Demonstration for security innovation

DEMASST deliverable D6.3

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“The issue of turning demonstration into innovation is top on DEMASST’s agenda.”

D6.3 describes methods that contribute to reaching this goal.

WP6.1 Demonstration programme methodology

- “Develop methodology for demonstration programmes in mass transportation security and related areas.”
- “Report on broader aspects of demonstrators for security innovation.”
  - Not only mass transportation, not only demo projects. (also the long perspective beyond a single DP)
  - “a generic version of the Concept Development and Experimentation (CD&E) methodology”
- “methodology used to develop the roadmap”

Knowledge platforms for security innovation

- What happens when the DP is over?
  - Long term need for consolidating DP results, maintaining supporting methods, models, tools.
- Build upon existing stakeholder organisations and facilities:
  - Network owners/operators/contractors, regulatory agencies, consultants, security equipment manufacturers, system integrators, first responders, RTOs, universities…
- Suitable organisational form will be different for the various security arenas (mass transport, supply chain, border security etc)

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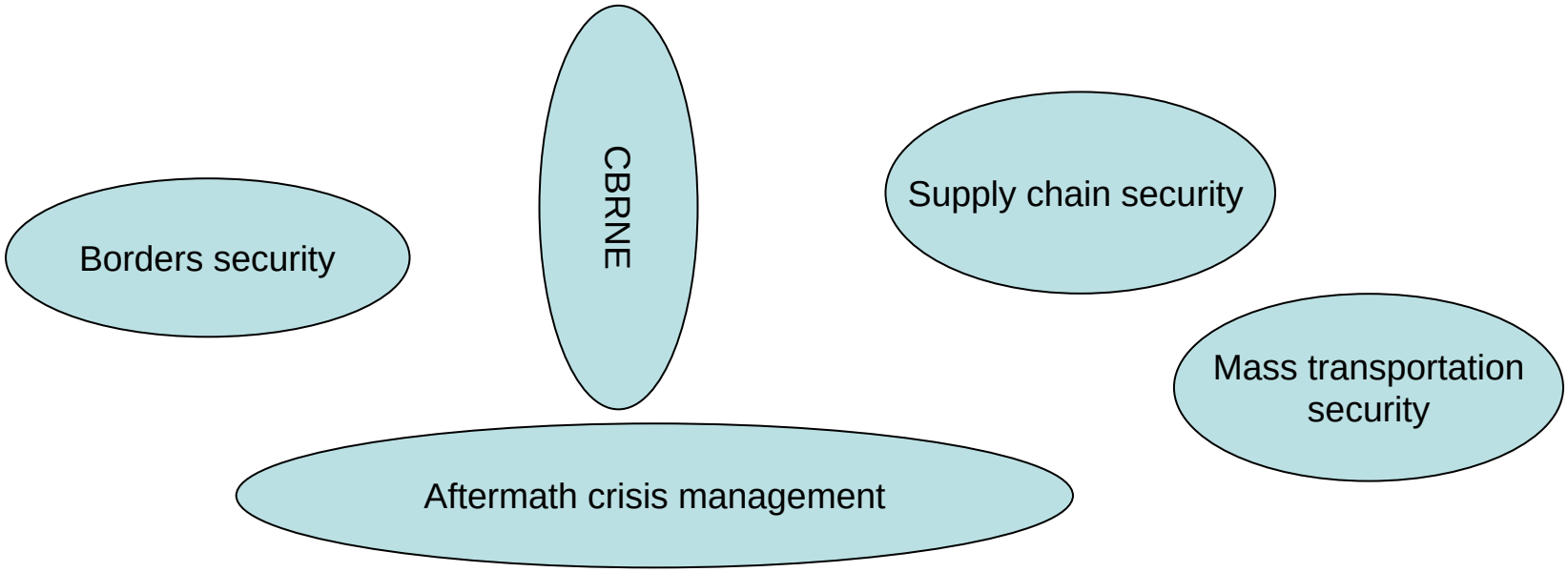
Character of DP areas -
Implications for organisational form of KP



Homogenuous, national agencies, (relatively) few targets, low background

- Stakeholder mix
- Operational goals
- Physical environment
- Role of general public
- …

Fragmented, commercial and public service open,

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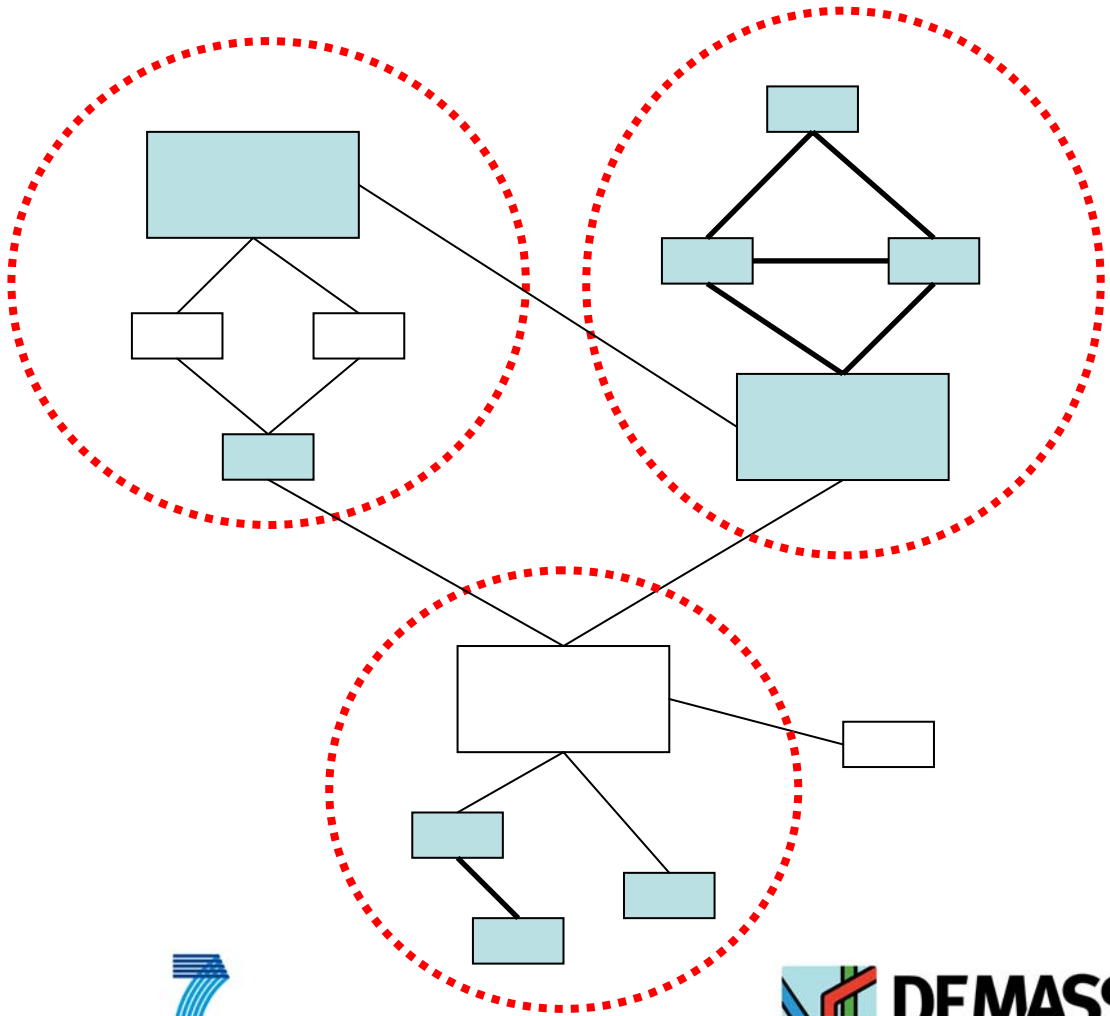
Design for SoS D&E

- Start from large scale SoS configuration.
- Find clusters that can be experimented on separately.
- Decide what type of experiment to use for each cluster.
- In a D&E campaign, experimentation can proceed from small clusters to larger and larger combinations.



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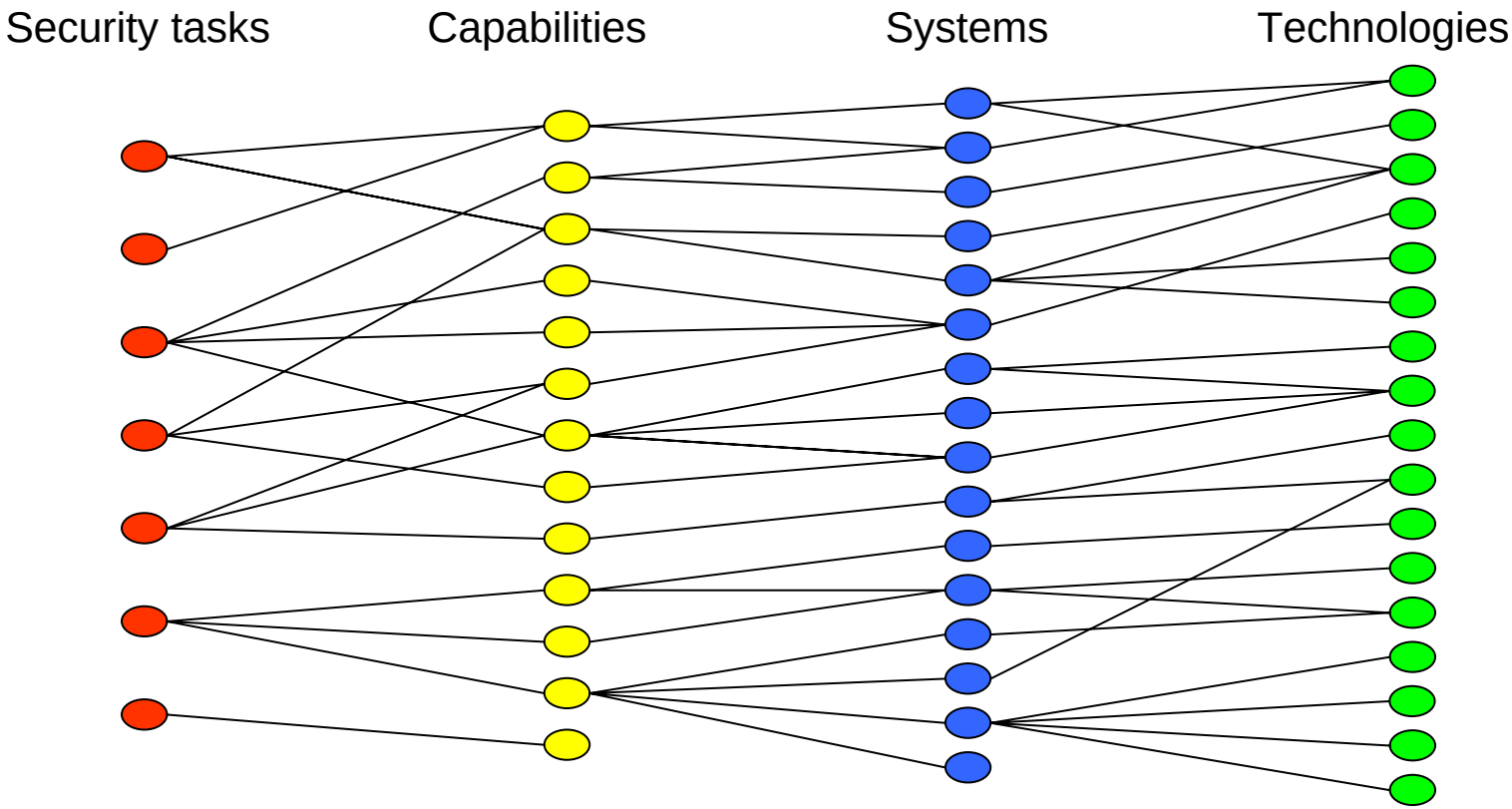
Evaluation of SoS D&E

- Much more than just “did it work?”
- Substantial efforts required (X %)
- Early start: evaluation planning
  - Metrics, data sources, collection plans, instrumentation, coordination, analysis
  - Otherwise, it’s just forensics!
- Evaluating effects on SoS level is always hard
  - Even harder when combining results from separate component system experiments. Total effects must be judged by evaluation models.

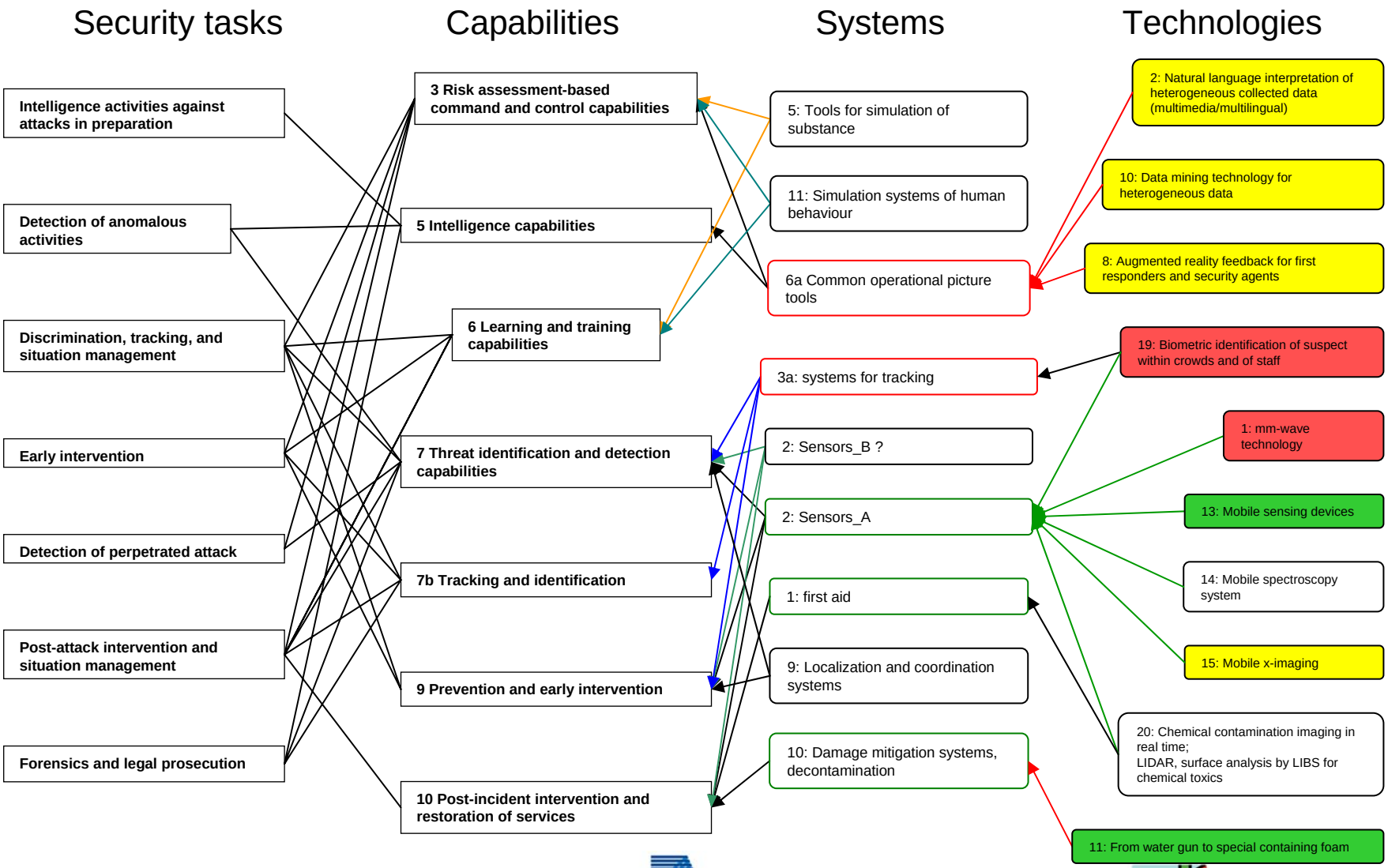
Roadmaps

- A way to produce and present a strategic plan
  - Outlining options and a recommended route towards a goal, staging possible activities over time.
  - Widely used to describe technological evolution, but obviously applicable also in other settings
- The map metaphor can be taken quite literally
  - Gives an overview, shows places to go and how to get there
- Multi-level presentation on a timeline
  - Typically markets, products, technologies,
  - Our approach for security: tasks , capabilities, systems, technologies

System-of-systems map



System-of-systems map for MTS



The figure has been simplified and does not contain all identified elements

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Roadmapping the system of systems dimension (SoS)

- Much of the material can be gained on individual technologies
- Effectiveness of interconnected systems of systems depends also on the means of integration
- As a consequence, various integration methods should be identified and demonstrated, in addition to individual systems.
- Thus, capability gaps due to integration issues must be identified and placed in an Demonstration roadmap.
- Corresponding tools, techniques and methods must be included in the roadmap.