



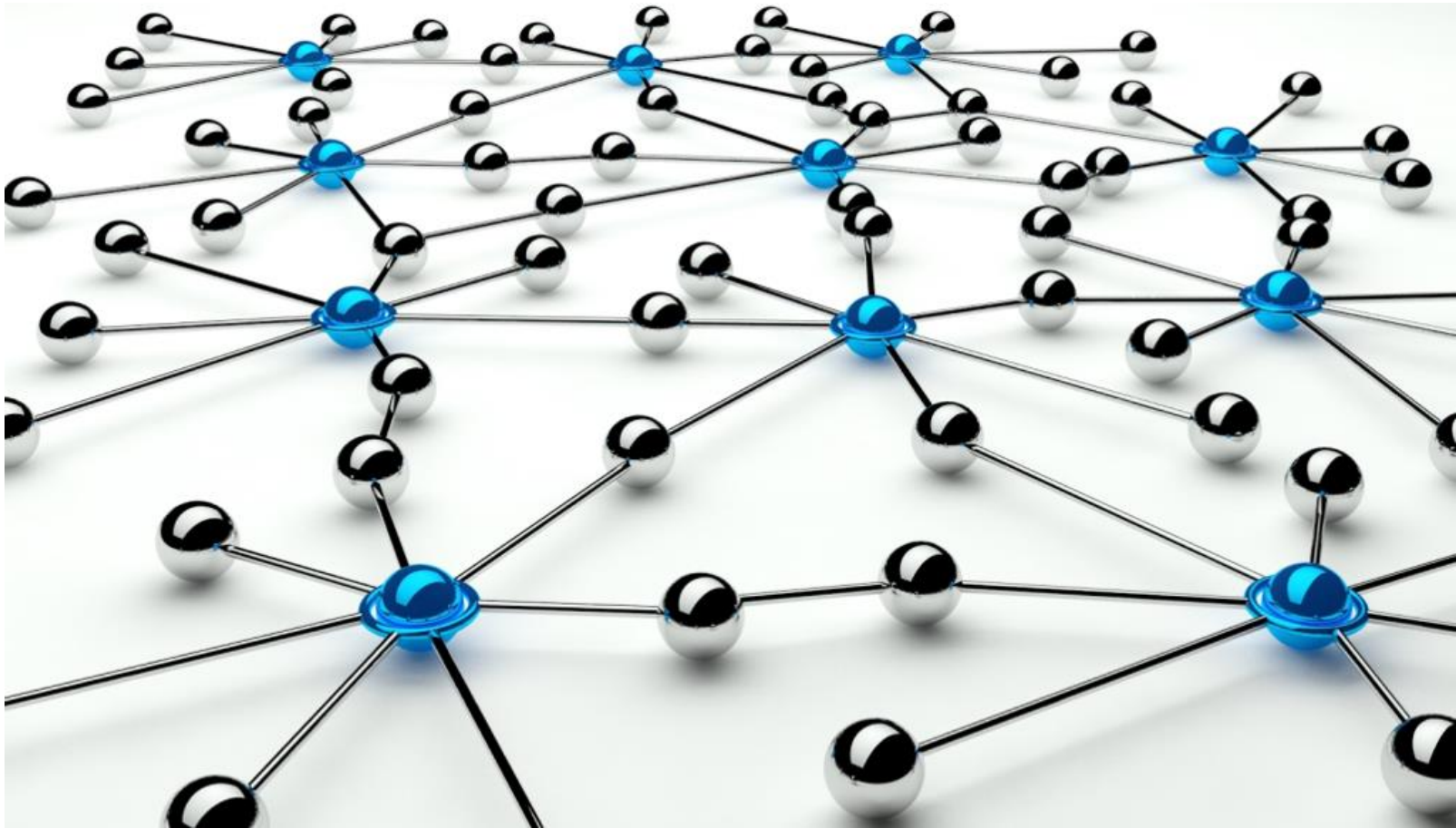
FIRE-IN

Fire and REscue Innovation Network



WP1: STATE OF THE ART AND CHALLENGES

FIRE-IN has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement N°740 575



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Partners brief presentation

1. **SAFE CLUSTER**, France (SAFE)
2. Ecole Nationale Supérieure des Officiers de Sapeurs-Pompiers, France (ENSOSP)
3. Italian Ministry of Interior, Department of Fire Corps, Public Rescue and Civil Defence, Italy (CNVVF)
4. Bundesanstalt Technisches Hilfswerk, Germany (THW)
5. Global Fire Monitoring Centre, Germany (GFMC)
6. INERIS DEVELOPMENT (INEDEV)
7. Fraunhofer INT, Germany (FhG-INT)
8. Fire Ecology and Management Foundation Pau Costa Alcubierre, Spain (PCF)
9. Catalonia Fire Service Rescue Agency, Spain (CFS)
10. Scientific and Research Centre for Fire Protection, Poland (CNBOP)
11. The Main School of Fire Services – Poland (SGSP)
12. Council of Baltic Sea States, Sweden (CBSS)
13. Civil Contingency Agency, Sweden (MSB)
14. KEMEA, Greece (KEMEA)
15. Czech Association of Fire Officer, Czech Republic (CAFO)
16. InnoTSD, France (INNO)



Project methodology



Practitioners' capability gaps

Project duration: 5 years.
Work is organized in 3 cycles,
with 5 workshops each cycle

Request for ideas

Common Capability Challenges

Screening of existing solutions



Capability gaps for crisis management



A. Search and Rescue (SAR) and emergency Medical Response

Cave Rescue

Air crash

Preplanning earthquake



B. Structures fires

High rise building

Road tunnel fires

Prevention larg commercial buildings



C. Landscape fires

LF crisis mitigation

LF vulnerabilit mitigation

WUI



D. Natural disasters

Flash Floods

Floods

Storms



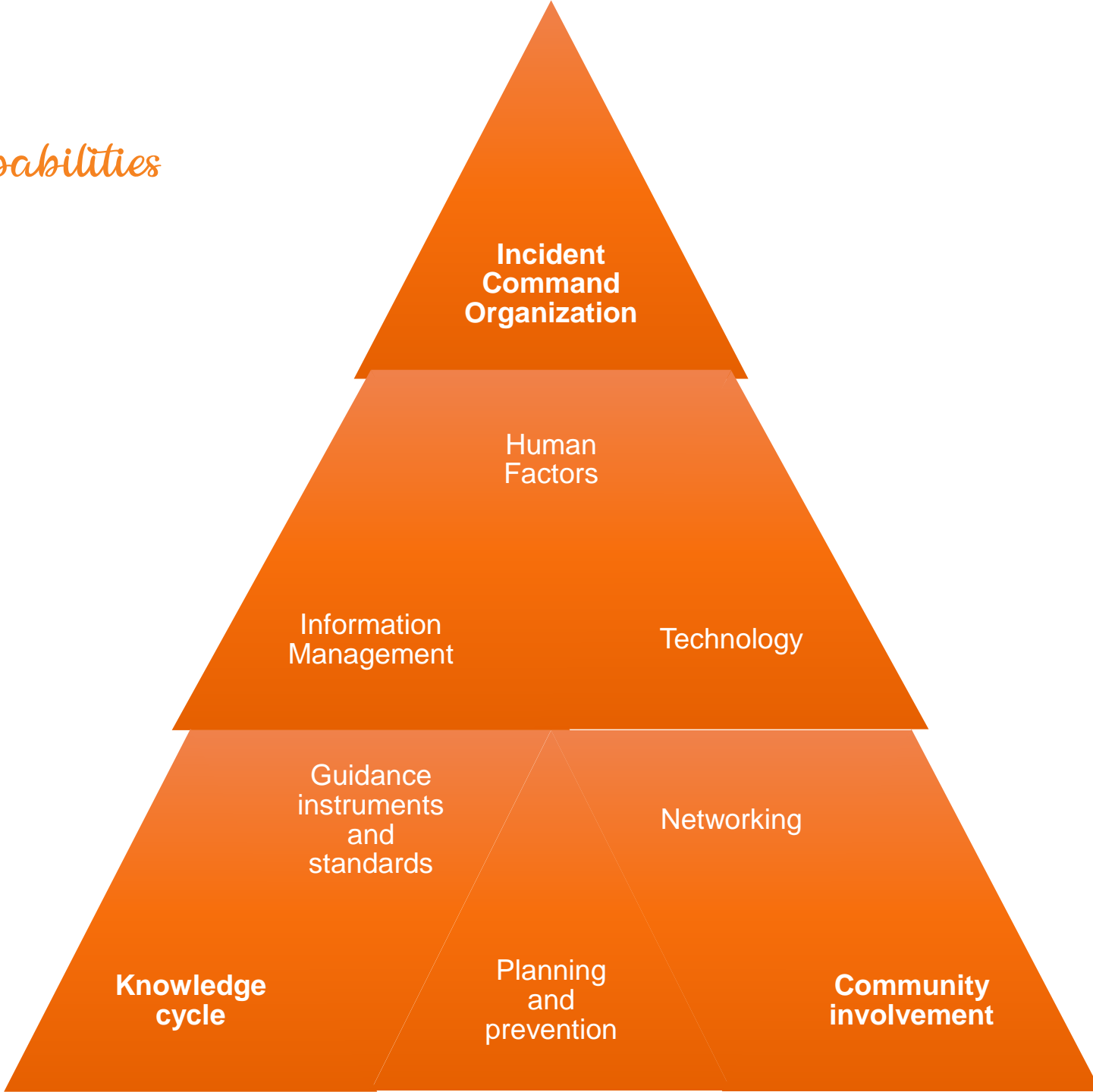
E. CBRNE

Accident in transport

Dirty bomb

Biological and Disease threats

Capabilities



High flow of
resources

High
impact, low
frequency

Multi-
leadership

High
uncertainty

Fast arrival
Sustain efforts
in time
Hostile
environment

Exceeds
firefighters
capacities
Very few
opportunities for
acquiring
expertise

Multiple
decision-makers
at different levels
and agencies
Complexity of
interest

More changes
than
communication
capacity
Dynamic
unexpected risks

**Maintain
operative
effort in
time**

**Developing
capabilities
not to
collapse in
fire services**

**Integrated
decision-
making at
different
levels**

**Maintaining
the initiative
and
credibility**

CCC	High flow of effort in hostile environment	Low frequency, high impact	Multiagency / Multileadership environment	High level of uncertainty
Incident Command Organization	Organize to sustain safe operations	Anticipate avoiding collapse of emergency system	Distributed decision-making	Strategies choosing safe, resilient scenarios.
Knowledge Cycle	Train specific roles and risks	Organizational learning on scenarios.	Shared understanding of emergency, and train interagency scenarios	Capacity building towards resilient societies
Community involvement	Self-protection to minimize responders' exposure	Actively involve citizens and communities	_____	Cultural changes in risk tolerance and resilience
Planning and prevention	Preplan time-efficient and safe response	Negotiate anticipated scenarios with stakeholders	Enhance synergies & Interoperability	Governance and integral risk management.
Guidance instruments & standards	Specific procedures and guides	Shared capabilities in front of pre-established scenarios	Harmonized and interagency framework	Build doctrine for Resilience in emergency services and society
Information management	Information cycle	Focus information to decision-making	Interagency information process	Build a shared understanding
Technology	To assess risk and minimize responders' engagement	To forecast and simulate complex scenarios	To support data sharing	To get a clear picture of the risk evolution

High flow of effort in hostile environment

Focus incident command on organizing to sustain safe operations

Train specific roles and risks

Community self-protection to minimize responders' exposure

Preplan time-efficient and safe response

Specific procedures and guides

Build information cycle

Technology to assess risk and minimize responders' engagement

Low frequency, high impact

Focus incident management on anticipating to avoid collapse of emergency system

Organizational learning on anticipated scenarios.

Actively involve citizens and communities

Negotiate solutions for anticipated scenarios with stakeholders

Shared capabilities in front of pre-established scenarios

Focus information to decision-making

Technology forecast and simulate complex scenarios

Multiagency / Multileadership environment

Distributed
decision-making

Shared
understanding of
emergency, and
train interagency
scenarios

—

Enhance synergies
& Interoperability in
planning and
prevention

Harmonized and
interagency
framework

Focus on
interagency
information sharing

Technology to
support data
sharing

High level of uncertainty

Strategies choosing safe, resilient scenarios.

Capacity building towards resilient societies

Cultural changes in risk tolerance and resilience

Governance and integral risk management.

Build doctrine for resilience in emergency services and society

Build a shared understanding

Technology to get a clear picture of the risk evolution

Some results on 2nd cycle

Table 2. Conceptual compilation of the results collected from the first and second cycle of workshops about Pre-planning.

I. HIGH FLOW OF RESPONDERS IN HOSTILE ENVIRONMENT	II. HIGH IMPACT, LOW FREQUENCY EMERGENCIES	III. MULTI-AGENCY/MULTI-LEADERSHIP ENVIRONMENT	IV. HIGH LEVEL OF UNCERTAINTY
<p>Pre-plan a time-efficient, safe response, minimizing responder's engagement</p>	<p>Negotiate solutions with stakeholders for anticipated scenarios</p>	<p>Pre-plan interoperability and enhance synergies</p>	<p>Focus on governance and integral risk management</p>
<p>1. Plan logistics & legal issues a. For specific scenarios. Consider help from outside the regional System. b. Package and pre-positioning modules of resources. c. Available minimum of logistical resources and supplies.</p> <p>2. Information – Awareness – Communication: Share information of local hostile scenarios, and its pre-planned response measures.</p> <p>3. Prevention & Preparedness: Passive prevention for safe access.</p> <p>4. People: Roles & Experts a. Key specific roles. b. Networks of experts that exchange knowledge, experience and best practices. c. Coordination between cross-border crews.</p>	<p>1. Plan scenarios: a. Based on: a₁. Historical events, statistics (baseline), modelling actual conditions and the human factor. a₂. On a range of probable scenarios, from a local to a regional level b. Including scenarios probable at long term, investing in knowledge and skills and being prepared by a flexible and modular approach. c. Integrate the different disciplines based on the scenarios and strategies.</p> <p>2. Information – Awareness – Communication: Regulate the expectations about the communications coming from the emergency systems.</p> <p>3. Prevention & Preparedness a. Change the focus towards active prevention, self-protection and risk mitigation. Facilitate firefighters' capacity. b. At a regional scale, harmonize P&P measures in cross-border/cross-regional areas.</p> <p>4. People: Communities a. Involve actors and agencies for their capacity to solve gaps. b. Exchange experts in large events in other places (countries?). c. Build communities of practice of experts.</p>	<p>1. Create a transboundary framework a. Legal framework for cross-border help, emergency support, victim transportation, recognition of qualifications... b. Pre-plan should be known by all agencies and stakeholders</p> <p>2. Prevention & Preparedness: Emergency preparedness should be dealt with international / European perspectives.</p> <p>3. People: Synergies a. Enhance synergies from regional, to national and international level. Share specialists and experts. b. Plan strategic ownership. c. Boost the exchange of aid-teams to train themselves.</p>	<p>1. Create a flexible and fast framework a. Quick adaptation to changes through situation assessment and decision-making structures. b. Focus: small window of opportunities to change policies and governance processes.</p> <p>2. Information – Awareness – Communication: a. Communication management for specific scenarios. Include post-accident procedures. b. Promote the growth of sustainable, risk-decreasing activities</p> <p>3. People: Resilience a. Involve key stakeholders in action-based strategies, considering integral risk management opportunities. Identify strategic ownership. b. Encourage own skills and community skills fostering habits focused on the adaptation to risk</p>

Some results on 2nd cycle



I. HIGH FLOW OF RESPONDERS IN HOSTILE ENVIRONMENT	II. HIGH IMPACT, LOW FREQUENCY EMERGENCIES	III. MULTI-AGENCY/MULTI-LEADERSHIP ENVIRONMENT	IV. HIGH LEVEL OF UNCERTAINTY
Pre-plan a time-efficient, safe response, minimizing responder's engagement	Negotiate solutions with stakeholders for anticipated scenarios	Pre-plan interoperability and enhance synergies	Focus on governance and integral risk management
	<p>5. Negotiate/Agree:</p> <ul style="list-style-type: none"> a. Responsibilities of organizations involved in the anticipated scenarios. b. Involve society in choosing between alternative strategical scenarios and negotiate solutions. c. Negotiate the accepted level of risk on a range of probable scenarios considered in the pre-planning (This phrase comes from II.1.b). <p>6. Best practices & Lessons Learnt: Context-specific guidelines on best practices in planning, preparedness and prevention at a national scale.</p> <p>7. Pre-planning vs response: adapt the pre-plans to usable tools at the the emergency.</p>	<p>4. Negotiate/Agree</p> <ul style="list-style-type: none"> a. Chain of command, specifying roles and capabilities. b. Establish agreements and structures for cross-collaboration between entities (private and public): <ul style="list-style-type: none"> ▪ with specific key intelligence, ▪ with those who have power of decisions ▪ with those who have influence on the management <p>5. Best practices & Lessons Learnt: European interagency round tables.</p>	<p>scenarios and on the robustness in front of the risk.</p> <ul style="list-style-type: none"> c. Improve the resilience among responders to maintain their response capacity. <p>4. Pre-planning vs response:</p> <ul style="list-style-type: none"> a. Reduce bureaucracy and other inhibitors. b. Pre-plans: Flexible, focused on indicators of key changes and providing tools for alternatives and contingency plans.

Thanks for your attention!!!



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Challenges

- Which are the areas in which there are more difficulties of knowledge?
- Adjustment of the methodology and theme of the third cycle of workshops
- How can the E-FIRE-IN Platform help to provide knowledge in those areas in which gaps have been detected?

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THANKS!

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