The European Reference Network for Critical Infrastructure Protection (ERNCIP)

EU-Japan ICT Security Workshop
Brussels, December 3rd, 2013

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EUROPE 2020

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Joint Research Centre

The European Commission's in-house science service

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Serving society
Stimulating innovation
Supporting legislation

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What is the Joint Research Centre?

As the Commission's in-house science service, the JRC's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners.

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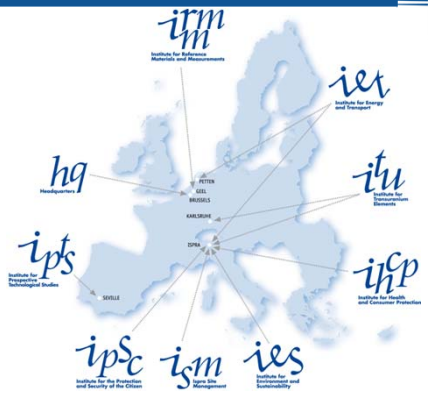

JRC facts - Established in 1957

- 7 institutes in 5 countries: Italy, Belgium, Germany, The Netherlands, Spain
- 2,822 staff in 2012
- 1,443 scientific publications in 2012
- €381 million annual budget, plus €68 million earned income (2012)

Where is the JRC located?

- **Corporate Services, HQ** – *Brussels, Belgium*
- **IRMM** – *Geel, Belgium*
  Institute for Reference Materials and Measurements
- **ITU** – *Karlsruhe, Germany and Ispra, Italy*
  Institute for Trans-uranium Elements
- **IET** – *Petten, The Netherlands and Ispra, Italy*
  Institute for Energy
- **IPSC – *Ispra, Italy***
  Institute for the Protection and Security of the Citizen
- **IES** – *Ispra, Italy*
  Institute for Environment and Sustainability
- **IHCP** – *Ispra, Italy*
  Institute for Health and Consumer Protection
- **IPTS** – *Seville, Spain*
  Institute for Prospective Technological Studies

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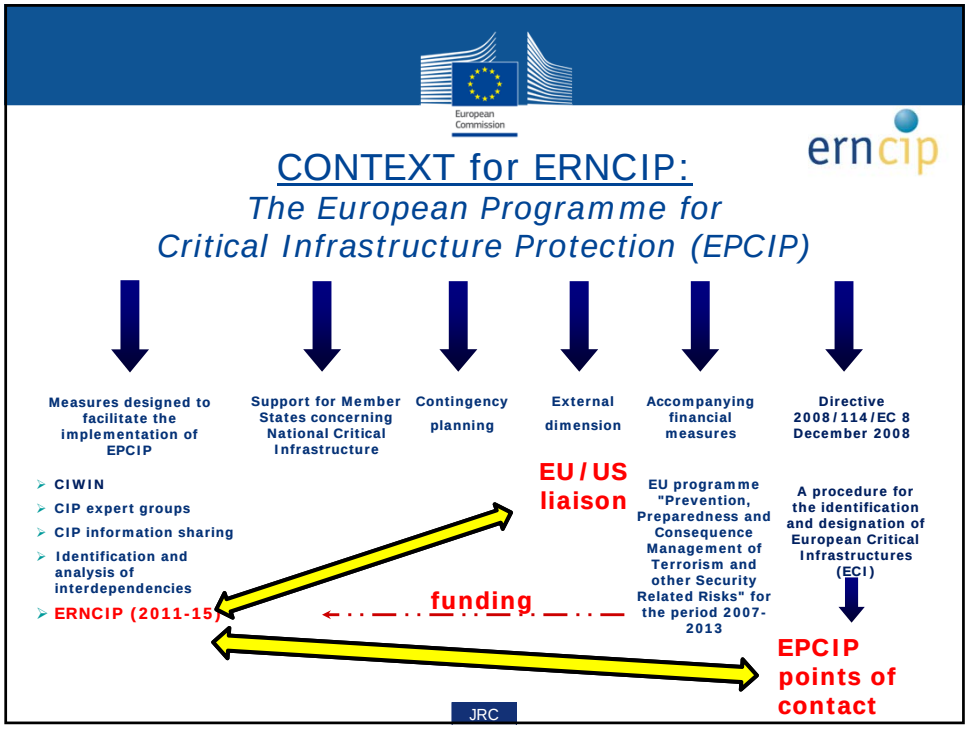
European Commission
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CONTEXT for ERNCIP:
The European Programme for Critical Infrastructure Protection (EPCIP)
Measures designed to facilitate the implementation of EPCIP
Support for Member States concerning National Critical Infrastructure
Contingency planning
External dimension
Accompanying financial measures
Directive 2008/114/EC 8 December 2008
CIWIN
CIP expert groups
CIP information sharing
Identification and analysis of interdependencies
ERNCIP (2011-15)
EU/US liaison
funding
EU programme "Prevention, Preparedness and Consequence Management of Terrorism and other Security Related Risks" for the period 2007-2013
A procedure for the identification and designation of European Critical Infrastructures (ECI)
EPCIP points of contact
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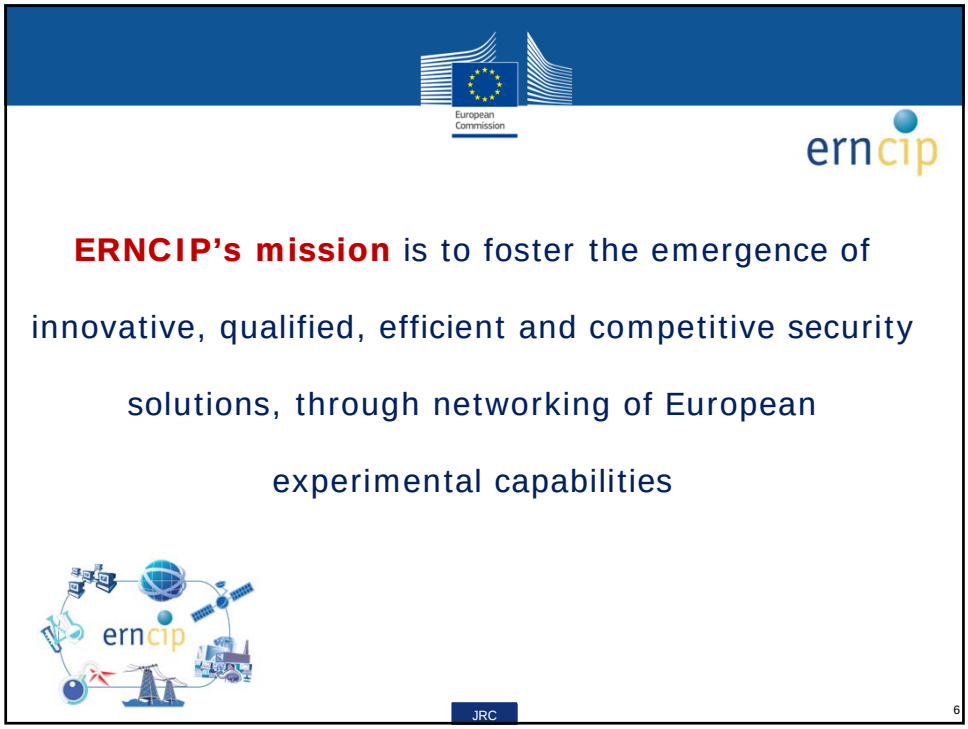
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ERNCIP's mission is to foster the emergence of innovative, qualified, efficient and competitive security solutions, through networking of European experimental capabilities
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ERNCIP Strategic Goals

- Improve the protection of critical infrastructure in the EU
- Support the development of a single EU market for security products
- Identify gaps in EU security product testing capabilities

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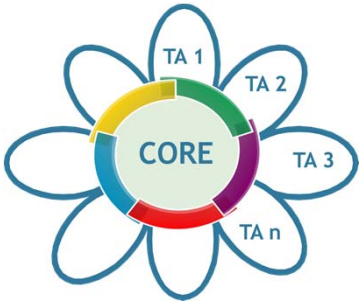
Core Activities of ERNCIP

1. Initiate and supervise ERNCIP Thematic Areas
2. Develop and operate the ERNCIP Inventory.



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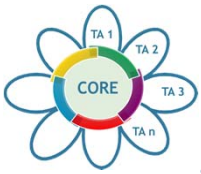
ERNCIP Thematic Areas

In 2012, ERNCIP initiated activity in several thematic areas, as identified by our sponsors, i.e. the European Commission and the Member States.

The work in these thematic areas is undertaken by specific thematic working groups, each led by a thematic group coordinator.



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ERNCIP Thematic Areas	Thematic Group Coordinator
Aviation Security Detection Equipment	JRC, Geel, Belgium
Explosives Detection Equipment (non-Aviation)	CEA, France
Industrial Automated Control Systems and Smart Grids	TNO, Netherlands
Structural Resistance against Seismic Risks	JRC, Ispra, Italy
Resistance of Structures to Explosion effects	Fraunhofer-EMI, Germany
Chemical & Biological Risks in the Water Sector	Austrian Environmental Agency
Video Analytics and Surveillance	CAST, United Kingdom
Applied Biometrics for CIP	CAST, United Kingdom
Radiological & Nuclear Threats to Critical Infrastructure	STUK, Finland

200+ experts from 18 Member States participate in these ERNCIP Thematic Groups

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Generic activities of the ERNCIP Thematic Groups (TG)

Within the overall context of security solutions for CIP, ERNCIP Thematic Groups have a wide scope of possible activities for their Work Programmes, such as:

- *Harmonise test protocols;*
- *Promote standardisation of test methods;*
- *Recommend EU-wide evaluation / certification / labelling procedures;*
- *Promote sharing of information, good practice and experimental results across all CIP stakeholders;*
- *Recommend new areas for EU-level research and investment.*

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ERNCIP Industrial Automated Control Systems & Smart Grids (IACS&SG) TG

Key Facts:

Coordinator = TNO (NL)
6 TG meetings between Feb 2012 and July 2013
Participants = 40 experts representing 33 orgs.

Objectives/Tasks:

1. Analyse the overall landscape for IACS security
2. Develop a cybersecurity workforce development framework
3. Identify gaps in IACS-related standards and test protocols.

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Outcome of ERNCIP IACS&SG TG

The TG has identified many other European initiatives on IACS and Smart Grids security:

- Previous EU projects such as ESCoRTS, ESTEC and Viking
- EU Expert Group on security and resilience of Information systems and telecommunications networks for Smart Grids
- EU Task Force for Smart Grids: Expert Group 2 on Data Privacy and Cyber Security
- Mandate 441 to CEN/CENELEC/ETSI on smart metering
- Mandate 490 to CEN/CENELEC/ETSI (Smart Grid Information Security)
- ENISA studies on cybersecurity of ICS and on cybersecurity of Smart Grids
- EU-US Working Group on cybersecurity and cyber-crime
- The European SCADA and Control System Information Exchange (EuroSCSIE)
- The European Smart Metering Industry Group (ESMIG)
- Other international working groups on security standards, e.g. IEC62443 that defines procedures for implementing electronically secure IACS.

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Working framework developed by the Task 2 sub-group of this TG

	People	Organisation (incl. Processes / Procedures)	Technology (Systems as a whole and components)
Standards			
Testing			
Certification			

This framework reflects that *secure technology*, *organisation*, and *people* are all essential elements for cybersecurity.

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Outcome from Task 2 sub-group of this ERNCIP TG

A sub-group of this TG has focussed on the human factors of cybersecurity, i.e. “people” in the framework.

This work has contributed to the new Global Industrial Cyber Security Professional (GICSP) certification scheme, just launched in November 2013 see https://www.sans.org/press/new-industrial-control-systems-cyber-security-certification-in-development.php

The GICSP is the newest certification in the Global Information Assurance Certification (GIAC) family, and focuses on the knowledge required to secure critical infrastructure assets.

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Next steps in the IACS & SG thematic area

The focus of the ERNCIP work in this area is now on the *technology* element. A new sub-group is being established for this thematic area, specifically to produce in 2014:

- Use Cases describing how communications with IACS are secured for configurations most commonly implemented by utilities in Europe
- An assessment of how a cybersecurity certification system could apply to these Use Cases
- Assessment of the current testing capabilities in Europe that could provide such a certification.

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ERNCIP Inventory

The Inventory is a **search tool** with information about European facilities with **CIP-related testing capabilities**

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Users of the ERNCIP Inventory

Who can register in the Inventory?

Experimental Facilities that are:

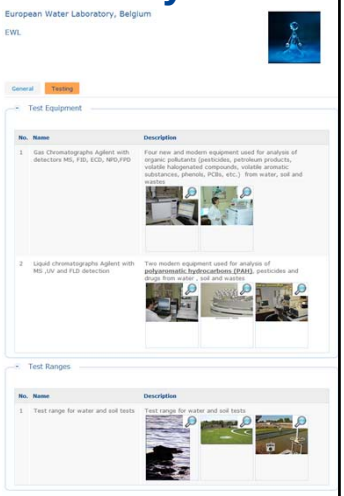
- in the EU or Associated Countries, and
- working in any CIP-related field (e.g. ICT security; SCADA; explosive detection; water contamination; aviation security).

What can be found in the Inventory?

Profiles of experimental facilities, detailing:

- Services offered/experience/ competencies/accreditations
- available test equipment.

e.g. http://www.rse-web.it/notizie/cloneII-laboratorio-PCS-ResTest-di-RSE-nella-top5-di-ERNCIP-.page



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Users of the ERNCIP Inventory

Who searches the Inventory?

- Organisations looking for CIP solution testing facilities, e.g. governments, infrastructure operators, technology providers, universities
- The system is accessible to all countries, EU and non-EU
- Designed for critical infrastructure stakeholders: a simple registration is needed for access
- If you have an interest in CIP, you are very welcome to register via the ERNCIP website.

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Thank you for your attention.

Much more information on the ERNCIP website at

http://ipsc.jrc.ec.europa.eu/?id=688

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