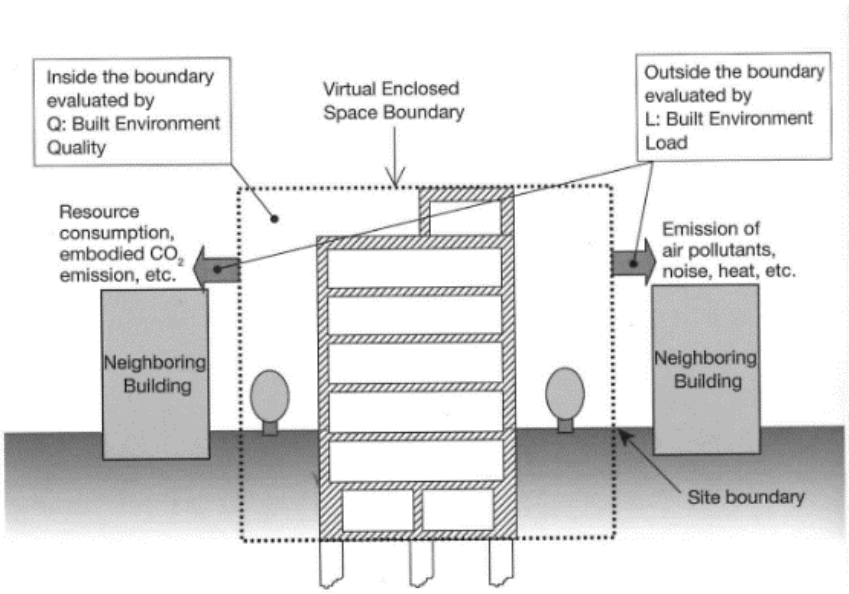


Figure 2.6.1: Division of the assessment categories for Q: Built Environment Quality and L: Built Environment Load based on the virtual enclosed space boundary

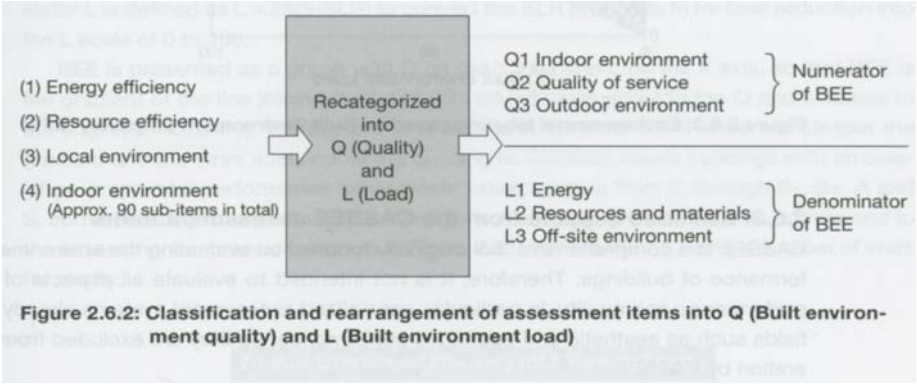


Figure 2.6.2: Classification and rearrangement of assessment items into Q (Built environment quality) and L (Built environment load)

Figure 27 – CASBEE virtual enclosure (top) & details of Q and L factors (down) (41)

Most criteria of building quality and environmental loading criteria can be known to those familiar with EU assessment methods, except for the counter-earthquake stability categories, as Japan is an earthquake prone country.

Figure 28 – CASBEE assessor licence (42)

A building will be ranked in 5 classes: class C (poor), class B- (quite poor), class B+ (good), class A (very good) and class S (excellent). In parallel, a star-ranking system exists with one star for class A and five for class S.

Assessor must be a licensed expert. An example of CASBEE assessor licence card is shown in Figure 28.

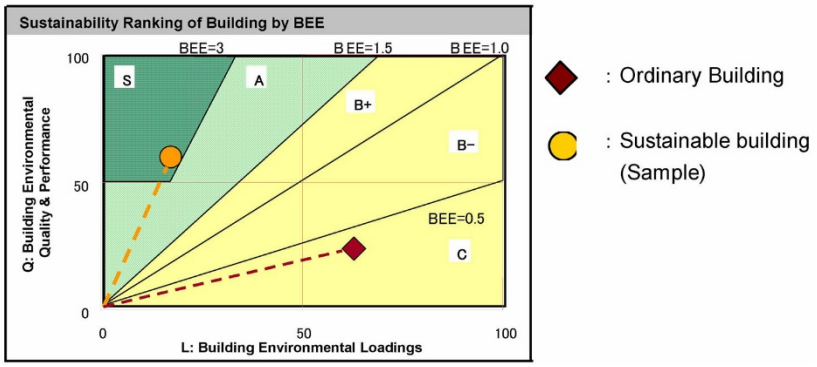


Figure 29 – Built environment efficiency ranking chart (42)

A CASBEE evaluation of class B+ can be obtained without difficulty if the building follows the BSL for sound/noise insulation. However, class S is difficult to obtain and only four or five buildings in Tokyo are crowned this evaluation. According to some architects, a cogeneration system will be efficacious to reach this level.

CASBEE assessments are required for national government administration buildings and for some local government administration buildings. However, assessments are voluntary for all other buildings and the following comments have been made:

- Except for wonting to gain incentives, there is no mandatory requirement to obtain even the minimum CASBEE level;
- All of insulation performance requirements (heat transmission coefficients) for exterior walls, exterior doors, and for windows are lower than similar EU standards.

8.3 Building a energy-efficient labelling system

The Building a energy-efficient labelling system (BELS) certification was established in April 2014 by MLIT and is the first evaluation guideline in Japan specific to energy conservation performance. It is expected to promote improvement by providing performance information on energy conservation for buildings.

BELS certification is to be obtained under a public evaluation system by a third party and in accordance with the Building Energy Index (BEI) value. Buildings are classified as one of five levels: one star being the lowest level to five stars the highest.

Compared with CASBEE, BELS certification is more focused on energy efficiency and evaluates the following aspects:

- Exterior: ratio of windows to wall area, types of glass and eaves;
- Air-conditioning: heat sources, cooling capacity, thermal capacity, air-conditioning systems, aeration capacity, open air cooling and cutting, heat exchange and CO_2 control;
- Ventilation: high-efficiency electric motors, inverter control, CO_2 control and temperature control;
- Lighting: lighting equipment, proximity sensor control, timer control, initial illumination compensation, daylight utilisation control and illumination adjustment control;
- Hot-water supply: hot-water heater, water-saving devices and heat insulation method;
- Elevator control systems.

The results of energy consumption are compared with standard values of the BEI. This system is better to allow the evaluation of the energy-efficiency of housing. However, like CASBEE, it is not a mandatory system and the application depends on the will of property owners.

8.4 Green construction materials

Japan and EU countries have suffered similar negative experiences of building materials substances, like asbestos, sick building syndrome and greenhouse gases. Therefore these items are regulated through the Building Standard Law as follows:

- Asbestos is prohibited for use in any building material;
- Sick building syndrome is believed to be related to chemical and/or biological contaminants. Emission of chlorpyrifos by materials is prohibited in habitable rooms and using interior finishing containing formaldehyde is restricted. Every material to be applied in habitable rooms has to be certified as free from or containing low quantities of such substances. If certified as free, products will be given a five-star rating and if they contain low quantities, a three- or four-star rating depending on the amount. If given a three- or four-star rating, interiors containing such materials must be suitably ventilated according to the amount emitted;
- Using greenhouse gases to form insulation boards is restricted.

Energy-saving regulations for houses have been applied to reduce global warming by limiting emission of CO_2. The following regulations concern energy saving:

- Energy-Saving Law: efficiency standards are regulated by performance-based standards for eight regions in Japan;
- Housing Performance Indication System: consumption, grading of indoor environments' ventilation, grading of interior visual environments, grade of interior acoustic environments, consideration for elderly persons and security (crime prevention).

8.5 Corresponding specific roles, needs and opportunities for European SMEs

In Japan, building materials are supplied in various ways, but most often involve the building fixture manufacturer buying raw materials from factories for assembly, whereupon all building fixtures are sent on site. Finished materials, such as for interiors, are also supplied by traders or agents.

There will be several ways for European SMEs producing materials to do business in Japan. It shall be worthwhile to try to contact Japanese architectural foundations. As discussed in Section 2.1.4.4, architects are prominent decision-makers for material selection, so manufacturers should approach architectural institutions to have a chance of give architects information about their products. The three main architectural institutions are the Japan Federation of Architects associations, the Japan Association of Architectural Firms and The Japan Institute of Architects.

Architects are always interested in new products or better designed materials, but most of architects will select the same materials used previously as the safe option. Working with architectural associations to present new products and explaining that they are for instance free from harmful chemical substances is important.

Another way of doing business would be to build model houses in Japan. Many successful exporters have found new clients by exhibiting their products in model houses. It would, however, be expensive for SMEs to build model houses individually, so joint ventures of several companies can be a good way to share costs or reduce the scale by rating a model room space.

9 Specific support for promoting EU SMEs in Japan

It is important to consider the various types of support which can be used to promote EU SMEs, since it appears that support must be comprehensive and not only refer to a single domain, regulation or standard. The following sections present such support measures.

9.1 Upstream measure: branding EU BCM products

EU products are often associated with good design and quality. However, the number of countries and languages involved make it difficult for Japanese customers to clearly identify product origins and for traders to get information on specific products.

From interviews, a common database for information on existing products in Europe was revealed to be desirable. The database would facilitate the dissemination of information to Japanese traders interested in European products.

Currently, some Japanese companies already use the European image by naming companies and products, such as Sweden House and Goethe House, but without necessarily fully using European BCM products.

On the other hands, European SMEs often value their independence, but still represent the European image.

The sense of belonging to the same community is important in Japan and the Japanese Government is currently developing an All-Japan brand for overseas sales. The concept of All-Japan brand is to offer a full service scope, from engineering to construction and equipment.

It is therefore important for the EU to provide in the BCM sector in Japan an united image and to create synergy at a local level between EU products, which will make them collectively become better-known to Japanese customers.

At present, national labels exist, such as Advantage Austria, but no EU BCM label exists. The creation of a label might be an efficacious tool, with values commonly attributed to housing in the EU, such as spaciousness, quality, warmth and comfort.

This label must be properly managed to achieve its purpose and should not promote substandard products or companies. Accordingly, appropriate support and management shall be needed, either by professional associations, professional bodies or authorities in Europe.

At the same time, products having received this EU label are to be compiled in a common database accessible to Japanese companies looking for partners or new products.

It is important to create synergy at the local level between EU products, which, collectively, can be more attractive to Japanese customers.

9.2 General promotional support: the Gateway to Japan programme

The Gateway to Japan programme established in 1990 is a long-running and successful support promotion tool for EU companies, particularly SMEs, wanting to create and develop their businesses in the Japanese market.

The feedback from companies is very good and successful, with 86% of EU companies being highly satisfied and 64% of them having established business collaborations after participating in a Gateway mission (see Gateway to Japan programme's factsheet in Annex G). Several of EU exhibitors surveyed during the Japan Home and Building Show 2014 indicated that they had made their debuts in the Japanese market with this programme and that it helped them to reach their current level of business.

Up to now, this program does not include a support beyond the missions themselves. The programme is well adapted to support EU companies by preparing missions to Japan and organising exhibitions and individual B2B meetings. However, the next steps by participated companies have to be made on their own.

This issue could be resolved by recruiting local consultants and positioning their office in a European institution in Japan to serve as a contact point and provide guidance to help to orientate individual companies. The support shall have to be situated in Japan, because of the difficulties that will arise if they are elsewhere, e.g. relating to time difference and the need for awareness of the BCM sector, in addition to language skills.

9.3 Necessary regulatory alignment cooperation

The difference in methods and approaches between the EU and Japan is important, including the dimensional approach vs. performance-based approach, consideration of new products and new methods, and length of the overall process for testing.

These gaps cannot be easily filled by private companies alone, particularly in the case of SMEs. Institutional support from both sides, the EU and Japan, is necessary to facilitate these issues. The following two main measures are recommended to taken:

a) Acceptance by Japanese authorities of tests made in the EU:

JIS, JAS and MLIT allow registered overseas certification bodies (ROCB) to certify tests on European products. However, the cost involved in becoming a registered overseas certification body is significant and currently there are few. For JAS, as explained previously, only one Norwegian company is registered for all Europe.

It is important for EU companies and SMEs to be able to undertake tests in their country; reduction costs and delays and easier discussions regarding tests. It would be beneficial for discussions between the EU and Japanese authorities to focus on recognizing EU testing institutions.

b) Regulatory alignment:

A MoU was signed in mid-November 2014 between CEN/CENELEC and its Japanese counterpart, the Japanese Industrial Standards Committee (JISC) (see press release in Annex H). However, the objectives are not clearly detailed, and as a first agreement was already signed with CENELEC on similar topic in 2008, further agreements will be needed before improvements are noticeable.

A representative of the Norwegian Institute of Wood Technology (NTI) is accepted as a member of the JAS Technical Committee. Consequently, structural timbers produced according to EN 14081-1 and tested by a registered overseas certification body, NTI, are accepted as equivalent to the national labelling system, JAS, since 6 February, 2012. This makes JAS certification easier for all European producers.

The following would further improve mutual recognition between the EU standards committees and Japanese counterparts:

- JIS: target for mutual recognition of standards between JIS and CEN/CENELEC;
- JAS: discussions towards mutual recognition between CEN and JAS for wood standards;
- Other relevant ministries: such as the Ministry of Health, Labour and Welfare.

These actions need to be carefully monitored by EU authorities and Japanese ministries.

9.4 Introduction of environmental performance criteria

MLIT has an intention to develop the concept of zero-energy houses in Japan. The discussions with Japanese companies working in the insulation sub-sector indicate the following:

- Companies are developing software to evaluate the energy consumption of houses, but this type of evaluation will take time to become popular, because evaluations is not mandatory under current regulations;
- European standards are more successful at promoting energy-efficient buildings than Japanese standards. Introducing European standards will energy efficiency in improve Japanese housing.
- Support by EU institutions in developing environmental performance criteria for Japan is desirable according to a Japanese company, because it will make Japanese BCM products improve and reach a level similar to Europe.

9.5 Considerations on ongoing EU-Japan FTA negotiations

a) Opening of the public markets in Japan:

The construction sector is specific in the economy: unlike other industrial sectors, (i) the operations are realized locally (not in a factory in the home country of the exporter) (ii) have major characteristics of prototype projects (the design of a road needs to be renewed for each new project), and (iii) the onsite duration of the works are generally long, in addition to a significant diversity of professionals involved[22].

On the other hand, Japan is an archipelago surrounded by sea, which has created and enforced its own language and own technical culture. In the construction sector, the contractors form a hierarchy with large contractors (*zene-kon*) having, in most cases, business operation histories dating more than a century. Until recently, a bid-rigging system (*dango*) existed inside cartels of contractors to share the public works, but this system has now disappeared.

Construction works in Japan are done by locally employed workforce, by means of a systematic externalization to specialized subcontracting companies (or *shita uke* system, literally: those who accept works underneath, and who benefit from this system of regular and privileged allocation of works by *zene-kon*). In addition to the language and the workforce, there are also distinctive technical standards, administrative procedures and accounting systems.

Successfully matching the above characteristics is not an easy task and the market alone cannot achieve changes favourable to European BCM companies, SMEs in particular. EU exporters have many difficulties in understanding the characteristics of the local market (including Japanese texts of almost all documents) and therefore cannot compete on an equal basis with local companies, which benefit from the *shita uke* system[23].

Foreign construction companies were virtually absent from Japan until the period of the Major Project Arrangement (MPA) in the beginning of the 1990's. In that scheme, for a selected number of reference projects (18 at the beginning), all Japanese competitors were obliged to include a foreign partner (first from the USA, then extended to France) in their consortium to be allowed to participate in the competitive bidding. This system worked well inside its boundaries (large-scale projects, however there were only18 projects, a very low number in comparison with the total of the public work projects

22 - In fact, when comparing for instance with the fabrication of a car, a larger variety of professions and workers is involved in the construction of a house: masons, carpenters, plumbers, electricians, painters, truck drivers, architects, BCM makers and installers… and this during a longer period of time.

23 This *shita uke* system also applies on the local scale vis-à-vis Japanese companies which face difficulties to find sub-contractors outside of their usual sphere of influence.

in Japan) until the establishment of GATT then WTO rules preventing this type of "structured" bids with pre-designation of authorized competitors.

Since the specificities of the Japanese market could not be overcome from outside, foreign (EU included) contractors withdrew from the market and the companies which had established subsidiaries in Japan closed their offices or restructured them in order to promote activities outside Japan. Currently, existing links between Japanese and foreign companies are mainly projects in the third countries.

EU and other foreign companies looked for more rewarding foreign markets and Japanese authorities had to face a system which, by structure, is not very competitive, and tends to maintain high prices and average quality which is not optimal for innovation[24].

Opening the *de facto* public markets in Japan in the construction sector will therefore require from the Japanese authorities the setting-up of appropriate schemes of devolution, comprising a reward to innovative products and materials (which implies to revise the system of standards), as well as practices (including more realistic proposed PPP schemes), hence encouraging Japanese companies to engage in renewed cooperative schemes with foreign partners.

At the same time, EU authorities can bring significant support by promoting EU and international standards through cooperation schemes with counterpart entities in Japan and by promoting EU know-how (not only technical, but also administrative and financial), in order to initiate and support the evolution of the local public works market (Note: it should be mentioned that the PPP system for construction was developed in Europe in the early 1990's, in particular on the occasion of the construction of the 2nd Severn bridge in United Kingdom).

EU authorities can also play the role of "whistle blower" when significant projects show absence of EU companies. This is the case for all projects around the "2020 Olympics" in Tokyo, where foreign/EU participation is scarce, even when considering all athletic facilities, their related infrastructure (public works) and the refurbishment of hotels (under private funding). Only example to date: Mrs. Zaha Hadid, London-based architect winner of the 2004 Pritzker prize, has been awarded, in cooperation with Japanese companies, the project of construction of the new national stadium in Tokyo (80,000 seats) following a restricted-entry international competition.

Consequently, the FTA negotiations should result in a *de facto* increased presence of EU players in the market, in particular SMEs, by promoting specific projects in connection with the Japanese authorities to serve as references on the local market, and also as assets to set-up or develop schemes of cooperation based on *jisseki* (reference in Japanese: the key to the development of business).

A specific effort should be made for supporting EU SMEs involved in innovative products or know-how, by allocating designated reduced scale projects (possibility within a specific programme for promoting energy efficient buildings for example) where they can implement and display their techniques and products[25].

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24 - During the study, we have asked several counterparts for information and we received documents dating back from the 1990's and mid-2000's, with this usual quote: "It is a little old but it is quite a good reference document, and anyway almost nothing has changed since".

25 This is similar to the *dejima* system, adopted in ancient times by Japan to permit the entry of foreign goods on a limited scale in Nagasaki, Kyushu Island.

b) Alignment of standards:

The agreement between CEN/CENELEC and JISC signed on November 13th, 2014, could be a breakthrough if standards are aligned based on the discussions and cooperation schemes to follow. On this issue, regular and joint monitoring must be set up and progress reported.

At the same time, the possibility of alignment of EU standards with the JAS, with standards of MLIT and other ministries should be investigated by relevant institutions from the EU side.

The alignment of standards may be a key element in FTA negotiations. It shall constitute an important help for EU SMEs and BCM exporters by reducing costs and delays for product approval. And it is worthwhile to emphasize that the Japanese BCM manufacturers and traders can also benefit from the alignment of standards.

c) Distortions due to local subsidies

This Japan-Japan issue (prioritising/ favouring materials produced locally, inside a governorate for instance, through subventions or various incentives[26]) produces collateral effects to foreign products, which are by force not local.

This possibility of market distortion by local subsidies has to be addressed by the central authorities through a dedicated legal act.

d) Associations of producers and installers:

The professional associations play key roles in local businesses by handling business-related issues and acting as contact points for the ministries. They are often involved in the process of drafting the guidelines and regulations for these ministries and are partly responsible for making the BCM market in Japan more obstructed.

Memberships to these associations are sometimes difficult for EU companies because of the need to have local sponsorship and a place of business in Japan.

A designated contact point (in Japanese *madoguchi*[27]) in the corresponding ministries would help to facilitate contacts with those associations for EU companies seeking membership, since the ministries are the regular counterparts and/or trustees of these associations and then should act as guarantors that no irregular or anticompetitive practice happen at this level.

e) Designation of a contact point (*madoguchi*) in each of corresponding ministries:

Some written materials are only available in Japanese and Websites are generally more up-to-date and detailed in the Japanese version. Accordingly, EU companies (and sometimes supporting institutions) have additional difficulties in accessing and optimally exploiting the available information.

A *madoguchi* established in each of the corresponding ministries would bevery useful.

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26 - For instance, suppression of requirements to abide to JAS standards (and to bear the corresponding costs) in case of use of locally produced wood.

27 - A *madoguchi* is not an information counter. The person designated as *madoguchi* has the power (technical background and skills, contacts with various Departments in the said ministry) and the duty to come back to the applicant/claimant with structured elements of answer, even negative. This can permit further action if necessary.

f) Creating a support structure in Japan for EU BCM companies

This structure would be composed of Japanese and EU nationals, selected based on their expertise in the EU and in the Japanese BCM domains. They would be counterparts of EU BCM exporters or soon-to-be exporters to Japan and of their support entities (EU Commission, programs and initiatives in the domain…), as well as Japanese entities (public/ private) encountering difficulties with EU products[28].

This structure would be supported locally by a group of experts originated from the EU and from Japan, selected based on their skills and their knowledge of the Japanese market. This group can constitute an authoritative counsel in the EU BCM domain, for day to day issues as for more complex schemes of discussions between EU and Japan.

The structure will establish and maintain regular contacts with the designated *madoguchi* in ministries and with Japanese associations in the domain.

This long term, structured commitment shall create a win-win system for all parties.

g) Increasing possibilities of information exchange and benchmarking on BCM related issues

Training seminars organised for representatives of EU countries in Japan and EU companies active in Japan could address ongoing BCM and construction issues on a regular basis, inform new matters and allow regular formal and informal exchanges of views[29].

This type of trainings and seminars could be organised in the framework of the EU-Japan Centre for Industrial Cooperation with the support of METI and other agencies as well as Japanese experts from the private sector.

These events should be organized on a regular basis in order to become a part of the agendas of the stakeholders in the domain.

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28 - This point has also to be considered, since some EU exporters facing difficulties have left Japan without providing substitute and/or after sale service. This is an inappropriate business practice, especially in Japan where after sale service is an integrated part of a business deal, included as such in the purchasing price of product.

29 This kind of seminar has been organized in the 1990s' by the Infrastructure Development Institute (IDI) for MLIT.

The above study was presented during a workshop held on March 18th, 2015, in the EU Delegation in Tokyo, alongside with testimonies of EU and Japanese practitioners and presentations of supporting institutions from EU and Japan.

The discussions held at this occasion permitted to assess the results of the study and to discuss follow-up. A networking event organised at the end of the workshop showed the need of exchange and communication on related issues and its outcomes in terms of facilitation, contacts and networking, counselling and sharing of experiences and ideas.

The report of this workshop is included at the end of the present document, in Annex K.

The presentations made during the workshop can be downloaded from the EUJC business portal EU-Business in Japan under the "construction sector".

http://www.eubusinessinjapan.eu/sectors/construction

10 Bibliography

1. **Kawabata, Yasunari.** *『雪国』 (Yukiguni / 'Snow Country' / 'Pays de Neige').* Tokyo / New York / Paris : Iwanami Shoten / Knopf / Le Livre de poche, 1948.

2. **JMA.** Tables of Monthly Climate Statistics. *Japan Meterological Agency.* [Online] Japan Meterological Agency, 24 06 2014. http://www.data.jma.go.jp/obd/stats/data/en/smp/index.html.

3. **European Commision.** Unit B.5. - Social Sciences and Humanities. *Global Europe 2050.* [Online] European Commission, 27 06 2014. [Cited: 19 02 2015.] http://ec.europa.eu/research/social-sciences/pdf/global-europe-2050-report_en.pdf.

4. **MIC.** Japan Statistical Handbook 2015. *Statistics Bureau.* [Online] Ministry of Internal Affairs and Communications, 26 11 2014. [Cited: 28 01 2015.] http://www.stat.go.jp/english/data/nenkan/index.htm.

5. **NASA.** *Earth Observatory.* [Online] National American Space Agency, 18 04 2012. [Cited: 10 02 2015.] http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=79765.

6. **MIC.** Summary of the Results of Internal Migration in 2013. *Statistics Bureau.* [Online] Ministry of Internal Affairs and Communications, 24 04 2014. [Cited: 10 02 2015.] http://www.stat.go.jp/english/data/idou/2013np/index.htm.

7. **MIC.** The Statistical Handbook of Japan 2014. *Statistics Bureau.* [Online] Ministry of Internal Affairs and Communications, 04 09 2014. [Cited: 28 01 2015.] http://www.stat.go.jp/english/data/handbook/index.htm.

8. **Nikkei Architecture.** *Selection of Construction Materials.* Tokyo : Nikkei Architecture, 2014.

9. **MOFA.** Japan Puzzle. *Web Japan.* [Online] Japanese Ministry of Foreign Affairs, 20 02 2013. [Cited: 28 01 2015.] http://web-japan.org/kidsweb/games/puzzle/.

10. **Euroconstruct.** *Press Release 78th Euroconstruct Conference 19 November 2014, Milan.* [Online] Experian, 20 01 2015. [Cited: 10 02 2015.] http://www.experian.co.uk/assets/economics/brochures/ec78-press-release.pdf.

11. **Eurostat.** *Eurostat Newsrelease: September 2014 compared with August 2014.* [Online] European Commission, 19 11 2014. [Cited: 10 02 2015.] http://ec.europa.eu/eurostat/documents/2995521/6491959/4-19112014-AP-EN.PDF/1dcaeb9b-0037-4691-bb4f-8de93b400bf8.

12. **Deloitte.** *European Powers of Construction (EPoC) 2013.* [Online] Deloitte, 02 02 2015. [Cited: 10 02 2015.] http://www.iberglobal.com/files/european_powers_construction.pdf.

13. **Dodge Data & Analytics.** *Engineering News Record (ENR).* [Online] Dodge Data & Analytics, 10 02 2015. [Cited: 10 02 2015.] http://enr.construction.com/toplists/.

14. **European Commission.** International Trade. *Eurostat.* [Online] European Commission, 28 01 2015. [Cited: 28 01 2015.] http://epp.eurostat.ec.europa.eu/newxtweb/mainxtnet.do.

15. **Ministry of Finance.** *Trade Statistics of Japan.* [Online] Ministry of Finance, 19 02 2014. http://www.customs.go.jp/toukei/info/index_e.htm.

16. **JETRO.** Investing in Japan. *Japan External Trade Organisation.* [Online] Japan External Trade Organisation, 28 01 2015. http://www.jetro.go.jp/en/invest/.

17. **JETRO.** Japanese Trade and Investment Statistics. *Japan External Trade Organisation.* [Online] Japan External Trade Organisation, 28 01 2015. http://www.jetro.go.jp/en/reports/statistics/.

18. **Sunesen, Eva R. , Francois, Joseph F. and Thelle, Martin H.** *Assessment of trade barriers to trade and investment between the EU and Japan.* Copenhagen : Copenhagen Economics, 2009.

19. **Griek, Lyckle.** *Government Procurement in Japan – Obstacles and Opportunities for European SMEs.* s.l. : Minerva & EU-Japan Centre for Industrial Cooperation, 2014.

20. **The Building Center of Japan.** *A Quick Look at Housing in Japan (May 2014).* [Online] The Building Center of Japan, 27 01 2015. [Cited: 27 01 2015.] http://www.bcj.or.jp/en/services/reference.html.

21. **EU Gateway Programme.** *Market Study on Construction and Building Technologies 2013.* [Online] EU Gateway Programme, 02 07 2013. [Cited: 30 01 2015.] http://www.eu-gateway.eu/userfiles/file/Market%20Studies/2013/2013%20Construction%20Building%20Technologies%20Market%20Report%20-%20Final.pdf.

22. **EBC.** Construction: issues and recommendations. *Taking Action: The EBC Report on the Japanese Business Environment 2014.* [Online] The European Business Council in Japan & The European (EU) Chamber of Commerce in Japan, 19 12 2014. [Cited: 30 01 2015.] https://www.ebc-jp.com/images/stories/2014_EBC_White_E.pdf.

23. **Japan Customs.** Japan's Tariff Schedule (Statistical Code for Import). *Japan Customs.* [Online] Japan Customs, 19 01 2015. [Cited: 28 01 2015.] http://www.customs.go.jp/english/tariff/index.htm.

24. **Tanizaki, Junichiro.** *In Praise of Shadows.* New Haven : Leete's Island Books, 1977.

25. **Koto City Culture and Community Foundation.** *Koto City Culture and Community Foundation.* [Online] Koto City Culture and Community Foundation, 28 01 2015. http://www.kcf.or.jp/fukagawa/.

26. **EU Gateway Programme.** *Doing Business in Japan 2014.* [Online] EU Gateway Programme, 04 11 2014. [Cited: 10 12 2014.] http://www.eu-gateway.eu/market-studies-0.

27. **Morse, Edgar S.** *Japanese Homes and their Surroundings.* Cambridge : University Press, 1888.

28. **BCJ.** *The Building Center of Japan.* [Online] The Building Center of Japan, 20 01 2015. http://www.bcj.or.jp/en/.

29. **BPSA.** List of Institutions. *Building Performance Standardisation Organisation.* [Online] Building Performance Standardisation Organisation, 26 01 2015. http://www.seinokyo.jp/hyoukakikan/g.

30. **MLIT.** Applications for Recognition of Overseas Performance Evaluation Organisations and Overseas Approval Organisations. *Ministry of Land, Infrastructure, Transport and Tourism.* [Online] Ministry of Land, Infrastructure, Transport and Tourism, 06 01 2004. [Cited: 28 01 2015.] http://www.mlit.go.jp/english/housing_bureau/recognition/index.html.

31. **JISC.** *Japan's Standardisation Policy 2013.* Tokyo : Japan Industry Standards Committee, 2013.

32. **JAS.** JAS Web Store. [Online] Japanese Standards Association, 26 01 2015. http://www.webstore.jsa.or.jp/webstore/Top/indexEn.jsp.

33. **MAFF.** JAS - Certification system. *Ministry of Agriculture, Forestry and Fisheries.* [Online] Ministry of Agriculture, Forestry and Fisheries, 18 12 2014. http://www.maff.go.jp/e/jas/jas/system.html.

34. **JISC.** *Japan Industry Standards Committee.* [Online] Japan Industry Standards Committee, 20 06 2014. http://www.jisc.go.jp/eng/index.html.

35. **JAEIC.** first-Class Architect, second-Class Architect & Mokuzo Kenchikushi. *The Japan Architectural Education and Information Center.* [Online] The Japan Architectural Education and Information Center, 19 01 2015. [Cited: 28 01 2015.] http://www.jaeic.or.jp/1k.htm.

36. **AIJ.** Chapter 5: Snow Loads. *AIJ Recommendations for Loads on Buildings.* [Online] Architectural Institute of Japan, 06 01 2004. [Cited: 27 01 2015.] http://www.aij.or.jp/jpn/symposium/2006/loads/Chapter5_com.pdf.

37. **JYURI.** *Jyukankyo Research Institute Inc.* [Online] Jyukankyo Research Institute Inc., 30 01 2015. [Cited: 30 01 2015.] http://www.jyuri.co.jp/english/.

38. **JACIC.** *Japan Construction Information Center Foundation.* [Online] Japan Construction Information Center Foundation, 29 01 2015. http://www.jacic.or.jp/jacic-hp/.

39. **JBDPA.** *The Japan Building Disaster Prevention Association.* [Online] The Japan Building Disaster Prevention Association, 29 01 2015. http://www.kenchiku-bosai.or.jp/.

40. **Nguyen, Binh K. and Altan, Hasim.** *Comparative Review of Five Sustainable Rating Systems.* School of Architecture, The University of Sheffield. [Online] : Elsevier Ltd., Procedia Engineering, Volume 21, 2011. pp. 376–386.

41. **Murakami, Shuzo, Iwamura, Kazuo and Cole, Raymond J.** *CASBEE: A decade of Development and Application of an Environmental Assessment System for the Built Environment.* [ed.] Japan Sustainable Building Consortium (JSBC). Tokyo : Institute for Building Environment and Energy Conservation (IBEC), 2014.

42. **CASBEE.** *Comprehensive Assessment System for Built Environment Efficiency.* [Online] Japan GreenBuild Council (JaGBC) & Japan Sustainable Building Consortium (JSBC), 01 05 2014. [Cited: 12 02 2015.] http://www.ibec.or.jp/CASBEE/english/.

43. **MAFF.** List of JAS Standards. *Ministry of Agriculture, Forestry and Fisheries.* [Online] Ministry of Agriculture, Forestry and Fisheries, 07 11 2014. http://www.maff.go.jp/j/jas/jas_kikaku/kikaku_itiran.html.

44. **EU-Japan Centre for Industrial Cooperation.** Information on Japan for EU Companies. *EU Business in Japan.* [Online] 26 01 2015. http://www.eubusinessinjapan.eu/sectors/construction.

45. **Barthes, Roland.** *L'Empire des Signes ('The Empire of Signs').* Paris : Skira, 1970. p. 152.

46. prefecture**s Grading Research.** prefecture*s Grading Research.* [Online] prefectures Grading Research, 03 11 2014. [Cited: 29 01 2015.] http://grading.jpn.org.

47. **Doing Business Project.** Ease of Doing Business in Japan. *Doing Business.* [Online] World Bank Group, 29 01 2015. [Cited: 29 01 2015.] http://www.doingbusiness.org/data/exploreeconomies/japan#.

48. **Tashiro and cartography students.** s.l. : Meiji University, 2014.

49. **Wikipedia.** *Japan bluemarble location map with side map of the Ryukyu Islands.* [Online] Wikipedia, 22 03 2011. [Cited: 10 02 2015.] http://en.wikipedia.org/wiki/File:Japan_bluemarble_location_map_with_side_map_of_the_Ryukyu_Islands.jpg#file.

50. **Yamada, Shohei.** *The Green Purchasing Law and Promoting Green Procurement In Japan.* [Online] Ministry of the Environment, 25 10 2007. [Cited: 19 02 2015.] http://www.igpn.org/workshop/india_0701/pdf/The%20Law_%20and%20Promoting%20for%20speech%20by%20MoE%20Yamada%20at%20Pune%20University.pdf.

51. **MOE.** *Law Concerning the Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Law on Promoting Green Purchasing).* [Online] Ministry of the Environment, 10 12 2014. [Cited: 19 02 2015.] http://www.env.go.jp/en/laws/policy/green/index.html.

52. **Nikkei Asian Review.** *Japan to ease visa rules for foreigners launching businesses.* [Online] Nikkei, 20 01 2015. [Cited: 20 01 2015.] http://asia.nikkei.com/Politics-Economy/Policy-Politics/Japan-to-ease-visa-rules-for-foreigners-launching-businesses.

LIST OF ANNEXES

Annex A

Table of market issues

A.1 General

A.1.1 Complete list of sections and chapters concerning construction materials' tariff duties from the Harmonized Commodity Description and Coding System

Section / Chapter	Title
Section V	Mineral Products
Chapter 25	Salt; sulphur; earths and stone; plastering materials, lime and cement
Chapter 26	Ores, slag and ash
Chapter 27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes
Section VI	Products of the Chemical or Allied Industries
Chapter 28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, ofradioactive elements or of isotopes
Chapter 29	Organic chemicals
Chapter 32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks
Chapter 34	Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster
Chapter 35	Albuminoidal substances; modified starches; glues; enzymes.
Chapter 38	Miscellaneous chemical products
Section VII	Plastics and Articles Thereof; Rubber and Articles Thereof
Chapter 39	Plastics and articles thereof
Chapter 40	Rubber and articles thereof
Section IX	Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork
Chapter 44	Wood and articles of wood; wood charcoal
Chapter 45	Cork and articles of cork
Chapter 46	Manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork
Section X	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard; paper and paperboard and articles thereof
Chapter 47	Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard
Chapter 48	Paper and paperboard; articles of paper pulp, of paper or of paperboard
Chapter 49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans
Section XIII	Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware
Chapter 68	Articles of stone, plaster, cement, asbestos, mica or similar materials
Chapter 69	Ceramic products
Chapter 70	Glass and glassware

Section XV	Base metals and base metal articles
Chapter 72	Iron and steel
Chapter 73	Articles of iron or steel
Chapter 74	Copper and related articles
Chapter 75	Nickel and related articles
Chapter 76	Aluminium and related articles
Chapter 78	Lead and related articles
Chapter 79	Zinc and related articles
Chapter 80	Tin and related articles
Chapter 81	Other base metals; cermets; related articles
Chapter 82	Tools, implements, cutlery, spoons and forks, of base metal; related parts of base metal
Chapter 83	Miscellaneous base metal articles
Section XX	Miscellaneous manufactured articles
Chapter 94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, not elsewhere specified or included; illuminated signs, illuminated name plates and similar; prefabricated buildings

A.1.2 Complete list of sections and chapters concerning construction materials' import regulations from *Handbook for Industrial Products - Import Regulations 2009*

ANNEXES

Annex B: Activities of JETRO to promote investment in Japan

Annex B: JETRO

Japan External Trade Organization, JETRO is a government-related organization established in 1958 aiming to contribute to the growth of Japanese economy and society through facilitating trade and investment. Its main activities are:

- assisting foreign business in Japan,
- supporting the overseas business operation of Japanese firms and
- facilitating economic growth in developing countries through trade promotion.

JETRO has global network with 76 offices overseas including 15 offices in EU while it has also 43 offices in Japan to network with local business society. The activities for FDI comprises:

1) Giving information on the Japanese market,
2) Finding and developing business partners for foreign companies,
3) Giving support for setting up business bases (including providing temporary office space),
4) Organizing business matching events.

In 2013, 46.3% of FDI stock in Japan comes from European countries.

For European SMEs, in addition to the EU-Japan Centre for Industrial Cooperation and EU Gateway to Japan program, JETRO's service for foreign companies can be very helpful because of its developed network both in Europe and in Japan, not only for direct investment, but also in helping to find a good business partner at initial stage of entering into the Japanese market.

JETRO has facilities of supporting foreign-affiliated companies by giving opportunity to utilize Invest Japan Business Support Center (IBSCs) that are located in six major Japanese cities namely Tokyo, Osaka, Kobe, Nagoya, Yokohama and Fukuoka. In these centers foreign-affiliated companies can enjoy consultations and advices including government incentives, subsidies, etc. from JETRO's legal, fiscal and commercial experts when setting up their business base in an office space provided temporary inside IBSC.

For more information: www.jetro.go.jp/en/invest

ANNEXES

Annex C: Forms for surveys and questionnaires:

C1 :Questionnaires to EU Members States diplomatic missions in Japan

C2 Questionnaire (E/J) distributed at the Japan Home and Building Show 2014

C3 Comprehensive survey (E/J) step 1

C4 Comprehensive survey (E/J) step 2

ANNEXES

Annex C: Forms for surveys and questionnaires:

C1 :Questionnaires to EU Members States diplomatic missions in Japan

SUSTAINABLE BUILDING AND CONSTRUCTION SECTOR IN JAPAN AND THE ANALYSIS OF OPPORTUNITIES FOR EUROPEAN FIRMS

QUESTIONNAIRE

Person in charge of building construction materials at the EU Member States' Diplomatic Missions (to be contacted if necessary by the Study team)

EU Member State:	
Name:	
Title:	
Telephone:	
Email :	

1 - MEETING WITH EU MEMBER STATES' DIPLOMATIC MISSIONS

1 - Participation in the meeting organized on Tuesday, 18 November, 2014, from 14:00 to 15:30 at the EU-Japan Centre for Industrial Cooperation:

☐ I will participate in the meeting
☐ I will not participate in the meeting
☐ I designate a substitute: Ms. / Mr. ……

2 – SPECIFIC QUESTIONNAIRE:

Thank you in advance for all information provided.

2.1 - Issues which I would like to be considered during the study:
(Please feel free to comment where ☑,)

☐	General presentation of the building market in Japan: ……..…
☐	Tariff barriers: ……
☐	Standardization of products: ……..……..
☐	Aftercare: …….....
☐	Promotion in Japan: ...……
☐	Distribution in Japan: ……
☐	Other issues (please indicate): …… …… ……

2.2 – Contact organizations and person(s) for building and construction materials in your country:

Domain of activity:	Please indicate organization details (name, address, tel., website) & person in charge if possible (name, tel. and email)
Supervising bodies:	(e. g. Ministerial Departments)
Commercial promotion:	(e. g. Professional Support Organizations)
Standards:	(e. g. Technical Centres)
Others:	

2.3 – Specific examples (successes, shortcomings, failures) of companies from your country trying to enter the building materials market in Japan:

Data on the Company (name, contact details):	
Contact in the Company (name, Email):	
Please explain what happened:	
Your comments:	

(Please feel free to introduce/display several cases).

3 – Additional information:

Please do not hesitate to send us now or later additional information which you might have (case stories, promotional brochures, general data of bilateral trade, etc.).

Please return this questionnaire to: franck.charmaison@ingerosec.com
(tel.: 03-5324-0602, fax: 03-5324-0609)

Thank you in advance for your cooperation!

ANNEXES

Annex C: Forms for surveys and questionnaires:

C2 Questionnaire (E/J) distributed at the Japan Home and Building Show 2014

JAPAN HOME & BUILDING SHOW 2014 (13/11/2014)

Name Card of the Contact / Pamphlet of the Company:	Company name: …… Country of origin: ……..

Activity of the Company (several answers possible):

☐ Producer ☐ Seller ☐ Installer
☐ Administration/Public entity
☐ Importer ☐ Home builder ☐ Professional association
☐ Exporter ☐ Construction Company ☐ Architect/Engineer
☐ Other: ……..

1) Which products do you produce/sell?

☐ Insulation materials and technologies; ☐ Wood-based products; ☐ Ceramics; ☐ Tiles;
☐ Roof tiles/materials;
☐ Others: ……

2) How do you distribute/sell your products in Japan?

☐ Case by case basis; ☐ Own network; ☐ Local partner; ☐ Others: ……

Questions:	Yes	No	NSP
1) Do you import building and construction products?	☐	☐	☐
2) Do you export building and construction products?	☐	☐	☐
3) Do you import/export these products from/to Europe? Country(ies): …….	☐	☐	☐
4) Do you import/export them from/to other countries/regions? Country(ies): …….	☐	☐	☐
5) Do you see any difficulties/problems in entering/distributing selling construction products in the Japanese market? If yes, please specify:	☐	☐	☐
6) Do you plan/wish to import EU building and construction products in the coming years? If yes, which type:	☐	☐	☐
7) Do you have information about EU building and construction products that may be of interest for you?	☐	☐	☐
Would you accept to be contacted after the Japan Home and Building Show by questionnaire?	☐	☐	☐

Others/Comments:

Thank you!

JAPAN HOME & BUILDING SHOW 2014 (13/11/2014)

名刺 / 会社案内:	企業名: …… 国: ……

業　種 (複数回答可):

☐ 製造者/メーカー　☐ 販売者　☐ 据付工事業者
☐ 行政/公共団体
☐ 輸入　☐ 住宅建築業者　☐ 専門家協会
☐ 輸出　☐ 建設業者　☐ 建築家/エンジニア
☐ その他: ……

1) 製作または販売している製品の種類

☐ 断熱材と関連技術　☐ 木材製品　☐ セラミック　☐ タイル　☐ 屋根材

☐ その他 : ……

2) 日本での流通、販売方法

☐ 個別に対応　☐ 自社ネットワーク　☐ 日本パートナー　☐ その他: ……

質問:	はい	いいえ	不明
1) 建築資材を輸入していますか?	☐	☐	☐
2) 建築資材を輸出していますか?	☐	☐	☐
3) 上記で「はい」と答えた方； 建築資材を欧州（から輸入/へ輸出）していますか？ 国名: ……	☐	☐	☐
4) 建築資材を欧州以外の国（から輸入/へ輸出）していますか? 国名: ……	☐	☐	☐
5) 日本市場で製品を輸入、流通、販売するにあたっての困難や問題はありますか? 「はい」と答えた方、内容をお答え下さい。:	☐	☐	☐
6) 今後、欧州から建築資材を輸入する予定または希望はありますか? 「はい」と答えた方、製品の種類をお答えください。:	☐	☐	☐
7) 興味をひかれる欧州の建築資材の情報をお持ちでしょうか?	☐	☐	☐
ジャパンホーム＆ビルディングショウ 2014 の後、アンケートにお答えいただくためご連絡さしあげてもよろしいでしょうか?	☐	☐	☐

ありがとうございました。

ANNEXES

Annex C: Forms for surveys and questionnaires:

C3 Comprehensive survey (E/J) step 1

Tokyo, November 2014

Sustainable Building and Construction Sector in Japan and Analysis of Opportunities for European Firms

Questionnaire for EU Companies exporting to Japan

Dear Sir/Madam,

Our consultancy, Ingerosec Corporation (Japan), has been entrusted by the EU Japan Centre for Industrial Cooperation with a study on "Sustainable Building and Construction Sector in Japan and Analysis of Opportunities for European Firms" *(see enclosed support letter)*.

One key point of this study is to gather experience and feedback from European and Japanese key players with a questionnaire in order to obtain a better and more detailed overview of the situation.

Your company/institution is amongst the contacts which we have selected for this purpose. You will, therefore, find attached a questionnaire about the activities of your company in the Japanese market and the potential difficulties which you have encountered in the process.

Most of the questions can be answered by simply ticking ☑ the corresponding case, but in some cases more elaborated/detailed answers are possible. Please do not hesitate to give several examples/additional information.

Please return your questionnaire to:

ingerosec@ingerosec.com
Fax: +81-3-5324-0215
Tel.: +81-3-5324-0211

BY 5 PM ON MONDAY 8 DECEMBER 2014 (CET).

The questionnaires will then be processed by our study team and you will soon be informed of our general results and findings. Depending on these results, a second and more focused questionnaire will be sent to you, should you indicate to us your agreement on this point (*see last page of the questionnaire*).

We thank you in advance for your time and we are at your disposal, should you need any further information.

THANK YOU FOR YOUR COOPERATION!

A – PLEASE TELL US MORE ABOUT YOUR COMPANY AND ITS ACTIVITIES

A-1 –YOUR COMPANY/ INSTITUTION

NAME: ……

DATE OF ESTABLISHMENT: ……

NO. OF EMPLOYEES: ……

ADDRESS: ……

……

COUNTRY: ……

WEBSITE: ……

A-2 - CONTACT PERSON IN YOUR COMPANY/ PERSON ANSWERING THIS QUESTIONNAIRE

NAME: ……

POSITION: ……

EMAIL: ……

PHONE: ……

A-3 - AREA(S) OF ACTIVITY OF YOUR COMPANY *(SEVERAL ANSWERS POSSIBLE)*

☐ Producer/Maker	☐ Seller/Installer	☐ Administration/Public entity
☐ Importer	☐ Home builder	☐ Professional association
☐ Exporter	☐ Building owner	☐ Architect/Engineer
☐ Trading company	☐ Real estate	☐ Construction company

☐ Others: ……

……

……

……

A-4 – MAIN SECTORS OF PRODUCTION/BUSINESS RELATING TO CONSTRUCTION MATERIALS

Focus sectors for this study: ☐ Ceramics ☐ Insulation materials ☐ Tiles ☐ Wood products

☐ Other sectors, please indicate: ……..…….

……..……..……..……

……..……

……

A-5 – PLACES OF PRODUCTION OF YOUR PRODUCTS *(SEVERAL ANSWERS POSSIBLE)*

☐ Your country ☐ Other EU countries ☐ Other countries outside EU ☐ Japan

If other countries please indicate: ……..…..……

……..…..……

A-6 – EXPORT TRADE OF YOUR COMPANY

Turnover in 2013 of your company in the construction sector (approx.): ……..

Percentage of your company's annual turnover from export:

☐ 0-20% ☐ 20-40% ☐ 40-60% ☐ 60-80% ☐ Over 80% ☐ Not available

If possible please indicate volume and value: ……..……

……..……...

A-7 - EXPORT TO JAPAN AS A PERCENTAGE OF YOUR EXPORT

☐ 0-20% ☐ 20-40% ☐ 40-60% ☐ 60-80% ☐ Over 80% ☐ Not available

If possible, please indicate:

- *Volume and value: ……..……...*
- *Details of export products to Japan: ……...*

……

……

……

……

……

……

B – PLEASE INTRODUCE MORE DETAILS OF YOUR ACTIVITIES IN JAPAN

B-1 – GENERAL DEVELOPMENT OF YOUR COMPANY IN JAPAN

Please indicate the development of activities of your company in the Japanese market during the last three years (period 2010-2013):

	In volume (number of units sold)	In value (turnover in EUR)
Decrease of activities	☐	☐
Stability of activities	☐	☐
Growth of activities:		
0-5%	☐	☐
5-10%	☐	☐
10-20%	☐	☐
Over 20%	☐	☐

☐ Not relevant.

B-2 – HOW DO YOU DISTRIBUTE YOUR PRODUCTS IN JAPAN?

☐ Not exporting to Japan yet, but have contacts;

☐ Sell “Ex Works” (EXW) from factory in the EU to an importer/trading company;

☐ Our distribution network;

☐ Local partner in Japan, please indicate: ……..……..

☐ Local distributor in Japan, please indicate: ……..……..

☐ Retailer(s) in Japan;

☐ Export on a case by case basis;

☐ Other cases, please indicate: ……..……

……

……

……..……

B-3 – WHERE IN JAPAN DO YOU SELL YOUR PRODUCTS?

☐ Not exporting to Japan yet;

☐ All areas and regions in Japan;

☐ Mainly urban areas;

☐ Mainly rural/non-urban areas;

☐ Specific regions of Japan (e.g. Hokkaido), please indicate: ……..

☐ Information not available.

B-4 – HOW DID YOUR COMPANY EXPLORE THE JAPANESE MARKET? *(SEVERAL ANSWERS POSSIBLE)*

☐ No exploration of the Japanese market yet;

☐ Buyers from Japan have contacted our company in the EU;

☐ Individual mission directly to Japan;

☐ Individual mission with the support of a private company in Japan;

☐ Individual mission with an institutional support in Japan:

- ☐ Chambers of commerce of EU countries,
- ☐ National supports (commercial sections of embassies…),
- ☐ Others, please indicate: ……

☐ Collective mission with:

- ☐ Companies from our region;
- ☐ Companies from our country;
- ☐ The Gateway to Japan Programme;
- ☐ Others, please indicate: ……
  ……

☐ Participation in an exhibition in Japan, please indicate: ……..……
……

☐ Other cases: ……..
……..
……..……
……

B-5 – WHAT PROMOTIONAL TOOLS/ACTIVITIES DO YOU USE IN THE JAPANESE MARKET? *(SEVERAL ANSWERS POSSIBLE)*

☐ No specific promotion material/activities;

☐ Participation in a collective promotional document in Japanese;

☐ Leaflet in Japanese;

☐ Specific commercial brochure in Japanese;

☐ Technical documentation in Japanese;

☐ Advertisement in local magazine(s) in Japan, please indicate: ……

☐ Reception of Japanese buyers at our company;

☐ Membership of a Japanese professional association, please indicate:

☐ Others: ……..……
……
……
……

In the following part of the questionnaire, we will focus on the difficulties/problems which your company might have encountered on the occasion of its exploration and development of its activities on the Japanese market.

Most of the questions have to be answered by ticking ☑ on a scale (example below) **from 1 (very small effect) to 10 (very important effect)**.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

(Please tick in "not observed" area if you have not observed the corresponding criterion).

C – GENERAL ASSESSMENT OF THE PROBLEMS WITH EXPORT OF THE BUILDING AND CONSTRUCTION PRODUCTS OF YOUR COMPANY TO JAPAN *(SEVERAL ANSWERS POSSIBLE)*

C-1 – YOUR OVERALL ASSESSMENT OF THE PROBLEMS WITH EXPORT OF THE PRODUCTS OF YOUR COMPANY TO JAPAN *(SEVERAL ANSWERS POSSIBLE)*

Difficulty of access to the Japanese market in comparison with other countries:

☐ Less difficult than other countries;

☐ Average, no specific difficulties;

☐ More difficult because of:

- ☐ The Japanese language;
- ☐ The characteristics of the local value chain;
- ☐ The characteristics of the local supply chain;
- ☐ Other reasons (administrative, cultural, technical standards, quality requirements, delivery times, etc.), please specify: ……

……
……
……

C-2 – HAVE YOU ENCOUNTERED ANY TARIFF BARRIERS FOR YOUR PRODUCTS ON THE JAPANESE MARKET?

☐ No
☐ Yes, please indicate: ……
……

C-3 – YOUR EVALUATION OF HOW RESTRICTIVE THE JAPANESE MARKET IS FOR THE EXPORT OF THE CONSTRUCTION PRODUCTS FROM YOUR COMPANY ON A SCALE OF 1 TO 10 FROM FREE-TRADE ENVIRONMENT (1) TO CLOSED MARKET (10)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

Please comment: ……
……
……

D – FOCUS ON NON-TARIFF BARRIERS THAT MAKE THE ENTRANCE INTO THE JAPANESE MARKET DIFFICULT *(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)*

If our company not concerned by this topic:	☐ *Please tick here and go to the next page*

D.1 - Regulatory environment (e.g. costs and complexity of doing business):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.2 - Quantity control measures (e.g. quotas, prohibitions):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.3 - Government assistance issues (e.g. subsidies, export refunds):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.4 - Public procurement issues (e.g. legal framework, contract conditions):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.5 - Distribution channels (e. g. seaport and airport regulations, secondary dealers):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D. 6 Lack of intellectual property rights (e.g. copyright, trademark, patents):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.7 - Border procedures (e.g. customs procedures):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.8 - Standards and conformity assessment requirements
(e.g. technical regulations, certification, specific markings):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.9 - Other non-tariff measures/ barriers (please specify):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

……
……
……
……
……

E – BORDER AND CUSTOMS PROCEDURES
(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)

If our company not concerned by this topic:	☐ *Please tick here and go to the next page*

E.1 - Para-tariff measures
(e.g. customs surcharges, additional charges, internal taxes and charges on imports):
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

E.2 - Automatic licensing measures *(e.g. automatic license, import monitoring):*
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

E.3 – Monopolistic features
(e.g. single channel for imports, compulsory national services):
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

E.4 - General customs procedures
(e.g. customs valuation, customs classification, customs clearance, rules of origin);
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

E.5 - Lack of transparency and information sharing when requirements and procedures are changed:
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

E.6 - Customs procedures that are specific for the products of your company. Please indicate: ……

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……
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……
……

E.7 - Other factors related to border procedures (please specify): ……

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……

F – PUBLIC PROCUREMENT AND TENDERS PROCEDURES
(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)

If our company is not concerned by this topic:	☐ *Please tick here and go to next page*

F.1 - Low implementation of public procurement regulations (e.g. no difference between an open procedure and selective tendering):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.2 -Complex legal framework (e.g. company registration):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.3 - Lack of English versions of tenders:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.4 - Lack of single point tender database:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.5 - Length of evaluation process prior to tendering:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

Other factors related to public procurement (please specify);

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G – PROBLEMS/BARRIERS RELATED TO STANDARDS AND TECHNICAL REGULATIONS

If our company is not concerned by this topic:	☐ *Please tick here and go to point H page 13*

Note: in accordance with WTO, the following definitions are used:

- **Standards:** Document approved by a recognised body, that provides for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, *with which compliance in not mandatory*;
- **Technical Regulations:** Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, *with which compliance is mandatory*.

G.1 - WHICH BARRIERS RELATED TO STANDARDS AND TECHNICAL REGULATIONS CREATE DIFFICULTIES FOR EXPORTING THE BUILDING AND CONSTRUCTION PRODUCTS OF YOUR COMPANY TO JAPAN?

☐ Production standards;
☐ Japan Industrial Standards (JIS);
☐ Japan Agricultural Standards (JAS);
☐ Regulations against fire;
☐ Additional local regulations (cities, prefectures, etc.…);
☐ Labelling requirements;
☐ Marking;
☐ Packaging;
☐ Getting information and documentation about the standards;
☐ Getting information and documentation **in English** about the standards;
☐ Passing the tests;
☐ Complete the procedure for approval of conformity of products;
☐ Difference between EU standards and JIS/JAS standards in your domain (please specify): ……
……
……
☐ Other issues related to standards and technical regulations (please specify):
……
……
……
……
☐ Not relevant.

G.2 – WHICH ACTION(S) DO YOU BELIEVE SHOULD/NEED TO BE TAKEN IN ORDER TO REDUCE THE BARRIERS RELATED TO STANDARDS AND TECHNICAL REGULATIONS AND TO EASE THE EXPORT OF THE EU CONSTRUCTION MATERIALS/BUILDING PRODUCTS TO JAPAN, BEARING IN MIND THE PRODUCTS OF YOUR COMPANY IN PARTICULAR *(SEVERAL ANSWERS POSSIBLE):*

☐ Introduction of new standards;
☐ Use of international standards;
☐ Use of EU standards;
☐ Possibility to make the tests by selected bodies in selected EU test centres;
☐ Mutual recognition of conformity assessment procedures;
☐ Harmonisation/convergence of rules and regulations;
☐ Suppliers' declaration of conformity;
☐ Review the pricing and reimbursement systems;
☐ Implementation of licence system for distribution;
☐ Mutual recognition of certification bodies for conformity of products;
☐ Other ways to reduce barriers related to standards and technical regulations.
Please specify:
……
……
……
……
……
☐ Not relevant.

G.3 - QUANTIFICATION OF THE IMPACT OF STANDARDS AND TECHNICAL REGULATIONS ON THE EXPORT OF CONSTRUCTION MATERIALS AND BUILDING PRODUCTS OF YOUR COMPANY FROM THE EU TO JAPAN: .

		If ☑, please estimate the cost increase (%)
☐	Impact on your shipment costs	……
☐	Impact on your logistic costs inside Japan	……
☐	Impact on your commercial costs	……
☐	Impact on your other direct/indirect costs	……
☐	Delay in the product approval process for the Japanese market compared to the EU	……
☐	Other impact on the export to Japan of the products of your company (if yes, please specify and evaluate the cost): …… …… …… …… ……	……

G.4 - POSSIBLE EFFECT OF AN ELIMINATION OF THE STANDARDS AND TECHNICAL REGULATIONS BARRIERS ON THE EXPORT OF CONSTRUCTION MATERIALS AND BUILDING PRODUCTS OF YOUR COMPANY TO JAPAN:

	in %:
By how much could your costs per unit decrease	.....
By how much could your other costs (i.e. fixed costs) decrease	.....
By how much could your volume/amount of export increase	.....

H – PROBLEMS/BARRIERS RELATED TO CONFORMITY ASSESSMENT PROCEDURES

If our company is not concerned by this topic:	☐ *Please tick here and go to point I page 15*

Conformity assessment procedures consist of certification, testing, quality system registration, inspection and similar activities used to determine/prove that relevant requirements of technical regulations or standards are fulfilled. Procedures necessary for sampling, evaluation, verification, assurance of conformity, registration, accreditation and approval are included in the above.

These procedures may be either voluntary (e.g. private bodies assessing conformity), or mandatory (e.g. government regulations to ensure that given technical regulations are met).

H.1 – PLEASE INDICATE ANY CONFORMITY ASSESSMENT PROCEDURES THAT AFFECT THE EXPORT OF THE CONSTRUCTION MATERIALS AND BUILDING PRODUCTS OF YOUR COMPANY TO JAPAN

☐ General certification;

☐ Inspection;

☐ Testing;

☐ Other issues related to conformity assessment procedures (please specify):
.....
.....
.....
.....

☐ Not relevant.

H.2 – WHICH ACTION(S) DO YOU BELIEVE SHOULD/NEED TO BE TAKEN IN ORDER TO REDUCE THE BARRIERS RELATED TO CONFORMITY ASSESSMENT PROCEDURES AND TO EASE THE EXPORT THE EU CONSTRUCTION MATERIALS/PRODUCTS IN JAPAN, BEARING IN MIND THE PRODUCTS OF YOUR COMPANY IN PARTICULAR *(SEVERAL ANSWERS POSSIBLE)*:

☐ Introduction of new standards;
☐ Use of international standards;
☐ Mutual recognition of conformity assessment procedures;
☐ Possibility to make/use the assessments made by selected bodies in the EU;
☐ Mutual recognition of conformity assessment bodies;
☐ Simplification of certification procedures;
☐ Acceleration of certification processes;
☐ Introduction of third party certification systems;
☐ Harmonisation/convergence of rules and regulations;
☐ Suppliers' declaration of conformity;
☐ Common positive and negative list of additives;
☐ Review the pricing and reimbursement systems;
☐ Implementation of license system for distribution;
☐ Other required actions to reduce barriers related to conformity assessment procedures (please specify): ……..……
……..……
……..……
……..……
☐ Not relevant.

H.3 - QUANTIFICATION OF THE IMPACT OF CONFORMITY ASSESSMENT PROCEDURES ON THE EXPORT OF CONSTRUCTION MATERIALS AND BUILDING PRODUCTS OF YOUR COMPANY FROM THE EU TO JAPAN:

		If ☑, please estimate the cost increase (%)
☐	Impact on your shipment costs	……
☐	Impact on your logistic costs inside Japan	……
☐	Impact on your commercial costs	……
☐	Impact on your other direct/indirect costs	……
☐	Delay in the product approval process for the Japanese market compared to the EU	……
☐	Other impact on the export to Japan of the products of your company (if yes, please specify and evaluate the cost):…… ……..……..…… …… ……	……

H.4 - POSSIBLE EFFECT OF AN ELIMINATION OF THE CONFORMITY ASSESSMENT PROCEDURES BARRIERS ON THE EXPORT OF CONSTRUCTION MATERIALS AND BUILDING PRODUCTS OF YOUR COMPANY TO JAPAN:

	in %:
By how much could your costs per unit decrease	.....
By how much could your other costs (i.e. fixed costs) decrease	.....
By how much could your volume/amount of export increase	.....

I – OTHER BARRIERS LIMITING THE DEVELOPMENT OF THE SALES OF THE PRODUCTS OF YOUR COMPANY IN JAPAN

.....
.....
.....
.....
.....
.....

(if more space is needed, please go to the last page of the questionnaire, thank you).

J – DIVERSITY OF THE PRODUCTS OF YOUR COMPANY AVAILABLE IN THE JAPANESE MARKET

Product range: diversity of the products of a company available on a market.

J-1 - PRODUCT RANGE OF THE CONSTRUCTION MATERIALS AND BUILDING PRODUCTS OF YOUR COMPANY AVAILABLE IN THE JAPANESE MARKET COMPARED TO OTHER COUNTRIES:

- ☐ Substantially fewer products proposed on the Japanese market;
- ☐ Fewer products proposed on the Japanese market;
- ☐ Same product range on the Japanese market as in other markets;
- ☐ More products on the Japanese market than in other markets;
- ☐ Substantially more products on the Japanese market than in other markets;
- ☐ Not relevant.

J. 2 - IMPORTANCE OF THE FOLLOWING NON-TARIFF MEASURES AND BARRIERS ON THE RESTRICTION OF THE RANGE OF YOUR PRODUCTS OF YOUR COMPANY AVAILABLE IN THE JAPANESE MARKET *(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)*

J.21 - Price control measures (e.g. anti-dumping measures, countervailing measures);
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.22 - Quantity control measures (e.g. quotas, prohibitions);
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.23 - Government assistance issues (e.g. subsidies, export refunds);
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.24 - Public procurement issues (e.g. legal framework, contract conditions);
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.25 - Distribution restrictions (e.g. seaport and airport regulations, secondary dealers);
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J. 26 - Lack of intellectual property rights (e.g. copyright, trademark, patents):
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.27 - Pricing and payment rules:
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.28 - Border procedures (e.g. customs procedures):
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.29 - Standards and conformity assessment procedures (e.g. technical regulations, certification);
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

Other non-tariff measures (please specify): ……...
……
……
……
……
……
……
……

☐ Not relevant.

J-3 IF THE RANGE OF THE PRODUCTS OF YOUR COMPANY IS REDUCED IN THE JAPANESE MARKET, THE REASONS ARE:

☐ There are no opportunities for your other products in the Japanese market;
☐ Your other products are not fitted for/suitable to the Japanese market;

☐ It is too costly/difficult for your company to export your other products to Japan given the structure or strategy of your company;

☐ It is too costly/difficult for your company to export your other products to Japan given the existing barriers in Japan in this sector;

☐ Other reasons (please specify): ……
……
……
……

K – OTHER ISSUES RELATED TO THE EXPORT OF THE PRODUCTS OF YOUR COMPANY TO JAPAN

(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)

K.1 – Is there a competition on the Japanese market between the products of your company with other import products coming from non-EU countries?

☐ No
☐ Yes, please indicate: ……..

K.2 - Importance of the exchange rate EUR/JPY for the competiveness of the products of your company in the Japanese market:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.3 - Importance of fashion/seasonal effect (e.g. short-term, yearly collections…) in the positioning of your product(s) on the Japanese market:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.4 – Do you think that there is a European image in Japan for the building materials and construction products?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.5 - Do you think that the compliance with local standards is a definitive market advantage for your products in Japan?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.6 – Do you think that compliance with the Japanese standards may constitute an advantage in other countries?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.7 – Do you think that having a product certification mark or label in Japan (e.g. *Better Living* or *BL* label) may constitute a significant advantage on the local market?

☐ No
☐ Yes, please indicate which label(s) the case being: ……

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Please feel free to indicate any point(s) which you would like to mention in connection with this questionnaire and/or in connection with the development of a presence in Japan of the building and construction products of your company: ……………………………………………

☐ Yes, I am interested in receiving your second questionnaire

☐ Yes, I am willing to be contacted after the present study in order to exchange ideas about related issues.

THANK YOU!

ANNEXES

Annex C: Forms for surveys and questionnaires:

C4 Comprehensive survey (E/J) step 2

Tokyo, January 2015

Sustainable Building and Construction Sector in Japan and Analysis of Opportunities for European Firms

Questionnaire for the prescribers/purchasers in Japan of EU building and construction materials (BCM)

Dear Sir/Madam,

Our consultancy, Ingerosec Corporation (Japan), has been entrusted by the EU Japan Centre for Industrial Cooperation with a study on "Sustainable Building and Construction Sector in Japan and Analysis of Opportunities for European Firms" *(see enclosed support letter)*.

One key point of this study is to gather experience and feedback from European and Japanese key players with a questionnaire in order to obtain a better and more detailed overview of the situation.

Your company is amongst the contacts which we have selected for this purpose. You will find attached a questionnaire about the activities of your company in the Japanese market and the potential difficulties which you may encounter in the process of prescribing and/or purchasing EU building and construction materials (BCM) in Japan.

Most of the questions can be answered simply by ticking ☑ the corresponding case, but in some cases more detailed answers are possible. Please do not hesitate to give several examples/additional information.

Please return your questionnaire to:

ingerosec@ingerosec.com
Fax: +81-3-5324-0215
Tel.: +81-3-5324-0211

BY THURSDAY 12 FEBRUARY 2015.

You will be informed of our findings after we have compiled our results.

We thank you in advance for your time and we are at your disposal, should you need any further information.

THANK YOU FOR YOUR COOPERATION!

A –YOUR COMPANY AND ITS ACTIVITIES

A-1 –YOUR COMPANY/ INSTITUTION

NAME: ……

DATE OF ESTABLISHMENT: ……

NO. OF EMPLOYEES: ……

ADDRESS: ……

……

COUNTRY: ……

WEBSITE: ……

A-2 - CONTACT PERSON IN YOUR COMPANY/ PERSON ANSWERING THIS QUESTIONNAIRE

NAME: ……

POSITION: ……

EMAIL: ……

PHONE: ……

A-3 - AREA(S) OF ACTIVITY OF YOUR COMPANY *(SEVERAL ANSWERS POSSIBLE)*

☐ Importer	☐ Home builder	☐ Professional association
☐ Exporter	☐ Building owner	☐ Architect/Engineer
☐ Trading company	☐ Real estate	☐ Construction company

☐ Others: ……

……

……

……

A-4 – ACTIVITIES OF YOUR COMPANY

Turnover in 2013 of your company in the construction sector (approx.): ……..

Percentage of your company's annual turnover in Japan:

☐ 0-20% ☐ 20-40% ☐ 40-60% ☐ 60-80% ☐ Over 80% ☐ Not available

Main projects undertaken during years 2010-2014: ……
……
……
……
……
……
……

A-5 – BUILDING AND CONSTRUCTION MATERIALS IMPORTED TO JAPAN

FOCUS PRODUCTS FOR THIS STUDY:	**TYPE(S) OF USE** *(several answers possible)*
Tiles	
Ceramics	
Insulation products	
Wooden products	

☐ Other products, please specify: ……..……..……..……
……..……..……..……
……..……
……..……

A-6 – PLACES OF PRODUCTION OF THESE IMPORTED PRODUCTS *(SEVERAL ANSWERS POSSIBLE)*

☐ EU countries ☐ Other countries outside EU

If EU countries, please indicate which are the main country/countries of origin:

PRODUCTS	**IMPORTED FROM** *(several answers possible)*
Tiles	
Ceramics	
Insulation products	
Wooden products	

☐ Other products, please specify: ……...
……..……
……..……
……..……
……..……
……..……
……...

B – FOCUS ON THE ACTIVITIES OF YOUR COMPANY IN JAPAN WITH REGARD TO IMPORT OF EU BUILDING AND CONSTRUCTION MATERIALS

B-1 – GENERAL DEVELOPMENT OF THE ACTIVITIES OF PURCHASE AND/OR PRESCRIPTION OF EU BUILDING AND CONSTRUCTION MATERIALS (BCM) IN JAPAN BY YOUR COMPANY

Please indicate the development of activities of your company in Japan related to these issues during the last four years (period 2010-2014):

	In volume (number of units)	In value
Decrease of these activities:	☐	☐
Stability of these activities:	☐	☐
Growth of these activities:		
0-5%	☐	☐
5-10%	☐	☐
10-20%	☐	☐
Over 20%	☐	☐

☐ Not relevant.

B-2 – HOW DO YOU PURCHASE EU BUILDING AND CONSTRUCTION MATERIALS IN JAPAN?

(SEVERAL ANSWERS POSSIBLE)

☐ We are not purchasing EU building and construction materials in Japan yet, but possibilities exist;

☐ We purchase from an importer/trading company;

☐ We purchase through a local partner in Japan, please indicate: ……..……..

☐ Through BCM distributor(s) in Japan, please indicate: ……..……..

☐ Through retailer(s) in Japan;

☐ We purchase and import on case by case basis;

☐ Other cases, please indicate: ……..……

……
……
……..…….
……
……
……..…….

B-3 – How do you mainly utilize/recommend these products?

☐ Not using EU building and construction materials in Japan yet;

☐ Residential buildings;

☐ Non-residential buildings/offices;

☐ Non-residential buildings/shops;

☐ Non-residential buildings/public facilities;

☐ Leisure facilities/amusement parks;
☐ Other cases, please indicate: ……
……
……

B-4 – In which location(s) in Japan do you utilize/recommend these products?

☐ All areas and regions in Japan;

☐ Mainly in urban areas;

☐ Mainly in rural/non-urban areas;

☐ Specific regions of Japan (e.g. Hokkaido), please indicate: ……..

B-5 – How did your company explore the Japanese market?

(SEVERAL ANSWERS POSSIBLE)

☐ Company established in Japan;

☐ Clients from Japan have contacted our company in the EU;

☐ Individual mission to Japan;

☐ Individual mission with an institutional support in Japan:

- ☐ Chambers of commerce of EU countries,
- ☐ National supports (commercial sections of embassies…),

☐ Collective mission with:

- ☐ Companies from our region;
- ☐ Companies from our country;
- ☐ The Gateway to Japan Programme;
- ☐ Others, please indicate: ……
  ……

☐ Participation in an competition in Japan, please indicate: ……..……
……..……

☐ Other cases: ……..
……..
……..……
……

B-6 – WHAT PROMOTIONAL TOOLS/ACTIVITIES DO YOU USE IN THE JAPANESE MARKET?
(SEVERAL ANSWERS POSSIBLE)

☐ No specific promotion material/activities;

☐ Participation in a collective promotional document in Japanese;

☐ Leaflet in Japanese;

☐ Specific commercial brochure in Japanese;

☐ Advertisement in local magazine(s) in Japan, please indicate: ……

☐ Membership of a Japanese professional association, please indicate:

☐ Others, please indicate: ……
……
……
……

_____

In the following part of the questionnaire, we will focus on the difficulties/problems which your company might have encountered on the occasion of the prescription and/or procurement of EU building and construction materials for the Japanese market.

Most of the questions have to be answered by ticking ☑ on a scale (example below) **from 1 (not important/small effect) to 10 (very large effect)**.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

(Please tick in “not observed” area if you have not observed the corresponding criterion).

C – GENERAL ASSESSMENT OF THE PROBLEMS WITH PRESCRIPTION AND/OR PROCUREMENT IN JAPAN OF EU BUILDING AND CONSTRUCTION MATERIALS

C-1 – YOUR OVERALL ASSESSMENT OF THE PROBLEMS WITH PURCHASE OF EU BUILDING AND CONSTRUCTION MATERIALS IN JAPAN *(SEVERAL ANSWERS POSSIBLE)*

In comparison with other countries:

☐ Less difficult than other countries;

☐ Average, no specific difficulties;

☐ More difficult because of:

☐ The Japanese language;

☐ The characteristics of the local value chain;

☐ The characteristics of the local supply chain;

☐ Other reasons (administrative, cultural, technical standards, quality requirements, delivery times, etc.), please specify: ……

……

……

……

C-2 – HAVE YOU ENCOUNTERED ANY TARIFF BARRIERS FOR THESE EU PRODUCTS ON THE JAPANESE MARKET?

☐ No

☐ Yes, please indicate: ……

……

……

……

C-3 – YOUR EVALUATION OF HOW RESTRICTIVE THE JAPANESE MARKET IS FOR THE IMPORT OF EU BUILDING AND CONSTRUCTION MATERIALS, ON A SCALE OF 1 TO 10 SCALE RANGING FROM FREE-TRADE ENVIRONMENT (1) TO CLOSED MARKET (10)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

Please comment: ……

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D – FOCUS ON NON-TARIFF BARRIERS THAT MAKE THE ENTRANCE INTO THE JAPANESE MARKET DIFFICULT

(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)

If your company is not concerned by this topic:	☐ *Please tick here and go to the next page*

D.1 - Regulatory environment (e.g. costs and complexity of doing business):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.2 - Quantity control measures (e.g. quotas, prohibitions):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.3 - Government assistance issues (e.g. subsidies, export refunds):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.4 - Public procurement issues (e.g. legal framework, contract conditions):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.5 - Distribution channels (e. g. seaport and airport regulations, secondary dealers):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D. 6 Lack of intellectual property rights (e.g. copyright, trademark, patents):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.7 - Border procedures (e.g. customs procedures):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.8 - Standards and conformity assessment requirements
(e.g. technical regulations, certification, specific markings):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

D.9 - Other non-tariff measures/ barriers (please specify):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

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E – BORDER AND CUSTOMS PROCEDURES

If your company is not concerned by this topic:	☐ *Please tick here and go to the next page*

(please tick ☐ if appropriate)

☐ - Para-tariff measures *(e.g. customs surcharges, additional charges, internal taxes and charges on imports):*

☐ - Automatic licensing measures *(e.g. automatic license, import monitoring):*

☐ – Monopolistic features *(e.g. single channel for imports, compulsory national services):*

☐ - General customs procedures
(e.g. customs valuation, customs classification, customs clearance, rules of origin);

☐ - Lack of transparency and information sharing when requirements and procedures are changed:

☐ – Specific customs procedures. Please indicate: ……

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☐- Other factors related to border procedures (please specify): ……

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Your overalll appreciation of the difficulty and burden of customs and border procedures in Japan compared to EU countries

(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F – PUBLIC PROCUREMENT AND TENDERS PROCEDURES

If our company is not concerned by this topic:	☐ *Please tick here and go to next page*

(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)

F.1 - Low implementation of public procurement regulations (e.g. no difference between an open procedure and selective tendering):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.2 -Complex legal framework (e.g. company registration):

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.3 - Lack of English versions of tenders:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.4 - Lack of single point tender database:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

F.5 - Length of evaluation process prior to tendering:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

Other factors related to public procurement (please specify);

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G – PROBLEMS/BARRIERS RELATED TO STANDARDS AND TECHNICAL REGULATIONS

If your company is not concerned by this topic:	☐ *Please tick here and go to point H, page 14*

Please note the following WTO terms:

- **Standards:** Document approved by a recognised body, that provides for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, *with which compliance in not mandatory*;
- **Technical Regulations:** Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, *with which compliance is mandatory*.

G.1 – IN YOUR OPINION, WHICH BARRIERS RELATED TO STANDARDS AND TECHNICAL REGULATIONS CREATE DIFFICULTIES WITH IMPORTING EU BUILDING AND CONSTRUCTION MATERIALS TO JAPAN? *(several answers possible)*

☐ Production standards;
☐ Japan Industrial Standards (JIS);
☐ Japan Agricultural Standards (JAS);
☐ Regulations against fire;
☐ Additional local regulations (cities, prefectures, etc.…);
☐ Labelling requirements;
☐ Marking;
☐ Packaging;
☐ Getting information and documentation about the standards;
☐ Getting information and documentation **in English** about the standards;
☐ Passing the tests;
☐ Completing the procedure and getting approval for conformity of products;
☐ Difference between EU standards and JIS/JAS standards in your domain (please specify): ……
……
……
☐ Other issues related to standards and technical regulations (please specify):
……
……
……
……
☐ Not relevant.

G.2 – WHICH ACTION(S) DO YOU BELIEVE SHOULD/NEED TO BE TAKEN IN ORDER TO REDUCE THE BARRIERS RELATED TO STANDARDS AND TECHNICAL REGULATIONS AND TO EASE THE IMPORTATION OF THE EU BUILDING AND CONSTRUCTION MATERIALS TO JAPAN: *(SEVERAL ANSWERS POSSIBLE):*

☐ Introduction of new standards;
☐ Use of international standards;
☐ Use of EU standards;
☐ Possibility to make the tests by selected bodies in selected EU test centres;
☐ Mutual recognition of conformity assessment procedures;
☐ Harmonisation/convergence of rules and regulations;
☐ Suppliers' declaration of conformity;
☐ Review the pricing and reimbursement systems;
☐ Implementation of licence system for distribution;
☐ Mutual recognition of certification bodies for conformity of products;
☐ Other ways to reduce barriers related to standards and technical regulations.
Please specify:
……
……
……
……
……
☐ Not relevant.

G.3 - POSSIBLE EFFECT OF AN ELIMINATION OF THE STANDARDS AND TECHNICAL REGULATIONS BARRIERS ON THE IMPORT OF EU BUILDING AND CONSTRUCTION MATERIALS TO JAPAN:

	in %:
How much could the costs per imported unit decrease	……
How much could the number of imported units increase	……

H – PROBLEMS/BARRIERS RELATED TO CONFORMITY ASSESSMENT PROCEDURES

If your company is not concerned by this topic:	☐ *Please tick here and go to point I, page 15*

Conformity assessment procedures consist of certification, testing, quality system registration, inspection and similar activities used to determine/prove that relevant requirements of technical regulations or standards are fulfilled. Procedures necessary for sampling, evaluation, verification, assurance of conformity, registration, accreditation and approval are included in the above.

These procedures may be either voluntary (e.g. private bodies assessing conformity), or mandatory (e.g. government regulations to ensure that given technical regulations are met).

H.1 – PLEASE INDICATE ANY CONFORMITY ASSESSMENT PROCEDURES THAT MAY AFFECT THE IMPORT OF EU BUILDING AND CONSTRUCTION MATERIALS TO JAPAN

☐ General certification;

☐ Inspection;

☐ Testing;

☐ Other issues related to conformity assessment procedures (please specify):
……
……
……
……

☐ Not relevant.

H.2 – WHICH ACTION(S) DO YOU BELIEVE SHOULD/NEED TO BE TAKEN IN ORDER TO REDUCE THE BARRIERS RELATED TO CONFORMITY ASSESSMENT PROCEDURES AND TO EASE THE IMPORT OF EU BUILDING AND CONSTRUCTION MATERIALS TO JAPAN:

(several answers possible)

☐ Introduction of new standards;

☐ Use of international standards;

☐ Mutual recognition of conformity assessment procedures;

☐ Possibility to make/use the assessments made by selected bodies in the EU;

☐ Mutual recognition of conformity assessment bodies;

☐ Simplification of certification procedures;

☐ Acceleration of certification processes;

☐ Introduction of third party certification systems;

…

Please turn over

☐ Harmonisation/convergence of rules and regulations;

☐ Suppliers' declaration of conformity;

☐ Common positive and negative list of additives;

☐ Review the pricing and reimbursement systems;

☐ Implementation of license system for distribution;

☐ Other required actions to reduce barriers related to conformity assessment procedures (please specify): ……..……
……..……
……..……
……..……

☐ Not relevant.

H.3 - POSSIBLE EFFECT OF AN ELIMINATION OF THE CONFORMITY ASSESSMENT PROCEDURES BARRIERS ON THE EXPORT OF BUILDING AND CONSTRUCTION MATERIALS TO JAPAN:

	in %:
How much could the costs per unit decrease	……
How much could volume/amount of import increase	……

I – OTHER BARRIERS WHICH, TO YOUR OPINION, LIMIT THE DEVELOPMENT OF THE SALES OF EU BUILDING AND CONSTRUCTION MATERIALS IN JAPAN

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(if more space is needed, please go to the last page of the questionnaire, thank you).

J – DIVERSITY OF THE EU BUILDING AND CONSTRUCTION MATERIALS AVAILABLE IN THE JAPANESE MARKET

Product range: diversity of the products of a company available on a market.

IMPORTANCE OF THE FOLLOWING NON-TARIFF MEASURES AND BARRIERS ON THE RESTRICTION OF THE RANGE OF EU BUILDING AND CONSTRUCTION MATERIALS AVAILABLE IN THE JAPANESE MARKET *(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)*

J.1 - Price control measures *(e.g. anti-dumping measures, countervailing measures);*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.2 - Quantity control measures *(e.g. quotas, prohibitions);*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.3 - Government assistance issues *(e.g. subsidies, export refunds);*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.4 - Public procurement issues *(e.g. legal framework, contract conditions);*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.5 - Distribution restrictions *(e.g. seaport and airport regulations, secondary dealers);*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J. 6 - Lack of intellectual property rights *(e.g. copyright, trademark, patents):*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.7 - Pricing and payment rules:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.8 - Border procedures *(e.g. customs procedures):*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

J.9 - Standards and conformity assessment procedures *(e.g. technical regulations, certification);*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

Other non-tariff measures (please specify): ……...
……
……
……
……
☐ Not relevant.

K – OTHER ISSUES RELATED TO THE EXPORT OF EU BUILDING AND CONSTRUCTION MATERIALS TO JAPAN

K.1 – Competition on the Japanese market between the EU building and construction materials and other import products coming from non-EU countries:

PRODUCTS	**COMPETITORS FROM** *(several answers possible)*
Tiles	
Ceramics	
Insulation products	
Wooden products	
Others, please specify:	…… …… …… …… ……

(ON A SCALE FROM 1: NOT IMPORTANT, TO 10: VERY IMPORTANT)

K.2 - Importance of the exchange rate EUR/JPY for the competiveness of the EU building and construction materials in the Japanese market:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.3 - Importance of fashion/seasonal effect (e.g. short-term, yearly collections…) in the positioning of these EU building and construction materials on the Japanese market:

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.4 – Do you think that there is a European image in Japan for the building materials and construction products?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.5 - Do you think that the compliance with local standards is a definitive market advantage for the EU building and construction materials in Japan?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.6 – Do you think that compliance with the Japanese standards may constitute an advantage in other countries?

☐ 1 ☐ 2 ☐ 3 ☐ ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ *Not observed*

K.7 – Do you think that having a product certification mark or label in Japan (e.g. *Better Living* or *BL* label) may constitute a significant advantage on the local market?

☐ No
☐ Yes, please indicate which label(s) the case being: …….

Please feel free to indicate any point(s) which you would like to mention in connection with this questionnaire and/or in connection with the development of a presence in Japan of the building and construction products of your company: ....…………
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☐ Yes, I am willing to be contacted after the present study in order to exchange ideas about related issues.

THANK YOU!

ANNEXES

Annex D: List of professional Associations in Japan

JAPANESE ORGANISATIONS AND ASSOCIATIONS

1- SEMI-GOVERNMENTALORGANISATIONS AND ASSOCIATIONS

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
BCJ - The Building Center of Japan 1-9, Kanda Nishiki-cho, Chiyoda-ku, Tokyo 101-8986, Japan Tel: +81-(0)3-5283-0479 / Fax: +81-(0)3-5281-2822 URL: http://www.bcj.or.jp/	Internet Site available in English An organization (under MLIT) that performs a wide range of activities, including evaluation, research and development of new building technologies as well as international cooperation and dissemination of those information.
BMMC - Building Maintenance and Management Center Shinkawa 1-24-8, Chuo-ku, Tokyo 104-0033, Japan Tel: +81-(0)3-3553-0070 / Fax: +81-(0)3-3553-6767 E-mail: info@bmmc.or.jp URL: http://www.bmmc.or.jp/	Only Japanese Language Internet Site Available An organization which aims is the preservation of the public buildings with adequate maintenance and management methods.
BRI - Building Research Institute 1 Tachihara, Tsukuba-shi, Ibaraki-ken 305-0802, Japan Tel: +81-(0)29-864-2151 / Fax: +81-(0)29-864-2989 web-adm@kenken.go.jp URL: http://www.kenken.go.jp/	Internet Site available in English An organization (under MLIT) that conducts various research and development which results are reflected in forming governmental policies and/or drawing up national technical standards utilized for technology development, design and construction in private sectors.
ER - Economic Research Association Higashi-Ginza Mitsui Bldg., Ginza 5-13-16, Chuo-ku, Tokyo 104-0061, Japan Tel: +81-(0)3-3542-3333 / Fax: +81-(0)3-3541-1234 E-mail: info-ml@zai-keicho.or.jp URL: http://www.zai-keicho.or.jp/	Internet Site available in English An organization placed under both the Economic Planning Agency (currently part of the Cabinet Office) and the MLIT, that conducts fact-finding research concerning commodity prices, cost of living, wages, etc., which results are edited in the "Report on Economic Research/Price Data", and also fact-finding researches of material prices and construction costs in the construction industry.
FAMIC - Food and Agricultural Materials Inspection Center Saitama Shintoshin National Government Building, Kensato Building, 2-1, Shintoshin, Chuo-ku, Saitama-shi, Saitama 330-9731, Japan Tel: +81-(0)50-3797-1830 / Fax: +81-(0)48-600-2372 URL: http://www.famic.go.jp/	Internet Site available in English An organization (under MAFF) that labels for agricultural, forestry, and fishery products, and carries out certification and audit for maintaining proper JAS system. Conducts also researches and studies involved in the review of JAS based on the request of MAFF.

GSI - Geospatial Information Authority of Japan Kitasato 1, Tsukuba-shi, Ibaraki-ken 305-0811, Japan Tel: +81-(0)29-864-1111 / Fax: +81-(0)29-864-1807 URL: http://www.gsi.go.jp/	Internet Site available in English A national organization under MLIT that conducts basic survey and mapping and instructs related organizations to clarify the conditions of land in Japan and that provides the results of surveys to help improve this land.
IBEC - Institute for building Environment and Energy Conservation Zenkyoren Bldg Kojimachi kan, Kojimachi 3-5-1, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-3222-6681 / Fax: +81-(0)3-3222-6696 URL: http://www.ibec.or.jp/index.html	Internet Site available in English An organization (under **MLIT**) that works to collect information about energy saving for construction, to evaluate energetic performance of building and assess the CASBEE values for building construction.
IDI - Infrastructure Development Institute Japan Suidocho Bldg. 6F, Suidocho 3-1, Shinjuku-ku, Tokyo 162-0811, Japan Tel: +81-(0)3-5227-4100 / Fax: +81-(0)3-5227-4109 E-mail: 1956sep@idi.or.jp URL: http://www.idi.or.jp/	Internet Site available in English A non-profit organisation under MLIT promoting international assistance in the development of infrastructure. It carries out surveys and researches for projects.
JACIC - Japan Construction Information Center Akasaka Seventh Avenue Building, 10-20-7, Akasaka, Minato-ku, Tokyo 107-8416, Japan Tel: +81-(0)3-3505-2981 / Fax: +81-(0)3-3505-2966 URL: http://www.jacic.or.jp/	Internet Site available in English A government-related organization (under MLIT) that offers information service on construction and engineering consulting experience records (CORINS-TECRIS). JACIC deals also with standardization of construction information, research and development of information systems and information service, environmental preservation through recycle use of resource, promotion of the arts and science in construction field, and of international cooperation in construction field.
JAS - Japanese Agricultural Standards Association Kato Bldg 4F, Nihonbashi Kabutocho 15-12, Chuo-ku, Tokyo 103-0026, Japan Tel: +81-(0)3-3249-7120 / Fax: +81-(0)3-3249-9388 URL: http://www.jasnet.or.jp/index.html	Only Japanese Language Internet Site Available An organization (under MAFF) developing the Japanese Agricultural Standard (JAS). As for the construction sector, related essentially to wood products (timber and plywood).
JETRO - Japan External Trade Organisation Ark Mori Building 6F, 1-12-32 Akasaka, Minato-ku, Tokyo 107-6006, Japan Tel: +81-(0)3-3582-5511 URL: http://www.jetro.go.jp/	Internet Site available in English A government-related organization (under METI) that works to promote mutual trade and investment between Japan and the rest of the world. JETRO's core focus in the 21st century is promoting foreign direct investment into Japan and helping small to medium size Japanese firms maximize their global export potential.

JICE - Japan Institute of Country-ology and Engineering Nissei Toranomon Bldg., Toranomon 3-12-1, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-4519-5000 / Fax: +81-(0)3-4519-5010 E-mail: web@jice.or.jp URL: http://jice.or.jp/	Only Japanese Language Internet Site Available An organization that deals with promotion of effective use and proper management of national land, carries out research and policy recommendation on national land to contribute to improvement of national welfare
JNIOSH - National Institute of Occupational Safety and Health, Japan Funaba Center Bldg. No5 2F, Funaba Chuo 2-2-5-206, Chuo-ku, Osaka-shi, Osaka-fu 541-0055, Japan Tel: +81-(0)6-4963-2056 / Fax: +81-(0)6-4963-2087 E-mail: toshigijutsu@uitech.jp URL: https://www.jniosh.go.jp/	Internet Site available in English A national institute conducting scientific research in order to contribute to administration of the government and for workers in industry, by eliminating industrial accidents and diseases, promoting workers' health, and creating a safe and comfortable working environment.
JSA - Japanese Standards Association Mita MT Building, 3-13-12 Mita, Minato-ku, Tokyo, 108-0073, Japan Tel: +81-(0)3-4231-8550 / Fax: +81-(0)3-4231-8665 URL: http://www.jsa.or.jp/	Internet Site available in English An organization (under METI) developing the Japanese Industrial Standards (JIS). JSA manage national committees for ISO/CASCO (Committee on Conformity Assessment) and IEC/CAB (Conformity Assessment Board) to deliberate on the technical issues related to draft international standards.
NIED - National Research Institute for Earth Science and Disaster Prevention Tennodai 3-1, Tsukuba-shi, Ibaraki-ken 305-0006, Japan Tel: +81-(0)29-851-1611 / Fax: +81-(0)29-851-1622 E-mail: toiawase@bosai.go.jp URL: http://www.bosai.go.jp/	Internet Site available in English A national institute being established to protect people's lives and properties from natural disasters and to prepare society to be resilient to natural disasters, through research on disasters caused by earthquakes, volcanoes, floods, landslides, meteorological changes, snow and ice damages.
NIES - National Institute for Environmental Studies 16-2 Onogawa, Tsukuba-City, Ibaraki, 305-8506 Japan Tel: +81-(0)29-850-2827 / Fax: +81-(0)29-851-2854 Email: international@nies.go.jp URL: http://www.nies.go.jp/index.html	Internet Site available in English An organization (under MoEnv) that carries out researches in the broad fields of environmental research, to provide the scientific and technical basis for the environmental policy-making administration.
NILIM - National Institute for Land and Infrastructure Management Asahi Office: 1 Asahi, Tsukuba City, Ibaraki Prefecture 305-0804, Japan Tel: +81-(0)29-864-2211 E-mail: kokusaie@nilim.go.jp URL: http://www.nilim.go.jp/index.html	Internet Site available in English An organization (under MLIT) that conducts research to help the MLIT to plan and propose its technology policies. It selects and defines priority challenges that should be resolved quickly as technology policy challenges and concentrates its efforts on their resolution, and conducts research and reflects its findings in the planning and enactment of policies and execution of projects.

NIPH - National Institute of Public Health Minami 2-3-6, Wako-shi, Saitama-ken 351-0197, Japan Tel: +81-(0)48-458-6111 / Fax: +81-(0)48-469-1573 URL: http://www.niph.go.jp/	Internet Site available in English A national institute established to carry out education and training of the personnel engaging in the work of public health, environmental hygiene and social welfare, and to conduct researches in these areas. It works also on building health problem (sick house syndrome).
PWRI - Public Works Research Institute Minamihara 1-6, Tsukuba-shi, Ibaraki-ken 305-8516, Japan Tel: +81-(0)29-879-6700 / Fax: +81-(0) E-mail: www@pwri.go.jp URL: http://www.pwri.go.jp/	Internet Site available in English An independent administrative agency under MLIT established for efficiently developing public works technologies. It conducts researches and development concerning public works, technological instruction and distribution of its research results at the same time as to contribute to promotion of development of Hokkaido.
RICE - Research Institute of Construction and Economy NP-Onarimon Bldg 8F., Nishi-Shimbashi 3-25-33, Minato-ku, Tokyo 105-0003, Japan Tel: +81-(0)3-3433-5011 / Fax: +81-(0)3-3433-5239 URL: http://www.rice.or.jp	Internet Site available in English A research organization under the MLIT that studies public investment and construction industry with experts in economics, engineering, law, and other various fields.
SME Support - Organization for SMEs and Regional Innovation, Japan 37th Mori Bldg. 3-5-1 Toranomon, Minato-ku, Tokyo 105-8453, Japan Tel: +81-(0)3-3433-8811 / Fax: +81-(0)3-5470-2376 E-mail: international@smrj.go.jp URL:http://www.smrj.go.jp/english	Internet Site available in English An organization (under METI and MoF) that provides support measures in order to resolve problems related to start-ups and new business development, business enhancement, “security” through a small-scale enterprise mutual aid system and business safety mutual relief system, and support in terms of infrastructure.

2 - ORGANISATIONS RELATED TO DESIGN

a) Architecture and Urbanism Organisations:

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
JAEIC - Japan Architectural Education and Information Center Kioicho Park Bldg, 3-6 Kioicho, Chiyoda-ku, Tokyo 102-0094, Japan Tel: +81-(0)3-6261-3310 URL: http://www.jaeic.or.jp/	Internet Site available in English An organization (under MLIT) that was designated as the Centrally-Designated Examination Organization by MLIT under the Kenchikushi Law, to conduct affairs related to the qualifying examination for 1st-class Kenchikushi. It also conducts training programs for Structural Design 1st-class Kenchikushi, MEP Design 1st-class Kenchikushi and Kanri Kenchikushi, and periodic training programs
AIJ - Architectural Institute of Japan Shiba 5-26-20, Minato-ku, Tokyo 108-8414, Japan Tel: +81-(0)3-3456-2051 / Fax: +81-(0)3-3456-2058 E-mail: info@aij.or.jp URL: http://www.aij.or.jp/aijhome.htm	Internet Site available in English The most prestigious academic association with about 35,000 members: architects, building engineers and researchers in every field of architecture. AIJ publishes results of research and studies and spreads architectural culture through its programs. AIJ has made an important contribution to the development of science, technology and art.
Japan Federation of Architects and Building Engineers Associations Kenchiku Kaikan 5F, Shiba 5-26-20, Minato-Ku, Tokyo 108-0014, Japan Tel: +81-(0)3-3456-2061 / Fax: +81-(0)3-3456-2067 E-mail: info@kenchikushikai.or.jp URL: http://www.kenchikushikai.or.jp/index2.html	Only Japanese Language Internet Site Available An organization designated by the government as registration agency implementing first-class architect registration of Minister of land, infrastructure and transportation, organizes training programs as "regular course" by cooperating with registered training organizations for architect.
JIA - The Japan Institute of Architects JIA Kan, Jingumae 2-3-18, Shibuya-ku, Tokyo 150-0001, Japan Tel: +81-(0)3-3408-7125 / Fax: +81-(0)3-3408-7129 E-mail: jiacontact@jia.or.jp URL: http://www.jia.or.jp/	Internet Site available in English An organization that performs a range of activities to Improve Social Systems Relating to Architecture, to Improve the Quality of Architects, gives awards to architectural design of excellence to communicate the value of a culture of architecture to the society, conducts joint research and studies with specialists, spreads information and knowledge, and is the only organization to participate in the Japanese Section of UIA (International Union of Architects). JIA cooperates with AlA (The American Institute of Architects), and is one of the leading members of ARCASIA (Architects Regional Council ASIA), having members of 5000 architects.
Association of Urban Housing Sciences	Only Japanese Language Internet Site Available

Stage Bldg 7F, Fujimi 2-7-2, Chiyoda-ku, Tokyo 102-0071, Japan Tel: +81-(0)3-5211-0597 / Fax: +81-(0)3-5211-0598 E-mail: t-info@uhs.gr.jp URL : http://www.uhs.gr.jp/	An organization that deals with urban housing caring out researches, surveys and publications.
Japan Association of Architectural Firms Hachobori NF Bldg. 6F, Hachobori 2-21-6, Chuo-ku, Tokyo 104-0032, Japan Tel: +81-(0)3-3552-1281 / Fax: +81-(0)3-3552-2066 E-mail: sysop@njr.or.jp URL: http://www.njr.or.jp/	Only Japanese Language Internet Site Available An organization that deals with registered architect's office for their accurate operation and health development, having members of architects' office association of prefectures.
Urban Renewal Association of Japan (URAJA) Dai-6 Central Bldg. 3F, Toranomon 1-19-10, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3591-2361 / Fax: +81-(0)3-3591-2456 E-mail: URL: http://www.uraja.or.jp/	Internet Site available in English An organization gathering about 550 members in the field of urban renewal, improvement of the environment of residential areas, improvement of densely populated urban areas, facilitation of rebuilding condominiums, reinforcement of the residential function of city centers (collectively "urban renewal and other projects") and conducts comprehensive research and studies and promotes projects.
The Architectural Association of Japan (AAJ) OMM Bldg. 7F Room B, Otemae 1-7-31, Chuo-ku, Osaka 540-6951, Japan Tel: +81-(0)6-6946-6981 / Fax: +81-(0)6-6946-6984 E-mail: soumu@aaj.or.jp URL: http://www.aaj.or.jp/	Only Japanese Language Internet Site Available An organization that gather architect offices, construction contractors, equipment and material makers.
Building and Equipment Long-Life Cycle Association (BELCA) Shiba Excellent Bldg. 4F., 2-1-13 Hamamatsucho, Minato-ku, Tokyo 105-0013, Japan Tel: +81-(0)3-5408-9830 / Fax: +81-(0)3-5408-9840 E-mail : belca@belca.or.jp URL: http://www.belca.or.jp/	Only Japanese Language Internet Site Available An organization gathering about 127 design companies to promote the development of long-life cycle buildings and equipment.
Japan Society for Interior Studies (JASIS) Tsudanuma 2-17-1, Narashino-shi, Chiba-ken 275-0016, Japan Tel: +81-(0)80-2386-5652 / Fax: +81-(0)47-478-0552 E-mail : jimukyoku@jasis-interior.jp URL: http://jasis-interior.jp/	Only Japanese Language Internet Site Available An organization that deals with interior, organizes seminars and lecture meetings, providing grant funding, and carries out researches, surveys and publications.

The City Planning Institute of Japan (CPIJ) Ichibancho west bldg. 6F, Ichibancho 10, Chiyoda-ku, Tokyo 102-0082, Japan Tel: +81-(0)3-3261-5407 / Fax: +81-(0)3-3261-1874 E-mail : www-contact@cpij.or.jp URL: http://www.cpij.or.jp/	Internet Site available in English An organisation gathering around 4755 members promoting research into the science and technology of urban and regional planning. It includes contributions to academic study and culture through further development and growth of urban planning as an academic field. It promotes knowledge exchange and communications, as well as participating in research, surveys, and other international projects.
Japanese Society for the Science of Design (JSSD) 703 Bellfort Nishiogi, Nishiogikita 3-15-21, Suginami-ku, Tokyo 167-0042, Japan Tel: +81-(0)3-3301-9318 / Fax: +81-(0)3-3301-9319 E-mail : jssd@mx10.ttcn.ne.jp URL: http://jssd.jp/	Internet Site available in English An organisation gathering around 2250 members promoting academic research in the field of design. It organizes international conferences and promotes international scholarly alliances, in addition to research paper conferences, symposia, etc. It publishes a journal "Bulletin of Japanese Society for the Science of Design".
Association of KENCHIKUSHIS of All Japan Naito Bldg. 301, Takadanobaba 3-23-2, Shinjuku-ku, Tokyo 169-0075, Japan Tel: +81-(0)3-3367-7281 / Fax: +81-(0)3-3367-7283 E-mail : info@kenchikukouza.org URL: http://www.kenchikukouza.org/	Only Japanese Language Internet Site Available An organization that conducts courses for examinations for qualification of registered architects, organise exchanges with overseas construction related organizations.
Japan Interior Architects / Designers' Association (JID) Shinjuku Park Tower 8F, Nishi-Shinjuku 3-7-1, Shinjuku-ku, Tokyo 160-1008, Japan Tel: +81-(0)3-5322-6560 / Fax: +81-(0)3-5322-6559 URL: http://www.jid.or.jp/	Internet Site available in English An organization that is a nationwide organization established for the individuals engaged in interior design practice and actively aims to enhance higher social recognition for interior design profession. JID holds various conferences, seminars, exhibitions, and encourages making good understanding and cooperation between its members and the government, municipal offices, other related organizations and industries. Also JID is actively taking part in different international affairs as a member of IFI (International Federation of Interior Architects / Designers) and APSDA (Asia Pacific Space Designers' Association) the worldwide interior designers' organizations representing interior professionals in Japan and fully cooperating with the fellow members.

Japan Institute of Healthcare Architecture (JIHA) Kenchikukaikan, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-3453-9904 / Fax: +81-(0)3-3453-7573 URL: http://www.jiha.jp/	Internet Site available in English An organisation gathering about 700 members that promotes improvement in Japan's medical and health architecture. It has taken the leading role in enhancing the standard of Japanese healthcare facilities through various activities. It holds meetings, seminars, training, and publish the "Journal of Japan Institute of Healthcare Architecture".
Japan Association Of Artists Craftsman & Architects (AACA) Kenchikukaikan, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-3457-7998 / Fax: +81-(0)3-3457-1598 E-mail : info@aacajp.com URL: http://www.aacajp.com/	Only Japanese Language Internet Site Available An organization that deals with artistic environment related to architecture, conducts a prize, organizes symposium, spreads information and knowledge, and carries out researches, surveys and publications
Japan Commercial Environmental Design Association (JCD) Sotokandakaikan 101, Sotokanda 2-1-6, Chiyoda-ku, Tokyo 101-0021 Japan Tel: +81-(0)3-5207-6707 / Fax: +81-(0)3-5207-6708 URL: http://www.jcd.or.jp/	Only Japanese Language Internet Site Available An organization that deals with commercial environmental design with creators from various sectors, conducts a prize, organizes symposium and seminars, spreads information and knowledge, and carries out researches, surveys and publications.
Eastern Regional Organisation for Planning and Housing – Japan (EUROPH-JAPAN) Tel: +81-(0)954-66-9117 / Fax: +81-(0) E-mail : earoph2015-regional-seminar@city.ureshino.lg.jp URL: http://earoph-japan.org/	Internet Site available in English An organisation (formerly Japanese Society for Planning and Housing – JASOPH) which is a NGO that aims at improving housing needs, to realize better living quality by promoting the research activities on urban & rural planning and the domiciled plan that meet to the international level.
Japan Architectural Renderers Association (JARA) Arusu Shin-otsuka 201, Otsuka 3-43-5, Toshima-ku, Tokyo 170-0005, Japan Tel: +81-(0)3-5956-5029 / Fax: +81-(0) E-mail : j-mail@jara-net.com URL: http://www.jara-net.com/	Internet Site available in English A national organization of professional architectural visualization groups. Purposes are to contribute to the development of industry and culture as part of an information society, to strive to improve technology, and to train the younger generations through mutual friendship among our members. Also exchange and exhibit works internationally with similar organizations.

Japan Society of Urban and Regional Planners (JSURP) Katori Bldg. Annex 2F, Kandaogawamachi 2-10, Chiyoda-ku, Tokyo 100-8111, Japan Tel: +81-(0)3-6273-7491 / Fax: +81-(0)3-6273-7492 E-mail : info@jsurp.net URL: http://jsurp.net/ja/	Internet Site available in English An organisation gathering more than 500 members established to promote *Machizukuri* (Urban and Regional Community Renovation). It implements many activities from various standpoints, such as mutual cooperation with institutions concerned, research and study on urban and regional renovation, edification, recommendation and support in various fields, and human resource development.
The Union of EcoDesigners University of Tokyo, Foundation for the Promotion of Engineering Research, Yayoi 2-11-16, Bunkyo-ku, Tokyo 113-8656, Japan Tel: +81-(0)3-5841-7661 / Fax: +81-(0)3-5841-7661 E-mail : secretariat@ecodenet.com URL: http://www.ecodenet.com/	Internet Site available in English An organization that deals with ecological design, conducts Eco promotion, organize symposium, spreads information and knowledge, fosters human resources and carries out researches, surveys and publications.

b) Engineering Organisations:

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
Japan Civil engineering Consultants Association (JCCA) KY Sanban-cho Bldg. 7-8F, 1 Sanban-cho,Chiyoda-ku, Tokyo 102-0075, Japan Tel: +81-(0)3-3239-7992 / Fax: +81-(0)3-3239-1869 E-mail: info@jcca.or.jp URL: http://www.jcca.or.jp/	Only Japanese Language Internet Site Available An association regrouping about 431 consulting companies in Japan.
Japan Building Disaster Prevention Association (Kenchiku-Bosai) Toranomon YHK Bldg 3F, Toranomon 2-3-20, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-5512-6451 / Fax: +81-(0)3-5512-6455 E-mail: kenbokyo@kenchiku-bosai.or.jp URL: http://www.kenchiku-bosai.or.jp/	Internet Site available in English An association that carry out investigations and disseminating information about disaster prevention systems and techniques related to building maintenance
Japan Structural Consultants Association (JSCA) Hayashi Sanbancho Bldg. 3F, Sanbancho 24, Chiyoda-ku, Tokyo 102-0075, Japan Tel: +81-(0)3-3262-8498 / Fax: +81-(0)3-3262-8486 E-mail: info@jsca.or.jp URL: http://www.jsca.or.jp/	Only Japanese Language Internet Site Available The organization gathering about 4000 structural engineers for buildings organizing symposiums, seminars.
Japanese Association of Building Mechanical and Electrical Engineers (JABMEE) 12 Toyo Kaiji Bldg. 7F, Shimbashi 6-9-6, Minato-ku, Tokyo 105-0064, Japan Tel: +81-(0)3-5408-0063 / Fax: +81-(0)3-5408-0074 E-mail: info@jabmee.or.jp URL: http://www.jabmee.or.jp/index.php	Internet Site available in English An association gathering registered Heating Air-Conditioning and Sanitary Engineers, or possessing skills related to building, or organization connected. Presently about 8830 members.
The Society of Heating Air-Conditioning and Sanitary Engineers of Japan (SHASE) Nakajima Bldg., Kita-Shinjuku 1-8-1, Shinjuku-ku, Tokyo 169-0074, Japan Tel: +81-(0)3-3363-8261 / Fax: +81-(0)3-3363-8266 E-mail: sugiyma@shase.or.jp URL: http://www.shasej.org/index.html	Internet Site available in English SHASE is a major organization for heating, air-conditioning and sanitary engineering in Japan. It gathers about 15425 members all over the world in the field of air-conditioning and sanitary engineering.
The Society of Instrument and Control Engineers (SICE) Hongo 1-35-28-303, Bunkyo-ku, Tokyo 113-0033, Japan Tel: +81-(0)3-3814-4121 / Fax: +81-(0)3-3814-4699 E-mail: webmaster@sice.or.jp URL: http://www.sice.jp/	Internet Site available in English SICE gather about 5600 members in the field of measurement and control. It develops scholarship and technology, and provides to members information.

The Japanese Geotechnical Society (JGS) Sengoku 4-38-2, Bunkyo-ku, Tokyo 112-0011, Japan Tel: +81-(0)3-3946-8677 / Fax: +81-(0)3-3946-8678 E-mail : jgs@jiban.or.jp URL: https://www.jiban.or.jp/	Internet Site available in English An association gathering about 8000 individual members and 850 corporate members in the field of geotechnical engineering. It publishes periodicals and books, holds technical meetings, and promotes research activities.
Electric Power Civil Engineering Association Ogai Bldg. 4F., Shibakoen 2-8-2, Minato-ku, Tokyo 105-0011, Japan Tel: +81-(0)3-3432-8905 / Fax: +81-(0)3-3435-1778 URL: http://www.jepoc.or.jp/	Internet Site available in English An organization that deals with the improvement of civil engineering technologies of electric power developments, such as hydraulic, thermal and nuclear power facilities, organizes research, investigations, technical publications, seminar workshop, plants observation and exchange technical views with foreign countries, having 3,225 Individual members and 219 Cooperation members.
The Illuminating Engineering Institute of Japan (IEIJ) Suitaya Bldg. 3F, Kanda Tsukasa-cho 2-8-4, Chiyoda-ku, Tokyo 101-0048, Japan Tel: +81-(0)3-5294-0101 / Fax: +81-(0)3-5294-0102 E-mail : information@ieij.or.jp URL: http://www.ieij.or.jp/	Internet Site available in English An organisation gathering about 5500 individual members and 187 corporate members in the field of illuminating technology. It conducts researches, takes part for establishment of technical standards, publishes periodicals and books, holds technical meetings, and distributes awards and grants.
The Japan Society for Precision Engineering (JSPE) Kudan-Seiwa Bldg., Kudan-kita 1-5-9, Chiyoda-ku, Tokyo 102-0073, Japan Tel: +81-(0)3-5226-5191 / Fax: +81-(0)3-5226-5192 E-mail : jspe_jspe@jspe.or.jp URL: http://www.jspe.or.jp/	Internet Site available in English An organisation gathering about 5000 members in the field of precision engineering. It covers area like design and production systems, precision machining, mechatronics, precision measurement, humans and environment
The Institute of Electrical Engineers of Japan (IEEJ) Homat Horizon Bldg. 8F, Goban-cho 6-2, Chiyoda-ku, Tokyo 102-0076, Japan Tel: +81-(0)3-3221-7312 / Fax: +81-(0)3-3221-3704 E-mail : jimkyoku@iee.or.jp URL: http://www.iee.jp/	Internet Site available in English An organisation gathering more than 23000 members in the field of electrical engineering, that covers a wide area, such as electronics, information, energy, environment and so on. It carries out activity of studies, researches, and diffuses information through the member or at international level.

The Institute of Electrical Installation Engineers of Japan (IEIEJ) Nihombashi Horidomecho 1-9-6, Chuo-ku, Tokyo 103-0012, Japan Tel: +81-(0)3-6206-2720 / Fax: +81-(0)3-6206-2730 URL: http://www.ieiej.or.jp/	Internet Site available in English An organisation gathering more than 5700 members in the field of electrical installation engineering. It carries out activity of studies, researches, and diffuses information through the members. Fields include electric power distribution systems, electrical installations at power users, information transmission and communication equipment and data processing technology.
Japan Society of Civil Engineers (JSCE) Yotsuya 1-chome, Shinjuku-ku, Tokyo 160-0004, Japan Tel: +81-(0)3-3355-3452 / Fax: +81-(0)3-5379-2769 URL: http://www.jsce.or.jp/	Internet Site available in English An organisation gathering more than 39000 members in the field of civil engineering. It carries out activities for promoting exchanges through members and diffusion of technological knowledge.
Acoustical Society of Japan (ASJ) Nakaura Dai-5 Bldg. 2F, Sotokanda 2-18-20, Chiyoda-ku, Tokyo 101-0021, Japan Tel: +81-(0)3-5256-1020 / Fax: +81-(0)3-5256-1022 E-mail : asj-www@asj.gr.jp URL: http://www.asj.gr.jp/	Internet Site available in English An organisation gathering more than 3400 members in the field of science and technology of acoustics. It promotes the technical advancement of this field and exchange of ideas in relation thereto by organizing meetings and publishing a magazine.
The Chemical Society of Japan (CSJ) Kanda-Surugadai 1-5, Chiyoda-ku, Tokyo 101-8307, Japan Tel: +81-(0)3-3292-6161 / Fax: +81-(0)3-3292-6318 E-mail : member@chemistry.or.jp URL: http://www.chemistry.or.jp/	Internet Site available in English An organisation gathering more than 34000 members in the field of pure and applied chemistry. It promotes chemistry for science and industry in collaboration with other domestic and global societies. It holds various academic conferences, lecture meetings and publishes journals and books.
The Japan Society of Home Economics (JSHE) Rm.502 Gakuendai Heights, Otsuka 2-1-15-502, Bunkyo-Ku, Tokyo 112-0012, Japan Tel: +81-(0)3-3947-2627 / Fax: +81-(0)3-3947-2627 E-mail : kaseigakkai@tokyo.email.ne.jp URL: http://www.chemistry.or.jp/	Internet Site available in English An organisation gathering about 5000 members in the field of home economics, a practical science centering on family life. It conducts researches to determine the interaction between human beings and the environment surrounding them, while natural, sociological and anthropological studies are made on the material as well as the human aspects of our life. It holds various academic conferences, lecture meetings and publishes journals and books.
Japanese Association of Fire Science and Engineering (JAFSE) Gakkai Center Bldg., Yayoi 2-4-16, Bunkyo-ku, Tokyo 113-0032, Japan Tel: +81-(0)3-3813-8308 / Fax: +81-(0)3-5689-3577 E-mail : kasai50@sepia.ocn.ne.jp URL: http://jafse.org/	Internet Site available in English An organisation gathering members in the field of fire related science and technology. It assures the promotion and interchange of research of fire related science and technology by designating its purpose as contributing to the welfare of society and development of scientific technology. It holds various academic conferences, lecture meetings and publishes journals and books.

The Japan Society of Mechanical Engineers (CSJ) Shinanomachi Rengakan Bldg. 5F, Shinanomachi 35, Shinjuku-ku, Tokyo 160-0016, Japan Tel: +81-(0)3-5360-3505 / Fax: +81-(0)3-5360-3509 E-mail : wwwadmin-e@jsme.or.jp URL: http://www.jsme.or.jp/	Internet Site available in English An organisation gathering more than 37000 members in the field of advanced science and technology, such as mechatronics, new energy sources, biotechnology, and new specialized materials, to contribute to the development of industries. It holds various academic conferences, lecture meetings and publishes journals and books.
The Japan Federation of Engineering Societies (JFES) Tokyo University of Science, Morito Kinenkan 3F, Kagurazaka 4-2-2, Shinjuku-ku, Tokyo 162-0825, Japan Tel: +81-(0)3-6265-0672 / Fax: +81-(0)3-6265-0673 E-mail : eng@jfes.or.jp URL: http://www.jfes.or.jp/	Internet Site available in English An organisation gathering around 100 engineering and scientific societies. It promotes the advancement of engineering and industry through the cooperation of its members and holds academic conferences and lecture meetings.
The Japan Society for Technology of Plasticity (JSTP) Y.S.K Bldg. 4F, Shibadaimon 1-3-11, Minato-ku, Tokyo,105-0012, Japan Tel: +81-(0)3-3435-8301 / Fax: +81-(0)3-5733-3730 URL: http://www.jstp.jp/jp08/	Internet Site available in English An organisation gathering around 4300 engineers and researchers, and over 370 supporting companies. It provides the various kinds of fields, so that the members can obtain and exchange their professional or technical information concerning plastic theory, plastic working and technology and the relevant topics. It holds academic conferences and lecture meetings.
Institute of Noise Control Engineering of Japan (INCE/J) Koujimachi 3-12-6, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-5213 9797 / Fax: +81-(0)3-5213 9798 E-mail : office@ince-j.or.jp URL: http://www.ince-j.or.jp/	Internet Site available in English An organisation gathering around 1300 members promoting the advancement and distribution of science and technology regarding noise and vibration control. It covers various fields such as architecture, civil engineering, mechanical engineering, applied physics, physiology and psychology, etc. It holds academic conferences and lecture meetings and also publishes magazine, textbooks and reference books.
Seismological Society of Japan (SSJ) Tokyo RS Bldg. 8F, Hongo 6-26-12, Bunkyo-ku, Tokyo 113-0033, Japan Tel: +81-(0)3-5803-9570 / Fax: +81-(0)3-5803-9577 E-mail : zisin@tokyo.email.ne.jp URL: http://www.zisin.jp/	Internet Site available in English An organisation gathering more than 2000 members that promotes studies of earthquakes and the interior of the Earth, shares and disseminates the results, and contributes to earthquake disaster mitigation. It holds annual meetings, which cover many disciplines related to earthquakes and the interior of the Earth, and symposiums.

Japanese Society for Engineering Education (JSEE) Kenchikukaikan 4F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-5442-1021 / Fax: +81-(0)3-5442-0241 E-mail : jsee@jsee.or.jp URL: https://www.jsee.or.jp/	Internet Site available in English An organisation gathering universities, colleges of engineering, government laboratories and industrial companies in its membership. It actively develops creative manpower and encourages students to study with enjoyment and take pride in their future calling. It holds meetings, seminars, training, and publish a magazine.
The Japanese Society for Non-Destructive Inspection (JSNDI) Tachibana Annex Bldg. 10F, Kameido 2-25-14, Koto-ku, Tokyo 136-0071, Japan Tel: +81-(0)3-5609-4011 / Fax: +81-(0)3-5609-4061 E-mail : acd@jsndi.or.jp URL: http://www.jsndi.jp/	Internet Site available in English An organisation gathering about 2600 members promoting Non-Destructive Testing (NDT), and exchanging about NDT technical information, to facilitate and promote research in this field and to apply NDT technology. It carries out academic investigation, research training, information dissemination, standardization, publishing and personnel certification which are related to NDT in general.
Japanese Society of Corrosion Engineering (JSCE) Yuasa Bldg. 5F, Hongo 2-13-10, Bunkyo-ku, Tokyo 113-0033, Japan Tel: +81-(0)3-3815-1161 / Fax: +81-(0)3-3815-1291 E-mail : ysm.hng-113-0033@jcorr.or.jp URL: http://www.jcorr.or.jp/	Only Japanese Language Internet Site Available An organization that deals with corrosion engineering, spreads information and knowledge, and carries out researches, surveys and publications for development and diffusion of corrosion engineering.
Japan Science and Technology Agency (JST) Kawaguchi Center Building, Honcho 4-1-8, Kawaguchi-shi, Saitama 332-0012, Japan Tel: +81-(0)48-226-5601 / Fax: +81-(0)48-226-5651 E-mail : consul@jst.go.jp URL: http://www.jst.go.jp/	Internet Site available in English Japan Science and Technology Agency (JST) is one of the core institutions responsible for the implementation of S&T policy in Japan, including the government's Science and Technology Basic Plan.
Healthcare Engineering Association of Japan (HEAJ) Ikakikaikaikan 3F, Hongo 3-19-15, Bunkyo-ku, Tokyo 113-0033, Japan Tel: +81-(0)3-3812-0257 / Fax: +81-(0)3-6240-0690 E-mail : hc-setsubi0919@heaj.org URL: http://heaj.org/	Internet Site available in English An organisation gathering about 800 members, specialists related to healthcare facilities, and promoting research and improvements in medical and healthcare equipment. Other activities include establishing healthcare facility design guidelines, Certified Hospital Engineer accreditation and the publication of our Journal.

The Society of Materials Science, Japan (JSMS) Yoshida-izumidono-cho 1-101, Sakyo-ku, Kyoto 606-8301, Japan Tel: +81-(0)75-761-5321 / Fax: +81-(0)75-761-5325 E-mail : jimu@jsms.jp URL: http://www.jsms.jp/	Internet Site available in English An organisation gathering about 3000 members, scholars, officials, engineers of private companies and students, and covering material related fields for wide area of science and technology, that is, Mechanical Engineering, Electrical Engineering, Chemical Engineering, Architecture, Civil Engineering, Agriculture, etc. Other activities include giving members advanced information for materials science and technology, and opportunities for research meeting, symposium, seminar, technical tour, joint research, etc.
The Japan Society for Computational Engineering and Science(JSCES) IFP Todaimae Bldg. 3F, Mukogaoka 1-1-2, Bunkyo-ku, Tokyo 113-0032, Japan Tel: +81-(0)3-3868-8957 / Fax: +81-(0)3-3868-8957 E-mail : office@jsces.org URL: http://www.jsces.org/	Internet Site available in English An organisation gathering about 980 individual members and 81 corporate members, established for researchers and technical experts in the field of computational engineering and science. Other activities include promotion of the computational engineering and science, annual conference, diffusion of information, symposium, seminar, technical tour, joint research, and publication of a magazine.
Research Institute of Human Engineering for Quality Life (HQL) Osakaekimae Dai-4 Bldg. 6F 6-601, Umeda 1-11-4-1600, Kita-ku, Osaka 530-0001, Japan Tel: +81-(0)6-6346-9912 / Fax: +81-(0)6-6346-9913 E-mail : web@hql.jp URL: http://www.hql.jp/	Only Japanese Language Internet Site Available An organization that deals with human engineering for quality life, organizes seminars and study groups, spreads information and knowledge, and carries out researches, surveys and publications.
Urban Disaster Research Institute (UDRI) Marunouchi Bldg. 7F 725, Marunouchi 2-4-1, Chiyoda-ku, Tokyo 106-6307, Japan Tel: +81-(0)3-5218-0880 / Fax: +81-(0)3-5218-0881 URL: http://www.udri.net/	Only Japanese Language Internet Site Available An organization that deals with disaster prevention, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Foundry engineering Society (JFS) Zenkoku Tabako Bldg. 4F, Shibadaimon 1-10-1, Minato-ku, Tokyo 105-0012, Japan Tel: +81-(0)3-6809-2303 / Fax: +81-(0)3-6809-2330 E-mail : jfs@jfs.or.jp URL: http://jfs.or.jp/	Internet Site available in English An organisation gathering more than 300 companies and 3,000 personal members. established to contribute to development of the learning about casting of our country, progress of technology, improvement, and the casting industry accompanying it greatly through exchange of research activities or technology, and spread of information by academic journal, meetings, etc.

Engineering Advancement Association of Japan (ENAA) Toranomon Marin Bldg. 10F, Toranomon 3-18-19, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-5405-7201 / Fax: +81-(0)3-5405-8201 E-mail : contact@enaa.or.jp URL: http://www.enaa.or.jp/	Internet Site available in English An organisation gathering more than 200 companies and organisations. It aims at developing diversified activities such as advancement of technological capabilities and promotion of technical development: Combination of technology and knowledge subdivided and specialized for Engineering, high value added production, systemization of technology and comprehensive project management.
Japan Accreditation Board for Engineering Education (JABEE) Kenchiku kaikan 4F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-5439-5031 / Fax: +81-(0)3-5439-5033 E-mail : info@jabee.org URL: http://www.jabee.org/	Internet Site available in English An organisation established to promote professional education and to support fostering international professionals. As a third-party accreditation body, it accredits professional education programs in higher education institutions fostering professionals. It respects the originality of education programs and encourages programs to continuously improve education through examination.
Japan Association for Earthquake Engineering (JAEE) Kenchiku kaikan 4F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-5730-2831 / Fax: +81-(0)3-5730-2830 E-mail : office@general.jaee.gr.jp URL: http://www.jaee.gr.jp/jp/	Internet Site available in English An organisation gathering about 1300 individual members and companies. It carries out activities that covers both the engineering fields such as seismology related to earthquake disaster reduction, applied geology, structure engineering, geotechnical engineering, steel structure and concrete engineering, mechanical engineering, vibration control engineering and lifeline engineering; as well as social system fields such as local disaster prevention planning, crisis management, and risk management. It carries out meeting and publishes a bulletin.

c) Other Organisations:

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
Information Center for Building Administration (ICBA) Kagurazaka 1 chome bldg. 4F, kagurazaka 1-15, Shinjuku-ku, Tokyo 162-0825, Japan Tel: +81-(0)3-5225-7701 / Fax: +81-(0)3-5225-7731 URL: http://www.icba.or.jp/	Only Japanese Language Internet Site Available An organization that deals with construction administration, offers database systems, organizes seminars, spreads information and knowledge, and carries out researches, surveys and publications.
General Building Research Corporation of Japan (GBRC) 5-8-1 Fujishirodai, Suita-city, Osaka 565-0873, Japan Tel: +81-(0)6-6872-0391 / Fax: +81-(0)6-6872-0784 E-mail: info@gbrc.or.jp URL: http://www.gbrc.or.jp/	Internet Site available in English An organisation (under MLIT and METI) that promote public welfare by improving the quality and ensuring the safety of buildings based on wide-ranging research, testing and evaluating activities related to building technologies. It also conducts performance evaluation, building confirmation, and on-site inspection, structural calculation conformity judgment, JIS marking certification, technical education and training courses
Japan Testing Center for Construction Materials (JTCCM) Akos North Bldg 3F, 2-9-2 Takasago Souka Shi, Saitama 340-0015, Japan Tel: +81-(0)48-920-3811 / Fax: +81-(0)48-920-3820 URL: http://www.jtccm.or.jp/english.html	Internet Site available in English An organization (under MLIT and METI) that provides testing, evaluation and certification of the construction materials and the building components. It carries out testing and research services, performance evaluation services, certification and registration services, and JIS mark certification services.
Center for Housing Renovation and Dispute Settlement Support (CHORD) Kudan Center Bldg. 3F, Kudankita 4-1-7, Chiyoda-ku, Tokyo 102-0073, Japan Tel: +81-(0)3-3261-4567 / Fax: +81-(0)3-3261-9357 E-mail: chord_inquiry@chord.or.jp URL: http://www.chord.or.jp/index.php	Internet Site available in English An organisation that works to protect the interests of consumers and ensure the swift and appropriate settlement of housing-related disputes under the Housing Quality Assurance Act and the Act for Execution of Housing Defects Warranty Liability. It provides housing consultation and provision of support for the resolution of housing-related disputes. It also creates The Center for Housing Renovation and Dispute Settlement Support, CHORD, plays its part in housing policy by working to, by providing a wide range of services such as settings for a sound housing renovation market to ensure that consumers will undertake renovation projects in a more carefree manner.

Public Buildings Association (PBA) Tonetsu Shinkawa Bldg. 6F, Shinkawa 1-24-8, Chuo-ku, Tokyo 104-0033, Japan Tel: +81-(0)3-3523-0381 / Fax: +81-(0)3-3523-1826 E-mail: kaiin@pba.or.jp URL: http://www.pbaweb.jp/	Only Japanese Language Internet Site Available An organization that deals with public architectures of central and local government, spreads information and knowledge, and carries out researches, surveys and publications, having more than 1150 members.
Japan Management Association (JMA) Shiba-koen 3-1-22, Minato-ku, Tokyo 105-8522, Japan Tel: +81-(0)3-3434-1601 / Fax: +81-(0)3-3434-1087 URL: http://www.jma.or.jp	Internet Site available in English An organisation gathering about 1300 members that carries out surveys, researches, information collection and publications concerning corporate management innovation.
Institute of International Harmonization for Building and Housing (I2BH) Kenchikukaikan 3F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-6435-3192 / Fax: +81-(0)3-6435-3193 E-mail : main@iibh.org URL: http://www.iibh.org/	Internet Site available in English An organisation established to promote the development of the domestic field of buildings and housings by means of effective international harmonization of technologies, systems, codes and standards, and communication of information with other countries and organizations in the field of buildings and housings.
Urban Housing Evaluation Center (UHEC) Shintoranomon Jigyo Kaikai 3F, Toranomon 1-1-21, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3504-2384 / Fax: +81-(0)3-3595-0900 URL: http://www.uhec.co.jp/index.html	Only Japanese Language Internet Site Available Confirmation of the compatibility of the structural calculations with the Building Standards Act.
Organization for Housing Warranty Nagatomo Landik Bldg 2F, Shimbashi 3-1-11, Minato-ku, Tokyo 105-0004, Japan Tel: +81-(0)3-3539-5888 / Fax: +81-(0)3-3539-3623 E-mail: information@how.or.jp URL: http://www.housing-warranty.jp/	Only Japanese Language Internet Site Available An organization carrying out researches and studies related to guarantee and insurances for buildings.
Foundation for Senior Citizens' Housing Kyobashi Nagaoka Bldg. No 8 4F, Hachobori 2-20-9, Chuo-ku, Tokyo 104-0032, Japan Tel: +81-(0)3-3206-6437 / Fax: +81-(0)3-3206-5256 URL: http://www.koujuuzai.or.jp/	Only Japanese Language Internet Site Available An organization that bring guarantee for rental of house and financing for renovation of houses. Gather public organization, ordinance-designated city, Urban Renaissance Agency, etc. In total about 61 organisations and 70 companies.

Center for Better Living (BETTER LIVING) Stage Bldg. 2F, Fujimi 2-7-2, Chiyoda-ku, Tokyo 102-0071, Japan Tel: +81-(0)3-5211-0556 / Fax: +81-(0)3-5211-0548 E-mail: betterliving@cbl.or.jp URL: http://www.cbl.or.jp/index.html	Internet Site available in English An organization that carries out evaluation, testing, registration, and other activities related to architectural design, construction, products and materials and creative research. It carries out the "Quality Housing Components Certification System", building permission and inspection services, housing performance evaluation services, ISO certification services, and evaluation services of new technologies in the field of housing and housing components.
Japan Concrete Institute (JCI) Sogo Hanzomon Bldg. 12F., Kojimachi 1-7, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-3263-1571 / Fax: +81-(0)3-3263-2115 URL: http://www.jci-net.or.jp/	Internet Site available in English JCI promotes concrete science and technology through researches, studies, and diffusion of information through publications and technical seminars. (more than 75,000 members)
Japan Housing Finance Agency (JHF) Koraku 1-4-10, Bunkyo-ku, Tokyo 112-8570, Japan Tel: +81-(0)3-3812-1111 / Fax: +81-(0) URL: http://www.jhf.go.jp/	Internet Site available in English An incorporated administrative agency lending monies for houses construction and for buildings construction for disaster mitigation, supplementing lending by general financial institutions, and purchasing loan claims to assist lending for house construction provided by general financial institutions.
Building Research Institute (BRI) Tachihara 1, Tsukuba-shi, Ibaraki-ken 305-0802, Japan Tel: +81-(0)298-64-2151 / Fax: +81-(0)298-64-2989 E-mail: web-adm@kenken.go.jp URL: http://www.kenken.go.jp/	Internet Site available in English An incorporated administrative agency and a public-sector research institute that conducts various activities such as research and development on housing, building and urban planning technology, and international training on seismology and earthquake engineering.
Association of Housing Warranty Insurers (AHWI) Choyu Landic Bldg. 2F, Shimbashi 3-1-11, Minato-ku, Tokyo 105-0004, Japan Tel: +81-(0)3-3580-0236 / Fax: +81-(0) URL: http://www.kashihoken.or.jp/	Internet Site available in English A membership association composed of 5 housing defect warranty liability insurers designated by the MLIT which mission is to improve credibility of the housing insurance products offered by members under the Act for Secure Execution of Defects Warranty Liability, to secure the performance of the housing defect warranty liability that housing suppliers are required to bear under the Act, and ultimately to protect consumers.

Land Institute of Japan (LIJ) Toranomon Center Bldg. 9F, Toranomon 1-16-17, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3509-6971 / Fax: +81-(0)3-3509-6975 E-mail: info@tochi.or.jp URL: http://www.lij.jp/	Internet Site available in English An organization that conduct research and study on land issues, real estate market and real property business activities to contribute toward promoting land policy, real property business, and sound development of activities on real property
Japan Testing Center for Construction Materials (JTCCM) Akos North Bldg. 3F, Takasago 2-9-2, Souka-shi, Saitama-ken 340-0015, Japan Tel: +81-(0)48-920-3811 / Fax: +81-(0)48-920-3820 URL: http://www.jtccm.or.jp/	Internet Site available in English An organization that covers testing, evaluation and certification of the construction materials and the building components. It contains over 200 human resources and is the largest testing organization in Japan.

3 ORGANISATIONS RELATED TO BUILDING CONTRACTORS AND HOME BUILDERS

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
Japan Prefabricated Construction Suppliers and Manufacturers Association (JPA) M&C BLDG., 3-13-2, Kandaogawamachi, Chiyoda-ku, Tokyo 101-0052, Japan Tel: +81-(0)3-5280-3121 / Fax: +81-(0)3-5280-3127 URL http://www.purekyo.or.jp	Internet Site available in English An organization (under MLIT and METI) that develops the industrial production of housing, promotes the modernization and rationalization of the construction industry, and promotes research and development on prefab architecture as well as its construction and propagation. It comprises about 180 contractors and makers.
Japan Association of the Housing Industry Kojimachi Nakata Bldg. 8F, Kojimachi 5-3, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-3511-0611 / Fax: +81-(0)3-3511-0616 URL: http://www.zenjukyo.jp/	Only Japanese Language Internet Site Available An association that regroups about 1300 members within all Japan: Suppliers of mansions and independent houses, real estate companies, developers or connected companies.
National Federation of Small to Medium Construction Contractors Kensetsu Kokuho Kaikan 1F, Nihombashi Hakozakicho 12-4, Chuo-ku, Tokyo 103-0015, Japan Tel: +81-(0)3-5643-1065 / Fax: +81-(0)3-5643-1067 URL: http://www.zenkenren.or.jp/	Only Japanese Language Internet Site Available Only organization in Japan by builder's office managers aimed at developing timber framework method.
Japan Two-by-Four Home Builders Association Toranomon center Bldg., Toranomon 1-16-17, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-5157-0834 / Fax: +81-(0)3-5157-0832 URL: http://www.2x4assoc.or.jp/	Internet Site available in English An association of wood frame building contractors, building materials suppliers and architect's offices. It consists of more than eight hundreds of member companies/professionals from almost everywhere in Japan.
Japan Association of Wooden Home Builders Zentoku Roppongi West Bldg. 2F, Roppongi 1-7-27, Minato-ku, Tokyo 106-0032, Japan Tel: +81-(0)3-5114-3010 / Fax: +81-(0)3-5114-3020 URL: http://www.mokujukyo.or.jp/	Only Japanese Language Internet Site Available An association of about 500 companies including constructors, product suppliers, engineers or designer for wooden home.

Association of Living Amenity Stage Bldg. 6F, Fujimi 2-7-2, Chiyoda-ku, Tokyo 102-0071, Japan Tel: +81-(0)3-5211-0540 / Fax: +81-(0)3-5211-0546 URL: http://www.alianet.org/	Only Japanese Language Internet Site Available An association regrouping makers and suppliers of building equipment and materials. It includes more than 140 companies.
Japan Federation of Housing Organizations (Judanren) Rokubancho SK Bldg. 2F, Rokubancho 3, Chiyoda-ku, Tokyo 102-0085, Japan Tel: +81-(0)3-5275-7251 / Fax: +81-(0)3-5275-7257 URL: http://www.judanren.or.jp/index.html	Internet Site available in English The leading organization in the housing industry in Japan was established by housing and housing-related associations which following main activities: Coordination of and research on building systems, coordination among housing associations, international exchanges, supply of information and submittal of proposals and recommendations, and other related matters.
Association of New Urban Housing Technology (ANUHT) Toranomon Center Bldg. 5F, Toranomon 1-16-17, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3504-2381 / Fax: +81-(0)3-3504-1018 E-mail : anuht@anuht.or.jp URL: http://www.anuht.or.jp/hp/profile/anuht.html	Only Japanese Language Internet Site Available An association that regroups about 80 companies for a better housing environment.
Environmentally Symbiotic Housing Promotion Council Kagurazaka Itchome Bldg. 4F, Kagurazaka 1-15, Shinjuku-ku, Tokyo 162-0825, Japan Tel: +81-(0)3-6265-3242 / Fax: +81-(0)3-6265-3243 URL: http://www.kkj.or.jp/	Internet Site available in English An association composed of various private corporations, agencies, and municipalities related to housing and local development in Japan. Viewpoints include examination, proposal, enforcement, and inspection activities. It includes about 65 entities.
Consortium for Building Research and Development (CBRD) Triton Square Tower-Z 4F, Harumi 1-8-12, Chuo-ku, Tokyo 104-6204, Japan Tel: +81-(0)3-6219-7127 / Fax: +81-(0)3-5560-8022 URL: http://www.conso.jp/index.html	Only Japanese Language Internet Site Available An organization being a platform between research institution and companies, with a total of about 136 members.
Housing Research Foundation (JUSOKEN) Funabashi 4-29-8, Setagaya-ku, Tokyo 156-0055, Japan Tel: +81-(0)3-3484-5381 / Fax: +81-(0)3-3484-5794 E-mail: jusoken@mxj.mesh.ne.jp URL: http://www.jusoken.or.jp/	Internet Site available in English A foundation founded by Shimizu which push researches on apartment housing with fire-resistant / mass production systems, and subsidizing for the contribution of the house life improvement.

Japanese Society of Steel Construction (JSSC) Yotsuya-Mitsubishi Bldg. 9F, Yotsuya 3-2-1, Shinjuku-ku, Tokyo 160-0004, Japan Tel: +81-(0)3-5919-1535 / Fax: +81-(0)3-5919-1536 E-mail: JSSC-INFO@jssc.or.jp URL http://www.jssc.or.jp	Internet Site available in English An association to promote structural use of steel and to improve technologies related to steel construction. About 840 members including steel contractors, individual, researchers, institutional organizations or academic societies related to steel construction
Japan Housing and Wood Technology Center (HOWTEC) Shinsuna 3-4-2, Koto-ku, Tokyo 136-0075, Japan Tel: +81-(0)3-5653-7662 / Fax: +81-(0)3-3539-3623 URL: http://www.howtec.or.jp/index.html	Only Japanese Language Internet Site Available A public interest organization which main purpose is to develop and promote technologies utilizing timber for wooden houses. Main themes are fire and seismic resistance and today environmental issues.
Imported House Industries Organization (IHIO) World Import Mart 6F, Higashi-Ikebukuro 3-1-1, Toshima-ku, Tokyo 170-0013, Japan Tel: +81-(0)3-3980-7311 / Fax: +81-(0)3-3980-7312 E-mail: mail-e@ihio.or.jp URL: http://www.ihio.or.jp/	Internet Site available in English An organization that gathers companies and organizations having a role in the imported housing business for promotion in order to win consumer confidence in the quality of imported houses and to develop new markets for imported houses.
Japan Federation of Construction Contractors (JFCC - Nikenren) Tokyo Kensetsu Kaikan 8F, Hachobori 2-5-1, Chuo-ku, Tokyo 104-0032, Japan Tel: +81-(0)3-3553-0701 / Fax: +81-(0)3-3551-4954 URL: http://www.nikkenren.com/	Only Japanese Language Internet Site Available An organization that deals with basic problems to solve over inside and outside in the construction industry, spreads information and knowledge, and carries out researches, surveys.
National General Contractors Association of Japan Tokyo Kensetsu Kaikan 5F, Hachobori 2-5-1, Chuo-ku, Tokyo 104-0032, Japan Tel: +81-(0)3-3551-9396 / Fax: +81-(0)3-3555-3218 URL: http://www.zenken-net.or.jp/	Only Japanese Language Internet Site Available A national organization with construction company associations of prefectural and city governments.
Japanese Association of Real Estate Appraisal (JAREA) SVAX TT Building, Toranomon 3-11-15, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3434-2301 / Fax: +81-(0)3-3436-6450 E-mail: jarea@fudousan-kanteishi.or.jp URL: https://www.fudousan-kanteishi.or.jp/index.html	Internet Site available in English An organization carrying out real estate appraisal consultations, data collection, investigation and researches and gathering companies in the field. About 5500 members.

Japan Association for Building Research Promotion (JABRP) Kenchikukaikan 5F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0) 3-3453-1281 / Fax: +81-(0) 3-3453-0428 E-mail: info@kksk.or.jp URL: http://www.kksk.or.jp/	Only Japanese Language Internet Site Available An organization carrying out studies, researches and verifications for building construction (design, materials, aseismic, etc.), and to propose information about building construction technologies among engineers and companies. 61 main members (main construction companies and laboratories) and 215 other members.
The Real Estate Companies Association in Japan Kasumigaseki Building 17F, Kasumigaseki 3-2-5, Chiyoda-ku, Tokyo 100-6017, Japan Tel: +81-(0)3-3581-9421 / Fax: +81-(0)3-3581-7530 URL: http://www.fdk.or.jp/	Internet Site available in English An organisation gathering about 150 companies within the real-estate industry: developers, construction companies, building management companies, etc.
Japan Prestressed Concrete Contractors Association Dai-3 Miyako Bldg., Tsukudocho 4-6, Shinjuku-ku, Tokyo 162-0821, Japan Tel: +81-(0)3-3260-2535 / Fax: +81-(0)3-3260-2518 E-mail: pcsoudan@pcken.or.jp URL: http://www.pcken.or.jp/	Only Japanese Language Internet Site Available An organization for promotion of prestressed concrete and gathering main concrete contractors (32 companies) and related technologies companies (39 companies).
Housing Research and Advancement Foundation of Japan Nibancho Sankyo Bldg. 5F, Nibancho 6-3, Chiyoda-ku, Tokyo 102-0084, Japan Tel: +81-(0)3-3264-5901 / Fax: +81-(0)3-3239-8429 URL: http://www.hrf.or.jp/	Only Japanese Language Internet Site Available An organization that conducts researches and survey about houses and building lands.
the Overseas Construction Association of Japan (OCAJI) Hatchobori Dai-ichi Seimei Bldg. 7F, Hatchobori 2-24-2, Chuo-ku, Tokyo 104-0032, Japan Tel: +81-(0)3-3553-1631 / Fax: +81-(0)3-3551-0148 E-mail: info@ocaji.or.jp URL: http://www.ocaji.or.jp/	Internet Site available in English A body consisting of leading Japanese construction companies established with the aim of promoting overseas activities of the construction industry and international cooperation. It cooperates with Japanese construction companies in overseas projects, assists in international contribution through construction and engages in projects designed to promote international exchange with other countries.

Urban Renewal Coordinator Association of Japan (URCA) Shiba 2-Chome Daimon Bldg. 7F, Shiba 2-3-3, Minato-ku, Tokyo 105-0014, Japan Tel: +81-(0)3-6400-0261 / Fax: +81-(0)3-3454-3015 URL: http://www.urca.or.jp/index.html	Only Japanese Language Internet Site Available An organization that deals with urban renewal, organizes training programs, spreads information and knowledge, and carries out researches and surveys, having members of more than 100 companies/entities in total.
Japan Environmental Management Association for Industry (JEMAI) Mitsui-Sumitomo Bldg. 6F/7F, Kajicho 2-2-1, Chiyoda-ku, Tokyo 101-0044, Japan Tel: +81-(0)3-5209-7702 / Fax: +81-(0)3-5209-7716 E-mail: webmaster@jemai.or.jp URL: http://www.jemai.or.jp/	Internet Site available in English. An organization gathering about 700 companies which activities include environmental assessments, technology developments, surveys for air and water pollution, noise, vibration, and hazardous chemical substances; and global environmental issues. Also it acts as organizing body for the National Certification Examination for Pollution Control Managers, and carries out seminars and publications.
Japanese Technical Organization for Commercial Spaces (JTOCS) Kenchikukaikan 4F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-3453-8103 / Fax: +81-(0)3-3453-8109 E-mail: info@jtocs.or.jp URL: http://www.jtocs.or.jp/index.html	Only Japanese Language Internet Site Available: An organization that deals with technical expertise related to Commercial spaces, conducts examinations for experts, organizes training programs, spreads information and knowledge, and carries out researches and surveys, having members of 35 companies/entities in total.
Japan Building Maintenance Association (JBMA) Building Maintenance Kaikan, Nishi-Nippori 5-12-5, Arakawa-ku, Tokyo 116-0013, Japan Tel: +81-(0)3-3805-7560 / Fax: +81-(0)3-3805-7561 E-mail: info@j-bma.or.jp URL: http://www.j-bma.or.jp/	Internet Site available in English An organization that deals with society's demand for securing comfortable building environments, conducts the Building Cleaning Technician Examination and the Building Facilities Administrative Examination, organises training programs, spreads knowledge and carries out researches and surveys.
The National Federation of Housing Supply Corporation Suidocho Bldg., Suidocho 3-1, Shinjuku-ku, Tokyo 162-0811, Japan Tel: +81-(0)3-3260-8717 / Fax: +81-(0)3-3260-8700 URL: http://www.zenjyuren.or.jp/index.html	Only Japanese Language Internet Site Available: An organization that deals with management and business related to local Housing Supply Public Corporations, spreads information and knowledge, and carries out researches and surveys, having members of 44 companies/entities in total.

Japan Steel Constructors Association (JSCA) Prosper Bldg. 2F, Iwamotocho 1-0-3, Chiyoda-ku, Tokyo 101-0032, Japan Tel: +81-(0)3-5829-6124 / Fax: +81-(0)3-5829-6125 E-mail: jsca@tekken-kyo.or.jp URL: http://www.tekken-kyo.or.jp/index.html	Only Japanese Language Internet Site Available: An organization composed of steel contractors that conducts examinations for experts, organizes training programs, spreads information and knowledge, and carries out researches and surveys, having members of 16 companies in total.
Japan Council of Shopping Centers (JCSC) Water Front Tower 13F, Kachidoki 3-12-1, Chuo-ku, Tokyo 104-0054, Japan Tel: +81-(0)3-3536-8121 / Fax: +81-(0)3-3536-8120 URL: http://www.jcsc.or.jp/index.html	Internet Site available in English An organisation promoting the development of shopping centers, organizing training and diffusion of information and knowledge around members.
Japan Technical Carpenters Association Dai-2 East Bldg. 9F, Kandasakumacho 1-14, Chiyoda-ku, Tokyo 101-0025, Japan Tel: +81-(0)3-3253-8301 / Fax: +81-(0)3-3253-8302 E-mail: tca@d4.dion.ne.jp URL: http://www.h2.dion.ne.jp/~daikusan/	Only Japanese Language Internet Site Available: An organization that deals with technical expertise of professional carpenters, conducts examinations for experts, organizes training programs, spreads information and knowledge, and carries out researches and surveys, having members of 15 entities in total.
Japanese Society of Steel Construction (JSSC) Yotsuya-Mitsubishi Bldg. 9F, Yotsuya 3-2-1, Shinjuku-ku, Tokyo 160-0004, Japan Tel: +81-(0)3-5919-1535 / Fax: +81-(0)3-5919-1536 E-mail: JSSC-INFO@jssc.or.jp URL: http://www.jssc.or.jp	Internet Site available in English An organisation that wants to develop the use of constructional steel and to improve technologies related to steel construction. Gather 913 members including 147 companies.
Japan Housing Association (JHA) Kaneko Bldg. 6F, Kandaogawamachi 1-11, Chiyoda-ku, Tokyo 101-0052, Japan Tel: +81-(0)3-3291-0881 / Fax: +81-(0)3-3291-0885 E-mail: info@jh-a.or.jp URL: http://www.jh-a.or.jp/index.html	Only Japanese Language Internet Site Available: An organization that promotes favourable policy for improving housing for better living, spreads information and knowledge, and carries out researches and surveys, having members of 9 entities in total.

Urban Underground Space Center of Japan (USJ) 201 Plaza Edogawabashi Bldg., Sekiguchi 1-23-6, Bunkyo-ku, Tokyo 112-0014, Japan Tel: +81-(0)3-5261-5625 / Fax: +81-(0)3-5261-5629 E-mail: usj-mail@mxa.mesh.ne.jp URL: http://www.toshimirai.jp/usj/	Internet Site available in English An organisation, composed of members from private and public sectors as well as academic circles, working for the purpose of investigation and research into as well as recommendations on diversified utilization of urban underground space in effective and orderly manners from such various perspectives as planning, technology, environment, programs, etc.
Japan Real Estate Institute (REI) Kangin-Fujiya Bldg., Toranomon 1-3-2, Minato-ku, Tokyo 105-8485, Japan Tel: +81-(0)3-3503-5335 / Fax: +81-(0)3-3597-8063 E-mail: HP-WebMaster@imail.jrei.jp URL: http://www.reinet.or.jp/	Internet Site available in English An organization that works like a think tank by providing accurate and impartial appraisal reports, and by recommending efficient real estate utilization. It conducts research & study, produces appraisal and consulting reports about real estate condition.
Miyazaki Construction Technology Promotion Organization Government Office Building, Enterprise Department, Asahi 1-2-2, Miyazaki-shi, Miyazaki-ken 880-0803, Japan Tel: +81-(0)985-20-1830 / Fax: +81-(0)985-20-1850 E-mail: info@mk-suishin.or.jp URL: http://www.mk-suishin.or.jp/	Only Japanese Language Internet Site Available: A public organization located in Miyazaki Prefecture that deals with improvement of construction technology, organizes training programs, spreads information and knowledge, and carries out researches and surveys.
Conference for Promotion of Residential Building Renovation Stage Bldg. 4F, Fujimi 2-7-2, Chiyoda-ku, Tokyo 102-0071, Japan Tel: +81-(0)3-3556-5430 / Fax: +81-(0)3-3261-7730 E-mail: suishinkyo@j-reform.com URL: http://www.j-reform.com	Only Japanese Language Internet Site Available: An organization that deals with residential building renovation, organizes training programs, spreads information and knowledge, and carries out researches and surveys, having regular members of 71companies/entities with 104 special members.
Conference for Promotion of Fixed Term Rental House Zentakuren Kaikan, Iwamotocho 2-6-3, Chiyoda-ku, Tokyo 101-0032, Japan Tel: +81-(0)3-5821-8117 / Fax: +81-(0)3-5821-7330 URL: http://www.teishaku.jp/	Only Japanese Language Internet Site Available: An organization that deals with supply of good quality rental housings, spreads data, information and knowledge, and carries out researches and surveys, having regular members of 28 entities with 29 supporting members in total.

Federation for Promotion of Housing Industry Urban Bldg. Sakasu V 4F, Yotsuya 1-2-6, Shinjuku-ku, Tokyo 160-0004, Japan Tel: +81-(0)3-5369-0345 / Fax: +81-(0)3-5369-1868 E-mail: info@jyusanren.jp URL: http://www.jyusanren.jp/	Only Japanese Language Internet Site Available: An organization that deals with housing industry for promoting consciousness of housing policy and organizes seminars, spreads information and knowledge, and carries out researches and surveys, having 12 real estate or housing companies listed as collaborators.
The Real Estate Transaction Modernization Center South Bldg. Nagatacho 8F, Nagatacho 1-11-30, Chiyoda-ku, Tokyo 100-0014, Japan Tel: +81-(0)3-5843-2070 / Fax: +81-(0)3-3504-3522 URL: http://www.kindaika.jp/	Only Japanese Language Internet Site Available: An organization that deals with real estate transaction, conducts examinations for qualification of professional experts, organizes training programs, providing loan guarantee, spreads information and knowledge, and carries out researches, surveys and publications.
Foundation for Senior Citizen' Housing (LIJ) Kyobashi Dai-8 Nagaoka Bldg. 4F, Hachobori 2-20-9, Chuo-ku, Tokyo 104-0032, Japan Tel: +81-(0)3-3206-6437 / Fax: +81-(0)3-3206-5256 URL: http://www.koujuuzai.or.jp/	Only Japanese Language Internet Site Available: An organization that deals with issues regarding housing for elderly people, organizes training programs, providing loan guarantee, spreads information and knowledge, and carries out researches, surveys and publications, having supporting members of 13 companies/entities in total.
Japan Housing Organisation (JAHO) Shintoranomon Jigyo Kaikan 2F, Toranomon 1-1-21, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3504-6601 / Fax: +81-(0)3-3504-6609 URL: http://www.jaho.or.jp/	Only Japanese Language Internet Site Available: An organization that deals with real estate transaction, organizes training programs for housing contractors and carpenters, spreads information and knowledge, and carries out researches, surveys and publications, having members of about 400 companies in total.
Housing and Community (HC) Asai Bldg. 4F, Shibakoen 2-11-17, Minato-ku, Tokyo 105-0011, Japan Tel: +81-(0)3-6809-1408 / Fax: +81-(0)3-6809-1438 URL: http://www.hc-zaidan.or.jp/	Only Japanese Language Internet Site Available: An organization that deals with creation of rich living environment, organizes seminars and training programs, providing subsidiary for NPO and civic groups, networking of NPOs, spreads information and knowledge, and carries out researches, surveys and publications.

All Japan Real Estate Federation (Zennichi) Zennichi Kaikan, Kioi-cho 3-30, Chiyoda-ku, Tokyo 102-0094, Japan Tel: +81-(0)3-3263-7030 / Fax: +81-(0)3-3239-2198 URL: http://www.zennichi.or.jp/	Internet Site available in English An organization that conducts research and development to promote real estate usage, proposes real estate policy, implements educational programs for the general public, and engages in promotional activities. It also facilitates real estate transactions, ensures that such transactions are safe and fair, promotes the effective use of real estate, and conducts activities for development of the industry.
Association of Real Estate Agents of Japan (FRK) Toranomon ES Bldg. 5F, Toranomon 3-25-2, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-5733-2271 / Fax: +81-(0)3-5733-2270 E-mail: frk@homenavi.or.jp URL: http://www.homenavi.or.jp/	Internet Site available in English An organization that gathers real estate agents in Japan and work to establish good real estate marketing practices assist the real estate industry in developing easier and more effective ways of handling real estate transactions. It has an internet site with information on real estate market.
Remodeling Promotion Committee for Condominium (REPCO) Miya Bldg. 8F, Kojimachi 4-3-4, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-3265-4899 / Fax: +81-(0)3-3265-4861 E-mail: repco-info@repco.gr.jp URL: http://www.repco.gr.jp/	Only Japanese Language Internet Site Available: An organization that deals with promotion of condominium remodeling, conducts capacity building of professionals, organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of about 100 companies in total.
Federation of Housing & Community Centers Kagurazaka 1-chome Bldg. 6F, Kagurazaka 1-15, Shinjuku-ku, Tokyo 162-0825, Japan Tel: +81-(0)3-5229-7560 / Fax: +81-(0)3-5229-7581 E-mail: sumaimachi@sumaimachi-center-rengoukai.or.jp URL: http://www.sumaimachi-center-rengoukai.or.jp	Only Japanese Language Internet Site Available: An organization that deals with common platform of regional Housing & Community Centers, organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Formwork Contractors Association (JFCA) IK Bldg. 1F, Shimbashi 6-20-11, Minato-ku, Tokyo 105-0004, Japan Tel: +81-(0)3-6435-6208 / Fax: +81-(0)3-6435-6268 E-mail: info@nikkendaikyou.or.jp URL: http://www.nikkendaikyou.or.jp/	Only Japanese Language Internet Site Available: An organization of formwork contractor having an aim for improvement of relevant technology in Japan, and conducts examinations for expert's qualification, organizes training programs, providing loan guarantee, spreads information and knowledge, and carries out researches, surveys and publications.

Japan Construction Cooperative Association (JCAA) Nishishimbashi Kowa Bldg. 6F, Nishi-shimbashi 1-6-11, Minato-ku, Tokyo 105-0003, Japan Tel: +81-(0)3-3504-1515 / Fax: +81-(0)3-3504-1515 URL: http://www.kensetsurengou.org/	Only Japanese Language Internet Site Available: An organization of 40 regional cooperatives of contractors that organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Demolition Contractors Association Anna Takarajima Bldg. 6F, Hatchobori 4-1-3, Chuo-ku, Tokyo 104-0032, Japan Tel: +81-(0)3-3555-2196 / Fax: +81-(0)3-3555-2133 URL: http://www.zenkaikouren.or.jp/	Only Japanese Language Internet Site Available: An organization that deals with real estate transaction, conducts examinations for qualification of professional experts, organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications, having regular members of 43 companies and supporting members of 17 companies.
Japan Framework Construction Contractors Association Tokyo Kutai Kaikan, Kumanocho 34-7, Itabashi-ku, Tokyo 173-0025, Japan Tel: +81-(0)3-3972-7221 / Fax: +81-(0)3-3972-7216 E-mail: info@nihonkutai.or.jp URL: http://www.nihonkutai.or.jp/	Only Japanese Language Internet Site Available: An organization composed of frame contractors that conducts examinations for qualification of professional experts, organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications.
All-Japan Smaller Construction Contractors Association New Shintomi Bldg. 2F, Shintomi 2-4-5, Chuo-ku, Tokyo 104-0041, Japan Tel: +81-(0)3-5542-0331 / Fax: +81-(0)3-5542-0332 E-mail: webmaster@zenchuken.or.jp URL: http://www.zenchuken.or.jp/	Only Japanese Language Internet Site Available: A nationwide organization of smaller contractors that organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications, having regular members of 32 regional smaller contractors' associations.
Japan Roofing Contractors Association (JRCA) Zennoyaku Bldg. 6F, Uchikanda 3-3-4, Chiyoda-ku, Tokyo 101-0047, Japan Tel: +81-(0)3-5298-3793 / Fax: +81-(0)3-5298-3793 URL: http://www.jrca.or.jp/	Only Japanese Language Internet Site Available: A nationwide organization of roofing contractors that conducts examinations for qualification of professional experts, organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications.

Japan Mastic Painting Contractors Association Toso Kaikan, Uguisudani-cho 19-22, Shibuya-ku, Tokyo 150-0032, Japan Tel: +81-(0)3-3496-3861 / Fax: +81-(0)3-3496-6747 E-mail: info@mastic.or.jp URL: http://www.mastic.or.jp/	Only Japanese Language Internet Site Available: An organization of regional cooperatives of contractors working with Mastic Painting Method that conducts examinations for qualification of professional experts, organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications.
The Japan Technical Carpenters Association Dai-2 Higashi Bldg. 9F, Kanda Sakumacho 1-14, Chiyoda-ku, Tokyo 101-0025, Japan Tel: +81-(0)3-3253-8301 / Fax: +81-(0)3-3253-8302 E-mail: tca@d4.dion.ne.jp URL: http://www.h2.dion.ne.jp/~daikusan/	Only Japanese Language Internet Site Available: An organization of carpenters for architecture that conducts examinations for qualification of professional experts, organizes training programs and professional skills competition, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Painting Contractors Association (JPCA) Toso Kaikan 3F, Uguisudani-cho 19-22, Shibuya-ku, Tokyo 150-0032, Japan Tel: +81-(0)3-3770-9901 / Fax: +81-(0)3-3770-9980 E-mail: jpca1116@paint.jp URL: http://www.nittoso.or.jp/	Only Japanese Language Internet Site Available: A nationwide organization of painting contractors that conducts examinations for qualification of professional experts, organizes training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of 2350 companies.
Temporary Construction Industries Association Masuyama Bldg. 4F., Nihombashi Kakigaracho 1-18-1, Chuo-ku, Tokyo 103-0014, Japan Tel: +81-(0)3-3667-4816	No Specific Internet Site: An organization of heavy temporary work contractors that organizes seminars and training programs, spreads information and knowledge, and carries out researches, surveys and publications.(details are not given)
Japan Plasterers' Association (JPA) Haraikatamachi 25-3, Shinjuku-ku, Tokyo 162-0841, Japan Tel: +81-(0)3-3269-0560 / Fax: +81-(0)3-3269-3219 URL: http://www.nissaren.or.jp/	Only Japanese Language Internet Site Available: An organization of companies of plasterers that conducts examinations for qualification of professional experts, organizes training programs and professional skills competition, spreads information and knowledge, and carries out researches, surveys and publications, having supporting members of 39 companies.
National Federation of Construction Contractors (NFCC) Toranomon 4-chome MT Bldg. 2-gokan 6F., 4-2-12 Toranomon, Minato-ku, Tokyo 105-0001 Tel: +81-(0)3-5473-1596 URL: http://www.kensanren.or.jp	Only Japanese Language Internet Site Available: A nationwide organization that deals with construction industry, spreads information and knowledge, and carries out researches, surveys and publications, having regular members of 35 entities with supporting members of 9 entities.

Japan Building Maintenance Association Building Maintenance Kaikan, 5-12-5 Nishi-Nippori, Arakawa-ku, Tokyo, Japan 116-0013 Tel: 03-3805-7560 Fax: 03-3805-7561 http://www.j-bma.or.jp/jbma_eng/	Only Japanese Language Internet Site Available: An nationwide organization in 47 prefectures that deals with Building cleaning, building facilities management and building maintenance inspection, conducts examinations for qualification of professional experts, spreads information and knowledge, and carries out researches, surveys and publications, having remembers of 2806 companies.

4 ORGANISATIONS RELATED TO BUILDING COMPONENTS MAKERS

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
Japan Construction Material & Housing Equipment Industries Federation (J-CHIF) KDX Hamacho Bldg. 5F, Nihonbashi Hamacho 2-17-8, Chuo-ku, Tokyo 103-0007, Japan Tel: +81-(0)3-5640-0901 / Fax: +81-(0)3-5640-0905 URL: http://www.kensankyo.org/index.html	Internet Site available in English The Federation collects and shares information relating to the construction materials and housing equipment industries, carries out surveys and research, promotes the wider use and understanding of high-quality construction material and housing equipment and the creation of a base for the construction material and housing equipment industry, in order to contribute to the development of industry and improvements in citizens' lives in Japan. 116 members
Membrane Structures Association of Japan (MSAJ) Daiichi Tentoku Bldg. 7F, Toranomon 1-13-5, Minato-ku, Tokyo-105-0001, Japan Tel: +81-(0)3-3501-3535 / Fax: +81-(0)3-3501-3548 URL: http://www.makukouzou.or.jp/index2.html	Only Japanese Language Internet Site Available: An organization that deals with Membrane Structures provides services of testing and to certify the conformity of performance of the products, spreads information and knowledge, and carries out researches, surveys and publications, having 42 members.
Flat Glass Manufacturers Association of Japan NBF Takanawa Bldg. 4F, Takanawa 1-3-13, Minato-ku, Tokyo 108-0074, Japan Tel: +81-(0)3-6450-3926 / Fax: +81-(0)3-6450-3928 URL: http://www.itakyo.or.jp/index.html	Only Japanese Language Internet Site Available: An organization of flat glass manufacturers that organizes events, training programs, spreads information and knowledge, and carries out researches, surveys and publications, having regular members of 3 major glass manufacturing companies.
Interior Floor Industrial Association (IFA) Uchiyama Bldg. 4F, Nishishimbashi 3-9-3, Minato-ku, Tokyo 105-0003, Japan Tel: +81-(0)3-3578-1260 / Fax: +81-(0)3-3578-1250 E-mail : ifa-jimu@kc5.so-net.ne.jp URL: http://www.ifa-yukazai.com/	Only Japanese Language Internet Site Available : An organization of interior floor industrial manufacturers that organizes events, training programs, spreads information and knowledge, and carries out researches, surveys and publications, having regular members of 6 companies and 6 organizations.
Rock Wool Association Japan Toyo Bldg. 4F, Yanagibashi 2-21-13, Taito-ku, Tokyo 111-0052, Japan Tel: +81-(0)3-5835-2569 URL: http://www.rwa.gr.jp/	Only Japanese Language Internet Site Available: An organization of Rock Wool industrial manufacturers that organizes events, training programs, spreads information and knowledge, and carries out researches, surveys and publications, having regular members of 15 companies and 4 supporting members.

Curtainwall Fire Window's Association Japan brewing Kaikan Bldg. 2F, Nishishimbashi 1-1-21, Minato-ku, Tokyo 105-003, Japan Tel: +81-(0)3-3500-3891 / Fax: +81-(0)3-3500-3584 URL: http://www.cw-fw.or.jp/	Only Japanese Language Internet Site Available: An organization of companies of Curtainwall Fire Window that conducts examinations for qualification of professional experts, organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of 57 companies.
Japan Tilers Association Tokyo Kara Kaikan, Fujimi 1-7-9, Chiyoda-ku, Tokyo 102-0071, Japan Tel: +81-(0)3-3265-2887 / Fax: +81-(0)3-3265-2903 E-mail: office@yane.or.jp URL: http://www.yane.or.jp/	Only Japanese Language Internet Site Available: An organization of companies of Roof Tiles that conducts examinations for qualification of professional experts, organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of 57 companies.
Japan Tile Works Association Kokuho-21 5F, Ichigayatamachi 2-29, Shinjuku-ku, Tokyo 162-0843, Japan Tel: +81-(0)3-3260-9023 / Fax: +81-(0)3-3260-9024 E-mail: nittaren@mvi.biglobe.ne.jp URL: http://www.nittaren.or.jp/	Only Japanese Language Internet Site Available: An organization of contractors of Roofing Tile Works that conducts examinations for qualification of professional experts, organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of 17 organizations.
Scaffolding and Construction Materials Leasing Association NK Bldg. 7F, Kanda-Ogawamachi 3-6, Chiyoda-ku, Tokyo 101-0052, Japan Tel; +81-(0)3-3293-3148 / Fax: +81-(0)3-3293 3207 E-mail: secretary@keikasetsu.or.jp URL: http://www.keikasetsu.or.jp/	Only Japanese Language Internet Site Available: An organization of leasing companies of light weight temporary materials that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of 90 companies.
Scaffolding and Construction Equipment Association of Japan (SCEA) kenchikukaikan 6F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel; +81-(0)3-3455-0448 / Fax: +81-(0)3-3455-0527 URL: http://www.kasetsu.or.jp/	Only Japanese Language Internet Site Available: An organization of manufacturers of Scaffolding and Construction Equipment that conducts examinations for qualification of professional experts, organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of about 350 companies.
The Mining and Materials Processing Institute of Japan (MMIJ) Akasaka 9-6-41, Minato-ku, Tokyo 107-0052, Japan Tel: +81-(0)3-3402-0541 / Fax: +81-(0)3-3403-1776 E-mail: info@mmij.or.jp URL: http://www.mmij.or.jp/	Only Japanese Language Internet Site Available: An organization of researchers of Mining and Materials Processing that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having 1858 individual members with 65 companies/organizations.

Japan Welding Society (JWS) Yosetsu Kaikan 6F, Kanda-Sakuma-cho 4-20, Chiyoda-ku, Tokyo 101-0025, Japan Tel: +81-(0)3-5825-4073 / Fax: +81-(0)3-5825-4331 URL: http://www.jweld.jp/	Only Japanese Language Internet Site Available: An organization of researchers of Welding that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications.
The Society of Inorganic Materials, Japan (SIMJ) No.12 Sankyo Bldg., Nishi-Shinjuku 7-13-5, Shinjuku-ku, Tokyo 160-0023, Japan Tel: +81-(0)3-3363-6445 / Fax: +81-(0)3-3363-6897 E-mail: imj@giga.ocn.ne.jp URL: http://www.simj.jp/	Internet Site available in English An organisation gathering about 1000 members (researchers, engineers, organisations and companies) in the field of inorganic materials (gypsum, lime, cement, etc.). Organize seminars and publish the "Journal of the Society of Inorganic Materials, Japan".
Japan Cement Association (SIMJ) Daiwa Nihonbashi-honcho Bldg. 7F, Nihonbashi-honcho 1-9-4, Chuo-ku, Tokyo 103-0023, Japan Tel: +81-(0)3-5200-5051 / Fax: +81-(0)3-5200-5062 E-mail: international@jcassoc.or.jp URL: http://www.jcassoc.or.jp/	Internet Site available in English An organisation gathering the 17 cement manufacturers in Japan. It supports research and development of cement and concrete technology, disseminates knowledge, carry out investigations and studies for JIS pertaining to cement, and draw up statistics on cement production, distribution and consumption,
Gypsum Board Association of Japan No.12 Sankyo Bldg., Nishi-Shinjuku 7-13-5, Shinjuku-ku, Tokyo 160-0023, Japan Tel: +81-(0)3-3591-6774 / Fax: +81-(0)3-3591-1567 E-mail: info@gypsumboard-a.or.jp URL: http://www.gypsumboard-a.or.jp/	Only Japanese Language Internet Site Available: An organization of manufacturers of Gypsum Board that organizes events, spreads information and knowledge, and carries out researches and publications, having members of about 10 companies.
Japan Lime Association (JLA) Shintoranomon Jitsugyo Kaikan, Toranomon 1-1-21, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3504-1601 / Fax: +81-(0)3-3593-1604 E-mail: jla@jplime.com URL: http://www.jplime.com/	Only Japanese Language Internet Site Available: An organization of producers of Lime that organizes events, spreads information and knowledge, and carries out researches and publications.

Japan Building Materials Association Shumokubashi Bldg. 4F, Edobori 1-4-23, Nishi-ku, Osaka 550-0002, Japan Tel: +81-(0)6-443-0345 / Fax: +81-(0)6-443-0348 E-mail: office@kenzai.or.jp URL: http://www.kenzai.or.jp/	Only Japanese Language Internet Site Available: An organization gathering 232 members especially building material makers that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Society for Finishing Technology (JSFT) Kenchikukaikan 6F, Shiba 5-26-20, Minato-ku, Tokyo 108-0014, Japan Tel: +81-(0)3-3798-4921 / Fax: +81-(0)3-3798-4922 E-mail: shiage@finex.jp URL: http://www.finex.jp/	Only Japanese Language Internet Site Available: An organization of researchers of Architectural Finishing Technology that organizes events and training programs, awards prizes, spreads information and knowledge, and carries out researches, surveys and publications.
The Japan Wood Research Society (JWRS) Takasakiya Bldg. 4F, Mukogaoka 1-1-17, Bunkyo-ku, Tokyo 113-0023, Japan Tel: +81-(0)3-3816-0396 / Fax: +81-(0)3-3818-6568 E-mail: office@jwrs.org URL: http://www.jplime.com/	Internet Site available in English An organisation gathering about 2200 members and 200 private sectors and governmental institutions, and promoting the study of forest products science and wood technology. It publishes the “Mokuzai Gakkaishi” and the “Journal of Wood Science”.
Wood Technological Association of Japan (JWTA) Rinyu Bldg., Koraku 1-7-12, Bunkyo-ku, Tokyo 112-0004, Japan Tel: +81-(0)3-3816-8081 / Fax: +81-(0)3-3816-7880 E-mail: kakou@jwta.or.jp URL: http://www.jwta.or.jp/	Only Japanese Language Internet Site Available: An organization that conducts examinations for qualification of professional experts, organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Federation of Wood Industry Associations Nagatacho Bldg. 6F, nagatacho 2-4-3, Chiyoda-ku, Tokyo 100-0014, Japan Tel: +81-(0)3-3580-3215 / Fax: +81-(0)3-3580-3226 URL: http://www.zenmoku.jp/	Only Japanese Language Internet Site Available: (To be checked) Under the organization members about 20,000 companies are indirectly join to the Association of Wood Industry that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications.

Japan Plywood Manufacturers' Association (JPMA) Leaf Square Suidobashi Bldg. 8F, Misakicho 2-21-2, Chiyoda-ku, Tokyo 101-0061, Japan Tel: +81-(0)3-5226-6677 / Fax: +81-(0)3-5226-6678 E-mail: info@jpma.jp URL: http://www.jpma.jp/	Only Japanese Language Internet Site Available: An organization of Plywood manufacturers that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having members of 29 companies and 34 factories.
Japan Wood Products Information & Research Center (JAWIC) Rinyu Bldg. 4F, Koraku 1-7-12, Bunkyo-ku, Tokyo 112-0004, Japan Tel: +81-(0)3-3816-5595 / Fax: +81-(0)3-3816-5062 E-mail: webmaster@jawic.or.jp URL: http://www.jawic.or.jp/	Internet Site available in English An organization committed to assist consumers, central and local governments, and wood industries and distributors through research on forestry policy, analysis of trade and industries, and promotion of using wood. It provides information on wood and wood products, including supply, demand, and prices in domestic and overseas wood markets, as well as housing construction.
Japan Wooden Housing Industry Association Zentoku Roppongi West Bldg. 2F, Roppongi 1-7-27, Minato-ku, Tokyo 106-0032, Japan Tel: +81-(0)3-5114-3010 / Fax: +81-(0)3-5114-3020 E-mail: somu@mokujukyo.or.jp URL: http://www.mokujukyo.or.jp/	Only Japanese Language Internet Site Available: An organization relating to the industry of wooden housing that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications including videos.
The Asahi Glass Foundation (AF) Science Plaza 2F, Yonbancho 5-3, Chiyoda-ku, Tokyo 102-0081, Japan Tel: +81-(0)3-5275-0620 / Fax: +81-(0)3-5275-0871 E-mail: post@af-info.or.jp URL: http://www.af-info.or.jp/	Internet Site available in English An organization that support advanced research in the fields of science and technology and recognizes efforts to solve environmental issues that call for global solutions.
Japan Aluminium Association (JAA) Tsukamoto Sozan Bldg., Ginza 4-2-15, Chuo-ku, Tokyo 104-0061, Japan Tel: +81-(0)3-3538-0221 / Fax: +81-(0)3-3538-0233 E-mail: info@alkyo.jp URL: http://www.aluminum.or.jp/	Internet Site available in English An organization comprising 131 companies members that promotes demand for aluminium and its products, and collect data and statistics about aluminium.

Japan Iron and Steel Federation (JISF) Tekko Kaikan, Nihonbashi-Kayabacho 3-2-10, Chuo-ku, Tokyo 103-0025, Japan Tel: +81-(0)3-3669-4811 / Fax: +81-(0)3-3664-1457 URL: http://www.jisf.or.jp/	Internet Site available in English An organization gathering more than 110 companies members (iron and steel makers and trading companies) that promotes demand for iron and steel and its products, and collect data and statistics about iron and steel.
Japan Society of Colour Material (JSCM) Tokyo-Toryo-Kaikan, Ebisu 3-12-8, Shibuya-ku, Tokyo 150-0013, Japan Tel: +81-(0)3-3443-2811 / Fax: +81-(0)3-3664-1457 E-mail: jscm@blue.ocn.ne.jp URL: http://www.shikizai.org/	Internet Site available in English An organization gathering more than 200 companies and 2000 individual members (related to colour materials) that promotes a wide field of colour materials such as pigments, paints, printing inks, raw materials, intermediates, functional products, additives, cosmetics, textiles, papers, ceramics, plastics, characterization, test equipment, etc..
Japan Architectural Concrete Block and Brick Industry Association (JCBA) Gomibuchi Bldg., Iwamotocho 2-17-4, Chiyoda-ku, Tokyo 101-0032, Japan Tel: +81-(0)3-3851-1077 / Fax: +81-(0)3-3851-1073 E-mail: info@jcba-jp.com URL: http://www.jcba-jp.com/	Only Japanese Language Internet Site Available: An organization having members of companies doing business of Architectural Concrete Block and Brick that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Emulsified Asphalt Association (JEAA) Pine Central Bldg., Kyobashi 2-11-5, Chuo-ku, Tokyo 104-0031, Japan Tel: +81-(0)3-5159-8096 / Fax: +81-(0)3-5159-8097 E-mail: info@jeaa.or.jp URL: http://www.jeaa.or.jp/	Only Japanese Language Internet Site Available: 20 company members An organization having members of companies doing business of Emulsified Asphalt that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications.
The Ceramic Society of Japan (CSJ) Hyakunincho 2-22-17, Shinjuku-ku, Tokyo 169-0073, Japan Tel: +81-(0)3-3362-5231 / Fax: +81-(0)3-3362-5714 E-mail: jim-ask@cersj.org URL: http://www.ceramic.or.jp/	Internet Site available in English An organization gathering more than 220 companies and 3200 individual members (related to ceramics field) that promotes the development of industry, science and technology related to the ceramics field and provides opportunities for learning, acquisition of new technology and exchanges of research activities.

Japan Reinforcing Bar Joints Institute (JRJI) Yasui Hirakawacho Bldg. 2F, Hirakawacho 1-3-14, Chiyoda-ku, Tokyo 102-0093, Japan Tel: +81-(0)3-3230-0981 / Fax: +81-(0)3-3230-0982 E-mail: info@tekkin-tsugite.or.jp URL: http://www.tekkin-tsugite.or.jp/	Internet Site available in English An organization that carries out research and studies on rebar joint technologies, formulation of criteria/standards and specification sheets, promotion of dissemination and training of technicians, certification of qualified personnel, as well as certification of companies and equipment technologies and issuance of publications.
Acoustic Materials Association of Japan (AMA) Laurel Mita No 605, Mita 2-14-7, Minato-ku, Tokyo 108-0073, Japan Tel: +81-(0)3-3452-6740 / Fax: +81-(0)3-3452-6795 E-mail: info@onzai.or.jp URL: http://www.onzai.or.jp/	Only Japanese Language Internet Site Available: An organization having members of companies doing business of Acoustic Materials to be used for building such as concert hall, studio, etc. that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having 27 members.
Japan Crushed Stone Association (JCSA) Gotanda NN Bldg. 4F, Nishi-Gotanda 2-12-19, Shinagawa-ku, Tokyo 141-0031, Japan Tel: +81-(0)3-5435-8830 / Fax: +81-(0)3-5435-8851 E-mail: jcsa_honbu@nifty.com URL: http://www.saiseki.or.jp/	Only Japanese Language Internet Site Available: An organization having members of companies doing business of Crushed Stones that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications, having 810 regular member companies with 124 supporting members.
The Iron and Steel Institute of Japan (ISIJ) Tekko Kaikan 5F, Nihombashi-Kayabacho 3-2-10, Chuo-ku, Tokyo 103-0025, Japan Tel: +81-(0)3-3669-5931 / Fax: +81-(0)3-669-5934 E-mail: webmaster_isij@isij.or.jp URL: https://www.isij.or.jp/	Internet Site available in English An organization gathering more than 520 companies and 8500 individual members (related to iron and steel) that carries out research and studies on iron and steel, organises seminars and meetings, and publish bulletins and journals.
Japan Paint Manufacturers Association (JPMA) Tokyo Toryo Kaikan 1F, Ebisu 3-12-8, Shibuya-ku, Tokyo 150-0013, Japan Tel: +81-(0)3-3443-2011 / Fax: +81-(0)3-3443-3599 E-mail: info@toryo.or.jp URL: http://www.toryo.or.jp/	Internet Site available in English An organization gathering about 258 members (paint manufacturers and paint-related industries) that promote robust development of Japanese paint industry by researching issues such as management, technological development, market supply & demand. It also organises exchange of information and development of standards.

Japan Copper Development Association (JCDA) Usagiya Bldg. 5F, Ueno 1-10-10, Taito-ku, Tokyo 110-0005, Japan Tel: +81-(0)3-3836-8821 / Fax: +81-(0)3-3836-8828 URL: http://www.jcda.or.jp/	Only Japanese Language Internet Site Available: An organization having 24 regular members and 24 supporting members for development of copper related technology that organizes events and training programs, spreads information and knowledge, and carries out researches, surveys and publications.
Japan Stainless Steel Association (JSSA) Tekko Kaikan 4F, Nihombashi-Kayabacho 3-2-10, Chuo-ku, Tokyo 103-0025, Japan Tel: +81-(0)3-3669-5691 / Fax: +81-(0)3-3669-5690 E-mail: info@toryo.or.jp URL: http://www.jssa.gr.jp/	Internet Site available in English An organization gathering about 75 companies that promotes stainless steel products, improves relevant technologies and enhances investigations/surveys and studies in cooperation with stainless steel-related companies and associations, It also organises exchange of information and preparing statistics.
Nippon Slag Association (NSA) Tekko Kaikan 5F, Nihombashi-Kayabacho 3-2-10, Chuo-ku, Tokyo 103-0025, Japan Tel: +81-(0)3-5643-6016 / Fax: +81-(0)3-5643-6018 URL: http://www.slg.jp/	Internet Site available in English An organisation gathering 26 companies and organisations that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of iron and steel slag products among consumer industries, governments, and academic associations, and for effective use of these products.
Japan Plastic Sheet Association (JPSA) Tobu Bldg. 5F, Moto-Akasaka 1-5-26, Minato-ku, Tokyo 107-0051, Japan Tel: +81-(0)3-3408-4342 / Fax: +81-(0)3-3403-6990 URL: http://www.p-bankyo.com/	Only Japanese Language Internet Site Available: An organisation gathering 8 companies that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of Plastic sheet, and for effective use of these products.
Artificial Light-Weight Aggregate Association (ALA) Kameda Bldg. 3F, Ueno 1-12-2, Taito-ku, Tokyo 110-0005, Japan Tel: +81-(0)3-3837-0445 / Fax: +81-(0)3-3837-0445 E-mail: ala@chive.ocn.ne.jp URL: http://suites.is-assoc.co.jp/~ala/	Only Japanese Language Internet Site Available: An organisation consists of major 4 cement companies that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of Artificial Light-Weight Aggregate products among consumer industries, governments, and academic associations, and for effective use of these products.
The Building Stone Association of Japan Kokura Bldg., Asakusabashi 1-36-11, Taito-ku, Tokyo 111-0053, Japan Tel: +81-(0)3-3866-0543 / Fax: +81-(0)3-5821-8591 URL: http://www.kenchikusekizai.org/	Only Japanese Language Internet Site Available An organisation consists of only 4 companies that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of building stones like marble, granite and other stone materials among consumer industries, governments, and academic associations, and for effective use of these products.

The Japan Stone Industry Association Nikkei Bldg. 2F, Kandatacho 2-9, Chiyoda-ku, Tokyo 101-0046, Japan Tel: +81-(0)3- 3251-7671 / Fax: +81-(0)3- 3251-7681 URL: http://www.japan-stone.org/	Only Japanese Language Internet Site Available An organisation consists of 1300 companies in the field of stone materials that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of stone industry among consumer industries, governments, and academic associations, and for effective use of these products.
Japan Bricks Association (JBA) Cooperative of All Aichi-Ken Red Brick Industry, Shinkawacho 3-85, Hekinan-shi, Aichi-ken 447-0863, Japan Tel: +81-(0)566-41-1276 / Fax: +81-(0)566-41-1276 E-mail: info@japanbricks.jp URL: http://www.japanbricks.jp/	Only Japanese Language Internet Site Available An organisation consists of 16 companies in the field of bricks that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of landscaping bricks among consumer industries, governments, and academic associations, and for effective use of these products.
Japan Sealant Industry Association (JSIA) Shona-Sudacho Bldg., Kanda-Sudacho 1-5, Chiyoda-ku, Tokyo 101-0041, Japan Tel: +81-(0)3-3255-2841 / Fax: +81-(0)3-3255-2183 E-mail: info@sealant.gr.jp URL: http://www.sealant.gr.jp/	Only Japanese Language Internet Site Available An organisation consists of 18 manufacturing companies of regular member and 24 raw material makers or dealers as supporting member in the field of sealant for building and civil works that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of sealant products among consumer industries, governments, and academic associations, and for effective use of these products.
Japan Plastics Industry Federation (JPIF) Aroma Bldg. 5F, Nihonbashi-Kayabacho 3-5-2, Chuo-ku, Tokyo 103-0025, Japan Tel: +81-(0)3-6661-6811 / Fax: +81-(0)3-6661-6810 URL: http://www.jpif.gr.jp/	Internet Site available in English An organization gathering 45 organisations and 52 companies of the Japanese plastics industry that engages in varies activities to cope with various aspects including raw material resins, molding/fabrication and management of used products both at home and abroad. It promotes the plastic industry, diffuses information and compiles statistics.
Japan Vinyl Goods Manufacturer's Association Tobu Bldg. 3F, Moto-Akasaka 1-5-26, Minato-ku, Tokyo 107-0051, Japan Tel: +81-(0)3-5413-1311 / Fax: +81-(0)3-3401-9351 URL: http://www.vinyl-ass.gr.jp/	Only Japanese Language Internet Site Available An organisation consists of 41 Vinyl Goods manufacturing companies of regular member and 14 raw material makers or dealers as supporting member that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of flexible vinyl chloride resin composition products among consumer industries, governments, and academic associations, and for effective use of these products.

Japan Building Coating Materials Association (JBCMA) Ogi Bldg. 5F, Kanda-Izumicho 1-7-1, Chiyoda-ku, Tokyo 101-0024, Japan Tel: +81-(0)3-3861-3844 / Fax: +81-(0)3-3851-0706 URL: http://www.nsk-web.org/	Only Japanese Language Internet Site Available: An organisation consists of 56 Building Coating Materials manufacturing companies as regular member and 16 raw material makers or dealers as supporting member that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of building finish coating products among consumer industries, governments, and academic associations, and for effective use of these products.
Japan Exterior Finishing Industry Federation Haneda Bldg. 502, Yoyogi 2-5-1, Shibuya-ku, Tokyo 151-0053, Japan Tel: +81-(0)3-3379-4338 / Fax: +81-(0)3-3374-3982 E-mail: gaiheki@east.or.jp URL: http://www.n-gaiheki.jp/	Only Japanese Language Internet Site Available: An organisation consists of 4 organization of Exterior Finishing work companies as regular member and supporting members that carries out researches, studies and collection of information (including statistics) for the purpose of promoting a broad understanding of building finish coating products among consumer industries, governments, and academic associations, and for effective use of these products.
Japan Society of Seismic Isolation (JSSI) JIA Bldg. 2F, Jingumae 2-3-18, Shibuya-ku, Tokyo 150-0001, Japan Tel: +81-(0)3-5775-5432 / Fax: +81-(0)3-5775-5434 E-mail: jssi@jssi.or.jp URL: http://www.jssi.or.jp/	Internet Site available in English An organization gathering more than 90 organisations and companies (construction companies and architects) that promotes seismic isolation through investigation and research on seismic isolation for buildings, dissemination and exchange of information.
Japan Thermal Insulation Association (JTIA) Shinsei Bldg. 3F, Asakusabashi 1-10-7, Taito-ku, Tokyo 111-0053, Japan Tel: +81-(0)3-3865-0785 / Fax: +81-(0)3-3865-0787 E-mail: jimukyoku@jtia.org URL: http://www.jtia.org/	Only Japanese Language Internet Site Available: An organization gathering 510 contractors, dealers and manufacturers that promotes thermal insulation through research on thermal insulation for buildings, dissemination and exchange of information.
Japan Coating Technology Association (JCOT) Yaraicho 3, Shinjuku-ku, Tokyo 162-0805, Japan Tel: +81-(0)3-6228-1711 / Fax: +81-(0)3-6228-1711 E-mail: tosou-jimukyoku@jcot.gr.jp URL: http://jcot.gr.jp/	Only Japanese Language Internet Site Available: An organization having 80 members from engineers, researchers that promotes paint coating technology through research and exchange of information.

Japan Institute of Light Metals (JILM) Tsukamoto-Sozan Bldg. 6F, Ginza 4-2-15, Chuo-ku, Tokyo 104-0061, Japan Tel: +81-(0)3-3538-0232 / Fax: +81-(0)3-3538-0226 E-mail: jilm1951@jilm.or.jp URL: http://www.jilm.or.jp/	Internet Site available in English An academic society for light metals such as aluminum, magnesium and titanium, gathering more than 2000 members that promotes science and technology of light metals and aims at developing light metals industries through seminar, meetings, researches and studies, dissemination and exchange of information, and publications.
Japan Wallcoverings Association (WACOA) Landic Dai-2 Toranomon Bldg. 7F, Toranomon 3-7-8, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-5408-5501 / Fax: +81-(0)3-5408-5502 URL: http://www.wacoa.jp/	Only Japanese Language Internet Site Available: An organisation consists of 63 regular members and 120 supporting members that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of wallcovering products among consumer industries, governments, and academic associations, and for effective use of these products.
Japan Interior Material Cooperative Quartier Blanc GINZA 2F, Ginza 1-4-3, Chuo-ku, Tokyo 104-0061, Japan Tel: +81-(0)3-3564-4088 / Fax: +81-(0)3-3564-2669 E-mail: info@nihon-naisouren.gr.jp URL: http://www.nihon-naisouren.gr.jp	Only Japanese Language Internet Site Available: An organisation consists of 11 cooperatives and 217 members of cooperative that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of interior materials among consumer industries, governments, and academic associations, and for effective use of these products. (To be checked)
Japan Construction Interior Cooperatives Federation (JCIF) Yanagida Bldg. 4F, Kojimachi 3-5, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-3239-6551 / Fax: +81-(0)3-3239-6552 URL: http://jcif.org/	Only Japanese Language Internet Site Available: An organisation consists of about 1000 members including interior work contractors under the law of SME cooperatives that carries out researches, studies and collection of information for the purpose of promoting a broad understanding among consumer industries, governments, and academic associations, and for effective use of these products.

5 ORGANISATIONS RELATED TO BUILDING EQUIPMENT MAKERS

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
The Association of Japan Instrumentation Industry (AJII) Toranomon Denki Bldg. 5F, Toranomon2-8-1, Minato-ku, Tokyo 105-0001, Japan Tel: +81-(0)3-3580-8921 / Fax: +81-(0)3-3580-8934 URL: http://www.keiso.or.jp/	Internet Site available in English An organisation gathering about 155 member companies that works for improvement in training, exchanges with related organizations, improvement in the investigation research in instrumentation, and technology, rationalization of management, etc., and aims to development of instrumentation construction business.
Association of Precise Survey and Applied Technology (APA) Kanzan Bldg. 9F, Takadanobaba 4-40-11, Shinjuku-ku, Tokyo 169-0075, Japan Tel: +81-(0)3-3362-6840 / Fax: +81-(0)3-3362-6841 E-mail: toiawase@sokugikyo.or.jp URL: http://www.sokugikyo.or.jp/	Internet Site available in English An organisation that works for improvement in training, exchanges with related organizations, improvement in the investigation research in instrumentation, and technology, rationalization of management, etc., and aims to development of instrumentation construction business.
Air-Conditioning and Plumbing Constructors Association of Japan Kuei Kaikan 3F, Shintomi 2-2-7, Chuo-ku, Tokyo 104-0041, Japan Tel: +81-3-3553-6431 / Fax: +81-3-3553-6786 URL: http://www.nikkuei.or.jp/index.asp	Only Japanese Language Internet Site Available An organization gathering about 220 companies and associations in the field of air conditioning and sanitation to develop technologies and standards.
Japan Solar Energy Society (JSES) Yoyogi 2-44-14, Shibuya-ku, Tokyo 151-0053, Japan Tel: +81-(0)3-3376-6015 / Fax: +81-(0)3-3376-6720 E-mail: info@jses-solar.jp URL: http://www.jses-solar.jp/	Only Japanese Language Internet Site Available An organisation of researchers of solar energy utilization that carries out fundamental and applied researches, studies and collection of information for the purpose of promoting a broad understanding of solar energy among consumer industries, governments, and academic associations, and exchange with foreign researchers and research institutes.
Solar System Development Association (SSDA) Kotetsu Bldg. 4F, Yaesu 1-6-3, Chuo-ku, Tokyo 103-0028, Japan Tel: +81-(0)3-5203-9111 / Fax: +81-(0)3-5203-6660 URL: http://www.ssda.or.jp/	Only Japanese Language Internet Site Available An organisation of 12 regular members for the purpose of improvement of energy use by utilizing solar heating system that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of solar technology among consumer industries, governments, and academic associations.

The Energy Conservation Center, Japan (ECCJ) Igarashi Bldg. 5F, Shibaura 2-11-5, Minato-ku, Tokyo 108-0023, Japan Tel: +81-(0)3-5439-9710 / Fax: +81-(0)3-5439-9719 URL: http://www.eccj.or.jp/	Internet Site available in English An organisation gathering 2339 companies as members that works for promotion of energy conservation in the industry, for households and local communities, to develop human resources and to promote international cooperation in the field of energy conservation. Information on energy conservation legal system in Japan
The Telecommunications Association (TTA) Tokyo Opera City Tower 13F, Nishi Shinjuku 3-20-2, Shinjuku-ku, TOKYO 163–1455, Japan Tel: +81-(0)3-5353-0190 / Fax: +81-(0)3-5353-0191 E-mail: tta@tta.or.jp URL: http://www.tta.or.jp	Internet Site available in English An organisation gathering 420 corporate members and 700 individual members including telecommunication operators, equipment manufacturers, cable-outside plant manufacturers, engineering companies, system integrators, software vendors, and consulting companies, that works for promotion related to information and communications technology
Japan Elevator Association (JEA) Dai2 kuyo Bldg., Minami Aoyama 5-10-2, Minato-ku, Tokyo 107-0062, Japan Tel: +81-(0)3-3407-6471 / Fax: +81-(0)3-3407-2259 E-mail: elekyo@sepia.ocn.ne.jp URL: http://www.n-elekyo.or.jp/	Internet Site available in English An organisation gathering about 130 companies that conducts researches and studies for elevator related topics, and organises meeting, training and diffusion of information.
Japan Sash Manufacturers Association (JSMA) Nihonshuzokaikan 2F, Nishi-Shimbashi 1-1-21, Minato-ku, Tokyo 105-003, Japan Tel: +81-(0)3-3500-3446 / Fax: +81-(0)3-3500-3477 URL: http://www.jsma.or.jp/	Only Japanese Language Internet Site Available An organisation composed of 84 manufacturers of Sash, door, shutter and other materials applied for openings in addition to exterior building materials that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of these products among consumer industries, governments, and academic associations.
Curtainwall Fire Window's Association (CFWA) Nihonshuzokaikan 2F, Nishi-Shimbashi 1-1-21, Minato-ku, Tokyo 105-003, Japan Tel: +81-(0)3-3500-3891 / Fax: +81-(0)3-3500-3584 URL: http://www.cw-fw.or.jp/	Only Japanese Language Internet Site Available An organisation gathering 57 companies of Curtainwall and Fire Window that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of safe and good quality products among consumer industries, governments, and academic associations.
Japan Heating Industrial Association Sanko Bldg. 4F, Kandanishikicho 2-5-19, Chiyoda-ku, Tokyo 101-0054, Japan Tel: +81-(0)3-3219-2561 / Fax: +81-(0)3-3219-1503 E-mail: danboh@oregano.ocn.ne.jp URL: http://www8.ocn.ne.jp/~danboh/	Only Japanese Language Internet Site Available:会員４１社 An organisation gathering 41 companies of heating equipment maker that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of heating equipments among consumer industries, governments, and academic associations.

Japan District Heating and Cooling Association Kyobashi NS Bldg. 6F, Kyobashi 2-5-21, Chuo-ku, Tokyo 104-0031, Japan Tel: +81-(0)3-5524-1196 / Fax: +81-(0)3-5524-1202 E-mail: dhcmaster@dhcjp.or.jp URL: http://www.dhcjp.or.jp/	Only Japanese Language Internet Site Available An organisation composed of 45 regular members, 25 supporting members and 33 special members that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of district heating and cooling technology and system among consumer industries, governments, and academic associations.
Association for Rainwater Storage and Infiltration Technology (ARSIT) Hanzomon Murayama Bldg. 1F, Koujimachi 3-7-1, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-5275-9591 / Fax: +81-(0)3-5275-9594 E-mail: info@arsit.or.jp URL: http://www.arsit.or.jp/	Only Japanese Language Internet Site Available An organisation composed of 22 regular members, 46 supporting members that carry out researches, studies and collection of information for the purpose of promoting a broad understanding of rain water storage and infiltration technology and system among consumer industries, governments, and academic associations.

6 ORGANISATIONS RELATED TO CIVIL WORKS

NAME AND ADDRESS OF ENTITIES	ROLE OF ENTITIES
Association of Nihon Tunnel Construction Sub-Contractors Broderie Nishi-Shimbashi 9F., 1-9-1 Nishi-Shimbashi, Minato-ku, Tokyo 105-0003 Tel: +81-(0)3-5251-4150 URL: http://www.tonnel.jp/	Only Japanese Language Internet Site Available An organisation composed of 105 sub-contractors specialized in tunneling works as regular member that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of tunneling technology among consumer industries, governments, and academic associations.
Japan Association of Dam & Weir Equipment Engineering Edogawabashi Bldg. 3F., 1-47-12 Sekiguchi, Bunkyo-ku, Tokyo 112-0014 Tel: +81-(0)3-3267-0371 URL: http://www17.ocn.ne.jp/~dam/ http://dam777.ec-net.jp/index.html	Only Japanese Language Internet Site Available An organisation composed of 38 companies in charge of Dam & Weir Equipment Engineering as regular member that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of Dam & Weir Equipment technology among consumer industries, governments, and academic associations.
Japan Bridge Association (JBA) Nishi-Shimbashi Kowa Bldg. 9F., 1-6-11 Nishi-Shimbashi, Minato-ku, Tokyo 105-0003 Tel: +81-(0)3-3507-5225 URL: http://www.jasbc.or.jp/	Only Japanese Language Internet Site Available An organisation composed of 34 companies in charge of Bridge Engineering as regular member that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of bridge technology among consumer industries, governments, and academic associations.
Japan Bridge Engineering Center (J-BEC) Otowa NS Bldg., 2-10-2, Otowa, Bunkyo-ku, Tokyo 112-0013 Tel: +81-(0)3-5940-7788 URL: http://www.jbec.or.jp	Only Japanese Language Internet Site Available An organisation of foundation that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of bridge project among consumer industries, governments, and academic associations.
Japan Dam Foundation Ginza GT Bldg. 7F., 2-14-2 Ginza, Chuo-ku, Tokyo 104-0061 Tel: +81-(0)3-3545-8361 URL: http://damnet.or.jp/	Only Japanese Language Internet Site Available An organisation that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of dam construction project among consumer industries, governments, and academic associations.

Japan Dredging and Reclamation Engineering Association Kokusai Sanno Bldg. 8F., 3-3-5 Akasaka, Minato-ku, Tokyo 107-0052 Tel: +81-(0)3-5549-7468 URL: http://www.umeshunkyo.or.jp/	Only Japanese Language Internet Site Available An organisation of engineering consisted of 27 companies that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of dredging and land reclamation works among consumer industries, governments, and academic associations.
Japan Dredging Association Root Kakigaracho Bldg. 6F., 1-19-9 Nihombashi Kakigaracho, Chuo-ku, Tokyo 103-0014 Tel: +81-(0)3-3661-3561 URL: https://www.yoi-kensetsu.com/dantai/info.php?did=23	Only Japanese Language Internet Site Available An organisation of dredging works that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of dredging works among consumer industries, governments, and academic associations.
Japan Earth Moving Construction Association (JEMCA) Ueno Fuji Bldg. 9F., 5-1-8 Higashi-Ueno, Taito-ku, Tokyo 110-0015 Tel: +81-(0)3-3845-2727 URl: http://www.jemca.jp/	Only Japanese Language Internet Site Available An organisation of contractors in charge of Earth Moving Construction works by means of mechanical equipments that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of earth moving works among consumer industries, governments, and academic associations.
Japan Grout Association Kasuga Bldg. 9F., 1-1-2 Koraku, Bunkyo-ku, Tokyo 112-0004 Tel: +81-(0)3-3816-2681 URL: http://www.japan-grout.jp/	Only Japanese Language Internet Site Available An organisation of 62 regular members and 57 supporting members in charge of Grouting engineering that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of grouting works among consumer industries, governments, and academic associations.
Japan Microtunnelling Association (JMA) Nishimura Bldg. 3F., 2-11-18 Tomioka, Koto-ku, Tokyo 135-0047 Tel: +81-(0)3-5639-9230 URL: http://www.suisinkyo.or.jp/	Only Japanese Language Internet Site Available An organisation of 72 regular members and 43 special members in charge of micro-tunneling engineering that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of micro-tunneling engineering among consumer industries, governments, and academic associations.
Japan Tunneling Association Tsukiji M Bldg. 6F., 2-11-26 Tsukiji, Chuo-ku, Tokyo 104-0045 Tel: +81-(0)3-3524-1755 URL: http://www.japan-tunnel.org/	Only Japanese Language Internet Site Available An organisation in charge of tunneling engineering that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of tunneling engineering about construction and maintenance among consumer industries, governments, and academic associations.

Japan Road Contractors Association (JRCA) Tokyo Kensetsu Kaikan 3F., 2-5-1 Hatchobori, Chuo-ku, Tokyo 104-0032 Tel: +81-(0)3-3537-3056 URL: http://www.dohkenkyo.com/	Only Japanese Language Internet Site Available An organisation gathering 170 contractors in charge of road construction that carries out researches, studies and collection of information for the purpose of promoting a broad understanding of road engineering works among consumer industries, governments, and academic associations. 170 companies.

ANNEXES

Annex E: Legal service life of tangible depreciation assets

Annex F: Legal service life of tangible depreciation assets

Buildings	Legal Service Life by type of Building Structure in years						
	Steel-Reinforced, Reinforced Concrete	Brick, Stone, Block	Metallic			Wooden, Synthetic Resins	Wooden with Mortar
			Structural material thickness > 4mm	Structural material thickness <4 and >3mm	Structural material thickness < 3mm		
Office, Museum	51	41	38	30	22	24	22
House, Dormitory, Lodgings, School, Gym	47	38	34	27	19	22	20
Restaurant, Theatre, Music Hall, Movie Theatre, Dance Hall	34-41	38	31	25	19	20	19
Hotel	31-39	36	29	24	17	17	15
Shop	39	38	34	27	19	22	20
Hospital	39	36	29	24	17	17	15

Source: MLIT

ANNEXES

Annex F: List of EU Diplomatic missions in Japan and EU Chambers of Commerce

Annex F: EU MEMBER STATES DIPLOMATIC MISSIONS IN JAPAN

AND RELATED BUSINESS ENTITIES

The following table gives the address of the diplomatic missions of EU Member States in Japan, of their business department if clearly identified and of the chamber(s) of commerce or business association linked to the corresponding country.

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
EUROPEAN UNION	Delegation of the European Union to Japan Europa House 4-6-28 Minami-Azabu, Minato-ku, Tokyo 106-0047 Japan Tel. +81(0)3-5422-6001 Fax.+81(0)3-5420-5544 http://eeas.europa.eu/delegations/japan	(Linked entity) European Business Council Sanbancho POULA Bldg. 2F, 6-7 Sanbancho, Chiyoda-ku, Tokyo 102-0075 Tel: +81-(0)3-3263-6222, Fax: +81-(0)3-3263-6223 https://www.ebc-jp.com/
AUSTRIA	The Austrian Embassy Tokyo 1-1-20 Moto-Azabu, Minato-ku, Tokyo 106-0046, Japan Tel: +81-(0)3-3451-8281 / Fax: +81-(0)3-3451-8283 URL: http://www.bmeia.gv.at/en/embassy/tokyo.html E-Mail: tokio-ob@bmeia.gv.at	ADVANTAGE AUSTRIA Tokyo *Austrian Embassy - Commercial Section* 3-13-3 Moto-azabu, Minato-ku, Tokyo 106-0046, Japan Tel: +81-(0)3-3403-1777 / Fax: +81-(0)3-3403-3407 URL: http://www.advantageaustria.org/jp E-mail: tokio@advantageaustria.org

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
BELGIUM	Embassy of of Belgium in Japan Nibancho 5-4, Chiyoda-ku, Tokyo 102-0084, Japan Tel: +81-(0)3-3262-0191 / Fax: +81-(0)3-3262-0651 URL: http://www.diplomatie.be/tokyo/ E-mail: tokyo@diplobel.fed.be	The Belgian-Luxembourg Chamber of Commerce in Japan Dai10 Daitetsu Bldg. 5F, Arakicho 23 Shinjuku-ku, Tokyo 160-0007 Tel: +81-(0)3-6457-8662 / Fax: +81-(0)3-6457-8663 URL: http://www.blccj.or.jp/ E-mail: info[at]blccj.or.jp
BULGARIA	Embassy of the Republic of Bulgaria 5-36-3 Yoyogi, Shibuya-ku, Tokyo 151-0053, Japan Tel: + 81-(0)3-3465-1021 / Fax: + 81-(0)3-3465-1031 URL: http://www.mfa.bg/embassies/japan E-mail: Embassy.Tokyo@mfa.bg	
CROATIA	Embassy of the Republic of Croatia 3-3-10 Hiroo, Shibuya-ku, Tokyo 150-0012, Japan Tel: + 81-(0)3-5469-3014 / Fax: + 81-(0)3-5469-3015 URL: http://jp.mfa.hr E-mail: croemb.tokyo@mvep.hr	
CYPRUS	Honorary Consulate-General of the Republic of Cyprus Hibiya Marine Bldg., 7F., 1-5-1, Yurakucho, Chiyoda-ku, Tokyo 106-0006, Japan Tel: +81-(0)3-3592-0611 / Fax: + 81-(0)3-3592-0611 E-mail: info@cyprus-hcg.jp	

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
CZECH REPUBLIC	Embassy of the Czech Republic 3-11-5 Hiroo, Shibuya-ku, Tokyo 150-0012, Japan Tel: +81-(0)3-3400-8122 / Fax: +81-(0)3-3400-8124 URL: http://www.mzv.cz/tokyo/cz/index.html E-mail: tokyo@embassy.mzv.cz	Embassy of the Czech Republic, Commercial and Economic Section CzechInvest - Investment and Business Development Agency Cerulean Tower 15F., 26-1, Sakuragaoka-cho, Shibuya-ku, Tokyo 150-8512, Japan Tel: +81-(0)3-5456-5283 / Fax: +81-(0)3-5456-5511 URL: http://www.czechinvest.org E-mail: tokyo@czechinvest.org
DENMARK	Royal Danish Embassy 29-6 Sarugakucho, Shibuya-ku, Tokyo 150-0033, Japan Tel: +81-(0)3-3496-3001 / Fax: +81-(0)3-3476-4234 URL: http://japan.um.dk/ E-mail: tyoamb@um.dk	Royal Danish Embassy - Team Trade & Export Danish Chamber of Commerce Japan C/O The Royal Danish Embassy Tokyo 29-6 Sarugaku-cho Shibuya-ku ,Tokyo 150-0033 URL: http://www.dccj.org/
ESTONIA	Embassy of the Republic of Estonia 2-6-15 Jingumae, Shibuya-ku, Tokyo 150-0001 Tel: +81-(0)3-5412-7281 / Fax: +81-(0)3-5412-7282 URL: http://www.estemb.or.jp/ E-mail: Embassy.Tokyo@mfa.ee	
FINLAND	Embassy of Finland 3-5-39 Minami-Azabu, Minato-ku, Tokyo, 106-8561, Japan Tel: +81-(0)3-5447-6000 / Fax: +81-(0)3-5447-6042 URL: http://www.finland.or.jp/ E-mail: sanomat.tok@formin.fi	Embassy of Finland - Team Finland in Japan Finnish Chamber of Commerce in Japan Forest View Meguro 101 5-11-17, Shimomeguro, Meguro-ku, Tokyo 153-0064, Japan Tel: +81-(0)3-5725-9596 / Fax: +81-(0)3-5725-9597 URL: http://www.fcc.or.jp/ E-Mail fccj@gol.com

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
FRANCE	Embassy of France 4-11-44 Minami-Azabu, Minato-ku, Tokyo, 106-8514, Japan Tel: +81-(0)3-5798-6000 / Fax: +81-(0)3-5798-6000 URL: http://www.ambafrance-jp.org/ E-mail: webmestre@ambafrance-jp.org	Embassy of France – Economic Section and UBIFRANCE Chambre de Commerce et d'Industrie Française du Japon Iida Building, 5-5 Rokubancho, Chiyoda-Ku, Tokyo 102-0085, Japan Tel: +81-(0)3-3288-9621 / Fax: +81-(0)3-3288-9558 URL: www.ccifj.or.jp E-mail: direction@ccifj.or.jp
GERMANY	Embassy of the Federal Republic of Germany 4-5-10 Minami-Azabu, Minato-ku, Tokyo 106-0047, Japan Tel: +81-(0)3-5791-7700 / Fax: +81-(0)3-5791-7773 URL: http://www.tokyo.diplo.de	Embassy of the Federal Republic of Germany – Economic Department German Chamber of Commerce and Industry in Japan Sanbancho KS Bldg. 5F, 2-4 Sanbancho, Chiyoda-ku, Tokyo 102-0075, Japan Tel: +81-(0)3-5276-9811 / Fax: +81-(0)3-5276-8733 URL: http://www.japan.ahk.de/ E-mail: info@dihkj.or.jp
GREECE	Embassy of Greece 3-16-30 Nishi-Azabu, Minato-ku, Tokyo 106-0031, Japan Tel: +81-(0)3-3403-0871 / Fax: +81-(0)3-3402-4642 URL: http://www.mfa.gr/tokyo E-mail: gremb.tok@mfa.gr	Embassy of Greece - Commercial Office in Tokyo Tel: +81-(0)3-3404-5853 / Fax: +81-(0)3-3404-5845 URL: http://agora.mfa.gr/jp70 E-mail: ecocom-tokyo@mfa.gr
HUNGARY	Embassy of the Republic of Hungary 2-17-14 Mita, Minato-ku, Tokyo 108-0073, Japan Tel: +81-(0)3-3798-8801 / Fax: +81-(0)3-3798-8812 URL: http://www.mfa.gov.hu/kulkepviselet/JP/en/ E-mail: mission.tio@mfa.gov.hu	

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
IRELAND	Embassy of Ireland Ireland House, 2-10-7 Kojimachi, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-3263-0695 / Fax: +81-(0)3-3265-2275 URL: http://www.irishembassy.jp/	Ireland Japan Chamber of Commerce Ireland House 4F, 2-10-7 Kojimachi, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-3263-8520 / Fax: +81-(0)3-3265-2275 http://www.ijcc.jp/
ITALY	Embassy of Italy 2-5-4 Mita, Minato-ku, Tokyo 108-8302, Japan Tel: +81-(0)3-3453-5291 / Fax: +81-(0)3-3456-2319 URL: http://www.ambtokyo.esteri.it E-mail: ambasciata.tokyo@esteri.it	Embassy of Italy – Economic and Commercial Section The Italian Chamber of Commerce in Japan FBR Mita Bldg. 9F, 4-1-27 Mita, Minato-ku, Tokyo 108-0073 Tel: +81-(0)3-6809-5802 / Fax: +81-(0)3-6809-5803 URL: http://www.iccj.or.jp/ E-mail: iccj@iccj.or.jp
LATVIA	Embassy of the Republic of Latvia 37-11 Kamiyama-cho, Shibuya-ku, Tokyo 150-0047, Japan Tel: +81-(0)3-3467-6888 / Fax: +81-(0)3-3467-6897 URL: http://www.latvia.ie/lv/japan/ E-mail: embassy.japan@mfa.gov.lv	
LITHUANIA	Embassy of the Republic of Lithuania 3-7-18 Moto-Azabu, Minato-ku, Tokyo 106-0046, Japan Tel: +81-(0)3-3408-5091 | Fax: +81-(0)3-3408-5092 URL: http://jp.mfa.lt/ E-mail: amb.jp@mfa.lt	

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
LUXEMBOURG	Embassy of the Grand-Duchy of Luxembourg Luxembourg House 1F, 8-9 Yonbancho, Chiyoda-ku, Tokyo 102-0081, Japan Tel: +81-(0)3-3265-9621 | Fax: +81-(0)3-3265-9624 URL: http://tokyo.mae.lu/en/ E-mail: infotokyo.amb@mae.etat.lu	The Belgian-Luxembourg Chamber of Commerce in Japan *(See Belgium)*
MALTA	Honorary Consulate General of the Republic of Malta c/o Institute for Political Studies in Japan, Room 207, Silkroad Bldg, 1-16-16 Ohara, Setagaya-ku, Tokyo 156-0041, Japan Tel: +81(0)3-3460-2392	
NETHERLANDS	Embassy of the Kingdom of the Netherlands 3-6-3 Shibakoen, Minato-ku, Tokyo 105-0011, Japan Tel: +81-(0)3-5776-5400 | Fax: +81-(0)3-5776-5535 URL: http://japan.nlambassade.org/ E-mail: tok@minbuza.nl	Embassy of the Kingdom of the Netherlands - Trade and Industry Department E-mail: tok-ea@minbuza.nl Netherlands Chamber of Commerce in Japan MBE 145, 3-28 Kioicho, Chiyoda-ku, Tokyo 102-8557, Japan Tel: +81-(0)4 4740-1558 / Fax: +81-(0)4 4740-1558 Email: contact@nccj.jp

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
POLAND	Embassy of the Republic of Poland 2-13-5 Mita, Meguro-ku, Tokyo 153-0062, Japan Tel: +81 (0)3-5794-7020 | Fax: +81 (0)3-5794-7024 URL: http://www.tokio.polemb.net/ E-mail: tokio.amb.sekretariat@msz.gov.pl	Trade and Investment Promotion Section: Orix Meguro Bldg. 2F, 1-24-12 Meguro, Meguro-ku, Tokyo 153-0063, Japan Tel.: +81 (0)3-5437-5050 / Fax: +81 (0)3-5437-5040 URL: http://tokyo.trade.gov.pl/ E-mail: tokyo@trade.gov.pl Polish Chamber of Commerce and Industry in Japan 7F, Casa Nihombashi Bldg., 2-9 Kobune-cho, Chuo-ku, Tokyo 103-0024, Japan Tel: +81-3-3665-1991 / Fax: +81-3-6203-8165 URL: http://www.pccij.or.jp/ E-mail: info@pccij.or.jp
PORTUGAL	Embassy of Portugal Kamiura Kojimachi Bldg. 5F, 3-10-3 Kojimachi, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81-(0)3-5212-7322 / Fax: +81-(0)3-5226-0616 URL: http://www.embaixadadeportugal.jp E-mail: portugal@embportjp.org	Embassy of Portugal - Commercial Section (AICEP Delegation) Kamiura Kojimachi Bldg. 4F, 3-10-3, Kojimachi, Chiyoda-ku, Tokyo 102-0083, Japan Tel: +81 3 3511 2851 / Fax. +81 3 3511 2887 URL: http://embaixadadeportugal.jp/en/aicep/ E-mail: aicep.toquio@portugalglobal.pt
ROMANIA	Embassy of Romania 3-16-19, Nishi-Azabu, Minato-ku, Tokyo 106-0031, Japan Tel: +81-(0)3-3479-0311 / Fax: +81-(0)3-3479-0312 URL: http://tokyo.mae.ro E-mail: office@ambrom.jp	Embassy of Romania – Economic Section Tel:: +81-(0)3-3479-0411 / Fax: +81-(0)3-3479-0312 E-mail: economic@ambrom.jp

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
SLOVAKIA	Embassy of the Slovak Republic 2-11-33, Moto-Azabu, Minato-ku, Tokyo 106-0046, Japan Tel: +81-(0)3-3451-2200 / Fax: +81-(0)3-3451-2244 URL: http://www.mzv.sk/App/WCM/ZU/TokioZU/main.nsf/vw_ByID/index_EN E-mail: emb.tokyo@mzv.sk	Embassy of the Slovak Republic - Trade and Economic Office Tel: +81-(0)3-3451-1008 / Fax: +81-(0)3–3451–1015 E-mail: commerce@slovak-embassy.jp
SLOVENIA	Embassy of the Republic of Slovenia 7-14-12 Minamiaoyama, Minato-ku, Tokyo 107-0062, Japan Tel: +81-(0)3-5468-6275 / Fax: +81-(0)3-5468-1182 URL: http://tokyo.embassy.si/ E-mail: vto@gov.si	
SPAIN	Embassy of Spain 1-3-29 Roppongi, Minato-ku, Tokyo 106-0032, Japan Tel: +81-(0)3-3583-8531 / Fax: +81-(0)3-3582-8627 URL: http://www.exteriores.gob.es/Embajadas/TOKIO/ E-mail: emb.tokio@maec.es	Embassy of Spain - Economic and Commercial Office 1-3-29-3F, Roppongi, Minato-ku, Tokyo 106-0032, Japan Tel: +81 3 5575 0431 / Fax: +81 3 5575 6431 URL: http://japon.oficinascomerciales.es E-mail: tokio@comercio.mityc.es
SWEDEN	Embassy of Sweden 1-10-3-100 Roppongi, Minato-ku, Tokyo 106-0032, Japan Tel: +81-(0)3-5562-5050 / Fax: +81-(0)3-5562-9095 URL: http://www.swedenabroad.com/en-GB/Embassies/Tokyo/ E-mail: ambassaden.tokyo@gov.se	Embassy of Sweden - Commercial Office Tel: +81-(0)3-5562-5000 / Fax: +81-(0)3-5562-9080 E-mail: tokyo@business-sweden.se The Swedish Chamber of Commerce and Industry in Japan c/o Embassy of Sweden 1-10-3-603 Roppongi, Minato-ku, Tokyo 106-0032, Japan Tel: 03-5562-5140 / Fax: 03-5562-5160 URL: http://www.sccj.org/ E-mail: office@sccj.org

COUNTRY	DELEGATION/EMBASSY	BUSINESS DEPARTMENT / BUSINESS ASSOCIATION
UNITED KINGDOM	British Embassy 1 Ichibancho, Chiyoda-ku, Tokyo, 102-8381, Japan Tel: +81-(0)3-5211-1100 / Fax: +81-(0)3-5275-3164 URL: http://ukinjapan.fco.gov.uk/en/ E-mail: public-enquiries.tokyo@fco.gov.uk	British Embassy - UK Trade & Investment URL: https://www.gov.uk/government/world/organisations/uk-trade-investment-japan Email: exporttojapan@fco.gov.uk The British Chamber of Commerce in Japan Ark Mori Bldg 12F, 1-12-32 Akasaka, Minato-ku, Tokyo 107-6012, Japan Tel: +81-(0)3-4360-8361 / Fax: +81-(0)3-4360-8454 URL: https://www.bccjapan.com/

ANNEXES

Annex G: Gateway to Japan – Fact sheet

EUGatewayProgramme

EU GATEWAY

Helping European SMEs seize opportunities in third country markets

METHODOLOGY

Funded by the European Union

Based on a methodology fine-tuned over 20 years of expertise, EU Gateway has always succeeded in pushing its performance limits adjusting to the dynamic market trends. What is this methodology all about?

1. RECRUITMENT

- TRADEFAIRS
- EXHIBITIONS
- PHONE CALLS
- EMAILS
- CALL CENTERS
- TRADE PROMOTION AGENCIES
- SOCIAL MEDIA
- WEB-PROMOTION

2. EXPRESSION OF INTEREST

10,000 EU COMPANIES

EXPRESSED INTEREST IN THE PROGRAMME AND WERE SCREENED

3. SCREENING

4. APPLICATION

3,500 COMPANIES APPLIED

5. ASSESSMENT AND SELECTION

MORE THAN **1,500** COMPANIES SELECTED

6. PRE-DEPARTURE MEETING

EU GATEWAY PARTICIPANTS ATTENDED AN **INTERACTIVE COACHING & BRIEFING SESSION**

7. BUSINESS MISSION PREPARATION

28,000 JAPANESE & KOREAN BUSINESS REPRESENTATIVES APPROACHED FOR MATCHMAKING WITH THE EU COMPANIES

8. BUSINESS MISSION WEEK

22,000 INDIVIDUAL BUSINESS MEETINGS ORGANISED

9. FOLLOW UP

THE RESULT-FOCUSED FOLLOW-UP OCCURS IN **3 STAGES**

- END OF BUSINESS MISSION WEEK
- 6 WEEKS LATER
- 12TH MONTHS LATER

10. BUSINESS

64% OF PARTICIPANTS ESTABLISHED BUSINESS COLLABORATIONS AFTER PARTICIPATING IN EU GATEWAY BUSINESS MISSIONS

EUGatewayProgramme

EU GATEWAY

Helping European SMEs seize opportunities in third country markets

PROGRAMME RESULTS (2009-2014)

Funded by the European Union

OVERALL SATISFACTION

86%

OF THE PARTICIPATING EU COMPANIES ARE

HIGHLY SATISFIED

WITH EU GATEWAY

BUSINESS PARTNERSHIPS

64%

OF PARTICIPANTS

ESTABLISHED BUSINESS COLLABORATIONS AFTER PARTICIPATING IN EU GATEWAY BUSINESS MISSIONS

REVENUE GROWTH

EU GATEWAY PROGRAMME

FOR EACH

EURO INVESTED

IN THE PROGRAME

THE COMPANIES GOT

5 EUROS BACK

IN EXTRA REVENUE WITHIN ONE YEAR

EXTERNALLY VERIFIED

COACHING AS KEY TO SUCCESS

Targeted coaching is a key success factor of EU Gateway. Companies are accompanied at every step and receive hands-on advice – a service which is highly appreciated.

ANNEXES

Annex H: CEN/Cenelec agreement with JISC: press release

NEWS RELEASE - Tokyo, 13 November 2014

European and Japanese standardization organizations - CEN, CENELEC and JISC - agree to strengthen their cooperation

Leaders from the European and Japanese standardization organizations have signed a joint Cooperation Agreement in Tokyo today (13 November). The Cooperation Agreement between CEN, CENELEC and JISC provides a new framework for closer collaboration on various aspects of standardization, which will facilitate trade in goods and services between Europe and Japan.

The three organizations – CEN (European Committee for Standardization), CENELEC (European Committee for Electrotechnical Standardization) and JISC (Japanese Industrial Standards Committee) – have committed themselves to increase their cooperation on issues of joint interest, in order to enable greater technical alignment of both markets. By strengthening their dialogue and promoting the harmonization of standards at international level, they will help to facilitate trade in goods and services between Europe and Japan, thereby contributing to sustainable growth.

The Cooperation Agreement was signed by the Presidents of CEN and CENELEC, respectively Mr Friedrich Smaxwil and Mr Tore Trondvold, and by the President of JISC, Dr Tamotsu Nomakuchi, at a ceremony in Tokyo (Japan), where the International Electrotechnical Commission (IEC) is holding its 78th General Meeting.

The Cooperation Agreement between CEN, CENELEC and JISC provides a common framework to facilitate the sharing of information, the transfer of technical knowledge and the exchange of best practices, as well as mutual support with regard to the work of the international standardization organizations, ISO and IEC.

By developing and deepening their cooperation in the field of standardization, CEN, CENELEC and JISC will contribute to overcoming technical barriers to trade and thus facilitating trade between Japan and Europe. Their cooperation would also support the successful implementation of an ambitious and mutually beneficial trade agreement between the EU and Japan, which is currently under negotiation.

Speaking at the signing ceremony in Tokyo, Dr Tamotsu Nomakuchi, President of JISC, said: "Among various activities under this Cooperation Agreement, I am pleased to hear that Working Groups for Smart Grids, Railways and Accessible Design are very active with participation of high-level experts from both sides. I believe these Working Groups will be further activated under the new agreement, and I hope that we can continue and further enhance our good relationship between Europe and Japan."

Representing CEN and CENELEC, the President of CENELEC, Mr Tore Trondvold, said: "We are convinced that through our Cooperation Agreement with JISC, which provides for the exchange of technical information and the sharing of standards, we will extend the benefits that standards bring to our societies, and contribute to the growth of our economies and the well-being of our people."

Notes

CEN (European Committee for Standardization) and CENELEC (European Committee for Electrotechnical Standardization) are recognised by the EU as European Standardization Organizations responsible for developing and defining standards at European level. These standards set out specifications and procedures in relation to a wide range of materials, products and services.

The members of CEN and CENELEC are the National Standards Bodies and National Electro-technical Committees of 33 European countries including all of the EU member states plus 3 EFTA countries (Iceland, Norway and Switzerland) as well as 2 EU candidate countries (Turkey and the former Yugoslav Republic of Macedonia).

European Standards (ENs) are developed through a process of collaboration among experts nominated by business and industry, research institutes, consumer and environmental organisations and other stakeholders. These standards are accepted and recognised in all of the countries covered by CEN and CENELEC members. When correctly applied, they contribute to enhancing safety, improving quality, facilitating cross-border trade and strengthening the European Single Market.

CEN and CENELEC work to promote the international alignment of standards in the framework of technical cooperation agreements with ISO (International Organization for Standardization) and the IEC (International Electrotechnical Commission).

CEN-CENELEC website: www.cencenelec.eu

JISC (Japanese Industrial Standards Committee) is recognized as the National Standards Body of Japan and represents Japan in international and regional standardization organizations. JISC consists of many national committees and plays a central role in standardization activities in Japan. The tasks of JISC is the development and maintenance of Japan Industrial Standards (JIS) standards, administration of accreditation and certification, participation and contribution in international standardization activities, and development of measurement standards and technical infrastructure for standardization.

JISC website: www.jisc.go.jp/eng/

Media contact

Ben Carlin
Communication Unit
CEN-CENELEC Management Centre
T: +32 2 550 08 32
bcarlin@cencenelec.eu
Twitter: @CENCLCpress

ANNEXES

Annex I: Panel of selected experts – General considerations and workflow

Annex I: key expert group

The deliverables for the present study includes the establishment of a list of individual experts in the domain of BCM, both Japanese experts and nationals from various EU countries, who could provide further guidance on these issues.

These experts have been selected from the various sectors and backgrounds in the interest of the study, as per the investigations conducted by the study team, in particular for the four focus sectors insulation, wooden products, ceramics and tiles..

As a result, a pre-selection of 31 names was made, and an enquiry realized to know if these persons volunteered for the expert group. Negative replies were received, based mostly on non-availability due to other commitments in Japan and in other countries, or on the fact that some statutory positions did not permit membership to this type of structure.

1 - Repartition of the candidates to the expert group made based on previous knowledge of experts and on the meetings held during the study.

Category	**Positive answers obtained**
Institutions (EU: European Business council)	1
Institutions (J) (*)	0
Architects (J)	6
Architects (EU)	3
General contractor	2
Maker (EU in Japan)	1
Importers	4
Testing bodies (EU)	1
Total (over 31):	**18**
Including:	
Focus sectors:	
• Insulation, energy	2
• Wood materials	2
Including CLT	1
Including wooden houses	1
• Ceramics	1
• Tiles	1

(Note: multiple answers possible in above chart)

Some considerations on this list:

- (*) Representatives from Japanese institutions have declined the proposal to join the expert group, possibly for statutory reasons.

- No proposal for participation has been made to any representative of the EU28 member States Diplomatic missions to Japan or to any member of chamber of Commerce of an EU country, basically because corresponding relevant individual expertise in BCM has not been found.

- The only "ex officio" position in this group is held by the chairperson of the EBC Construction Committee (EBC CC), who is already selected among EBC CC members based on her/his particular expertise and knowledge of Japanese BBCM sector. A "special recruit" but also a good addition to the team.

- One woman is a member of the expert group at this stage.

The presence of architects from Japan and from EU doing business in Japan is important due to the fact that the study has shown the preeminent role of architects for the selection of building and construction materials (BMCs).

The relative importance of French nationals is due to their presence in the field of building and construction in Japan and to the fact that they could be met during the study. EU participants are at present from: Finland, France, Germany, Italy and the Netherlands.

2 – The candidates of this group have reached targeted number permitting to start its activities. Around 20 participants seem to be appropriate for the structure of the expert group in order to allocate enough time to all participants and to have vivid discussions. Possible draft terms of reference (ToRs) for activities are detailed here after.

The expert group is now constituted but it needs a road map and support. The directions to start its activities, setting conditions of work as on a perennial basis and way of promoting its outcomes and results in order to become a key interlocutor related to EU-Japan BCM issues.

This necessitates background support:

1. The expert group should be in a position to meet regularly at the same place.

2. This expert group should comprise a Leader for definition of the agenda, moderation and a secretary for recording minutes of meetings. The Leader could either be chosen among the members or "provided" by EUJC. In the second case she/he will better be connected with the general EU–Japan issues. An intermediate solution (adopted by EBC in their committees) is to have a Leader selected among members + a support counsellor.

3. The secretary must be either a volunteer among members or a person provided by EUJC (from own staff or outsourced). If we want to prioritize fruitful debates among all members), it is not recommended to select a secretary from members. This point is of

importance since there must be a memory of the meetings and discussions since the contents of the discussions can be communicated outside the expert group (European Commission services for instance).

4. The structure proposed by the consultant is (i) a president to be selected among members for 1-year period, possibility to renew but maximum consecutive duration of 2 years, then the president shall be re-elected after 1 year with another person; and (ii) a support under the responsibility of EUJC: co-establishing the agenda, helping to convene the meetings, taking and keeping the minutes, distributing and managing them in a sustainable way in order to constitute an easily accessible database of knowledge.

5. This expert group is different in its structure from the EBC Committees, since the latter are basically lobbying structures for their members, who invest time/money for getting direct benefit in turn. It sounds therefore appropriate that members of the expert group be reimbursed of their travel expenses and receive participation fees.

A proposal for organisation of the work and work packages is as follows (see flowchart on page 6):

Step 1: First meeting: the expert group is constituted, so the first meeting should be scheduled in a near future in order to avoid any possible loss of (interest from) participants (the first meeting should take place before next April 22nd).

Tentative agenda: general presentation (5 minutes minimum per participant) issue of secretariat (presentation of the secretary), discussion of the ToRs (a draft will be prepared before the meeting and tabled), and election of the president who will be selected among the ones (i) who volunteer and (ii) who have shown during the debate on ToRs that they have leadership and interesting ideas. Also, discussion on how to complete the expert group (missing profiles, missing actors if any, missing EU countries, etc.).

Step 2: Second meeting (3 weeks after 1st meeting, to be scheduled after the *golden week*): greeting of additional members, discussion and approval of the ToRs by the expert group. The discussion will be conveyed by the chairperson but with guidance from secretary in order to facilitate respect of the road map.

Step 3: Organisation of the work: the expert group should be perennial and work on several tasks in parallel, to be distributed among members and discussed during meetings with all the members of the expert group.

The following tasks have been identified:

Task I: Mapping of EU products in Japan: This is a hard task to be implemented in cooperation with representatives and structures of all EU member states, as indicated in the study, there are more than 50 logistic ports for entry to the Japanese market, which has a size comparable to the EU market as a whole. Apart from well-known products, lots of products come on a project base, case by case,

recommended by one architect for one specific work. There are references(*jisseki* in Japanese), the key to sustainable presence in the Japanese market.

Hence this first task necessitates creating and maintaining a database (task to be managed by the secretary probably, but the overall responsibility shall be taken by EU Japan Centre for Industrial Cooperation);

Task II: "Complaint desk". This name may not be appealing, nevertheless it is a reason why the structure exists, in order to provide advises to EU BCM companies facing difficulties to enter the Japanese market. By gathering the complaints, the structure will get better identification from the corresponding Japanese ministries, especially if permanent contact points (*madoguchis*) can be established as proposed in the conclusion of the present study.

Remarks: this complaint desk has to work in the two directions. The structure must receive back up and support from the EU Commission services when Japanese entities raise a problem, based on their perception of "what needs to be done" by an EU exporter as for typical case: commitment from a supplier beyond the legal and contractual guaranty period, as described in the study.

Task III: **Opinions and recommendations:** based on Task I and Task II above, the expert group will make proposals to simplify procedures for some products, based on case by case examples.

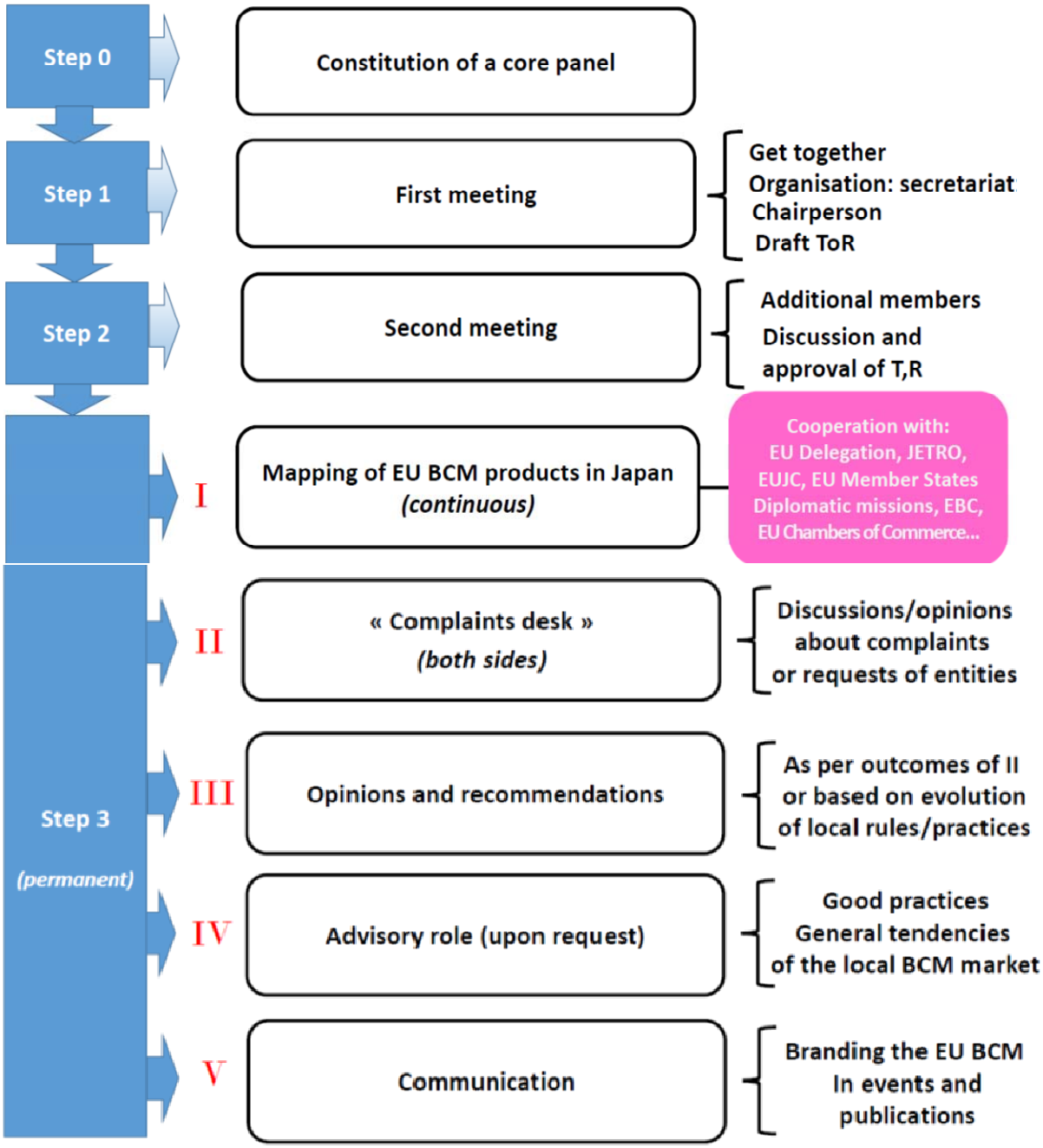
EUJC or the secretary may give some input to the expert group on several issues pending on general interests expressed by EU services.

Task IV: Advisory role (see above). The expert group can serve in the scheme of complex negotiations or the schemes of bilateral relation between EU and Japan. Based on their expertise, members shall be in a position to sort issues between common ones or ones concerning only a few companies, between problems faced by a large number of EU BCM exporters or difficulties encountered only by a few because of non-proper approach to the local market.

Task V: Communication: the expert group will be a strong point in Japan for EU BCM promotion by experts, backed up by EU structures, good knowledge of both EU and Japanese systems and specificities, and enlarged capacities to advise on *do's and don'ts*.

The expert group can help to develop a better and brighter image of EU BCM in Japan, by organising and participating to seminars, conferences, drafting articles with the support of the secretariat, etc. Also, they may become a privileged contact point of EU companies exploring the market.

Due to the fact that the structure of the expert group is not permanent but meets only at regular periods throughout the year, the secretariat shall play crucial role of bridging up the gap between two meetings, by ensuring the necessary presence and follow up by members.



PROPOSED FLOWCHART FOR THE ADVISORY PANEL

ANNEXES

Annex J: Workshop of march 18th, 2015 - Report

Annex J: Workshop held on March 18th, 2015, in EU Delegation in Tokyo

Note: the presentations made during the workshop can be uploaded on the EUJC business portal EU-Business in Japan under the "construction sector". http://www.eubusinessinjapan.eu/sectors/construction

In order to publicize the results of the study and to get a feedback from a wider audience, a workshop has been organized at the EU Delegation in Tokyo on March 18th, 2015, with the support of the EU japan Centre for Industrial Development (program here after).

A total of 57 participants attended this event, from both Japan and EU countries. The main points to be pointed out from the presentations are as follows:

1 - Ms. Uli Wienrich, First Secretary, Trade Section of the Delegation of the European Union to Japan, focused during her opening remarks on sustainability, green growth and energy consumption, keys for a sustainable development, and highlighted the following:

- The construction sector represent about 10% of GDP and 20 million jobs in the EU;
- The challenges for housing in Japan are: shorter lifetime for buildings (70 years in Europe vs. 30 to 40 years in Japan), less durability than in EU (houses made of wood, effects of disasters); no established tradition for the maintenance and renovation of buildings, great efforts to save energy after Fukushima and to increase energy efficiency of housing with a 2020 horizon;
- Solving these challenges will require increased exchanges between EU and Japan. This may represent great opportunities for EU BCM;
- Sustainability can offer business chances to the EU BCM products on the Japanese market.

2 – Mr. Franck Charmaison, Project Manager, Ingerosec Corporation, made a presentation of the main points and of the outcomes of the present study as addressed in the report. This presentation was followed by a Q&A session with the audience. Among the issues raised:

- Tariff barriers exist for some products (and should be reduced), but EU BCM products are mainly chosen for their image, even if they are more expensive;
- Language and accuracy of translation, in the direction EU-Japan (necessity to understand Japanese), but also in the direction Japan-EU for Japanese importers who shall get information in various European languages;
- Other technical barriers like regulations (or absence of regulation), approval procedures, etc. are the same for Japanese companies, but with more impact for SMEs due to distance and cost.

The main issue of the Q&A session was related to the insulation of houses in Japan and discrepancy between experience and data provided for energy consumption, for instance the 60% ratio of energy consumption for housing announced for Japan compared to EU. Experience is that, due to poor insulation, houses are cold in winter but temperature reaches up to 35 degrees inside in summer. Therefore, the houses should require more energy than in Europe.

But, even if insulation is worse in Japan than in Europe, building occupants do not often have a central heating system and spend energy to heat only one or a few rooms; therefore the consumption is lower than in Europe.

Also, this ratio represent the actual level of energy consumption (with many old houses), but a central heating system is now requested by customers. Thus developers and house makers are proposing such system. The risk is that houses well equipped for heating, but without proper insulation, may have lower performances for energy consumption.

3 - Mr. Masashi Mori, General Manager, of the International Department of the Building Center of Japan (BCJ), made a comprehensive presentation of the rules for construction and addressed regulatory and standard issues related to construction and to building materials in Japan.

Most of these elements are detailed in the report. Additional information provided:

- The Japanese population is decreasing, but as the occupancy rate by housing unit is also decreasing (increase in the number of one-person households), the number of housing as a whole continues to increase[1]
- The floor area per housing unit is similar to the level in EU (94.1 m²/unit);
- In accordance with the data of FY2003 (sampling survey financed by the Japan Housing Finance Agency), around 60% of the conventional wooden houses are built by small and medium size carpenters and building firms: on a total of the 508,000 dwellings of the sample, 47% are built by contractors constructing less than 49 dwellings per year, 31.8% by contractors constructing more than 300 dwellings/year, and the remaining 21.2% by contractors remaining between 50 and 299 dwelling/year;
- In Japan, the rate of transfer of existing houses from one owner to another is very low (13.5% in 2008) in comparison with Europe (88.8% in UK and 66.4% in France), but it is bit increasing. This may constitute an opportunity for EU BCM makers: due to the relatively small size of this market. Now, the Japanese government carries out measures such as used-housing circulation promotion to utilize existing housing effectively based on quantitative sufficiency situation of housing stock.
- Various housing-related manufacturers started to develop products and construction methods.
- Presentation of related issues (energy-efficiency standards, sick building issue, accessibility standards of buildings, Housing Performance Indication, Seismic retrofitting). As for the seismic retrofit, the goal is to have 95% of earthquake-resistant housing units by 2020.

Also, Mr. Mori indicated that the building products could be classified into 3 types:

- Type A: comply with requirement of the Building Standard Law;
- Type B: comply with JIS or JAS standards as designated by the Minister;
- Type C: approved by the Minister based on Performance Evaluation by designated Bodies. For these type C products, there are now 5 designated bodies for fire-resistive and fire-preventive performance of products, 11 for quality of designated building materials, and 13 for formaldehyde emissions of interior materials.

4 - Mr. Francois-Xavier Lienhart, General Delegate to Japan of Saint Gobain (turnover of 23 billion JPY, co-leader in the glass wool market), pointed out various issues, as the complexity of the supply chain; the

[1] Note: in accordance with the Statistical Handbook of Japan, this tendency should continue until 2019 and a decrease should start from this date.

necessity to find the proper contact person for a successful presence in the local market; the complexity and the cumbersome aspects of the tests in the fire domain:

- **Difficulties in the Distribution of BCM material:**

  The BCM producer has to deal at the same time with many counterparts in order to sell his products; this costs time and money. For example: building contractors, carpenters, trading companies, building material wholesalers, building material stores/dealers. It is important to understand who is an essential actor in the system and who is not;

  All these essential actors shall be remunerated. This explains the large difference between what the customer pays (more than in Europe), and what the maker receives (less than in Europe). Hence, finding the right route to access the market is crucial.

- **Non-tariff barriers and regulation: example of fire certifications:**

  There is an obligation to pass fire tests in accredited centres in Japan. These tests shall be carried out for each kind of product, each material, each location of application, and related regulations depend also from local authorities (for example the protection against fire for the exhaust pipe for kitchen hoods are regulated by local fire agencies);

- **Different cultural approaches between Japan and Europe for insulation related regulation:**

  In the EU, regulations are mandatory, as for example the requirement of “nearly zero energy building” by year 2019 for publics buildings or by year 2021 for private buildings. In Japan, there is no mandatory regulation but incentives (for example, “zero-energy housing promotion program” with subsidies amounting until 1,65 million JPY/house, limited to a maximum of 50% of the cost);

  The main problem in that respect is the uncertainty regarding the stability of the system of incentives as they may vary due to budgetary conditions. It is difficult for companies to invest on heavy equipment without long-term vision.

5 - Mr. Hiroyasu Nonaka, who has a long experience of introducing foreign products to the Japanese market (he worked successively for Velux (Denmark), Pella Corporation (USA) and now for Fakro Japan (Poland, roof windows, skylights and related accessories), introduced success stories, but also failures. During his presentation, Mr. Nonaka pointed out the necessity to have a progressive approach with a local contact point in order to (i) expand the activities in Japan and to (ii) ensure prompt and effective after-care. He also emphasized on the following quote as a reference: "*In Rome, do as the Romans do!*".

The important points to understand are:

①: Good preparation is key before entering the market, with collection of information and good understanding of the local market;

② Opening of a Japanese branch, as local customers do not trust the companies not having an office in Japan (it is also sometimes difficult to find reliable distributors trusted by customers);

③ Follow the rule of the Japanese industry: follow the request of customers and comply with the warranty system in Japan. As for example, the guarantee for roof window and skylight is 10 years against water-leaking (Product Liability Act), but after-sales practices differ as the maker shall not only bear the cost of replacement/remedy to the default, but also shall bear the cost for transportation, staff charges and other related costs incurred for the exchange of the window and, the case being, the repair of other damages (floor, walls, etc.).

If the maker is not present in Japan, the distributor/dealer will have to bear all these expenses and to organise the repair works;

For Japanese customers, finishing is often more important than the performance of product. To be able to sell on the Japanese market, we shall not forget the appearance of the product;

The Japanese market is important, with many constructions of new houses, In spite of the difficulties, there are examples of success of European companies, with the presence in japan and to this workshop of their Japanese subsidiaries. In order to succeed, EU BCM makers shall comply with the Japanese way: “When you are in Rome, do as the Romans do”.

6 - Mr. Albert Abut is a French Architect having his Architectural Firm in Japan and a long experience of City Planning and Building Design in Japan. Mr. Abut emphasized on various issues, including the inappropriate distinction between Architects and General Contractors, where in Japan most Architects are working for the General Contractors & Builders of Prefabricated Houses or in their subsidiaries, and on the necessity to have a better control of the energy consumption of buildings & infrastructures, furthermore important in Japan due to the local prices of electricity.

Main items pointed out in the presentation:

- Like in any other country in the world construction is present in a large part of the Japanese economy, even if not identified as such (for example, transportation includes construction of railway station buildings, manufacturing includes construction of factories, retail includes construction of department stores & shopping centers, …);
- The Japanese construction market is decreasing, but the ratio between public and private investments is relatively stable;
- The Architectural Laws & Regulations have changed in 2008. Also, as only 1st class Architectural Firms can file requests for building permits and as according to the law General Contractors & Builders of Prefabricated Houses can have their own in-house 1st class Architectural Firms this creates an evident conflict of interest and quasi-impossibility of cost and quality control for clients;
- As for the contracts for architectural design and supervision, 90% are signed by General Contractors & Builders of Prefabricated Houses within the “design & build” contract frameworks! Of the remaining 10%, half are signed by 50 big size Architectural Firms (Nihon Sekkei, Nikken Sekkei, MHS, …) and the remaining half (5% of total architectural design & supervision contracts) by 2,950 Architectural Firms in the country!!!
- EU BCM can take part of the Japanese market through specialized importers/distributors, Architects (deciders) or General Contractors and Prefabricated House Builders (deciders), but:
- The costs of products delivered to the construction sites equal the ex-factory cost & packaging x (3.5~5), which highly increases the cost of products. EU BCM makers will then need to seriously control the cost of their products;
- Giving insurance coverage reasons (10 years guarantee), many General Contractors & Prefabricated House Builders refuse to use alternative / imported / innovative products as they have arrangements with local manufacturers to use their own products. In this case, Architectural Firms, which can’t find in Japan a high level of insurance, can’t impose the alternative product ;
- Necessity for product testing and approvals (problems of JG approved testing centre locations and Japanese regulations has to be followed);
- Except earthquake & typhoon resistant materials & technologies, 80% of the innovation in BCM and construction technologies is in the EU;

- For a Japanese Architectural Firm it is necessary to have information on new products and foreign materials. This information can be found by internet search (35%), by visits of representatives and catalogues (15%), by professional networking and events (35%) and the remaining 15% by specialized European sources and EU Member States' Diplomatic Missions in Japan;

- Despite these difficulties, Albert Abut designs & builds buildings in Japan using EU BCM products, as for example the "Hakuju Hall" classical music concert hall in Tokyo, carpeting, marble, thermoformed glass walls, seats, ceiling mesh, etc… were directly imported from the EU:

  http://www.hakujuhall.jp/

- Energy-efficiency, not only for housing but also in all sectors (retailing, transportation, manufacturing, educational, cultural, administrative, ...) need to be more developed in Japan, where the price of electricity is extremely high. However, Japan's ranking 3rd best in 2011 for the Energy consumption / GDP ratio, behind UK and Italy need to be re-evaluated;

- Since January 2013, according to the RT 2012 Architectural Regulations in France all Architects & Architectural Firms must demonstrate < 50 kWhPE/m2/year3 consumption for a new building in order to get the Building Permit approval from the Authorities. Similar regulations need to be implemented in Japan;

- By the end of the 20th century and the beginning of the millennium the total cost of a conventional building (land cost excluded) to it's landlord & tenants during the first 50 years of it's life span is as follows:

  ¼ = development, planning, design & construction costs

  ¾ = renovation/repair costs - maintenance/cleaning costs - water/gas/electricity bills

- Huge costs to landlords, tenants & the planet;

- Sustainable materials, technologies & efficient maintenance systems need to be implemented in order to reverse the equation.

7 - Mr. Bjorn Kongstad, Policy Director, European Business Council (EBC) made an overall presentation of the activities of EBC and focused on the points of concern of EBC Construction Committee (EBC CC). This gave one example of the support of EBC to general and sectorial issues faced by the companies from EU in Japan. It permitted also to point out the issues of the visas for skilled workforce from overseas in the BCM domain as the problems faced in what relates to standards and regulations.

Mr. Kongstad presented the requests made by EBC CC in their yearly status report and recommendations of the EBC White Paper for the following domains:

- Harmonisation of building material standards and contractors qualifications;
- Mutual recognition of JAS/JIS and EN standards for buildings;
- Recognition of foreign experience for obtaining general construction license;
- Promotion of environmentally friendly construction;
- Strengthening of regulations for energy efficiency for housing;
- Introduction of much stricter insulation standards for buildings as existing buildings are not yet up to the level of international standards;
- Transparency and accessibility of information and regulations:

- Request for rationalisation of the existing patchwork of local regulations and clarification by local authorities of the legal framework;
- Liberalisation of the Japanese immigration policy so that construction companies can use skilled labour from overseas on fixed-term contracts;

After this round of presentations an exchange took please with the audience. Among the main issues addressed on this occasion and regarding the difficulties for EU SMEs to enter the Japanese market:

- EU BCM Makers need a strong willingness in order to enter the Japanese market, as it requests both time and cost. In particular and regarding SMEs. But as a general issue, selling products overseas requires additional efforts;
- Selling a product which is different from others can work, but it is always difficult.
- The best way is to find a local "sponsor" who will work collaborate you in order to develop your product on the local market;
- A big company encounters fewer problems since in a better position to invest in order to open branches.

In addition, the problem of having also approved testing centres located in Europe and the various conformity assessment schemes was addressed on this occasion.

8 - Mr. Pablo Iglesias Rumbo, Attaché, Trade Section, Delegation of the European Union to Japan, in his presentation of the EU Gateway to Japan Programme highlighted the following:

- The longstanding Programme, which started in 1990 and continued until 2014, saw over the years, a gradual expansion in both the number of business missions organised and the number of companies participating in the Programme;
- The construction sector has been a priority sector in the Programme since 1994;
- Just for the 2009-2014 period, 1,500 EU companies participated in the Programme with 64% having established business collaborations afterwards;
- The selection of EU companies includes an active coaching component to adequately prepare companies about the Japanese market and the prospects of doing business in Japan;
- Following an assessment of the companies participating in the Programme between 2009 and 2013, it was found that for every 1 euro invested in the programme, the companies generated 5 euros in additional revenue within one year.
- Subject to approval by the EU, a future edition of the programme, EU Green Gateway to Japan, will focus on promoting the green technologies of Europe's SMEs in the construction, energy environment, medical devices and railway components and parts industries.

9 - Ms. Veronika Kutics, Invest Japan Coordination Division, Invest Japan Department of the Japan External Trade Organisation (JETRO) introduced a JETRO initiative which finds its place in the scheme of the promotional activities towards EU companies wanting to develop their activities in the Japanese market, beyond or in parallel to the Gateway to Japan programme, and dedicated to foreign companies wanting to invest in Japan:

- EU is the main investor in Japan with 46% of Foreign Direct Investment (FDI);

· JETRO is present in EU with 16 offices but also throughout Japan with over 40 local offices;

· JETRO support companies investing in Japan (or expanding their activities) by:

- Providing information on the Japanese market;
- Developing business for foreign companies;
- Giving consultation about setting up business bases, and providing office space on a temporary basis.
- Organizing business matching events.

10 – During his closing remarks, Mr. Fabrizio Mura, Deputy General Manager, EU-Japan Centre for Industrial Cooperation, pointed out the following points:

- this study conducted by the EU-Japan Centre for Industrial Cooperation complements other similar studies and workshops, like for example the "Smart Cities" workshop organized on February 24th, 2015;
- The organisation of the study comprises 3 main deliverables: the Comprehensive written report, the present workshop and a list of individual experts who may constitute a working group on EU BCM issues ;
- The report with aim to identify opportunities for EU BCM products on the Japanese market, and will be made available to EU BCM makers;
- Today's workshop increases chances and opportunities for companies.

As a conclusion to this working event, a networking reception was organized in order to permit to participants better now each other and to continue to exchange ideas with panelists.

As per questionnaires distributed to participants at the end of the event, over 80% of them declared that they have learned a lot from this workshop.

PROGRAMME OF THE WORKSHOP OF MARCH 18TH, 2015

Moderator: Mr. Franck Charmaison, General Manager, International Business Department, Ingerosec Corporation

13:00-13:30 Registration

13:30-13:35 **Presentation of the Programme**
by Mr. Franck Charmaison, General Manager, International Business Department, Ingerosec

13:35-13:45 **Opening Remarks**
by Ms. Uli Wienrich, First Secretary, Trade Section, Delegation of the European Union to Japan

13:45-14:30 **Presentation of the Main Results of the Study**
Speaker: Mr. Franck Charmaison, General Manager, International Business Department, Ingerosec

14:30-14:45 Question & answer

14:45-15:00 Coffee break

15:00-15:20 **Outline of building regulation system and housing situation in Japan**
Speaker: Mr Masahi Mori, General Manager, International Department, the Building Centre of Japan (BCJ)

15:20-15:40 **The Local Market Seen from the Point of View of an EU Practitioner**
Speaker: Mr. Francois-Xavier Lienhart, General Delegate to Japan, Asia Pacific Delegation, Saint-Gobain
Member, EU-Japan Business Round Table

15:40-16:00 **The Local Market Seen from the Point of View of a Japanese Practitioner**
Speaker: Mr. Hiroyasu Nonaka, Fakro Japan Co., Ltd.

16:00-16:20 **Positioning of Architectural Firms and Procurement of Construction Materials & Technologies in Japan**
Speaker: Mr. Albert Abut, Founding Principal, Albert Abut Architecture Limited
Former Chairman (1996~2002) of the Construction Committee of the European Business Council

16:20-16:40 **The Support Role of the European Business council (EBC)**
Speaker: Mr. Bjorn Kongstad, Policy Director, European Business Council (EBC)

16:40-17:00 Question & answer

17:00-17:20 **Presentation of the Gateway to Japan Programme**
Speaker: Mr. Pablo Iglesias Rumbo, Attaché, Trade Section, Delegation of the European Union to Japan

17:20-17:40 **Utilizing JETRO's services for investing in Japan**
Speaker: Ms. Veronika Kutics, Invest Japan Coordination Division, Invest Japan Department
Japan External Trade Organisation (JETRO)

17:40-17:50 **Closing remarks**
by Mr. Fabrizio Mura, Deputy General Manager, EU-Japan Centre for Industrial Cooperation

17:50-18:45 Networking reception

ANNEXES

Annex K –Other documents of interest gathered during the study

The documents in this section have been selected because of their relation to the study but also because they show various aspects of the presentation of information in the « Japanese way » .

Annex K1	MLIT: general statistics on construction
Annex K2	Architect design sphere (which type of buildings based on qualification
Annex K3	First class architects by expertise and prefecture (47)
Annex K4	Flowchart of procedure for determining snow load on roof
Annex K5	List of foreign entities designated as performance evaluation organizations for formaldehyde emitting building materials
Annex K6	Vision 2050: building-related measures to counteract global warming

ANNEXES

Annex K –Other documents of interest gathered during the study

Annex K1	MLIT: general statistics on construction

INVESTMENTS IN CONSTRUCTION

(Unit: Trillion yen)

Categorie	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
Building (Public Sector)	4.0	3.6	3.5	3.2	2.4	2.1	2.0	2.0	2.1	2.2	2.2	2.1	2.2	2.7
Building (Private Sector)	29.6	27.2	25.7	25.5	27.3	27.7	28.5	25.8	26.4	20.5	19.9	20.3	21.3	23.7
Total Building	**33.6**	**30.8**	**29.2**	**28.7**	**29.7**	**29.7**	**30.6**	**27.7**	**28.4**	**22.7**	**22.1**	**22.5**	**23.4**	**26.4**
Civil Engineering (Public Sector)	26.0	24.6	22.4	20.3	18.4	16.9	15.8	15.0	14.7	15.7	15.8	16.5	16.5	17.9
Civil Engineering (Private Sector)	6.6	5.9	5.2	4.7	4.7	4.9	5.0	5.0	5.1	4.6	4.1	4.3	4.2	4.4
Total Civil Engineering	**32.6**	**30.5**	**27.6**	**25.0**	**23.1**	**21.9**	**20.7**	**20.0**	**19.7**	**20.3**	**19.8**	**20.8**	**20.8**	**22.3**
Total Construction	**66.2**	**61.3**	**56.8**	**53.7**	**52.8**	**51.6**	**51.3**	**47.7**	**48.2**	**43.0**	**41.9**	**43.3**	**44.2**	**48.7**

INVESTMENTS IN BUILDING CONSTRUCTION

(Unit: Trillion yen)

Categorie	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
Housing (Private Sector)	20.3	18.6	18.0	17.9	18.4	18.4	18.7	16.6	16.4	12.8	13.0	13.4	14.1	15.7
Housing (Public Sector)	1.0	0.9	0.9	0.8	0.7	0.5	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.7
Total Housing	**21.2**	**19.5**	**18.8**	**18.7**	**19.0**	**19.0**	**19.3**	**17.1**	**16.9**	**13.4**	**13.5**	**13.8**	**14.6**	**16.4**
Non-Housing (Private Sector)	9.3	8.6	7.7	7.6	8.9	9.2	9.8	9.2	10.0	7.6	6.9	7.0	7.2	8.0
Non-Housing (Public Sector)	3.0	2.7	2.6	2.3	1.7	1.5	1.4	1.4	1.5	1.7	1.7	1.7	1.7	2.0
Total Non-Housing	**12.4**	**11.3**	**10.4**	**9.9**	**10.7**	**10.7**	**11.2**	**10.6**	**11.5**	**9.3**	**8.6**	**8.6**	**8.9**	**10.0**
Total	**33.6**	**30.8**	**29.2**	**28.7**	**29.7**	**29.7**	**30.6**	**27.7**	**28.4**	**22.7**	**22.1**	**22.5**	**23.4**	**26.4**

Source: Ministry of Land, Infrastructure, Transport and Tourism

BUILDING CONSTRUCTION STARTED BY INVESTOR, BY TYPE AND BY STRUCTURE (Floor Area)

YEAR	TOTAL		TYPE OF INVESTOR				TYPE OF BUILDING				TYPE OF STRUCTURE									
	Area (1000 m^2)	Change Ratio %	PUBLIC		PRIVATE		DWELLING		NON-DWELLING		WOODEN		STEEL FRAME REINFORCED CONCRETE		REINFORCED CONCRETE		STEEL FRAME		OTHERS	
			(1000 m^2)	%	(1000 m^2)	%	(1000 m^2)	%	(1000 m^2)	%	(1000 m^2)	%	(1000 m^2)	%	(1000 m^2)	%	(1000 m^2)	%	(1000 m^2)	%
2004	181,505	4.9%	9,766	5.4%	171,739	94.6%	112,266	61.9%	69,239	38.1%	64,568	35.6%	7,371	4.1%	39,425	21.7%	69,554	38.3%	116,936	0.3%
2005	186,058	2.5%	9,261	5.0%	176,797	95.0%	113,574	61.0%	72,485	39.0%	63,270	34.0%	5,440	2.9%	46,640	25.1%	70,067	37.7%	122,788	0.3%
2006	188,875	1.5%	8,236	4.4%	180,639	95.6%	115,522	61.2%	73,353	38.8%	64,181	34.0%	6,373	3.4%	47,350	25.1%	70,480	37.3%	124,693	0.3%
2007	160,991	-14.8%	7,358	4.6%	153,633	95.4%	95,885	59.6%	65,106	40.4%	56,960	35.4%	5,752	3.6%	35,187	21.9%	62,460	38.8%	103,547	0.4%
2008	157,411	-2.2%	7,585	4.8%	149,826	95.2%	96,448	61.3%	60,963	38.7%	56,772	36.1%	4,952	3.1%	35,568	22.6%	59,182	37.6%	100,639	0.6%
2009	115,486	-26.6%	8,033	7.0%	107,453	93.0%	72,538	62.8%	42,947	37.2%	48,225	41.8%	2,753	2.4%	24,280	21.0%	39,693	34.4%	67,261	0.5%
2010	121,455	5.2%	8,272	6.8%	113,183	93.2%	76,934	63.3%	44,521	36.7%	52,255	43.0%	2,818	2.3%	25,190	20.7%	40,609	33.4%	69,200	0.5%
2011	126,509	4.2%	8,470	6.7%	118,039	93.3%	79,254	62.6%	47,254	37.4%	52,799	41.7%	2,982	2.4%	28,994	22.9%	41,115	32.5%	73,709	0.5%
2012	132,609	4.8%	8,602	6.5%	124,006	93.5%	82,424	62.2%	50,184	37.8%	54,804	41.3%	2,404	1.8%	29,891	22.5%	44,753	33.7%	77,804	0.6%
2013	147,673	11.4%	9,587	6.5%	138,086	93.5%	91,726	62.1%	55,947	37.9%	61,969	42.0%	3,424	2.3%	29,846	20.2%	51,529	34.9%	85,704	0.6%

Source: Ministry of Land, Infrastructure, Transport and Tourism

NON-DWELLING BUILDING CONSTRUCTION STARTED BY USE (Floor Area)

YEAR	TOTAL		TYPE OF USE													
	Area ($1000\ m^2$)	Change Ratio %	OFFICE		STORES		FACTORIES		WAREHOUSES		SCHOOLS		HOSPITALS		OTHERS	
			($1000\ m^2$)	%	($1000\ m^2$)	%	($1000\ m^2$)	%	($1000\ m^2$)	%	($1000\ m^2$)	%	($1000\ m^2$)	%	($1000\ m^2$)	%
2004	69,239	10.9%	7,670	11.1%	11,675	16.9%	12,736	18.4%	8,073	11.7%	4,071	5.9%	3,655	5.3%	21,360	30.8%
2005	72,485	4.7%	8,369	11.5%	11,937	16.5%	14,201	19.6%	8,599	11.9%	4,679	6.5%	3,252	4.5%	21,448	29.6%
2006	73,353	1.2%	7,852	10.7%	11,678	15.9%	15,841	21.6%	9,955	13.6%	4,285	5.8%	3,026	4.1%	20,715	28.2%
2007	65,106	-11.2%	7,053	10.8%	13,274	20.4%	12,486	19.2%	8,381	12.9%	3,811	5.9%	3,007	4.6%	17,095	26.3%
2008	60,963	-6.4%	8,659	14.2%	8,828	14.5%	13,095	21.5%	7,979	13.1%	3,749	6.2%	2,363	3.9%	16,290	26.7%
2009	42,947	-29.6%	6,941	16.2%	5,852	13.6%	6,492	15.1%	4,601	10.7%	4,151	9.7%	2,265	5.3%	12,645	29.4%
2010	44,521	3.7%	6,350	14.3%	5,914	13.3%	6,470	14.5%	4,228	9.5%	4,453	10.0%	2,771	6.2%	14,335	32.2%
2011	47,254	6.1%	5,684	12.0%	5,365	11.4%	6,794	14.4%	5,478	11.6%	4,572	9.7%	4,791	10.1%	14,569	30.8%
2012	50,184	6.2%	6,125	12.2%	6,590	13.1%	8,321	16.6%	6,168	12.3%	4,353	8.7%	3,788	7.5%	14,839	29.6%
2013	55,947	11.5%	6,435	11.5%	8,312	14.9%	8,342	14.9%	6,779	12.1%	4,753	8.5%	3,815	6.8%	17,511	31.3%

Source: Ministry of Land, Infrastructure, Transport and Tourism

NEW DWELLINGS CONSTRUCTION STARTED BY SOURCE OF FUNDS AND BY INVESTERS TYPE (Number of Dwelling

YEAR	TOTAL		MEAN AREA		SOURCE OF FUNDS						TYPE OF INVESTERS			
	Number of Dwelling Units	Change Ratio %	Dwelling (m2)	Change Ratio %	PRIVATE		Housing Loan Corporation		Other Public		PRIVATE		PUBLIC	
					No	%	No	%	No	%	No	%	No	%
2004	1,189,049	2.5%	94.4		952,839	80.1%	161,182	13.6%	75,028	6.3%	1,159,367	97.5%	29,682	2.5%
2005	1,236,175	4.0%	91.9	-2.7%	1,044,946	84.5%	114,691	9.3%	76,538	6.2%	1,209,642	97.9%	26,533	2.1%
2006	1,290,391	4.4%	89.5	-2.6%	1,146,888	88.9%	67,389	5.2%	76,114	5.9%	1,266,483	98.1%	23,908	1.9%
2007	1,060,741	-17.8%	90.4	1.0%	960,938	90.6%	33,960	3.2%	65,843	6.2%	1,040,629	98.1%	20,112	1.9%
2008	1,093,519	3.1%	88.2	-2.4%	984,426	90.0%	43,593	4.0%	65,500	6.0%	1,073,546	98.2%	19,973	1.8%
2009	788,410	-27.9%	92.0	4.3%	690,058	87.5%	39,897	5.1%	58,455	7.4%	764,474	97.0%	23,936	3.0%
2010	813,126	3.1%	94.6	2.8%	690,736	84.9%	61,691	7.6%	60,699	7.5%	794,005	97.6%	19,121	2.4%
2011	834,117	2.6%	95.0	0.4%	706,437	84.7%	68,403	8.2%	59,277	7.1%	817,928	98.1%	16,189	1.9%
2012	882,797	5.8%	93.4	-1.7%	765,704	86.7%	55,526	6.3%	61,567	7.0%	864,053	97.9%	18,744	2.1%
2013	980,025	11.0%	93.6	0.2%	864,411	88.2%	50,653	5.2%	64,961	6.6%	959,321	97.9%	20,704	2.1%

NEW DWELLINGS CONSTRUCTION STARTED BY STRUCTURE, BY PREFABRICATED AND BY TWO-BY-FOUR (Number of Dwelling Units)

YEAR	TOTAL		STRUCTURE												TYPE OF CONSTRUCTION			
	Number of	Change Ratio	WOODEN		Steel Frame		Reinforced Concrete		Steel Frame		Concrete Block		Others		PREFABRICATED		TWO-BY-FOUR	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
2004	1,189,049	2.5%	540,756	45.5%	46,351	3.9%	358,127	30.1%	240,122	20.2%	492	0.0%	3,201	0.3%	159,930	13.5%	90,706	7.6%
2005	1,236,175	4.0%	542,848	43.9%	28,466	2.3%	436,568	35.3%	225,057	18.2%	427	0.0%	2,809	0.2%	156,254	12.6%	95,824	7.8%
2006	1,290,391	4.4%	559,201	43.3%	31,158	2.4%	470,604	36.5%	226,991	17.6%	520	0.0%	1,917	0.1%	160,347	12.4%	105,390	8.2%
2007	1,060,741	-17.8%	504,546	47.6%	21,282	2.0%	335,548	31.6%	197,394	18.6%	402	0.0%	1,569	0.1%	145,360	13.7%	98,555	9.3%
2008	1,093,519	3.1%	516,875	47.3%	18,714	1.7%	336,325	30.8%	219,546	20.1%	469	0.0%	1,590	0.1%	154,427	14.1%	107,715	9.9%
2009	788,410	-27.9%	430,121	54.6%	5,658	0.7%	192,396	24.4%	158,298	20.1%	610	0.1%	1,327	0.2%	125,924	16.0%	91,730	11.6%
2010	813,126	3.1%	460,134	56.6%	7,100	0.9%	194,080	23.9%	150,341	18.5%	637	0.1%	834	0.1%	126,671	15.6%	96,104	11.8%
2011	834,117	2.6%	464,837	55.7%	5,538	0.7%	221,507	26.6%	140,971	16.9%	691	0.1%	573	0.1%	126,770	15.2%	98,248	11.8%
2012	882,797	5.8%	486,756	55.1%	5,523	0.6%	243,719	27.6%	145,370	16.5%	816	0.1%	613	0.1%	132,244	15.0%	107,487	12.2%
2013	980,025	11.0%	549,971	56.1%	3,455	0.4%	261,798	26.7%	162,916	16.6%	950	0.1%	935	0.1%	146,402	14.9%	120,111	12.3%

NEW DWELLINGS CONSTRUCTION STARTED BY OWNER OCCUPANT RELATION (Number of Dwelling Units)

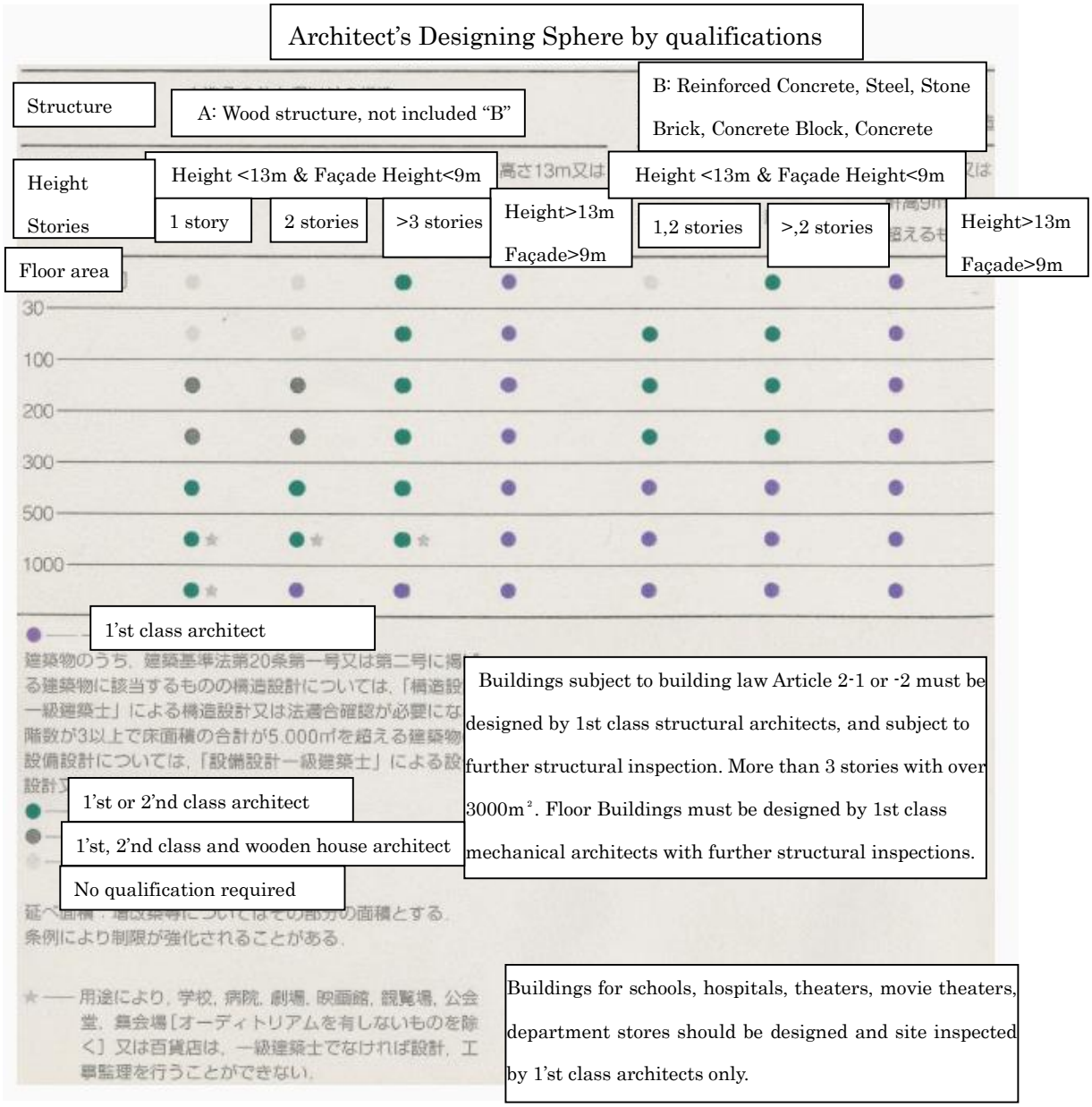
YEAR	TOTAL		OWNER OCCUPANT RELATION													
	Number of	Change Ratio	OWNED				RENTED		ISSUED		BUILT FOR SALE					
			TOTAL		Housing Loan						TOTAL		Collective Housing		Detached Houses	
	Dwelling	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
2004	1,189,049	2.5%	369,852	31.1%	18,529	1.6%	464,976	39.1%	8,720	0.7%	345,501	29.1%	204,081	17.2%	139,242	11.7%
2005	1,236,175	4.0%	353,267	28.6%	10,592	0.9%	504,294	40.8%	9,547	0.8%	369,067	29.9%	229,352	18.6%	137,836	11.2%
2006	1,290,391	4.4%	358,519	27.8%	7,572	0.6%	543,463	42.1%	9,228	0.7%	379,181	29.4%	238,614	18.5%	138,261	10.7%
2007	1,060,741	-17.8%	314,865	29.7%	4,661	0.4%	441,733	41.6%	9,366	0.9%	294,777	27.8%	168,918	15.9%	124,238	11.7%
2008	1,093,519	3.1%	318,511	29.1%	5,341	0.5%	464,851	42.5%	10,136	0.9%	300,021	27.4%	182,555	16.7%	115,785	10.6%
2009	788,410	-27.9%	284,631	36.1%	6,312	0.8%	321,470	40.8%	13,473	1.7%	168,836	21.4%	76,678	9.7%	91,254	11.6%
2010	813,126	3.1%	305,221	37.5%	21,341	2.6%	298,014	36.7%	8,003	1.0%	201,888	24.8%	90,597	11.1%	110,358	13.6%
2011	834,117	2.6%	305,626	36.6%	26,880	3.2%	285,832	34.3%	8,088	1.0%	234,571	28.1%	116,755	14.0%	116,798	14.0%
2012	882,797	5.8%	311,589	35.3%	20,315	2.3%	318,521	36.1%	5,877	0.7%	246,810	28.0%	123,203	14.0%	122,590	13.9%
2013	980,025	11.0%	354,772	36.2%	16,337	1.7%	356,263	36.4%	5,059	0.5%	263,931	26.9%	127,599	13.0%	134,888	13.8%

Source: Ministry of Land, Infrastructure, Transport and Tourism

ANNEXES

Annex K –Other documents of interest gathered during the study

Annex K2	Architect design sphere (which type of buildings based on qualification



From "The Japan Architectural Education and Information Center" home page

ANNEXES

Annex K –Other documents of interest gathered during the study

Annex K3	First class architects by expertise and prefecture (47)

Annex K3

平成25年度　下半期　建築士登録状況

（平成26年3月31日現在）

県No.	都道府県名	一級建築士	構造設計 一級建築士	設備設計 一級建築士
01	北海道	12,390	201	119
02	青森県	1,886	40	12
03	岩手県	2,003	37	9
04	宮城県	5,710	139	78
05	秋田県	1,645	29	7
06	山形県	2,000	50	15
07	福島県	2,985	60	14
08	茨城県	4,671	125	61
09	栃木県	3,097	67	48
10	群馬県	4,154	90	48
11	埼玉県	18,871	731	347
12	千葉県	16,976	691	285
13	東京都	70,201	1,720	912
14	神奈川県	29,100	922	535
15	新潟県	5,211	125	50
16	富山県	2,710	59	25
17	石川県	3,362	82	46
18	福井県	2,283	50	18
19	山梨県	1,593	35	15
20	長野県	4,744	98	53
21	岐阜県	4,541	102	59
22	静岡県	7,909	200	88
23	愛知県	20,256	543	355
24	三重県	3,433	82	43
25	滋賀県	3,037	65	43
26	京都府	7,391	131	60
27	大阪府	30,498	728	375
28	兵庫県	16,487	451	195
29	奈良県	3,770	142	83
30	和歌山県	1,812	36	17
31	鳥取県	1,255	29	12
32	島根県	1,791	36	5
33	岡山県	3,829	67	39
34	広島県	9,527	231	116
35	山口県	3,497	51	15
36	徳島県	1,761	25	11
37	香川県	2,809	46	31
38	愛媛県	2,798	51	18
39	高知県	1,472	21	4
40	福岡県	13,894	329	166
41	佐賀県	1,583	22	6
42	長崎県	2,375	50	9
43	熊本県	3,456	82	29
44	大分県	2,717	50	18
45	宮崎県	2,331	31	12
46	鹿児島県	3,146	43	21
47	沖縄県	2,229	58	37
50	その他	725		
		355,921	9,053	4,564

First class architects by Japanese prefecture in year Heisei 25 (2013)

(total, those having in addition a speciality in M&A or a speciality in structures)

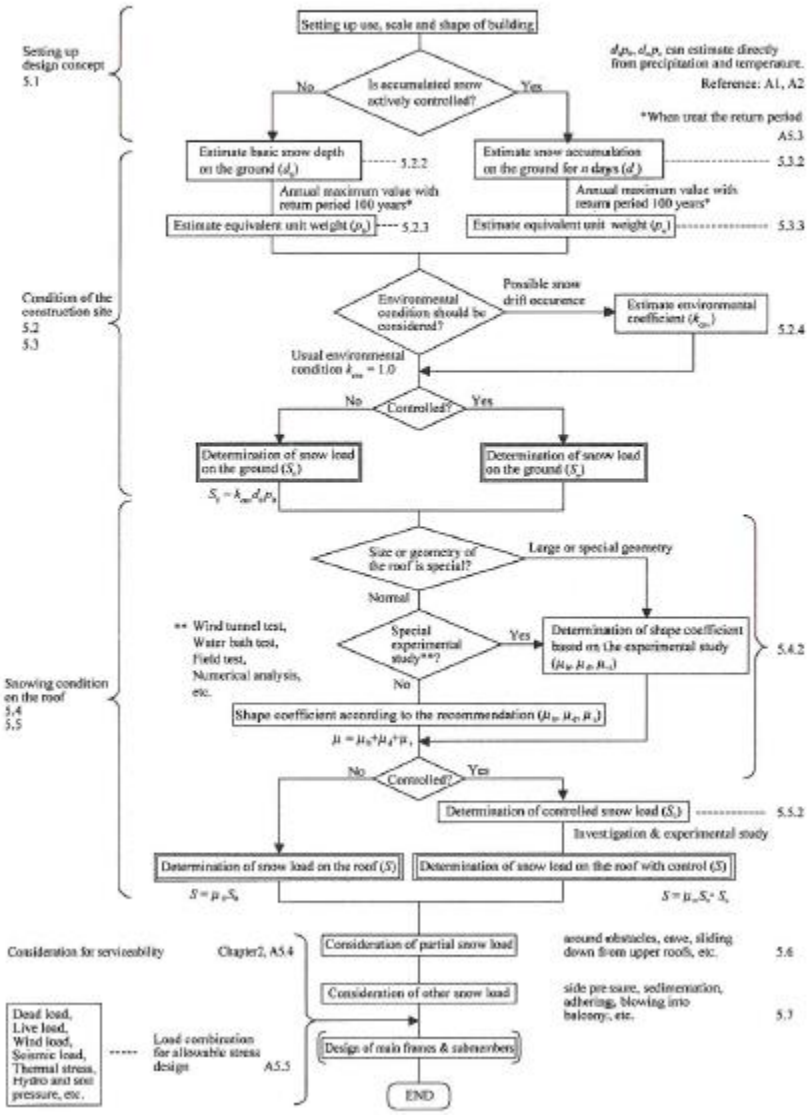
ANNEXES

Annex K –Other documents of interest gathered during the study

Annex K4	Flowchart of procedure for determining snow load on roof

Annex K4

ground is calculated from the snow depth multiplied by an equivalent snow density. The other ways to estimate ground snow weight using observed precipitation and temperature are also introduced.



Flow chart procedure for determining snow load on roof (taken from ref. 36 AIJ)

ANNEXES

Annex K –Other documents of interest gathered during the study

Annex K5	List of foreign entities designated as performance evaluation organizations for formaldehyde emitting building materials

Annex K5

List of Recognized Performance Evaluation Organizations

Organization	Service areas	Service Categories	Name and address of evaluation work office	Telephone number, etc.	Recognition* date
Australian Building Codes Board	All countries (except Japan)	[Article 59 Item (1),(2) and (6)]	Australian Building Codes Board Office Allaara Street, Canberra ACT 2603, Australia	1300 134 631 (domestic call only) E-mail: japaneseevaluationbody@abcb.gov.au	May 29, 2003
Professional Service Industries, Inc.	All countries (except Japan)	performance evaluation services in relation to folmaldehyde emissions [Article 59 Item (8-3)]	Professional Service Industries, :Pittsburgh Testing Laboratory, Engineered Wood Products Division 2710 West 5th Avenue Eugene, Oregon, U.S.A.	+1 541 484 9212 E-mail: info@psiusa.com Tokyo Regional Office: +81 3 5405 1174	June 7, 2004
Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e. V.	All countries (except Japan)	performance evaluation services in relation to folmaldehyde emissions [Article 59 Item (8-3)]	Fraunhofer Wilhelm-Klauditz-Institut für Holzforschung (WKI) Quality Assessment Bienroder Weg 54E, D-38 108 Braunchweig, Germany	+49 531 2155 375 E-mail: info@wki.fhg.de Representative Office Japan: +81 3 3586 7104	July 23, 2004
SP Technical Research Institute of Sweden	All countries (except Japan)	performance evaluation services in relation to folmaldehyde emissions [Article 59 Item (8-3)]	SP Technical Research Institute of Sweden Building Technology and Mechanics Laboratorgrand 2, Skeria 2 SE-931 77, Skelleftea, Sweden	+46 910 547 03 E-mail: larserik.wikstrom@sp.se SP Tokyo Office +81 3 3823 5854	October 17, 2005
Korea Testing and Research Institute for Chemical Industry	All countries (except Japan)	performance evaluation services in relation to folmaldehyde emissions [Article 59 Item (8-3)]	Korea Testing and Research Institute for Chemical Industry Hazard Evaluation Headquarters 7-6 Gomak-ri, Wolgot-myeon, Gimpo-si, Kyonggi-do, Korea	+82-31-999-3000	December 26, 2005

* Recognition as an entity qualified to carry out performance evaluations for approval under Article 20-5 Paragraphs 2 through 4 of the Order as stipulated in Article 59 Item (8)-3 of the Ministry Order Concerning Designated Qualified Inspection Organizations, etc., under the Building Standard Law

Foreign evaluation bodies recognized by the Building Performance Standardisation Association (BPSA, *Kenchiku Seino Kijun Suishin Kyoukai*) for formaldehyde emitting building materials.

ANNEXES

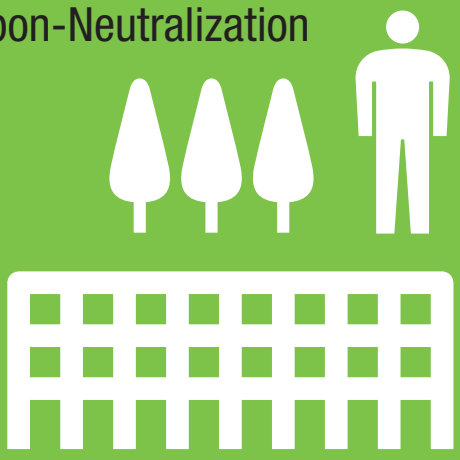
Annex K –Other documents of interest gathered during the study

Annex K6	Vision 2050: building-related measures to counteract global warming

Proposal

2050 Vision : Building-related Measures to Counteract Global Warming

Towards Carbon-Neutralization



December 2009

I.

Preface

The five building-related associations＊1 in Japan have conducted a variety of initiatives to cope with global environmental issues, including in the year 2000, the enactment of the “Architectural Charter for a Global Environment”. Since then, scientific knowledge regarding global warming has been accumulated, and social concern about this topic has continued to grow throughout Japan. Tackling this issue requires mid- and long-term efforts, while drawing up a concrete roadmap is a pressing need.

Since demographic, lifestyle, energy and resource issues are deeply connected to global warming, these must be the basic factors for constructing a sustainable society. Individual buildings, cities, and regions, being a part of the built environment, play a significant role thereupon. After consideration of domestic and international responses to global environmental problems, Japan’s seventeen building-related associations *(i.e. Architectural Institute of Japan, Japan Federation of Architects & Building Engineers Association, Japan Association of Architectural Firms, The Japan Institute of Architects, Building Contractors Society, The Society of Heating, Air-conditioning and Sanitary Engineers of Japan, Building and Equipment Life Cycle Association, The Institute of Electrical Installation Engineers of Japan, The Japan Federation of Housing Organizations, Japan Sustainable Building Consortium, The City Planning Institute of Japan, Japan Association for Real Estate Sciences, The Japan Wood Research Society, Institute for Building Environment and Energy Conservation, Japan Building Mechanical and Electrical Engineers Association, Association of Building Engineering and Equipment, and Japan Structural Consultants Association)* have sought mid- and long-term goals towards the year 2050 for buildings, cities, and regions. Based on the basic principles of the Architectural Charter for a Global Environment, which includes the key issues of 1) longevity, 2) symbiosis, 3) energy conservation, 4) resource conservation and cyclicity and 5) succession, the associations have begun to closely examine concrete architectural measures to counteract global warming.

Future buildings, cities and regions will determine the form of society in the future. Therefore, we hereby propose to start working together to achieve carbon-neutralization＊2 of buildings and cities/regions for the sake of creating a low carbon society, and share with all the building-related stakeholders the goals of “Vision 2050: Building-related Measures to Counteract Global Warming ~ Towards Carbon-Neutralization”, stated hereinafter.

＊1 The five building-related associations: Architectural Institute of Japan, Japan Federation of Architects & Building Engineers Association, Japan Association of Architectural Firms, The Japan Institute of Architects, Building Contractors Society

＊2 “Carbon-neutral” refers to achieving zero carbon dioxide emissions by balancing a measured amount of carbon released with an equivalent amount sequestered or offset throughout a whole year. This is achieved by controlling energy demands, providing necessary energy by renewable resources, and/or combining the reduction of CO_2 emissions with other projects. Carbon neutral indicates being as close to the situation of zero CO_2 emissions as possible.

＊3 IPCC　Intergovernmental Panel on Climate Change

＊4 ‘Backcasting’, as opposed to ‘forecasting’, involves envisioning a future scenario, and then tracing the needed steps back to the present.

＊5 ‘Building-related sector’ involves individual buildings, cities/regions, legislation and real estates.

II.

Proposal

In response to the warning set forth in IPCC*3's Forth Assessment Report, many countries from around the world have set a long term goal to reduce greenhouse gas emissions by 50% of the current level by the year 2050. Taking into consideration the limited carrying capacity of the earth, the "Backcasting"*4 method should be used to set goals for the future in order to strategically transform our market and society, which are closely related to architectural design and urban/regional planning.

In the course of making this transformation, developed countries must play a leading role and accept larger responsibilities and burdens. As mentioned above, IPCC's Forth Assessment Report stated that the building sector has the largest potential to contribute to short- and mid-term mitigation and prevention of global warming. This indicates that we, those involved in the building-related sector, are in the very position to lead the world in executing large scale measures to counteract global warming.

Therefore, in order to prevent the negative affects of global warming, we must do our best to implement the carbon-neutralization of buildings and cities/regions by minimizing CO_2e. Our goal is to carbon-neutralize new construction during the next 10 to 20 years, and then all buildings, including existing buildings, by the year 2050. A detailed outline of the strategies is as follows.

Goals

Carbon-Neutralization of Buildings, Cities and Regions

1 Promote the minimization of CO_2e from buildings during the next 10 to 20 years through the carbon-neutralization of new construction.

New buildings must be designed to minimize the energy required for construction and operation, and to maximize the utilization of renewable energy sources. The carbon-neutralization of buildings must also be promoted through long-life design using eco-materials, while at the same time being flexible for easy refurbishment in the future. It is possible to achieve this goal using existing technologies; however, efforts should be made to achieve the goal sooner through the promotion of technical developments to reduce costs and the development of institutions.

2 Promote the carbon-neutralization of all building-related sector*5, including existing buildings, by the year 2050

Buildings, composing a considerable part of our social property, require relevant measures addressing not only new construction but also the enormous number of existing buildings through refurbishment. It is important as well to provide relevant social systems that enable us to use and maintain a building for a long time through refurbishment. That is, we promote the carbon-neutralization of all buildings by the year 2050 through refurbishments that will minimize the environmental impact during the life of the building. Considering the method of refurbishment developed at the design stage and in accordance with the building's objectives, this includes measures such as energy efficiency, adoption of renewable energy sources, and enhancement of durability.

3 Promote carbon-neutralization of the surrounding city/region and society

In order to achieve the carbon-neutralization of a building, it is essential to understand the close relationship it has with its surrounding city/region. This includes consideration of the local climate, local geographical features, utilization of local resources, and closer cooperation with nearby economic activities and communities. Since a building is an important component of the region, the carbon-neutralization of buildings helps accelerate low-carbonization of the region as well. We promote, therefore, the carbon-neutralization of not only a single building but also its surrounding region and society.

Policy 1: How to plan, design, construct and operate carbon-neutral buildings

1 Design and operate buildings to minimize energy consumption

Buildings emit large amounts of CO_2 when consuming energy for heating and cooling, which can be significantly reduced through enhancing the environmental performance of the building envelop (e.g. insulation and sun-shading), and also through installation of state-of-the-art mechanical appliances (e.g. air-conditioners, lighting, hot water heaters and office appliances). These products have recently made remarkable progress in energy efficiency. In addition, the behavior of the building users contributes greatly to the reduction of CO_2e, through lifestyle changes and choosing efficient household electrical appliances. By integrating these energy-saving measures as intensively as possible into a building's design, energy consumption can be minimized without sacrificing comfort.

2 Design buildings to use renewable energy sources to provide the amount of energy consumed

Renewable energy sources include solar, wind, geothermal, hydraulic and biomass energy. The feasibility of renewable energy should be examined during the design stage of a building. Buildings should be equipped with demand and supply systems that utilize thermal renewable energy sources, especially solar energy. During the operational stage, minimizing energy consumption and changing to renewable energy sources can promote carbon-neutralization of buildings with the greatest reduction of CO_2e.

3 Design and operate a building to extend its lifespan

Carbon-neutralization of a building can also be promoted by extending a building's lifespan as long as possible, which avoids CO_2e originating from construction and disposal. This requires improving the physical performance of buildings through enhancing durability, seismic stability and disaster-prevention. In addition, flexible building design for the sake of future refurbishment (e.g. skeleton-infill building system) will help maximize utilization of the existing building structures and elements and also contribute to easy circulation of existing buildings in the future real-estate market. Furthermore, the refurbishment of the existing building stock should be properly promoted to improve energy efficiency as well as to extend the lifespan of buildings.

4 Promote the utilization of eco-materials which reduces CO_2e

When choosing building materials and elements, eco-materials should be chosen, reducing CO_2e during manufacturing and transportation, as well as maximizing resource efficiency. The intensive use of wood also helps reduce the amount of carbon dioxide in the atmosphere by consequently increasing the amount of fixed carbon accumulated in building elements. From this same viewpoint, during the disposal stage of a building, reuse of building materials should also be promoted.

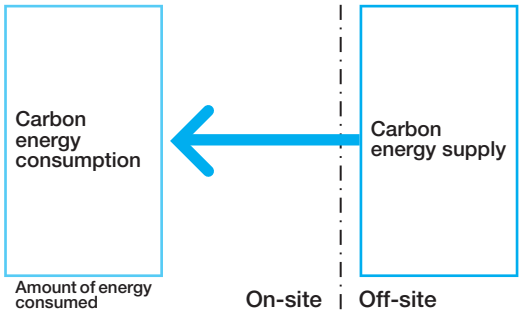
5 Plan to reduce off-site CO_2e when on-site CO_2e are irreducible

When carbon-neutralization of a building cannot be achieved on-site, complementary measures should be examined to reduce CO_2e off-site, which helps attain carbon-neutralization as a whole while maintaining flexibility in design. Carbon Credits for the procurement of off-site renewable energy sources and Certified Emission Reductions that allow buildings to manage reductions of CO_2e collectively are examples of economic systems that reduce off-site CO_2e when on-site CO_2e are irreducible.

6 Formulate and utilize a life-cycle management system applied consistently throughout the life of a building (e.g. from design, construction, operation, renovation to disposal)

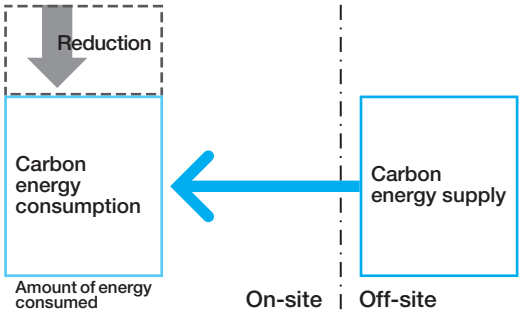
An effective lifecycle management system covering the life of a building, including design, construction, operation, renovation and disposal, should be developed and implemented. Use of a totally integrated building data-base will simplify management of the built environment. Carbon neutralization of buildings can be promoted through the development and implementation of such a coherent design and management process.

1 Conventional building



2 Energy efficient building

Reduce energy loads through energy efficient design, enhancing basic passive performance, choosing high efficient equipment, etc.



Policy 2: How to construct a carbon-neutral city/region and society

1 Promote measures even on urban and regional levels

The carbon-neutralization of a region and society, beyond that of a single building, should be promoted by means of comprehensive measures on urban and regional levels, addressing urban compaction, regional energy supply, utilization of unused and/or renewable energy, reduction of energy used for transportation, and measures to mitigate the heat island effect of urban areas$_{*6}$. To this end, the waste of resources and energy arising from urban sprawl should be minimized by utilizing and refurbishing existing buildings and infrastructures and also by transforming urban areas into compact cities.

2 Observation and utilization of the local climate in building design

Japan has a variety of climate zones, by which buildings are significantly influenced. Passive building designs and town-scaping methods conforming to the local climate and/or micro-climate may reduce energy demands for heating and cooling. Furthermore, intensive use of regional resources, materials and renewable energy sources may contribute not only to mitigating global warming, but also to creating buildings and cities/regions specific to their local environment.

3 Promote forests as carbon storage

Forests store carbon, and therefore should be carefully used and nursed on the basis of a long-term program. Although the building industry is the largest consumer of wood, the lumber used in buildings functions as a carbon sink for the life of the building. Given this, we can contribute to promoting forest carbon storage through the appropriate use of wood in buildings. This includes banning the use of illegally logged timbers and encouraging intensive use of domestic wood including trees thinned from forests.

4 Utilize information and economic systems

Free access to information on greenhouse gas emissions and the visualization of built environment performance through a standardized labeling and evaluation system are very effective in moving social awareness towards carbon-neutralization. Such initiatives have recently been promoted and used in the real estate market to appraise the value of properties. While regulatory control of buildings is an effective measure, financial incentives that provide benefits are also indispensable when seeking to achieve higher goals. Once fully operational, complementary methods, such as certification, carbon credits, and credit procurement, will create a very flexible system capable of reducing CO_2e for each building.

5 Lifestyle reform

Those using the built environment have demanded greater comfort and convenience, which has created a lifestyle of high energy use and separation from nature. In order to achieve carbon-neutralization, it is necessary for building-related experts not only to improve building performance but also to propose a lifestyle$_{*7}$ which does not rely on carbon energy, as well as to practice this lifestyle together with users and occupants. It is also important to provide a healthy living environment to users and occupants throughout their lives and to create a lifestyle in accordance with nature.

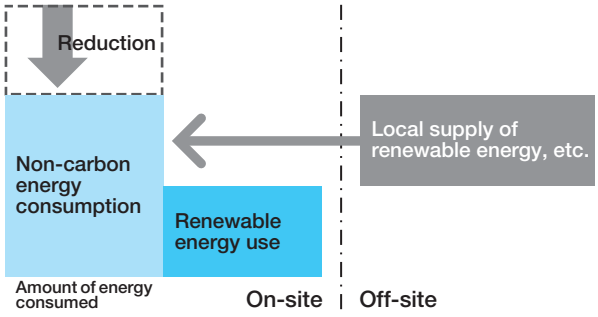
6 Share the long-term vision of each city/region and society

Japan is already encountering depopulation due to an extremely low birthrate and aging society. For quite some time, Japan has been suffering from the decline and depopulation of provincial city centers and agricultural and fishing communities, which has become a serious social issue. The time has already come to reconsider our current social structure and plans for the future, which are based on the assumption of continuous population growth. This represents a totally new paradigm. The measures needed to counteract global warming extend over time and are inevitably linked to social reform. Therefore, it is necessary to share the vision we have for buildings and cities/regions with the citizens concerned.

＊6 Proposals of the measures to mitigate urban heat islands, Architectural Institute of Japan, 2005
＊7 Action plan to promote a lifestyle to counteract global warming, Architectural Institute of Japan,2005

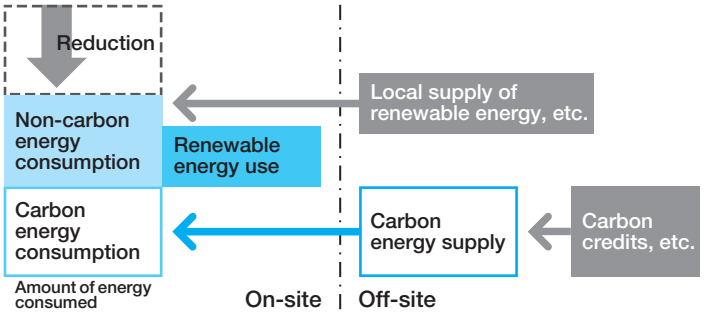
3 Zero carbon building

Achieve zero consumption of energy from fossil fuel sources while adopting renewable energy sources to meet energy requirements



4 Carbon neutral building

Achieve carbon-neutralization by adopting off-site measures as well



III.

Framework of the Action Plan

A building should protect the life and private property of its owner and occupants. It should also be regarded a part of social property that contributes to protecting the environment at regional and even global levels (e.g. preventing global warming). Furthermore, a building and a city/region can also possess a highly public aspect through carbon-neutralization, which largely contributes to mitigating global warming by reducing CO_2e.

Because of the intrinsically deep connections between lifestyle, society and the built environment, not only building owners and experts, but all members of society must engage in measures to counteract global warming. Following from this viewpoint, we hereby propose for society "Vision 2050: Building-related Measures to Counteract Global Warming" as an expression of the will of all parties involved in the building-related sector. We also hereby declare our own action plan to realize "Vision 2050". The framework of the action plan is as follows.

1 Research and development

Technological development and integrated research will be conducted to increase energy efficiency, intensify adoption of renewable energy sources, and lengthen the lifespan of buildings. In addition, a roadmap to actualize countermeasures will be created by envisioning a building and city/region image, associated with an entire scenario for society in 2050.

2 Policy proposition

In order to ensure the effective execution of the building-related measures to counteract global warming, we will elaborate and propose policies regarding information and economic systems, including regulatory and incentive methods, considering case studies from abroad. How to bear the necessary costs arising from applying these measures will also be examined and reflected in the policy proposition.

3 Development of human resources

Among the experts and students involved in planning, design, construction and operation of the built environment, we will develop human resources with the relevant knowledge and skills necessary to comprehend the building sector's countermeasures to global warming.

4 Information dissemination

Efforts should be made to provide the general public with information on the importance and effective role of building-related measures to counteract global warming in a tangible way, for instance, by using a standardized labeling and evaluation system. Using opportunities in environmental education, all people must be made aware that civil life in the built environment, including life in buildings, cities and regions, influences global warming.

5 Cross-lateral cooperation

In order to promote building-related measures to counteract global warming, cooperation and a common understanding is indispensable among various stakeholders including construction and maintenance experts, building material manufacturers and suppliers, equipment makers, energy providers, as well as building clients, users, neighborhood residents, administrators, real estate developers and financiers. Therefore, cross-lateral cooperation among all stakeholders will be facilitated.

6 International cooperation

In order to share and actualize the common goal of carbon-neutralization of buildings to prevent global warming, close and continuous cooperation among countries and regions from around the world should be promoted. This goal can be achieved, while both preserving the unique architectural and urban/regional culture of Japan fostered by its specific climate and region and providing diverse solutions to buildings and regions around the world.

Image by Centre National d'Etudes Spatiales, NASA Images.

IV.

Background

1 Warning of global warming

The Fourth Assessment Report of IPCC warned in the most serious tone ever that "global warming is likely attributed to human activity" and "there is no longer any doubt that global warming is occurring". We must sincerely accept this warning, which is the outcome of extensive and scientific research, and then devote ourselves to the implementation of preventive measures to mitigate global warming, which is likely to threaten the existence of human beings on earth.

2 Our ultimate goal is to stabilize climate change

The Kyoto Protocol, adopted at COP3＊8 in 1997, was internationally the historic first step to cope with global warming. However, our ultimate goal must be to resolve "how we as humans can stabilize climate change?" Based on the Fourth Assessment Report of IPCC, in order to reduce the amount of anthropogenic emissions to the same level as natural absorption, it is now widely accepted to set the goal of reducing global greenhouse gas emissions by 50% by the year 2050.

3 Recent goal of Japan

Although coping with global warming is a global issue common to all nations, it is now widely recognized that developed and developing countries have different responsibilities both qualitatively and quantitatively. As a result, some developed countries have set their goals to reduce emissions by even more than 50%. In July 2008, Japan's Cabinet adopted the "Action Plan for Building a Low-Carbon Society", which proposes to reduce CO_2e by 60 to 80% by the year 2050.

4 Realization of a "Low-Carbon Society"

The technical possibility of reducing CO_2e by 60 to 80% is being examined from various viewpoints using diverse approaches. However, given present circumstances, such a significant reduction in CO_2e is a challenging goal and impossible to achieve by applying a single existing measure or technical development. Drastic transformations in the market, socio-economic structure and lifestyle, etc. are absolutely required. In addition, current discussions are now focused on how to achieve a real "Low-carbon Society", which complements the national efforts to formulate an overall framework with local initiatives conforming to regional characteristics.

5 The responsibility of the building-related sector

The building sector is responsible for approximately 30% of global CO_2e. IPCC's Fourth Assessment Report also points out that the building sector has the largest potential to reduce CO_2e through short- and mid-term effective measures. While the manufacturing sector is significantly influenced by the geographical and local social conditions and international competition, the building sector can be controlled by relatively stable domestic measures.

With full knowledge of the above mentioned issues, we, those involved in the building-related sector, must be aware of our very important role of implementing architectural measures to counteract global warming.

6 Utilization of sustainable resources

Global warming is the result of the massive use of fossil fuels such as coal, petroleum and natural gas. However, considering we rely heavily on exhaustible non-renewable energy sources, the world's population is increasing, and developing countries are experiencing rapid economic growth, our future looks more and more uncertain. Therefore, buildings that consume enormous amounts of energy and resources throughout their lifespan should be designed and transformed to effectively utilize renewable resources and for cyclical use in order to neutralize CO_2e as much as possible during production, operation and deposal.

7 Constructing a sustainable society

Due to an extremely low birthrate, the population of Japan is decreasing while the number of elderly is increasing. Moreover, the decline of provincial local city centers and agricultural and fishing communities has long been a social issue. Facing such rapid social change, a new perspective towards sustainable reorganization of regional and urban areas is needed. In order to obtain a new perspective to counteract global warming, the "Backcasting" method can be used for planning and design initiatives. In contrast to "Forecasting", backcasting is a reverse process that first creates a concrete vision of the future, and then retraces the needed steps back to the present to create strategies and initiatives that will contribute to building local communities and a sustainable society.

8 Prevention of global warming and the social capital value of buildings

Assuming that lifespan of current buildings is longer than 50 years, the building sector must begin working towards 2050 to prevent global warming. Moreover, it is most important to extend the lifespan of buildings, as well as to improve the generally poor performance of the tremendous amount of existing building stock.

Even though a building may be private property, architectural measures to counteract global warming, such as energy efficiency, utilization of renewable resources and extending the lifespan of a building, may provide public benefits by contributing greatly to the creation of a low-carbon society. In this sense, buildings should be regarded as a part of social capital.

9 Global trends in the building and city/region sector

Prevention of global warming has been recognized as the building sector's top priority not only in Europe and the U.S., but also in Asian countries. Japan should establish a network of building-related associations from around the world including Asia, which will help to create a low-carbon society on a global scale through the exchange of information and people, sharing goals, and transferring technology.

＊8 COP3 The 3rd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change

Proposal

2050 Vision : Building-related Measures to Counteract Global Warming

Towards Carbon-Neutralization

Drafter

Architectural Institute of Japan
Japan Federation of Architects & Building Engineers Association
Japan Association of Architectural Firms
The Japan Institute of Architects
Building Contractors Society
The Society of Heating, Air-conditioning and Sanitary Engineers of Japan
Building and Equipment Life Cycle Association
The Institute of Electrical Installation Engineers of Japan
The Japan Federation of Housing Organizations
Japan Sustainable Building Consortium
The City Planning Institute of Japan
Japan Association for Real Estate Sciences
The Japan Wood Research Society
Institute for Building Environment and Energy Conservation
Japan Building Mechanical and Electrical Engineers Association
Association of Building Engineering and Equipment
Japan Structural Consultants Association

info@aij.or.jp for questions and further information.