

European Reference Network for Critical Infrastructure Protection (ERNCIP)

ERNCIP-IMPROVER Workshop
27-28 April 2016

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Joint Research Centre

the European Commission's
in-house science service



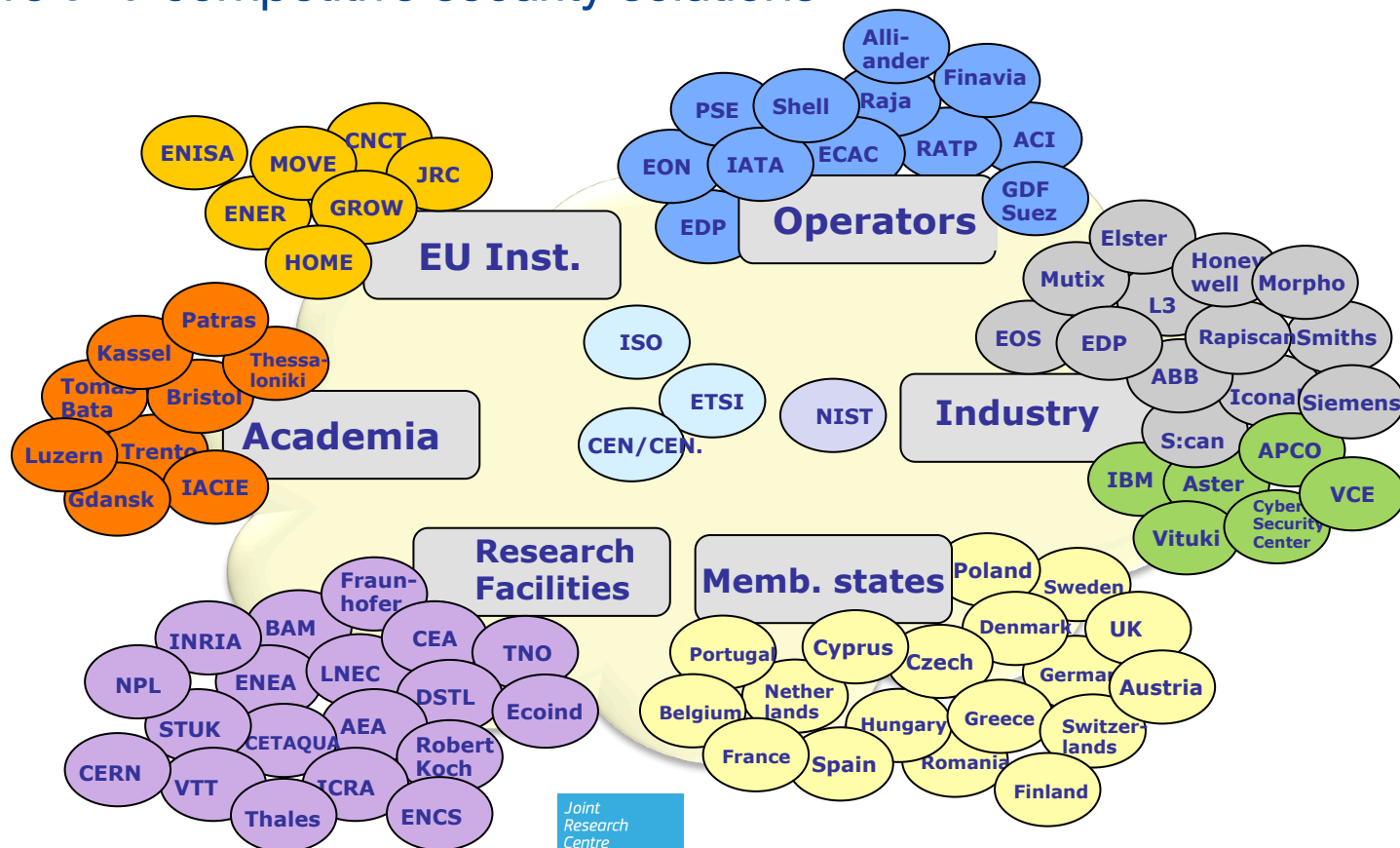
ec.europa.eu/jrc

JRC Role - Facts & Figures

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

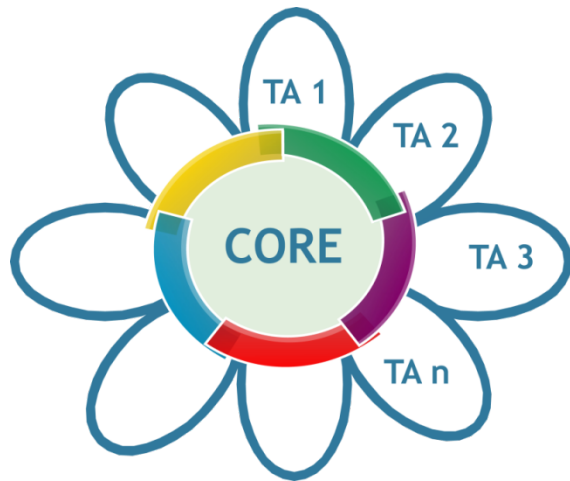
What is ERNCIP?

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



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

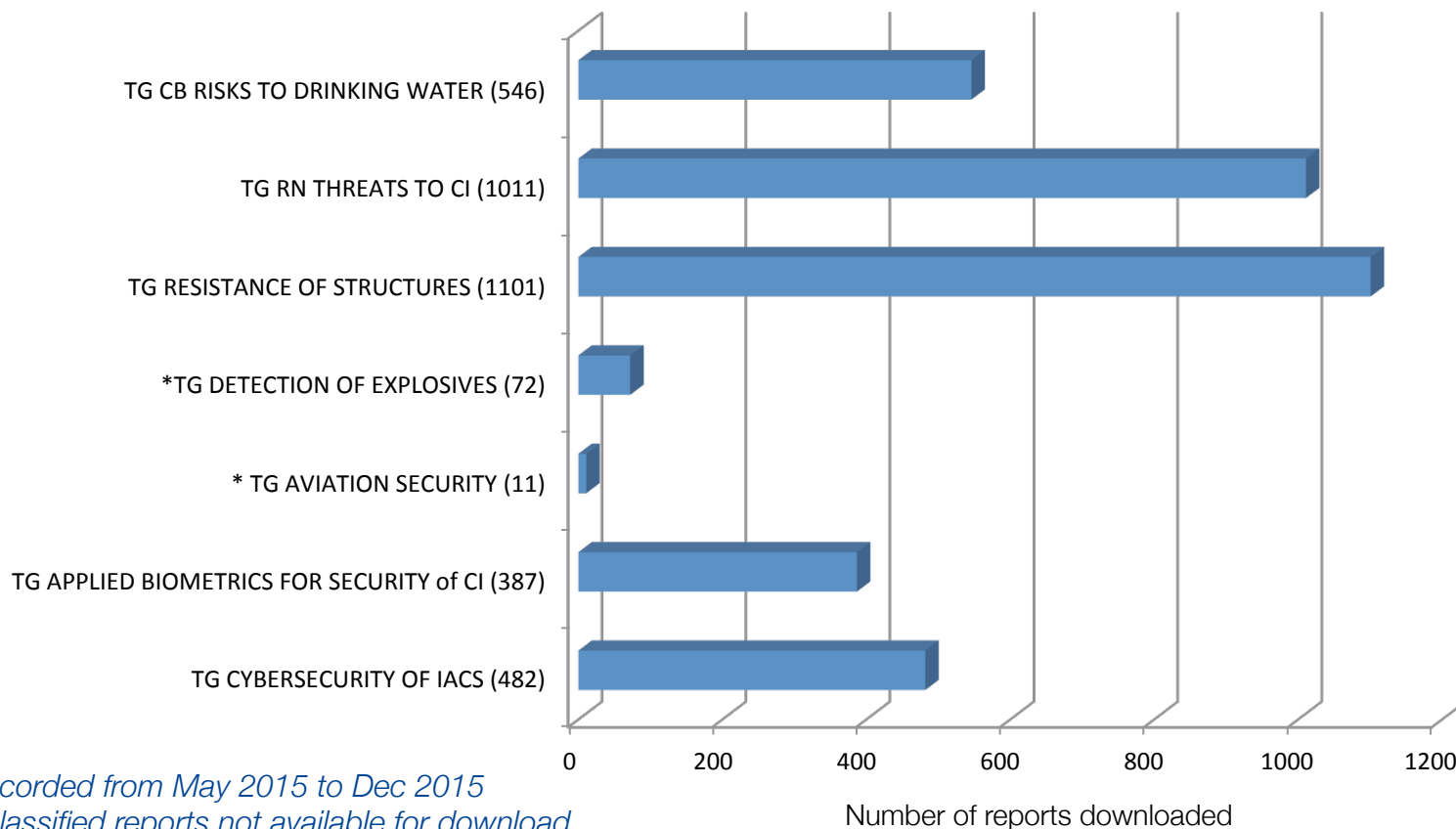


124 experimental facilities from 21 Member States are registered in the ERNCIP Inventory

ERNCIP Active Thematic Groups 2016

<u>ERNCIP Thematic Group</u>	<u>Coordinator</u>
Radiological & Nuclear Threats to Critical Infrastructure	STUK, Finland
Resistance of Structures to Explosion effects	Fraunhofer-EMI, Germany
Chemical & Biological Risks to drinking Water	Austrian Environmental Agency
Detection of Explosives and Weapons at Secure Locations	Iconal Technology, UK
Video Surveillance for security of CI	CAST, UK
Applied Biometrics for security of CI	IBM, UK
Industrial Automation and Control Systems	Thales, France
Detection of indoors airborne chemical & biological agents	Aristotle University of Thessaloniki, Greece

ERNCIP Thematic Groups: Downloads of all published reports



ERNCIP Website:

Statistics of access

to ERNCIP website, by country as a
percentage of total accesses

(As monitored August 2014 to Oct 2015)

United States	9.9%
Italy	6.7%
Spain	5.9%
Germany	4.8%
France	4.5%
Great Britain	4.4%
Sweden	4.2%
Belgium	2.7%
Romania	2.6%
Netherlands	2.2%
New Zealand	1.7%
India	1.1%
....	
Canada	0.9%
Switzerland	0.8%
China	0.7%
Japan	0.6%
Russian Federation	0.4%
European Commission	17.1%
Unknown	4.9%

ERNCIP Achievements 2015

- Standardisation activities

Detection of Explosives and Weapons at Secure locations TG



- Recommendations for EU-level standardisation activities on explosives and weapons detection at secure locations, with low to medium throughput, was validated at an EU stakeholder consultation workshop in Brussels on 15 December 2015.

Radiological & Nuclear Threats to Critical Infrastructure TG



- The new work item proposal for the development of a standard for list-mode data format for radiation detection, submitted in October 2015, was approved by IEC/TC45 in January 2016.

ERNCIP Thematic Group: Chemical and Biological Risks to Drinking Water

Active since April 2012; 15 Participants; 12 Organisations; 9 Countries

Reports produced in 2015

- Overview of current practices for vulnerability assessment of drinking water
- Synthesis of existing legislation, guidelines, standards, organisations and projects related to drinking water safety and monitoring
- Proposed outline of the elements of a Water Security Plan
- Review of methods for the rapid identification of pathogens in water samples.

ERNCIP Thematic Group: Chemical and Biological Risks to Drinking Water (cont.)

Objectives proposed for 2016

1. Identification of requirements for harmonization of real-time monitoring systems
2. Scoping basic elements of real-time monitoring systems as part of water security plan.

Probable technical parameters to take into account include:

- Natural variations of blended water
- Chemical parameters as surrogate for biological contamination
- Software requirements (large amount of data to be processed)
- Maintenance aspects
- Validation of systems (both in the field, and in the laboratory).

ERNCIP Thematic Group: Resistance of Structures to Explosive Effects

Active since March 2012; 10 participants; 7 countries;

Reports produced in 2015:

- Recommendations for European norms concerning numerical simulations of the resistance of windows and glazed facades to explosive effects
- Recommendations for the improvement of existing European norms for testing the resistance of windows and glazed facades to explosive effects
- Numerical simulations for classification of blast-loaded laminated glass
- Comparison of existing standards for testing blast-resistant glazing and windows.

ERNCIP Thematic Group: Resistance of Structures to Explosive Effects (cont.)

Started March 2012; 10 participants; 7 countries;

Objectives proposed for 2016:

1. Feasibility assessment of proposing **enhancements** to existing CEN experimental standards for testing the resistance of windows and glazed facades to explosive effects
2. To assess **existing standards** for **numerical simulation** for testing the resistance of windows and glazed facades to explosive effects - towards a **CEN-CENELEC Workshop Agreement**.

ERNCIP Thematic Group: Detection of Explosive Weapons in Secure Locations

Active since Jan 2015; 14 experts; 5 countries

Report produced in 2015

- Recommendations for standardisation activities based on the needs of security managers for the detection of explosives and weapons at secure locations with low to medium throughput
- Recommendations validated at the EU stakeholder consultation workshop in Brussels on 15 December 2015.

ERNICIP Thematic Group: Detection of Explosive Weapons in Secure Locations (cont.)

Objectives proposed for 2016:

1. Propose EU standardisation activities to mitigate the risk of explosives and weapons attacks at secure locations with low to medium throughput towards instigating the CEN Workshop Agreement process and/or harmonisation activities;
2. Investigate the opportunities for EU standardisation for mitigating the risk of explosives and weapons attacks at:
 - i. secure locations with high throughput (e.g. large sporting and entertainment events) and
 - ii. public places/mass transportations locations (with no secure perimeters).

ERNCIP Thematic Group: Radiological and Nuclear Threats to CI

Active since March 2013; 19 participating organisations; 10 countries;

Reports produced in 2015

- Possible scenarios for radiation measurements and sampling using unmanned systems
- State-of-the-art of unmanned systems with potential to be used for radiation measurements and sampling
- Remote Expert Support of Field Teams - Reachback Services for Nuclear Security
- Reachback State-of-the-art report
- Findings of the survey on the standardization of the list-mode data format
- Findings from the EU-wide consultation on reachback proposals
- Findings of the survey on use of unmanned systems for radiation detection.

ERNCIP Thematic Group: Radiological and Nuclear Threats to CI (cont.)

Objectives proposed for 2016:

1. **List-mode:** To fully support the EMPIR Digital Standard project that will progress the development of a **standard** for list-mode data through IEC/TC45.
2. **Reachback:** To raise **awareness** within **EU Member States** on the benefits of **information sharing nationally and internationally**
 - a) For **detection** of, or **response** to nuclear security events
 - b) **Identify** the elements for **harmonisation** of a **standard technological structure** for spectrometric measurements.
3. **Robotics:** To support the **development** of **European robotics/RN detection exercises, trials and/or competitions** using the **Group's work** on **RN scenarios**

ERNCIP Thematic Group: Detection of Indoor Airborne Chemical & Biological Agents

Latest ERNCIP Group, Kick-off meeting held on 16-17 September 2015

13 expert participants; 10 countries;

Summary of objectives:

1. To **define** relevant **scenarios** of indoor airborne threats (chemical and biological) in critical infrastructures.
2. To **perform a critical review** on the **existing sensors** available in the EU and used
 - (a) for chemical agents and
 - (b) for biological agents
3. To **identify** the **gaps** and to **define requirements** for next generation detectors in the EU.

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.

ERNCIP Inventory of Labs

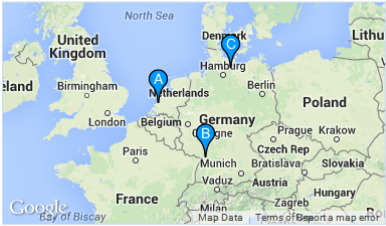
Facility search

Facility Search

ECAC

Search

[Advanced Search](#)



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- TNO Toegepast Natuurwetenschappelijk Onderzoek (explosives detection)**

Netherlands, Rijswijk P.O. 80x 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 Schwartzauer Landstrasse 1-5

Offered Services : **ECAC** Test Center for Aviation Security Equipment - Explosive Detection Systems - Security Scanners

Facility profile



Germany, Pfinztal

Fraunhofer Institute for Chemical Technology

Last update on 7/24/2012 8:07:27 AM



General Experience Skills Testing Documents Access Rights

Unpublish

Basic Details

Edit

Facility Name	Fraunhofer Institute for Chemical Technology
Short name	Fraunhofer ICT
Offered Services	Explosive Testing and Trialing (Detection System tests of trace (vapor and particle), liquids and solids (bulk) explosives); official German Liquid explosive test center within ECAC (civil aviation security); Advanced training for handling and disarming improvised explosives (e.g. bomb squad (civil and military); Analytical research as well as stability testing of explosives; tailored chemical sensor material development for explosives, drugs and TICs; explosive propagation simulation; advisory service for civil and military authorities on explosives and related topics
Homepage	http://www.ict.fraunhofer.de/

Demo Video available on ERNCIP Project website
<https://erncip-project.jrc.ec.europa.eu/inventory>

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





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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