European Commission

European Reference Network for Critical Infrastructure Protection (ERNCIP)

Workshop: CIP and Disaster Resilience in Horizon 2020
Vienna, 22 February 2016

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Joint Research Centre
the European Commission's
in-house science service

Joint Research Centre

JRC Role - Facts & Figures

- **In-house science service** of the European Commission
- Independent, evidence-based **scientific and technical suppo**rt for many EU policies
- **Established 1957**
- **7 institutes** in 6 locations
- **Around 3000 staff,** including PhDs and visiting scientists
- **1370 publications** in 2014

Contents

- What is ERNCIP?
- Association of ERNCIP with EU calls
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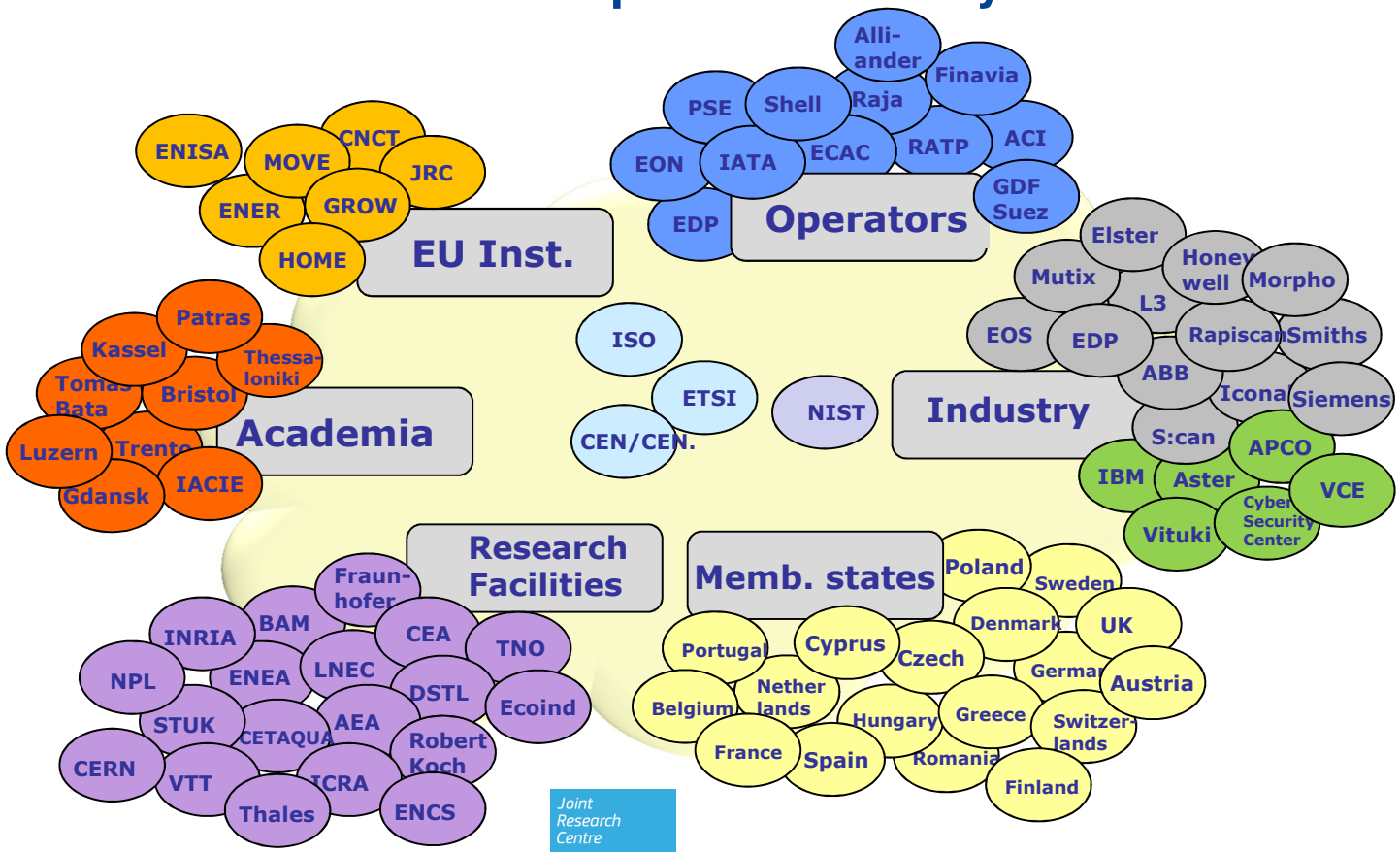
What is ERNCIP?

A **JRC-facilitated** network of **security related experts** volunteering to address issues of **pre-standardisation** at **EU-level** towards fostering the development of **innovative** and **competitive security solutions**



CIP & Disaster Resilience Calls: ERNCIP involvement

Under EU FP7-SECURITY/ Call SEC-2012.7.4-2; Networking of researchers for a high level multi-organisational and cross-border collaboration - Network of Excellence

- ERNCIP is a partner in the **CIPRNET** project, which aims to form the foundation for a European Infrastructures Simulation & Analysis Centre (EISAC).

Under EU H2020 Secure Societies/ Call: DRS-07-2014 - Crisis management topic 7: Crises and disaster resilience – operationalizing resilience concepts

- ERNCIP is a partner in the **IMPROVER** project, which aims to improve European critical infrastructure resilience to crises and disasters.

CIPRNet Facts

Critical Infrastructures Preparedness and Resilience Research Network	
Scientific domain:	Critical Infrastructure (CI) Protection (CIP)
Co-funded by:	EU FP7
Instrument:	Network of Excellence (NoE)
Objective:	CIPRNet builds a long-lasting virtual centre of shared and integrated knowledge and expertise in CIP
Start date / duration:	March 1, 2013 / 48 months
Participants:	12
Lead partner:	Fraunhofer IAIS
JRC role:	JRC as a full partner but not with a major role (i.e. not being a WP leader but participating in all but WP1)
Websites:	www.ciprnet.eu www.cipedia.eu

CIPRNet Objectives

- Providing new **capabilities** to end users for better **preparedness** for CI-related emergencies:
  - *Advanced decision support*
  - *'what, if …' analysis*
  - *Support of secure design of next generation infrastructures*
  - *'Ask the expert' service*

  } **Main WPs**
- Building required **capacities** by **educating** and **training** experts and researchers (reaching a critical mass)
- **Providing knowledge and technology** to end users for improving their understanding of the role of CI in crises and emergencies.
  - **CIPedia**, training, simulators, middleware, models, …
- Provide long-lasting end user support by establishing a **Virtual Centre of Competence and Expertise in CIP (VCCC)**.

IMPROVER Facts

Improved risk evaluation and implementation of resilience concepts to critical infrastructure	
Scientific domain:	Critical Infrastructure (CI) Protection (CIP)
Co-funded by:	H2020
Instrument:	H2020-DRS-2014
Objective:	IMPROVER improves European critical infrastructure resilience to crises and disasters through the implementation of combinations of societal, organisational and technological resilience concepts to real life examples of pan-European significance.
Start date / duration:	June 1, 2015/ 35 months
Participants:	10
Lead partner:	SP SVERIGES TEKNISKA FORSKNINGSINSTITUT AB
JRC role:	JRC as a full partner but not with a major role
Website:	http://improverproject.eu/

IMPROVER: Overall Aim

To **improve** European critical infrastructure **resilience** to crises and disasters
through
the implementation of combinations of societal, organisational and technological resilience in real-life examples of infrastructure of pan-European significance, including cross-border examples.

This implementation will be enabled through the development of a methodology based on risk evaluation techniques, and informed by a review of the positive impact of different resilience concepts on critical infrastructures.

IMPROVER: JRC involvement

Methodology

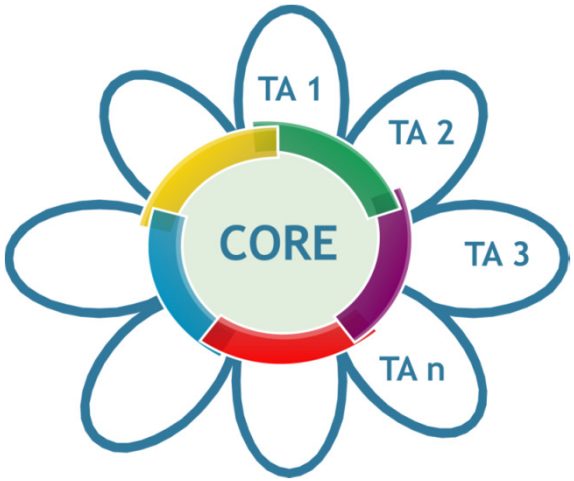
Stage 1. Review of existing methodologies (resilience concepts)
Stage 2. Development of an improved methodology
Stage 3. Pilot implementation

JRC tasks

- Resilience Lexicon (CIPedia)
- Contribution to the proposed methodology
- Link to policy and provide guidelines
- Liaison with ERNCIP, CIPRNet, JRC's CIP cluster and other projects
- Liaison with operators: 3 (annual) workshops

ERNCIP core activities

I. Initiate and supervise Thematic Areas



200+ experts from 120+ organisations in 18 Member States have participated in ERNCIP Thematic Areas

II. Develop and Operate the ERNCIP Inventory

124 experimental facilities from 21 Member States are registered in the ERNCIP Inventory

ERNCIP Active Thematic Groups 2016

ERNCIP Thematic Group	Coordinator
Radiological & Nuclear Threats to Critical Infrastructure	HT Nuclear Oy, Finland
Resistance of Structures to Explosion effects	Fraunhofer-EMI, Germany
Chemical & Biological Risks to Drinking Water	Environment Agency, Austria
Detection of Explosives and Weapons at Secure Locations	Iconal Technology, UK
Video Surveillance for security of Critical Infrastructure	CAST, UK & TNO, Netherlands
Applied Biometrics for security of Critical Infrastructure	IBM, UK
Industrial Automation and Control Systems: ***Cyber-security Compliance and Certification***	Thales, France
Detection of indoor airborne chemical & biological agents	Aristotle University of Thessaloniki, Greece

ERNCIP Inventory of Labs

What is it?

The ERNCIP Inventory is a free-to-use Web search tool for delivering open-source information on European security experimental and testing facilities.

What can I find?

The Inventory holds profiles of 124 CIP-related experimental and testing facilities from across the EU, containing:

- Basic information about the facility ;
- Services offered/Experience/Competencies/Accreditations;
- Available experimental/testing equipment;
- Contact points for potential customers.

ERNCIP Inventory of Labs – Search users

Search Users are organisations which need information about CIP-related experimental or testing facilities, with 250 organisations now registered.

Why search?

To identify CIP-related labs, for:

- Specific knowledge or expertise on CIP security-related problems
- Certified testing solutions to CIP security-related problems
- Research partners (e.g. to conduct CIP-related experiments, or to form partnerships to bid for EU funded projects)

Now includes a repository of standards and guidelines, linked to relevant labs, making their testing capabilities more accessible and transparent. This is intended to open up new business opportunities for testing labs by better connecting them to organisations needing their testing services.

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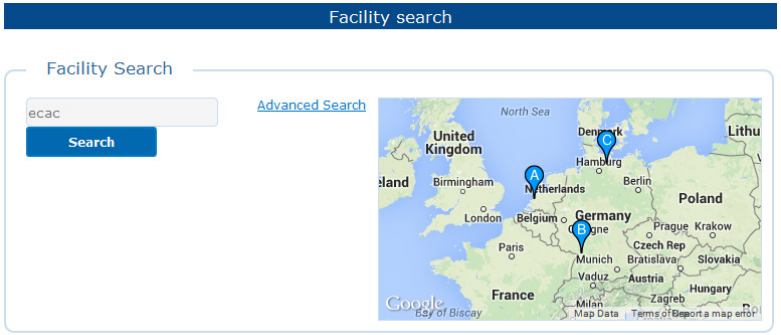
ERNCIP Inventory of Labs

Screenshots

Facility search



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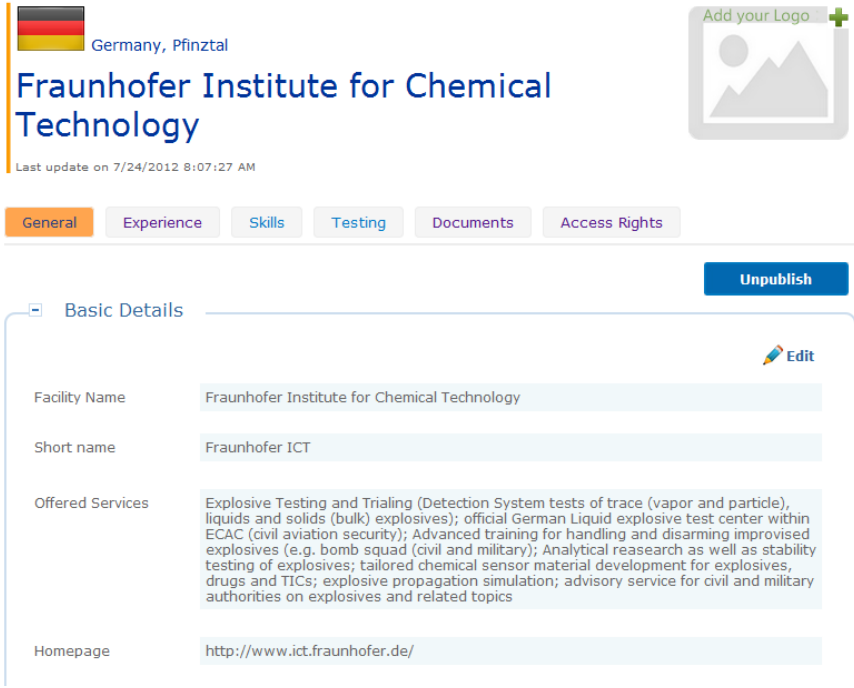
TNO Toegepast Natuurwetenschappelijk Onderzoek (explosives detection)
Netherlands, Rijswijk P.O. BOx 45 Lange kleiweg 137
Competencies : Test and evaluation of AVSEC explosives detection systems within the *ECAC* CEP regime: EDS
Offered Services : Scanners, ETD), according to ad hoc protocols, as well as *ECAC* Common Evaluation Common Testing

Fraunhofer Institute for Chemical Technology
Germany, Pfinztal Joseph-von-Fraunhofer Strasse 7
Networks : Member of *ECAC* study groups on liquid, trace and advance cabin baggage detection systems
Offered Services : solids (bulk) explosives); official German Liquid explosive test center within *ECAC* (civil aviation
Contact Persons : @ict.fraunhofer.de Member of *ECAC* CEP study groups; Project manager of German Liquid Explosive testcenter for

Federal Police Technology Center
Germany, Luebeck Schwartauer Landstrasse 1-5
Offered Services : *ECAC* Test Center for Aviation Security Equipment - Exposive Detection Systems - Security Scanners

Facility profile



Demo Video available on ERNCIP Project website

https://erncip-project.jrc.ec.europa.eu/inventory

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ERNCIP Achievements : Standardisation activities

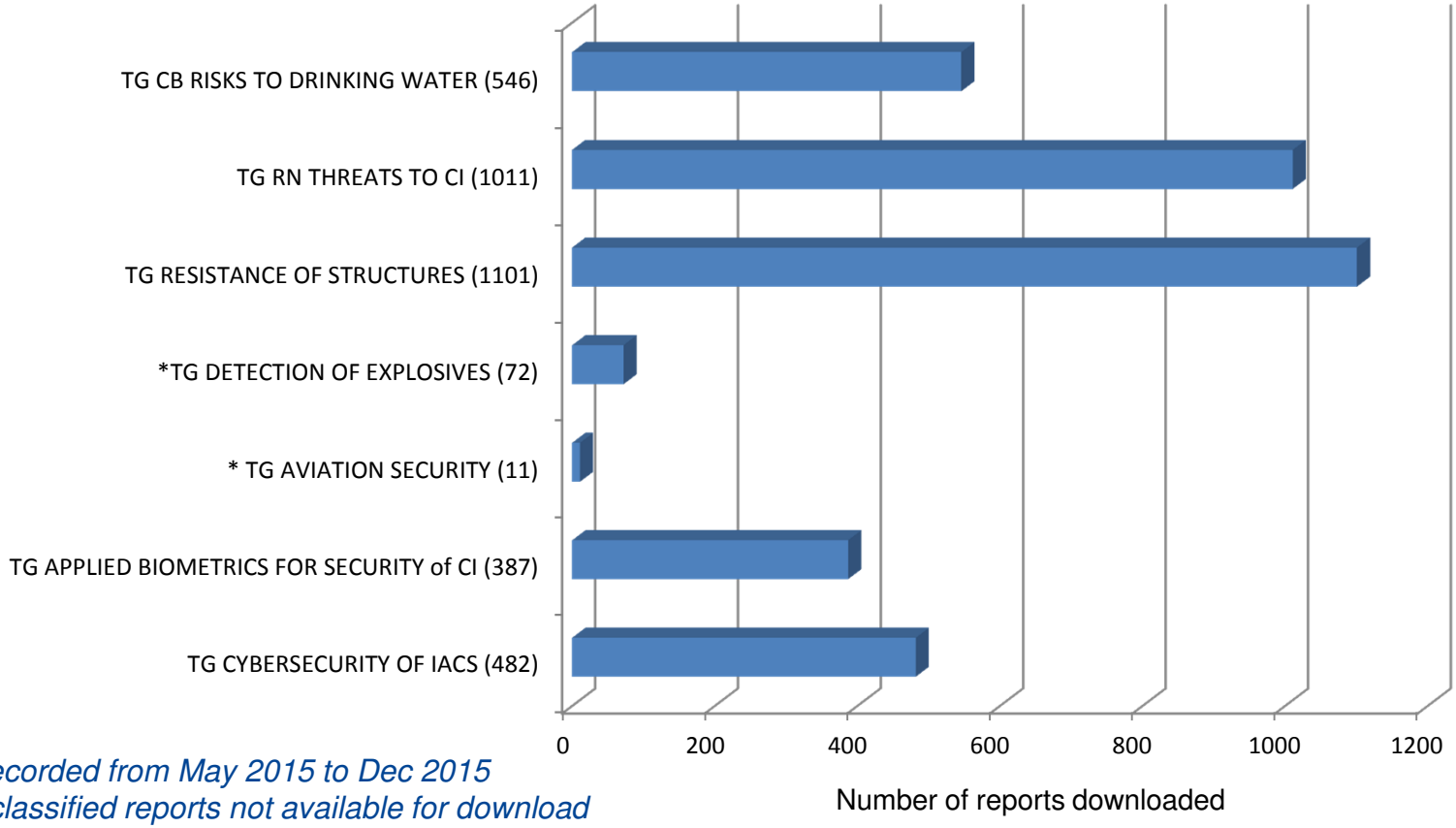
- Proposals for a European IACS Components Cyber-security Compliance and Certification Scheme
- Recommendations for EU-level standardisation activities on explosives and weapons detection at secure locations, with low to medium throughput, was validated at a stakeholder workshop in Brussels on 15 December 2015
- The new work item proposal for the development of a standard for list-mode data format for radiation detection was approved by IEC/TC45 in January 2016.
- Contribution to the new work item (multipart standard ISO/IEC 30137 on use of biometrics in Video surveillance systems) progressing through ISO/IEC JTC 1/SC 17 Technical Committee for Biometric Standards
- Contribution to the new work item for CEN Technical Committee 224 WG 18 – Biometrics for standards on biometric physical access control within a secure area
- Contribution to the Global Information Assurance Certification (GIAC) initiative that led to the launching of the vendor-neutral Global Industrial Cyber Security Professional (GICSP) Certification scheme.

ERNCIP Achievements : Reports

ERNCIP Thematic Groups:

- 22 reports published by the Thematic Groups with 10 more under review to be published soon. Examples of published reports include:
  - Methods for the rapid identification of pathogens in water samples
  - State-of-the-art of unmanned systems for radiation measurement
  - Testing using high explosives or blast simulators (shock tubes);
  - Derivation of common test procedures for the resistance of windows under blast-loaded conditions
  - Recommendations for experimental and simulation testing standards
  - Experiences from Large Scale Testing of Systems using Biometric Technologies
  - Detection Requirements and Testing Methodologies for Aviation Security Screening Devices.

ERNCIP Thematic Groups: Downloads of all published reports



Statistics recorded from May 2015 to Dec 2015

** Includes classified reports not available for download*

Other ERNCIP Activities

Organised at EU-level:

- Two ERNCIP conferences (2012 & 2015)
- Two infrastructure operators workshops (2013 & 2014)
- A water utility operator consultation workshop (2014)
- An explosives/weapons detection consultation workshop (2015).

Dissemination of ERNCIP outputs

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Thank you for your attention.

Keep in touch :

https://erncip-project.jrc.ec.europa.eu

or by e-mail at *erncip-office@jrc.ec.europa.eu*

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