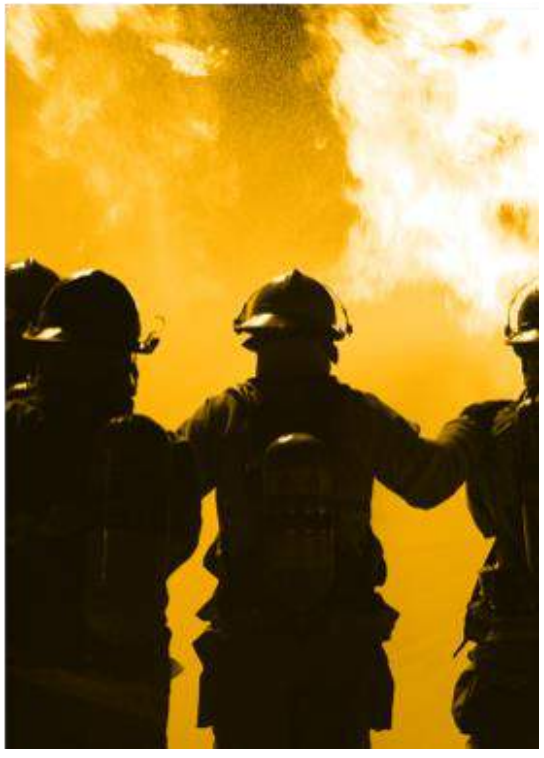
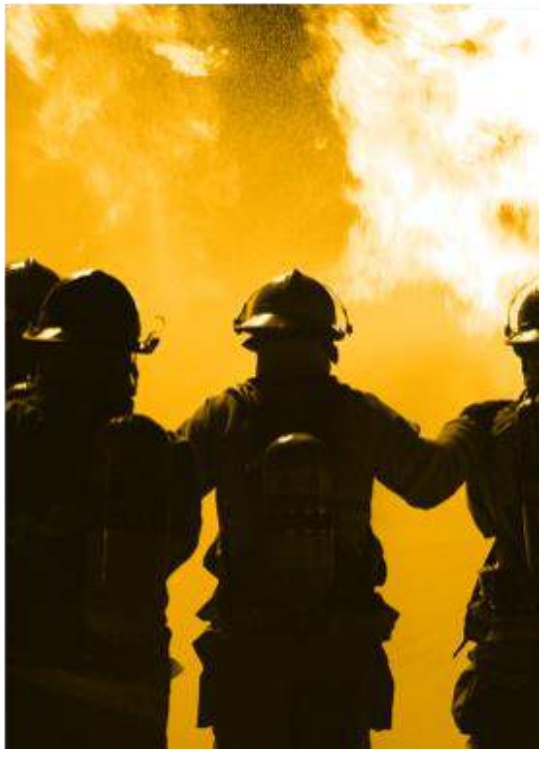


i4CM
Innovation for Crisis Management

DAY 1 - I4CM CONFERENCE

3RD OF SEPTEMBER 2018

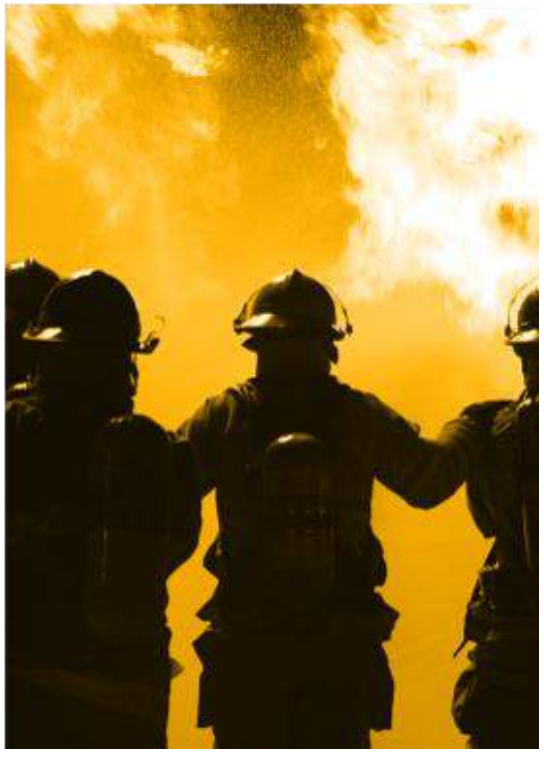
WARSAW, POLAND



i4CM
Innovation for
Crisis Management

FORUM OF IDEAS

A SPACE TO DISCOVER CRISIS MANAGEMENT INITIATIVES



CEN/TC 391

SOCIETAL AND CITIZEN SECURITY

Patricia Compard – September 3rd 2018 – Warsaw

I4CM Forum of Ideas

CEN/TC 391 Societal and Citizen security

TC/391 Objective and Scope

Objective:

CEN/TC 391 elaborates a family of European standards (e.g. EN standards, TS, TR) to support societal and citizen security stakeholders to help ensure preparedness, cooperation, and a culture of societal security.

Scope:

Standards developed by CEN/TC 391 deal with:

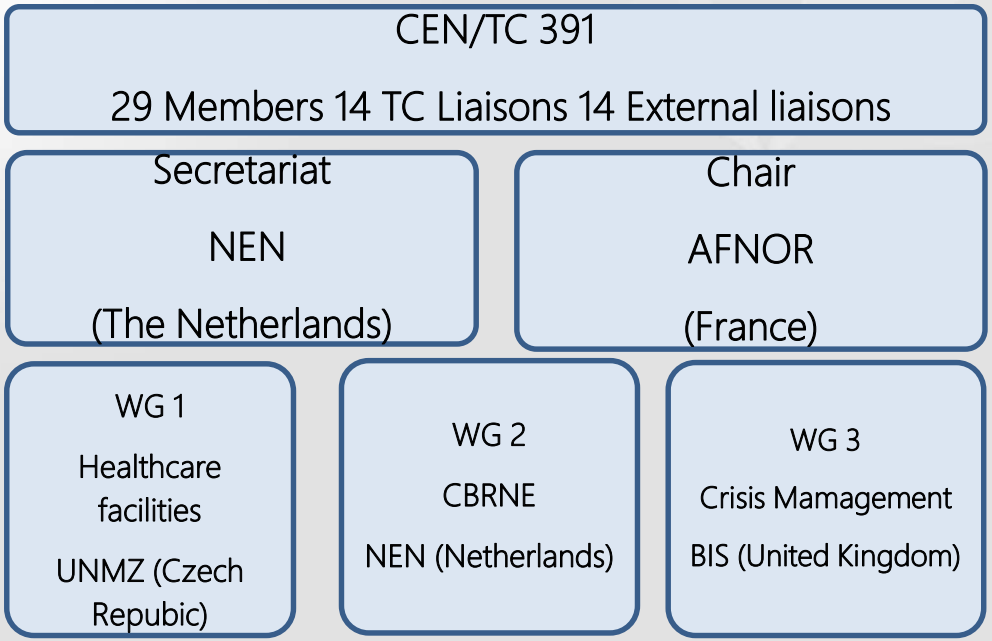
- Any kind of threat posed to European societal and citizen security;
- Disruptive events such as natural or man-made disasters, emergencies or crisis (e.g. related to CBRNE, climate or geology, terrorism, organized crime, border security, pandemics, communication, infrastructures, or flows of data);
- Citizen requirements and vulnerability, including privacy;
- The use of security-related products and/or technologies
- Excluded: specifications for security-related products and technologies.

CEN/TC 391 standards are compliant with other European and international societal and citizen security related standards. They address specific European needs, and cover specific global needs not addressed by international standards.

29 delegations and their National standardisation bodies

Austria ASI
Belgium MBN
Bulgaria BDS
Czech Republic UNMZ
Croatia HZN
Cyprus CYS
Denmark DS
Estonia EVS
Finland SFS
France AFNOR
Germany DIN
Greece NQIS
Hungary MSZT
Iceland IST
Ireland NSAI
Italy UNI
Lithuania LST
Latvia LVS
The Netherlands NEN
Norway SN
Poland PKN
Romania ASRO
Serbia ISS
Spain UNE
Slovenia SIST
Sweden SIS
Switzerland SNV
Turkey TSE
United Kingdom BSI

Current Structure



Published standards and documents

CEN/TS 16595:2013 'CBRN – Vulnerability Assessment and Protection of People at Risk'

CEN/TS 16850:2015 'Societal and citizen security – Guidance for managing security in healthcare facilities'

CEN/TS 17159:2018 'Societal and citizen security – Guidance for the security of hazardous materials (CBRNE) in healthcare facilities'

EN-ISO 22300:2018 Security and resilience – Vocabulary

Active work items and projects

prEN 17173: CBRNE - Glossary

prCEN/TS: Crisis Management – Developing a Strategic capability

prEN-ISO 22301:2014 Societal security – Business Continuity Management Systems-Requirements

prEN-ISO 22313:2014 Societal security - Business continuity management systems – Guidance

prEN-ISO 22315 Societal security - Mass evacuation - Guidelines for planning (ISO 22315:2014)

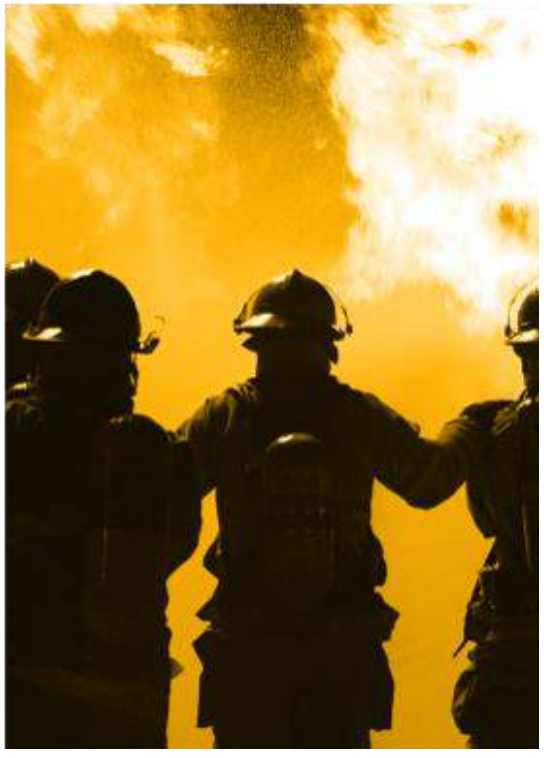
prEN-ISO 22397 Societal security - Guidelines for establishing partnering arrangements

NWIP ‘CBRNE Training Framework: Requirements for CBRNE education and training’

NWIP ‘Assessment framework for new standardisation work items related to Disaster Management’

Please, get involved !

- Standards are not apples: they do not grow up on trees !
- If you need standards, you are one of the stakeholders to write them !
- If you need standards join your NSB's mirror committee and get involved in CEN/CENELEC standardisation's activities



THE BroadWay PROJECT

PROCURING INNOVATION ACTIVITY TO ENABLE A PAN-EUROPEAN BROADBAND MOBILE SYSTEM FOR PPDR

www.broadway-info.eu

Sanja Holen, chair of Technical Validation Committee

BroadMap to BroadWay :

Steps towards European Interoperable broadband

I4CM, Warsaw, 3rd -4th September 2018

www.broadway-info.eu

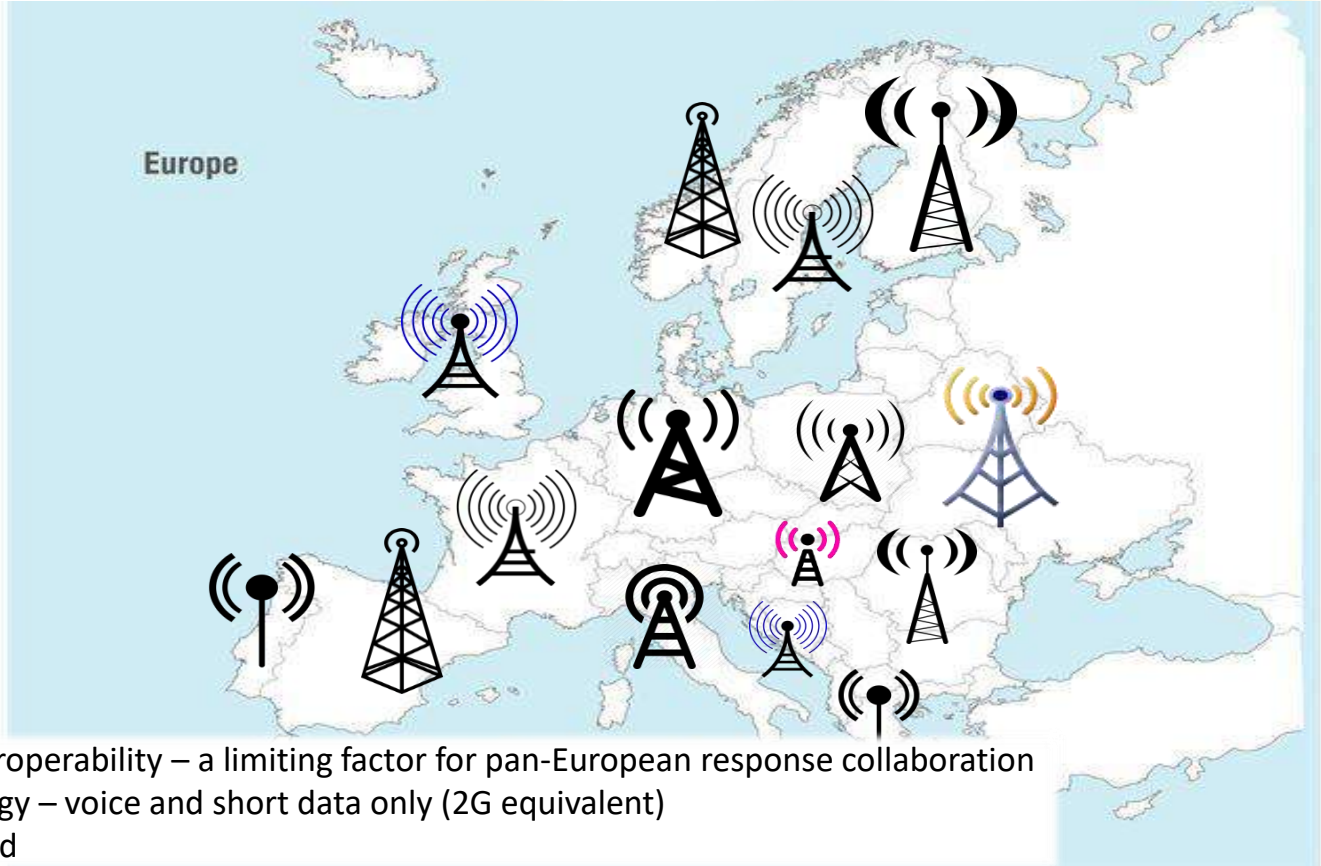
BroadWay is Procuring Innovation activity to enable a pan-European broadband mobile system for PPDR, validated by sustainable test and evaluation capabilities

PSCEurope
Public Safety Communication Europe

www.psc-europe.eu

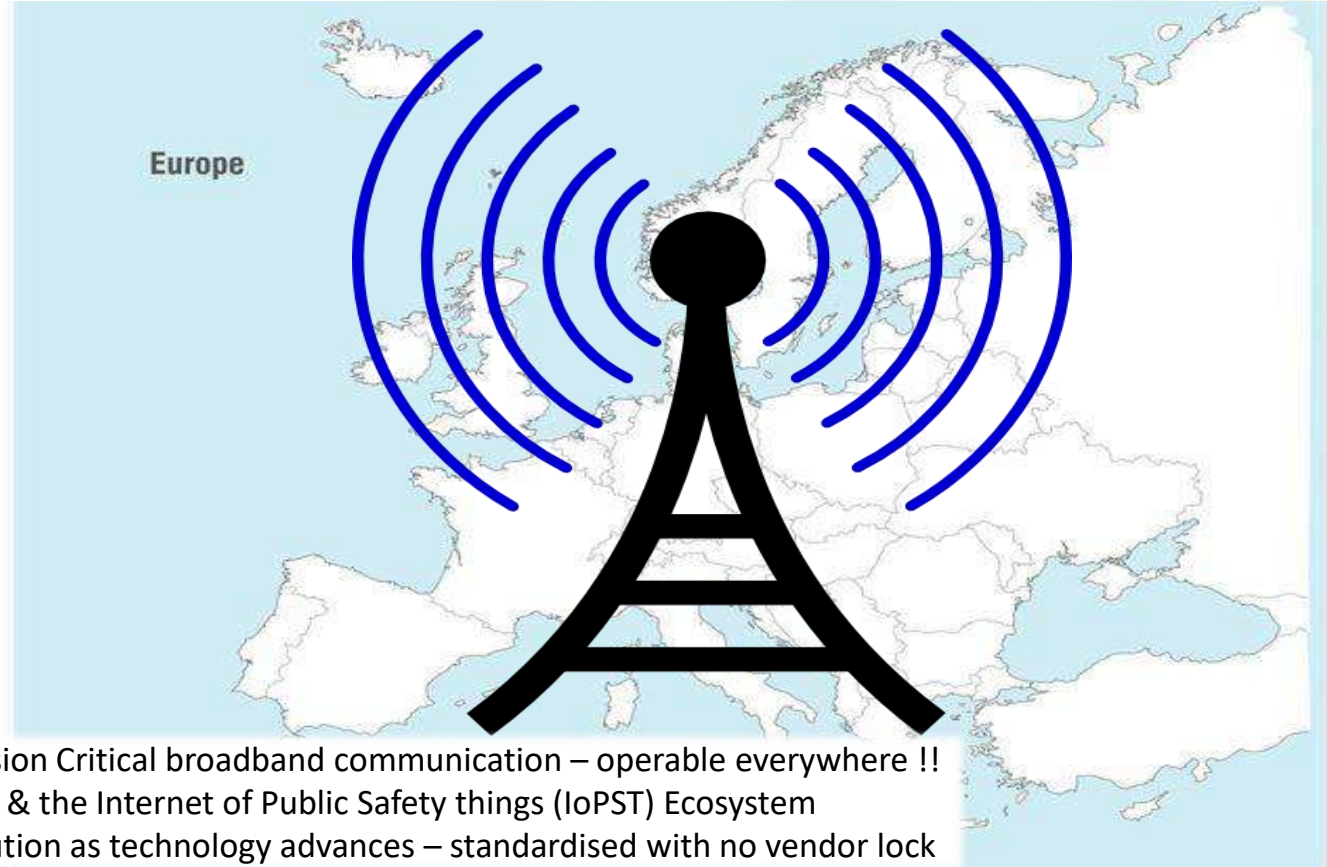
PSCE was formed ~10 years ago due to the FP6 NARTUS project recognizing that this dialogue is essential

The Common Challenge – we have today



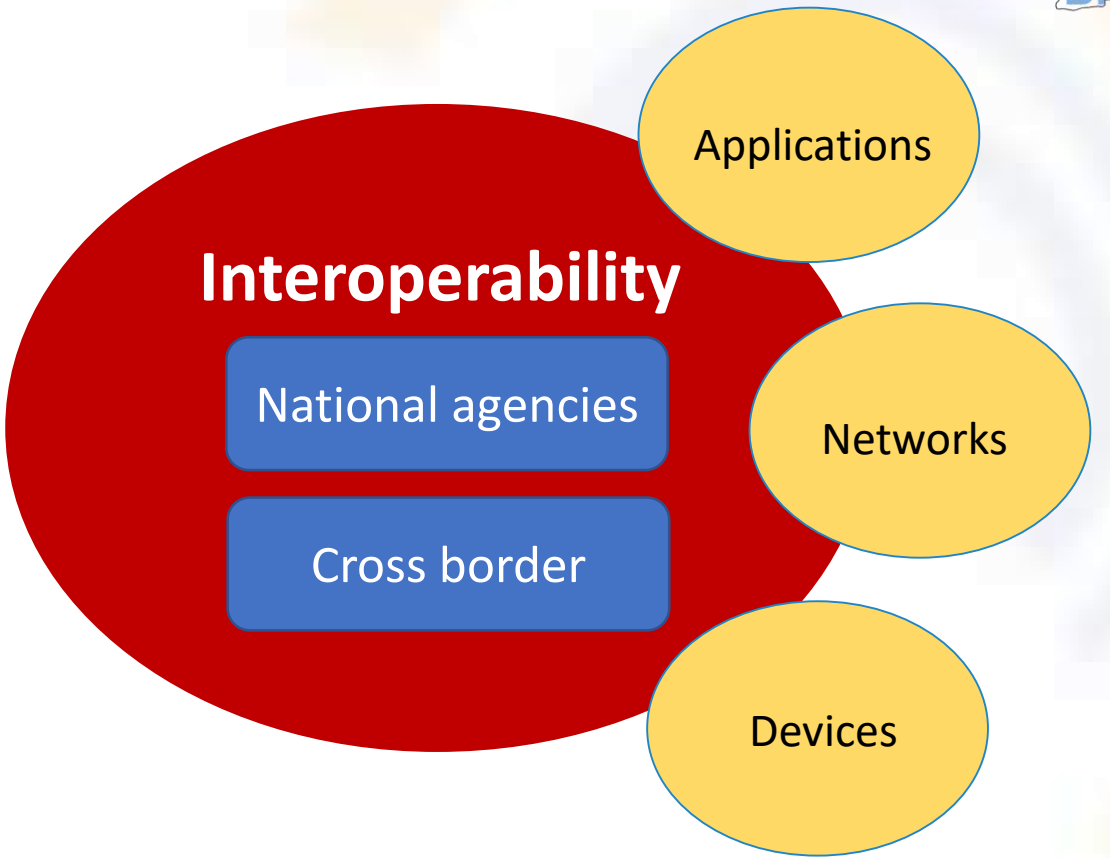
- Minimal interoperability – a limiting factor for pan-European response collaboration
- Old technology – voice and short data only (2G equivalent)
- Vendor locked

The Common Challenge – we need today

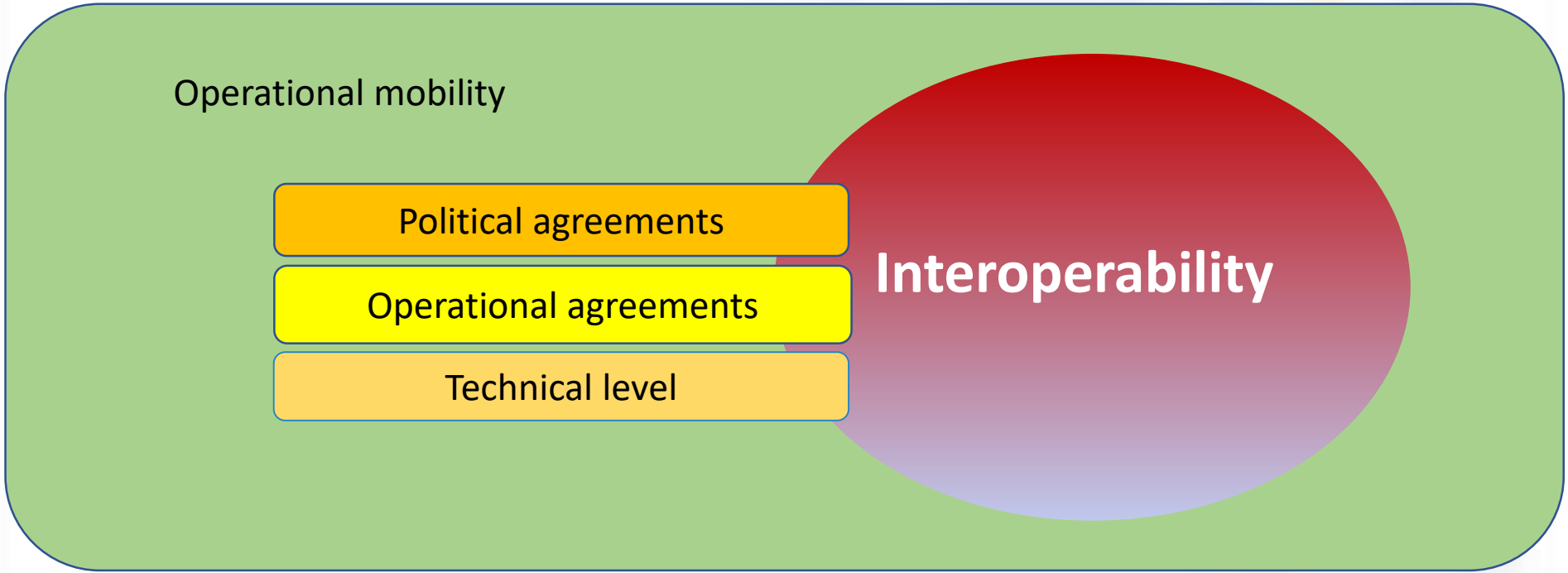


- Secure, Mission Critical broadband communication – operable everywhere !!
- Applications & the Internet of Public Safety things (IoPST) Ecosystem
- Future evolution as technology advances – standardised with no vendor lock

What PPDR need today?



What PPDR need today?



Ultimate Goal

Pan-European mobile broadband for Public Safety

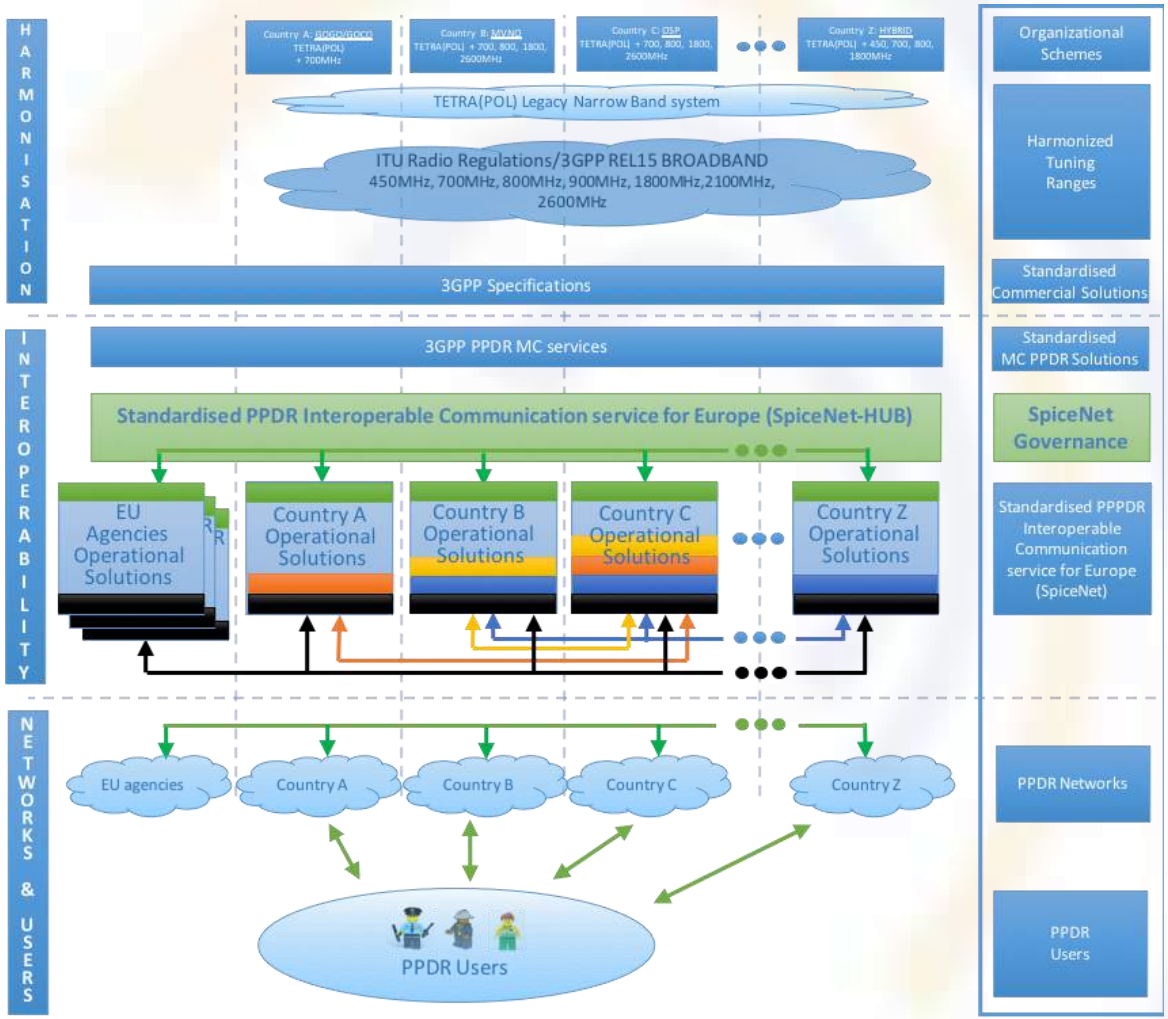
To '**IMPROVE**' Collaboration between responders from different agencies and different countries

To '**ENABLE**' mobility of responders between different countries

Pan-European

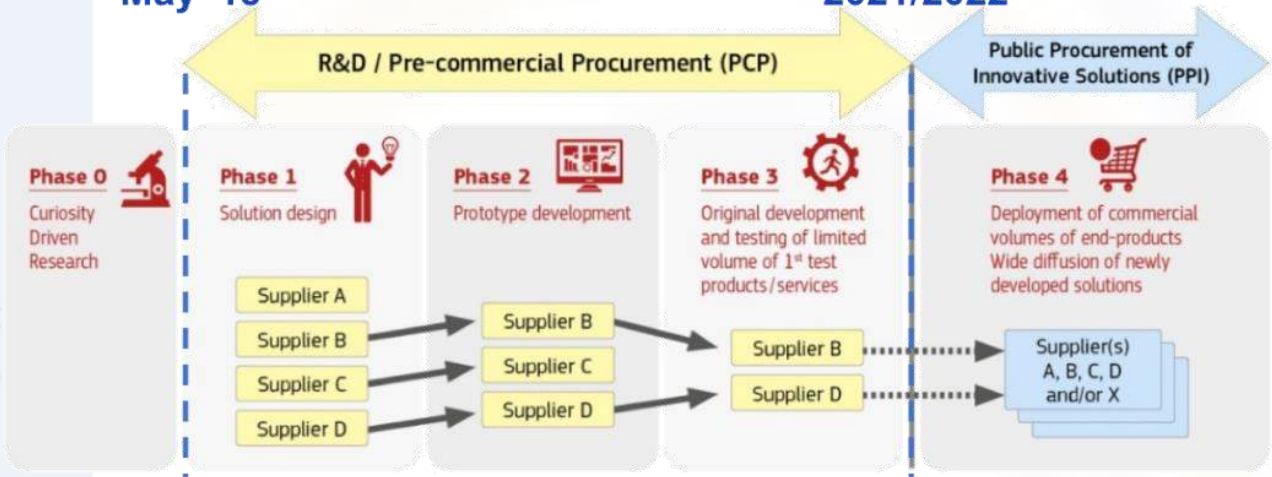
SpiceNet

The SpiceNet model proposes a reference architecture for harmonized pan-European PPDR mission critical broadband services



Roadmap

BroadWay will not just innovate. We will pave the way to put that innovation into live an sustainable use for the benefit of [illegible] Europe. We create a new and competitive eco-system for innovation within and beyond the BroadWay project.



BroadMap

BroadWay

BroadNet

Preparation

Pre-Commercial Procurement

An understanding of the need

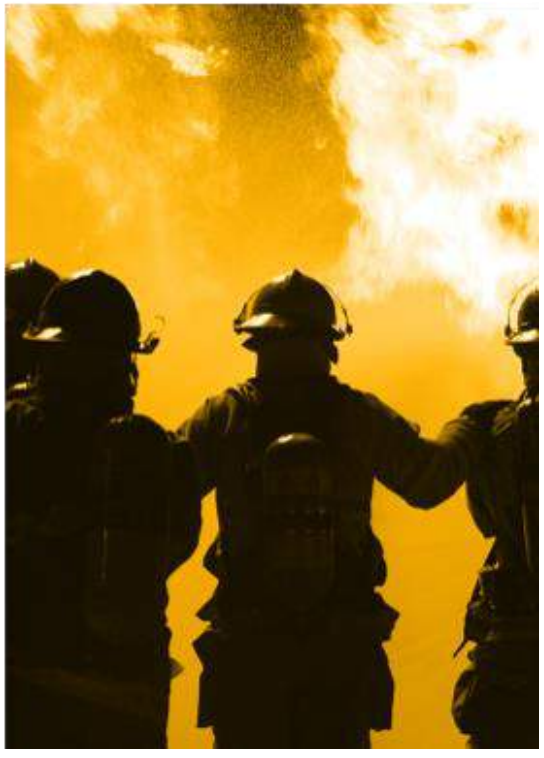
TRL8

- The BroadMap project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No **700380**.

- This BroadWay project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No **786912**, with an expected start date 1st May 2018

Thank you!

sanja.holen@psc-europe.eu



DARE net

Danube River Region Resilience Exchange network

THE DAREnet PROJECT

DEVELOPING A PRACTITIONER NETWORK TO STRENGTHEN FLOOD RESILIENCE IN THE DANUBE REGION

DARE net

Danube River Region Resilience Exchange network

Practitioner Network to Strengthen Flood Resilience in the Danube Region

The DAREnet Project

I4CM, Warsaw, September, 3rd 2018

The DAREnet project is funded by the European Union's Research and Innovation Programme H2020 under grant agreement n° 740750

The DAREnet Network

DARE net

A multi-disciplinary Community

Flood response

Medical and emergency services

Industrial innovators

Security research

DARE net

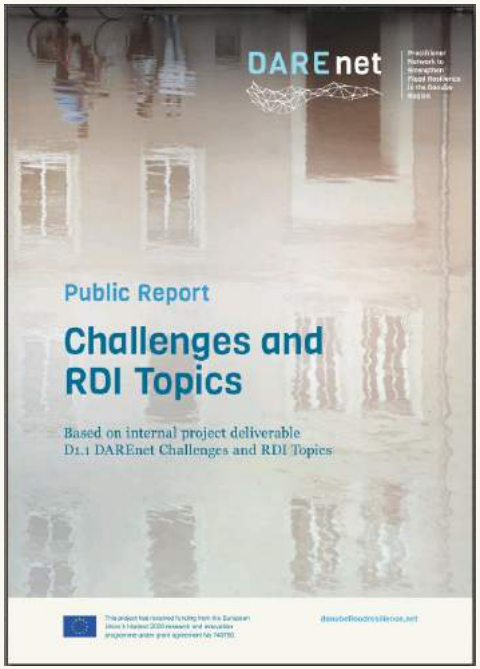
DARENet roadmapping cycle

DARENet

New Threats and Challenges

DARE net

Resulting RDI topics



The almost 100 identified RDI topics are grouped in the following 14 sub-groups:

- Resilience of Citizens
- Civil Protection Training
- Civil Protection Methods, Procedures and Technology
- Spontaneous Volunteers
- Communication
- General Data Management
- Academic Research
- Civil Protection Human Resources
- Critical Infrastructure
- Early Warning (Information)
- Legislative Administration
- Meteorology Services
- Situation Awareness
- Water Way Management

4.4 Spontaneous Volunteers

Concepts to involve spontaneous volunteers

Civilians willing to help → Involvement of spontaneous volunteers

Concepts are needed for an efficient and secure involvement of spontaneous volunteers, i.e. those that are not affiliated to any response organization, nor have completed civil protection trainings. One important step is creating structures to get in touch with those willing to help. Further, technical/organisational issues such as liabilities/insurances or protective equipment need to be considered as well.

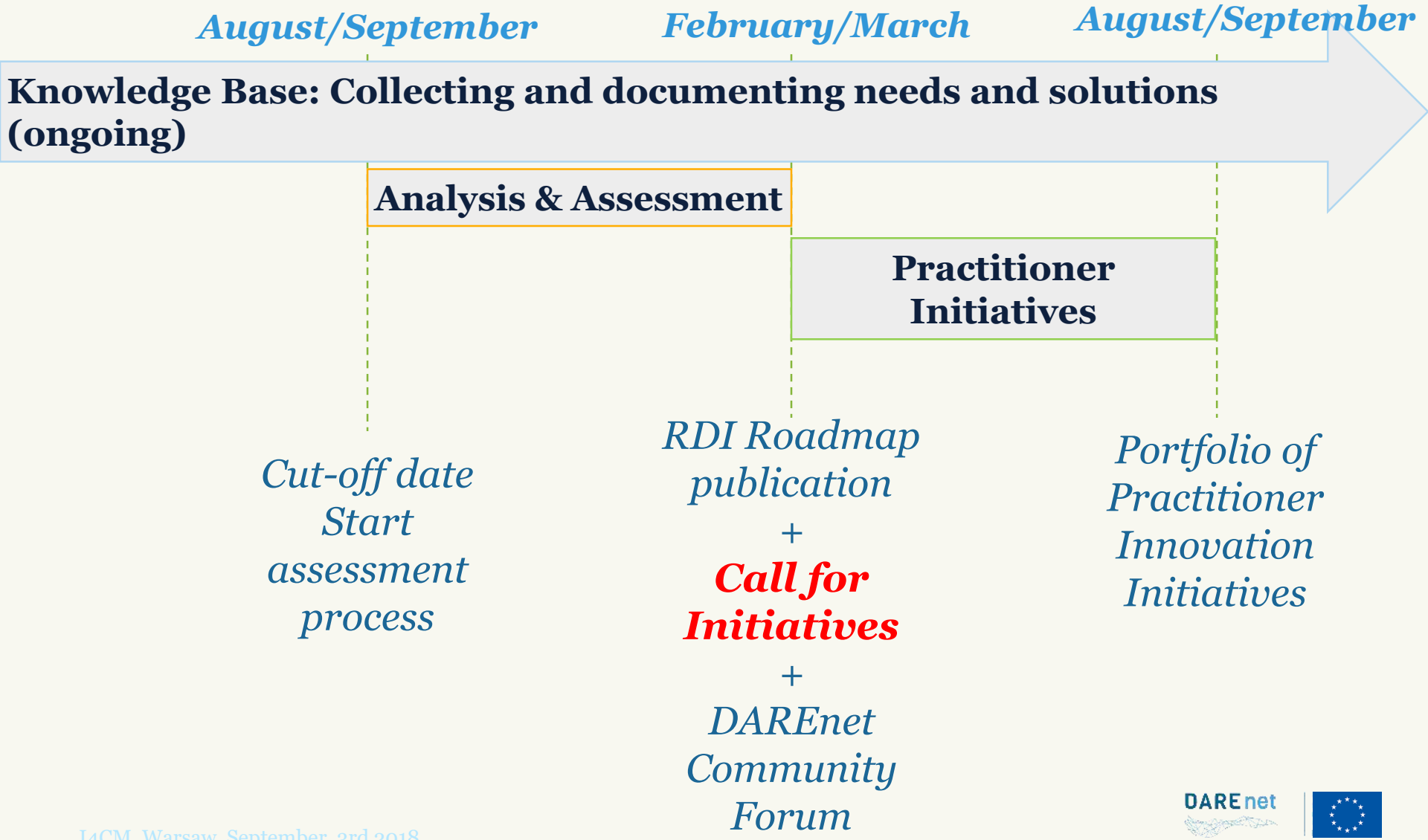
DARE net

Integration of knowledge

Innovation for and by Practitioners

DARE net

Let's innovate together
The DAREnet yearly cycle (2018→2022)



Contact

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Project.Darenet@thw.de

Management Team
Balazs Kern, Andreas Schweinberger
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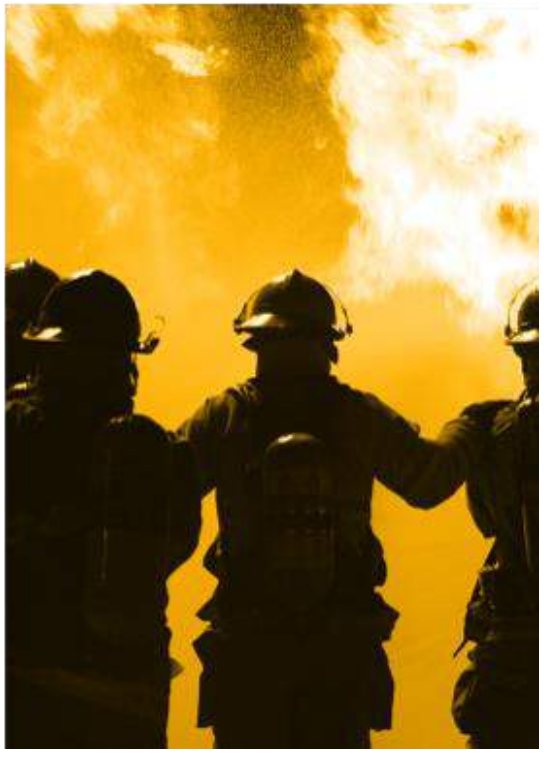
https://twitter.com/DARENet_EU

Source of photos: THW

I4CM, Warsaw, September, 3rd 2018

The DARENet project is funded by the European Union's Research and Innovation Programme H2020 under grant agreement n° 740750



BRIGAID

BRIDGING THE GAP FOR INNOVATIONS IN DISASTER RESILIENCE

THE BRIGAID PROJECT

BRIDGING THE GAP INNOVATION IN DISASTER RESILIENCE

BRIGAID

BRIDGING THE GAP FOR INNOVATIONS
IN DISASTER RESILIENCE

BRIGAID PROJECT PRESENTATION

THIRD INNOVATION FOR CRISIS MANAGEMENT (I4CM) EVENT
3RD- 4TH SEPTEMBER 2018, WARSAW, POLAND

BUREAU VERITAS

DISASTER RESILIENCE

Europe is particularly prone to these natural hazards
and evidence is now ever stronger that damages will increase.

Evaluations also show a huge potential to reduce these risks
through adaptation strategies.

Bridging the Gap in Innnovations in Disaster Resilience (BRIGAID)

BRIGAID is a 4-year project (2016 - 2020) under EU Horizon2020 aimed to effectively bridge the gap between innovators and end-users in resilience to floods, droughts and extreme weather.

BRIGAID

BRIGAID

BRIDGING THE GAP FOR INNOVATIONS IN DISASTER RESILIENCE

OUR AIM IS TO PROVIDE STRUCTURAL AND ONGOING SUPPORT FOR INNOVATION CLUSTERS:

offering solutions for climate adaptation by developing an innovative mix of methods and tools, to become a standard for climate adaptation innovations.

PROJECT PARTNERS

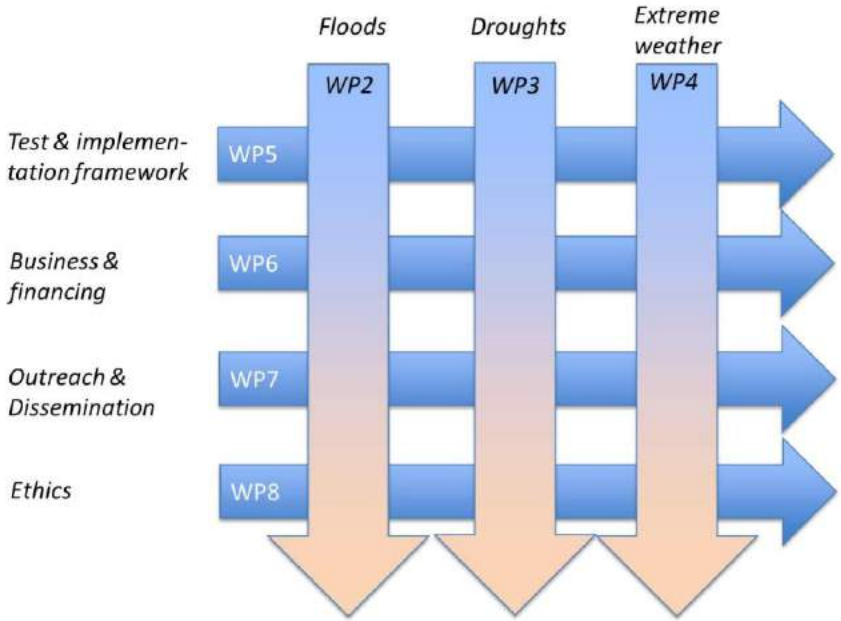
BRIGAID

BRIGAID'S APPROACH

BRIGAID clears the path to deliver innovations on floods, droughts and extreme weather to the market through the assessment and improvement of:

Technical + Social + Market Readiness

By advancing these three factors simultaneously, BRIGAID smoothens the development path, because technical, social and market requirements can be incorporated in the design, business model and market approach early on.



BRIGAID

BRIGAID'S ROADMAP

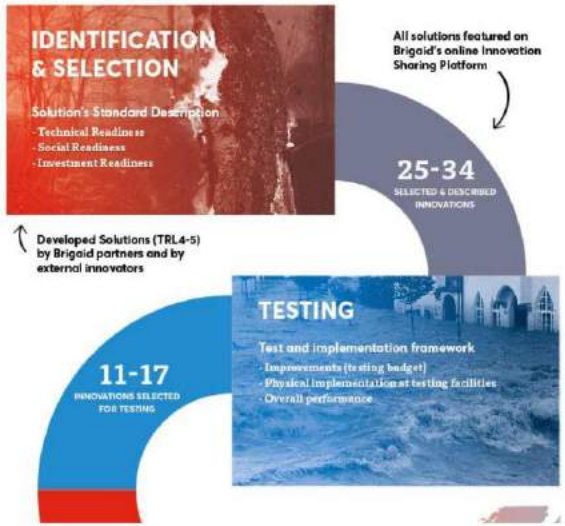
BRIGAID offers solutions for climate adaptation by developing an innovative mix of methods and tools, to become a standard for climate adaptation innovations.

1. **IDENTIFY** 75-100 existing innovations (trl 4-8) on floods, droughts and extreme weather.
2. **SELECT** the most promising 35-50 innovations for further testing, validation and demonstration.
3. **IMPROVE** these innovations.
4. **SELECT & SUPPORT** the 20-30 most promising innovations for market introduction.
5. **ESTABLISH** this process to make it an ongoing, structural activity beyond BRIGAID's life time.

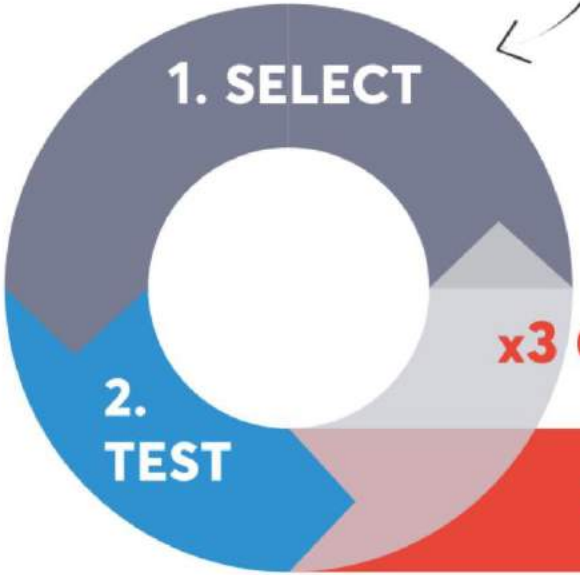
BRIGAID'S PLANNED CYCLES

2016 > 2017 > 2018

CYCLE'S PHASES



The 3 innovation cycles



All the innovations found not to be ready for market deployment will have the chance to be improved and tested again in the upcoming innovation cycles.

x3 Cycles: 2016, 2017 & 2018

3. BUSINESS DEVELOPMENT

BRIGAID

The Cycle phases

All solutions featured on Brigaid's online Innovation Sharing Platform

75 - 100
Described Innovations

BRIGAID

35 - 50

Selected for Testing

2nd TESTING

Test and implementation framework

- Improvements (testing budget)
- Physical implementation at testing facilities
- Overall performance

BRIGAID

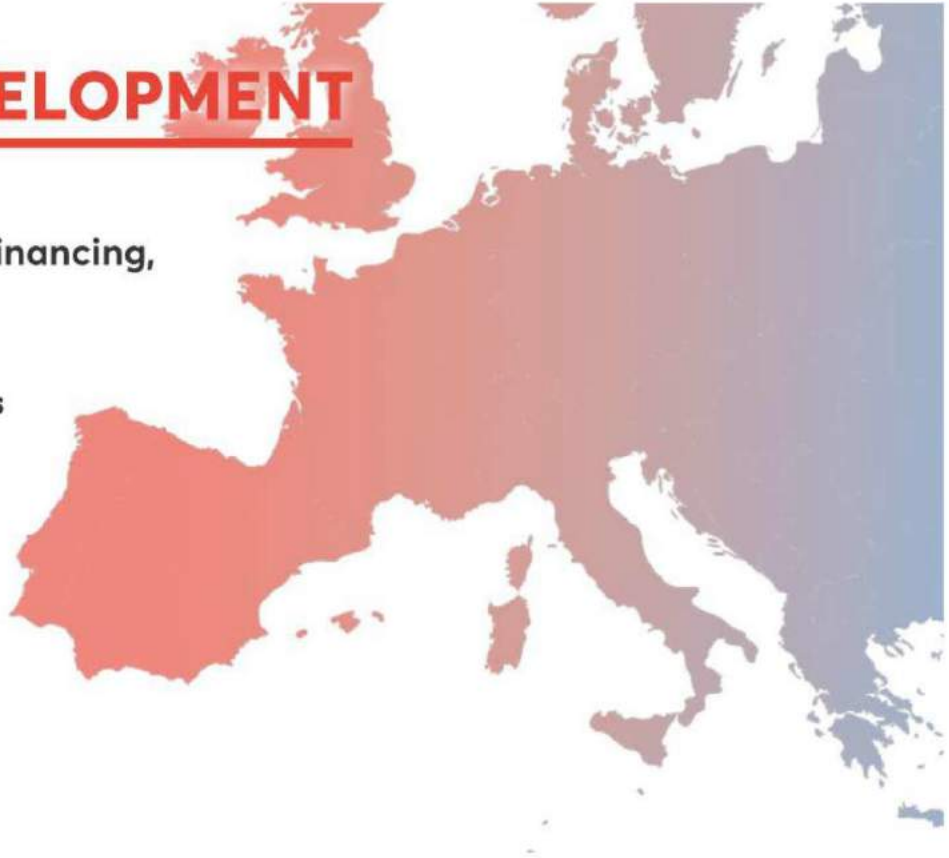
3rd BUSINESS DEVELOPMENT

TRL8-9

Market Analysis, Investment and Financing, Marketing and Dissemination

- Individual business models
- Funding and investment opportunities

20 - 30
Selected for Market Introduction



BRIGAID

LIVING LABS

- Flood Proof Holland
- Flood Flood Proof Romania
  - 3 test basins: 2.5m x 20m x 30m
  - 1 will allow for testing of river flood defenses (i.e., “flow past” barriers)
- Field test sites, e.g. Antwerp

BRIGAID

TIFF

A Testing and Implementation Framework (TIF) for Climate Adaptation Innovations.

BRIGAID

A Testing and Implementation Framework (TIF) for Climate Adaptation Innovations

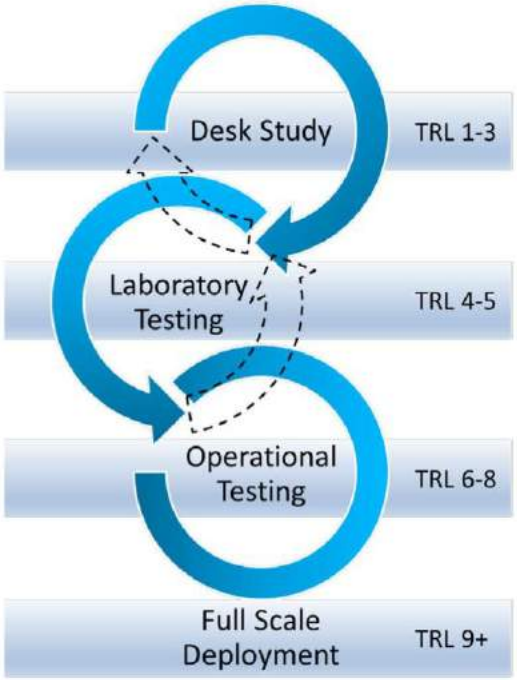
Final Version of the TIF

Deliverable 5.2

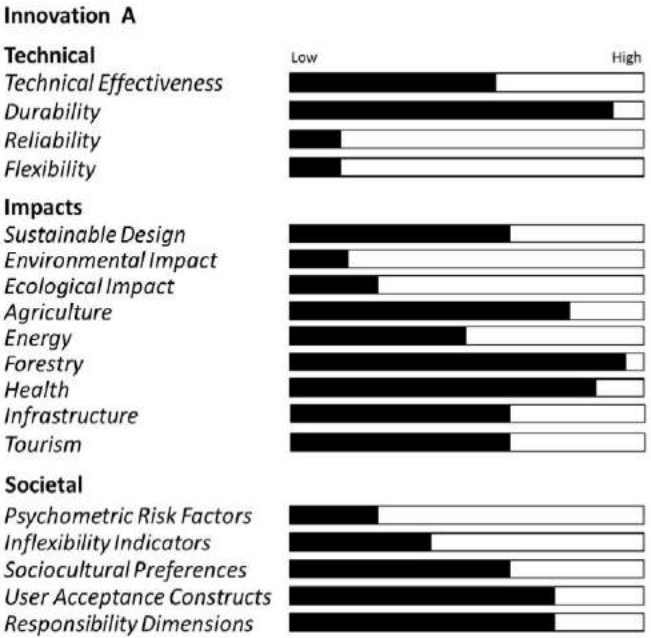
Grant Agreement No.	700699
Project Start Date	01-05-2016
Duration of the project	48 months
Deliverable Number	D5.2
Deliverable Leader	Delft University of Technology
Dissemination Level (PU, CO, CI)	PU
Status	3.0
Submission Date	30 October 2017
Author Institution Email	Antonia Sebastian Delft University of Technology a.g.sebastian@tudelft.nl

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 700699.The opinions expressed in this document reflect only the author's view and in no way reflect the European Commission's opinions. The European Commission is not responsible for any use that may be made of the information it contains.

TESTING FRAMEWORK



TECHNICAL, SOCIETAL & MARKET READINESS



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PPIF

The PPIF The Public-Private Investment and Financing Model (PPIF).

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The Business Development approach and PPIF methodology
D6.3

Grant Agreement No.	700699
Project Start Date	01-05-2016
Duration of the project	48 months
Deliverable Number	6.3
Deliverable Leader	The Funding Company
Dissemination Level (PU, CO, CI)	PU
Status	V1.0
Submission Date	30/10/2017
Author	Pieter van Os
Institution	The Funding Company
Email	p.vanos@thefundingcompany.nl

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PU=Public, CO=Confidential, only for members of the consortium (including the Commission Services), CI=Classified, as referred to in Commission Decision 2001/844/EC.

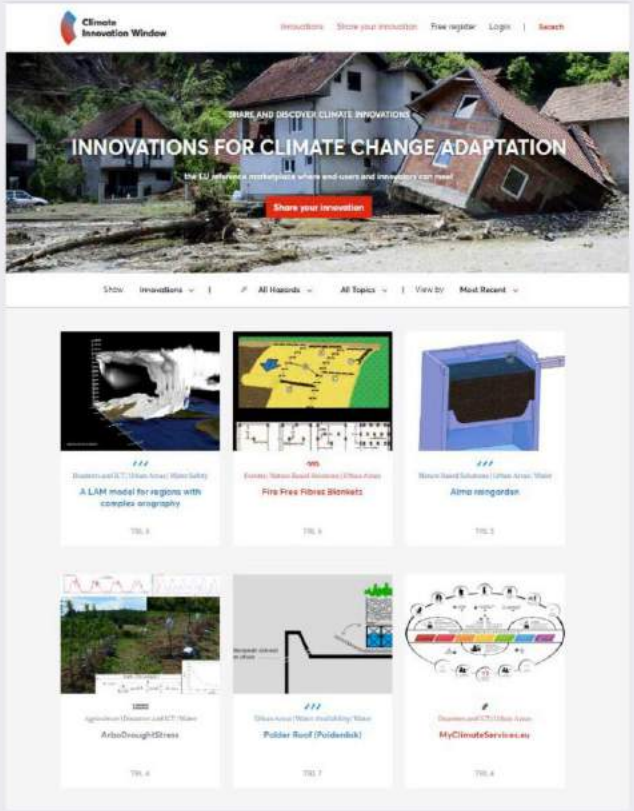
Market Analysis Framework +

https://maf.brigaid.eu

BRIGAID

The CLIMATE INNOVATION WINDOW

https://climateinnovationwindow.eu



BRIGAID

Polderroof

Multi-hazard Urban Areas

Heavy rainfall events are occurring more frequent and are becoming more intense due to climate change. In dense city areas with a large share of hard surfaces (roads, pathways and buildings) the rainwater creates peak loads on the sewage system, causing nuisance, damage and spilling of sewage in surface water. Municipalities want to limit the runoff of rainwater to the sewage system to reduce investments in the sewage system and damage caused due to excess rainwater.

Developed by
De Dakdokters BV

Polder Roof®
water management on rooftops

Justyna Wysocka-Golec |Sustainability Manager

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BRIGAID
BRIDGING THE GAP FOR INNOVATIONS IN DISASTER RESILIENCE

www.brigaid.eu

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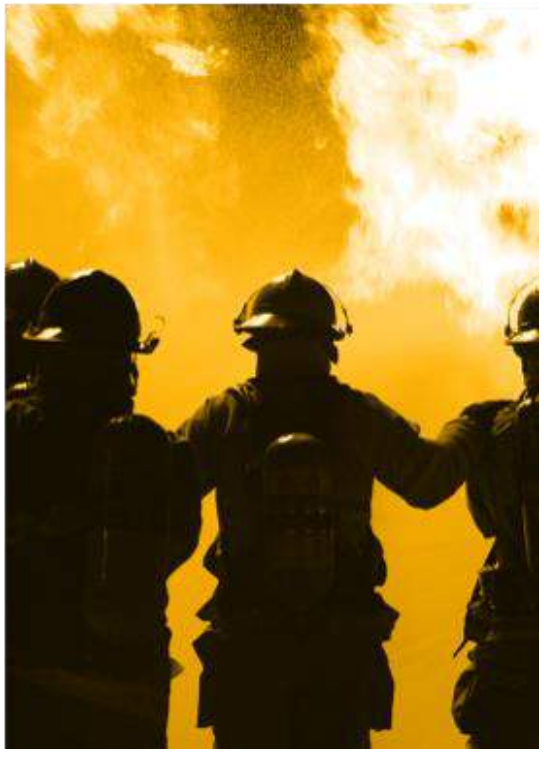


International Forum to Advance
FIRST RESPONDER INNOVATION

THE IFAFRI INITIATIVE

INTERNATIONAL FORUM TO ADVANCE FIRST RESPONDER INNOVATION

International Forum to Advance **FIRST RESPONDER INNOVATION**

DRIVER+

September 3, 2018

Stefan Tangen
Swedish Civil Contingences Agency

The Problem

There is no current mechanism to identify and discuss shared first responder capability gaps

The global first responder market is fragmented, which limits their buying power

These challenges lead to limited incentive for industry to invest in the first responder market

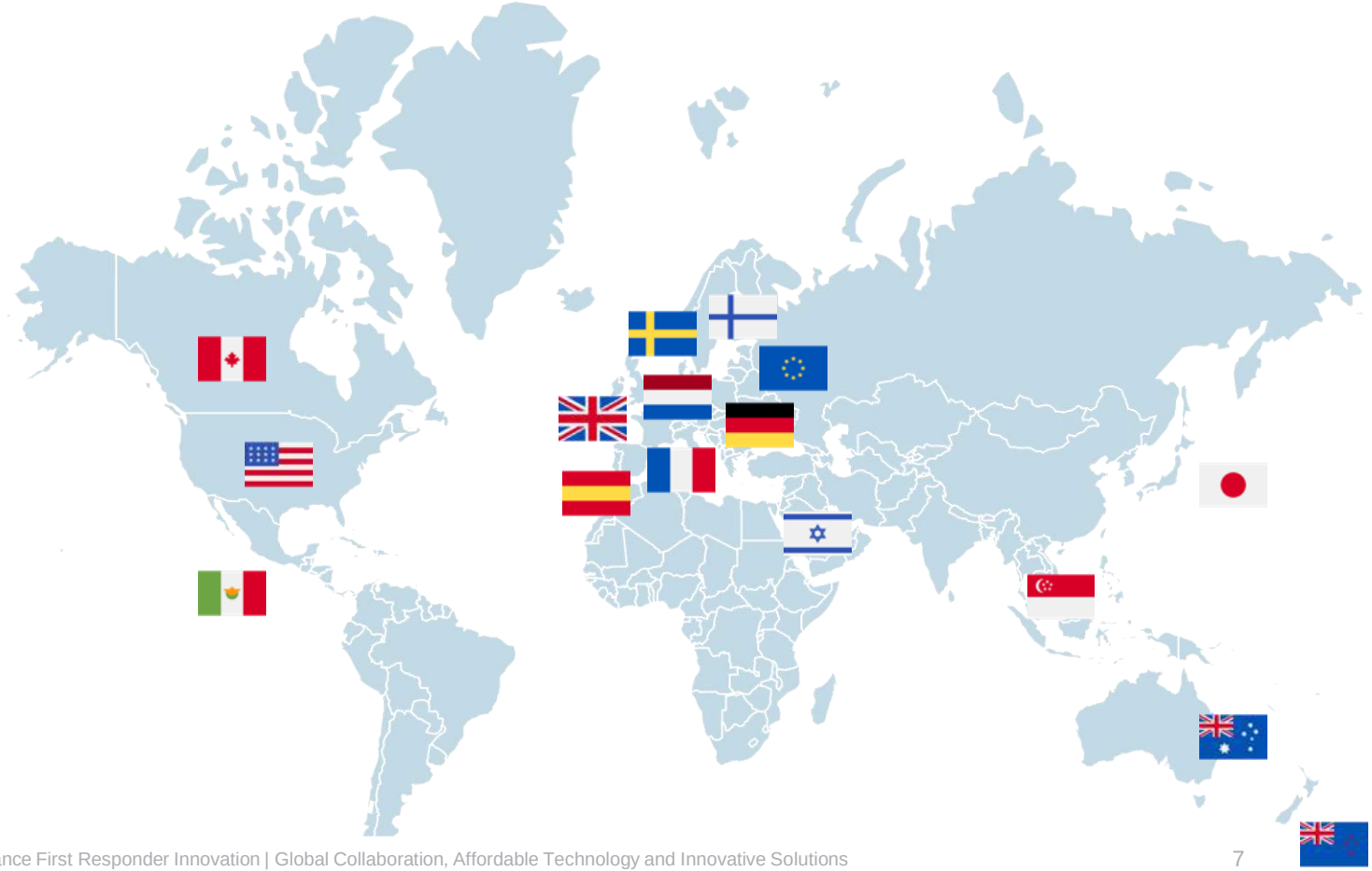
The International Forum to Advance First Responder Innovation (IFAFRI) –

IFAFRI is a global collaboration of government leaders focused on enhancing and expanding the development of affordable technology and innovative solutions to improve first responder…

Giving First Responders a Greater Voice

IFAFRI Participants

- Australia
- Canada
- European Commission**
- Finland
- France*
- Germany
- Israel
- Japan
- Mexico*
- Netherlands
- New Zealand
- Singapore
- Spain
- Sweden
- United Kingdom
- United States



* Participation pending

** IFAFRI Chair as of October 2018

IFAFRI Committees

Capability Gaps Committee

Chaired by: Sweden

Analyzes, organizes and prioritizes a list of *Common Global Capability Gaps* to help characterize current and future technology requirements for first responders

Research and Development (R&D) Committee

Chaired by: United Kingdom

Facilitates dissemination of information that is useful for industry and academia to initiate development on relevant solutions to established capability gaps

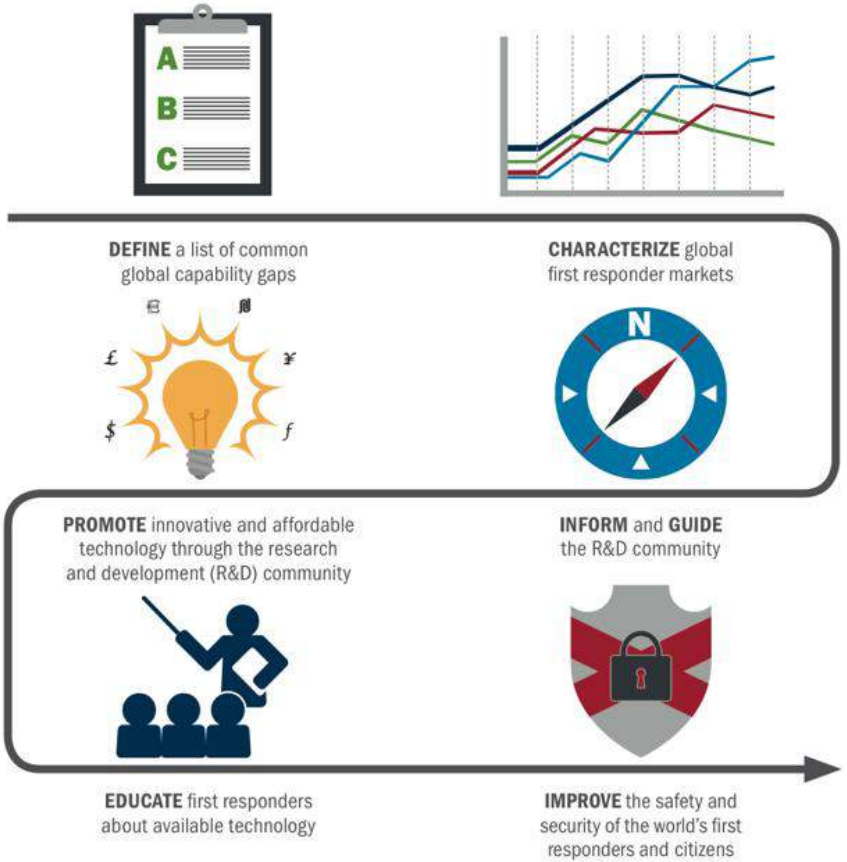
Stakeholder Engagement Committee

Chaired by: United States

Identifies, cultivates and maintains relationships with first responders, industry and academia that would advance the goals of IFAFRI on behalf of the global first responder community

The Solution

Influence the global market to develop affordable, innovative solutions for first responders



IFAFRI Common Global Capability Gaps - 2016

1. The ability to know the location of responders and their proximity to risks and hazards in real time
2. The ability to detect, monitor and analyze passive and active threats and hazards at incident scenes in real time
3. The ability to rapidly identify hazardous agents and contaminants
4. The ability to incorporate information from multiple and nontraditional sources (for example, crowdsourcing and social media) into incident command operations

- Statement of Objectives (SOO) contain requirements associated with specific IFAFRI *Common Global Capability Gaps*
- Requirements are presented in quantitative and qualitative terms

Example Requirements

Cost Requirements

- Shall be priced to affordably outfit entire workforce;
- Shall be designed for repeated use;
- Etc.

Power Source Requirements

- Shall operate for a minimum of <12> hours;
- Shall be able to replenish power supply using non-proprietary technology;
- Etc.

Giving the World's RESPONDERS a Greater Voice

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International Forum to Advance
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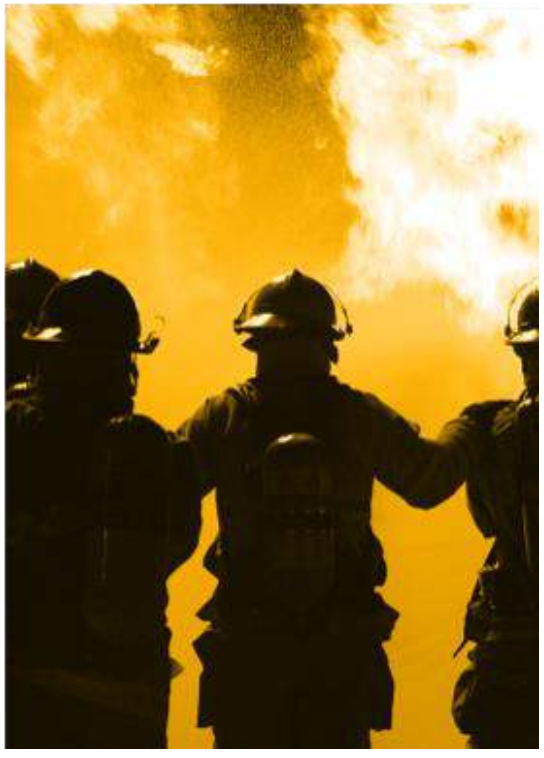


SAYSO

Standardisation of situational Awareness sYstems to Strengthen Operations in civil protection

THE SAYSO PROJECT

STANDARDISATION OF SITUATIONAL AWARENESS SYSTEMS TO STRENGTHEN OPERATIONS IN CIVIL PROTECTION

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 740872

SAYSO

Standardisation of situational Awareness sYstems to Strengthen Operations in civil protection

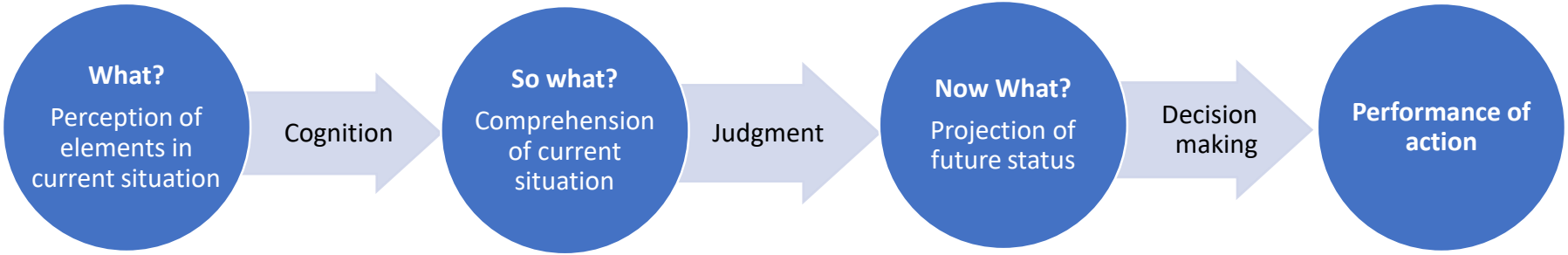
Christoph Lamers

State Fire Service Institute North Rhine Westphalia (IdF)

What's SAYSO about? (1/2)

- **Situational Awareness**:
  Ability to select, take in and understand large volumes of data quickly, to know what is going on
  - What? → Perception of elements in current situation (level 1)
  - So what? → Comprehension of current situation (level 2)
  - Now what? → Projection of future status (level 3)

→ Decision making and performance of action



What's SAYSO about? (2/2)

SAYSO
Standardisation of situational Awareness sYstems to Strengthen Operations in civil protection

- Crises require the **coordinated response** of multiple types of stakeholders
- SAYSO aims to pave the way for the development of innovative **Situational Awareness Systems** (multiple sensors, computer-based decision support) **for improved coordination of multi-stakeholder emergency responses and civil protection missions**
- Define **specifications** and corresponding **Reference Architecture** for beyond the State-of-the-Art Situational Awareness tools, which
  - **fulfil end-user requirements**
  - can be used **across different organisations, command levels and national borders**
- Provide information & tools that Public Procurement Authorities need to **launch pre-commercial procurements** required to develop SAYSO-compliant Situational Awareness Systems

SAYSO Consortium

The SAYSO consortium is led by THW (Federal Agency for Technical Relief, Germany) and involves collaboration between 12 partners across Europe (two-year project)

Practitioners

Technisches Hilfswerk

IdF Institut der Feuerwehr NRW

KEMEA

Public Health England

Protecting and improving the nation's health

Experts

ISCC International Security Competence Centre

CNet SVENSKA AB

Luxembourg Institute of Science and Technology LIST

Suppliers

EOS European Organisation for Security

Standardisation

Paderborn University

DIN

Ethics & Legal Issues

Stockholm University

Management & Dissemination

ARTTIC International Management Services

Approach for requirement collection

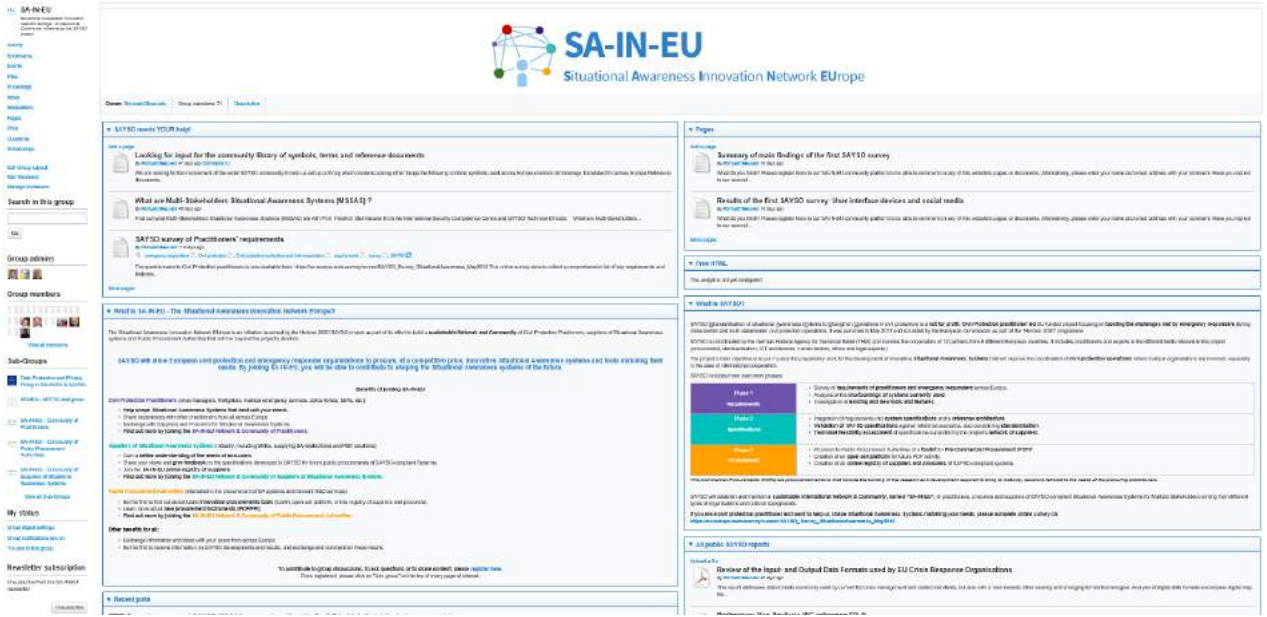
- Addressing practitioners of civil protection, emergency responders and crisis managers
- SAYSO workshops, meetings and questionnaire → data and findings
  - First Technical Workshop, Bad Neuenahr (Germany) – June 2017
  - First version of an online SAYSO survey – July 2017
  - Second Technical Workshop, Salzburg (Austria) – January 2018
  - First Public Workshop, Berlin (Germany) – March 2018
  - Meeting with Greek firefighters, Athens (Greece) – May 2018
  - **Second version of the online SAYSO survey: https://ec.europa.eu/eusurvey/runner/SAYSO_Survey_SituationalAwareness_May2018**

    Contribution until mid of September still possible!
- Further SAYSO workshop and meetings planned
  - Second Public Workshop, Brussels (Belgium) – 4 December 2018 – Save the date!

Situational **A**wareness **I**nnovation **N**etwork **EU**rope (**SA-IN-EU**)

Situational **A**wareness **I**nnovation **N**etwork **EU**rope (**SA-IN-EU**) launched by SAYSO to build a sustainable Network and Community of

- Civil Protection Practitioners
- Suppliers of Situational Awareness systems
- Public Procurement Authorities



Get involved ! Join the SA-IN-EU and contribute to shaping the Situational Awareness systems of the future

https://cmt.eurtd.com/groups/profile/20479/sayso

Find out more by joining:

SA-IN-EU Network & Community of Practitioners

SA-IN-EU Network & Community of Suppliers of SA Systems

SA-IN-EU Network & Community of Public Procurement Authorities

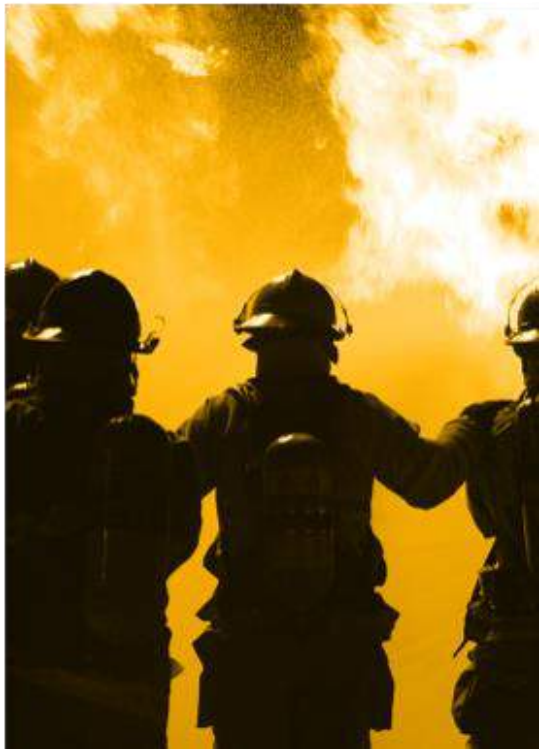
Contact us

For more information about SAYSO visit:www.sayso-project.eu
Twitter: https://twitter.com/Sayso_H2020

Contact us on the SAYSO online community platform:
cmt.eurtd.com/groups/profile/20479/sayso
or by email:
sayso_coordination@eurtd.com

Project start: May 2017 – Duration: 2 years
SAYSO has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 740872.

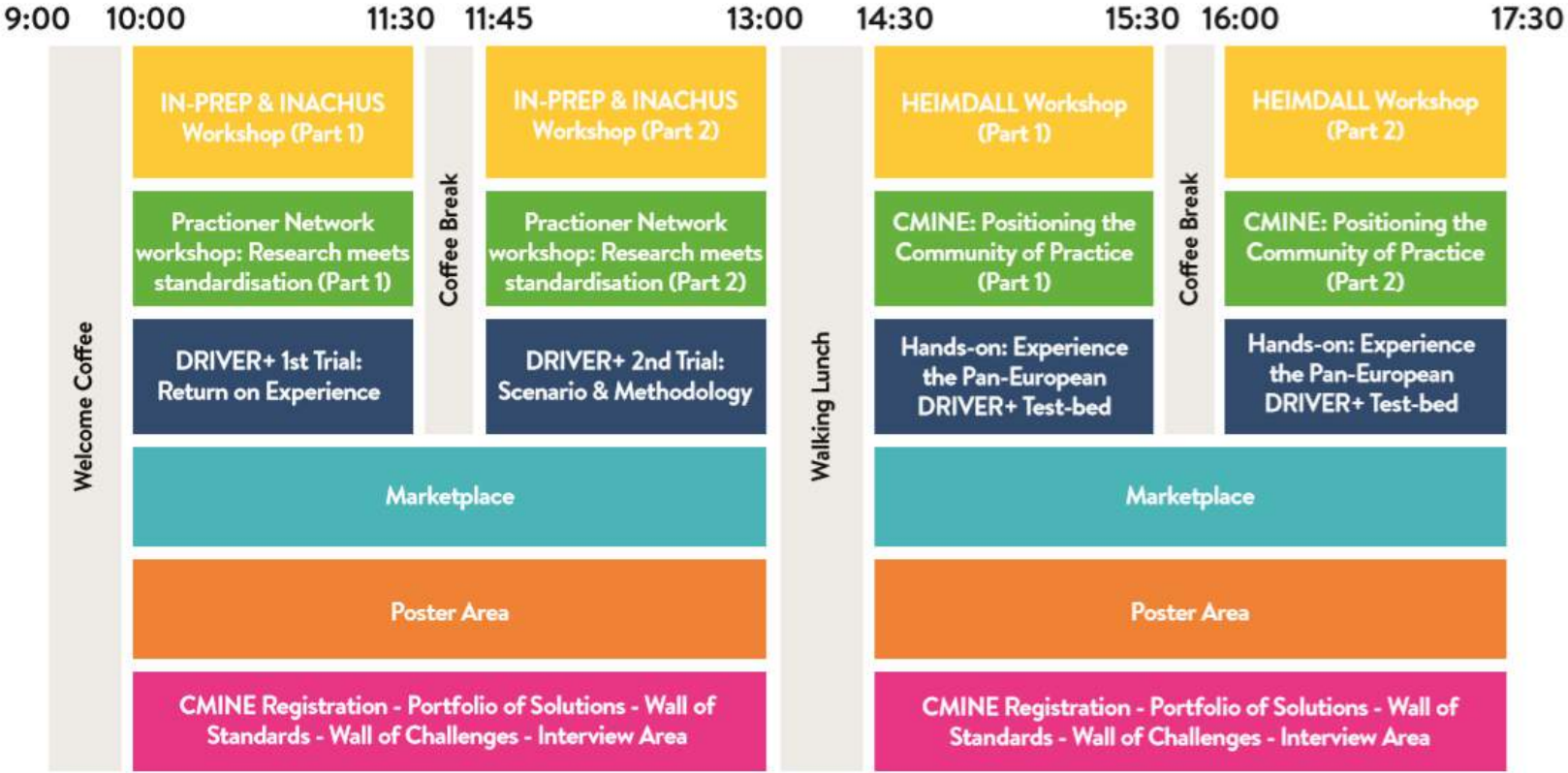
Photos: THW/Stefan Muehlmann, THW/Kai-Uwe Wärner



i4CM
Innovation for Crisis Management

DAY 1 - I4CM CONFERENCE

WRAP-UP



I4CM OFF
SEPTEMBER 4