Waste Management and Recycling in Japan
Opportunities for EU SMEs

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Outline

- **Targets:** EU SMEs, support organisations

- **Objectives:**
  - Give an overview of the Japanese waste market
  - Identify opportunities for EU SMEs
  - Formulate recommendations

- **Methodology:** Desk research, Interviews, Factory visits
1. Overview of waste management and recycling
Legislation 1

- Post-war period: Health and pollution concerns
- Economic growth: "Take - Make - Dispose" (quantity and complexity)
- Present: Scarcity of valuable resources and energy dependance

Waste Management & Recycling
Legal Framework in Japan

- Basic Environment Act (1993)
- Act on the Promotion of Effective Utilization of Resources (1991, revised in 2001)
- Containers and Packaging Recycling Act (1995)
- Food Recycling Act (2000)
- Small Home Appliances Recycling Act (2012)

Main source: History and Current State of Waste Management in Japan, 2014, MoE
Legislation 3

- 3Rs, Waste Hierarchy, LCA

Source: METI

- Circular economy: using waste as a resource
Outline of the waste treatment

- Categories of waste
- Responsibilities’ sharing

Source: History and Current State of Waste Management in Japan, MOE
Outline of the waste treatment 2

- Municipal Waste

Figure showing the amount of treated wastes from 1980 to 2012. The bars represent the different waste treatment methods, including direct incineration, intermediate treatment for recycling, direct recycling, and direct final disposal. The percentages are indicated within each bar for each year. The source of the data is Handbook on Resource Recycling, Legislation and Trends in 3R, 2014 (METI).
Outline of the waste treatment 3

- Competitive landscape
  - Small local companies *(ex. collection)*
  - Large groups *(ex. plant construction)*

Main players 2012 – 2014 by supplier

- Hitz: 30%
- JFE: 13%
- Takuma: 11%
- KHI: 10%
- NSENGI: 6%
- Ebara: 9%
- MHI: 7%
- Kobelco: 6%
- Others: 8%

Source: Vaccani European Market Share Analysis of Thermal Waste Treatment Plants, 2015 Edition (provided by JEFMA)
Outline of the waste treatment 4

» Industrial Waste

» Quantity slightly decreasing

» Recycling stable
  ~ 52%

Specific waste streams

- Packaging waste
- Food waste
- E-waste
- PCB waste
- Plastic waste
Waste as energy source

- (Renewable) energy in Japan
- Biomass Strategy
- Feed-in Tariff
- Incineration

Overall energy generation in Japan, in FY2013, by source - Source: JFS
Concrete examples of waste management in Japan

- "Tokyo Model": Clean Authority of Tokyo (CAT23)
  - Intermediate processing in Tokyo 23 ward
- Mitsubishi Material Corporation
  - Aluminum « Can to Can » recycling system
- Ishizaka Sangyo
  - Industrial Waste (Construction)
- Programs for the creation of « New-Towns »
  - Eco-Towns, Biomass Cities, etc.
2. Opportunities and Challenges of the Japanese (waste) market
Opportunities

Waste Management & Recycling
Opportunities 1

- Opportunities of the Japanese market in general
  - World’s 3rd largest economy
  - Good business environment
  - Long-term relationship with partners, smooth collaboration
  - Quality reference
  - Foothold for the rest of Asia
Opportunities 2

Opportunities of the Japanese waste market
- Resource scarcity & Energy dependence
- Governmental support (FiT, New-Towns)
- Public awareness regarding environment and waste
- Trained workforce
- Good IP protection
- Good image of Europe
Opportunities 3

- Business Opportunities
  - Biomass
  - Partnership for research for the recovery of strategic materials
  - Machinery and equipment
  - Innovative products adapted to the Japanese market
  - Niche markets, ex. Solar Panels
  - Incineration (W2E, bottom ash)
Challenges 1

- Challenges of the Japanese market in general
  - Cross-cultural barriers
  - Domestic vs. Foreign made
  - Risk-averse
  - High demand for quality
  - After-sale service
  - Need a network and references
  - Long decision process
  - Investment in finance, time and human resources
Challenges 2

- Challenges of the Japanese waste market
  - Mature market
  - Strong domestic players
  - Organization and established practices
  - Waste quantity is decreasing
  - Intermediaries
  - Public procurement
Recommendations to EU companies

- **General recommendations**
  - Use support services available
  - Find the right partner and rely on him
  - Do not spare on a good interpreter
  - Build a network
  - Be visible
  - Long term strategy including finance and human resources
Recommendations to EU companies 2

- **Sector specific recommendations**
  - Convince with hard facts, organize product demonstrations and factory visits
  - Certifications, references
  - New-town programs
  - Presence in Japan, especially maintenance and after-sale service
  - Synergies
Recommendations to support organizations

- **Services**
  - Networking
  - Fairs & Exhibitions (N-EXPO)
  - Communication
Recommendations to support organizations 2

- **Topics for research or cluster missions**
  - Biomass, esp. from wood
  - Recovery of strategic materials
  - Circular economy, with a focus on eco-design
  - Partnership to approach third country markets
Recommendations to support organizations 3

Topics of discussion between Europe and Japan
- Import/Export of waste
- Collection and sorting system
- Pollution control
- Identification mark on packaging
- Exchange of best practices (circular economy, food loss reduction, etc.)
Conclusion
Conclusion

- **To understand:** System based on **land scarcity** and **responsibility** of the waste generator

- **Main opportunities:** Resource scarcity & Energy dependence and Government & Public Support

- **Main challenge:** Mature market

- **Main sectors:** Biomass, Urban mines (R&D), Niche markets

- **Market-entry:** Be prepared (strategy + investment) and find a good Japanese partner
Thank you for your attention

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Waste Management & Recycling
Q & A

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