



ERNCIP Academic Committee's

proposal on

'Science-based training curriculum in Critical Infrastructure Protection and Resilience'

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ERNCIP's Gap Analysis...

There's a lack of multidisciplinary and harmonized EU training and education in the field of Critical Infrastructure Protection and Resilience.



Drivers

Recommendation from the 2nd ERNCIP Operator Workshop: “ERNCIP to facilitate the creation of such an EU-wide harmonised training scheme for CI operator staff. The training scheme should include training on realistic threat scenarios and vulnerabilities of CIs, meaning that an applied, hands-on approach should be favoured”.

ERNCIP Academic Committee highlighted the need of University and Training Centres to acquire more Operators’ need for preparing future CIPR professionals (from under/postgraduate education to training).



Links to existing policy

COMMISSION STAFF WORKING DOCUMENT SWD(2013) 318 final

“on a new approach to the European Programme for Critical Infrastructure Protection”

‘II. Preparedness: We will then support the development of preparedness strategies based around contingency planning, stress tests, awareness raising, training, joint courses, exercises and staff exchange’.

CBRNE Action Plan ‘Action4 - goal 4: improve training’:

‘Action H.55 [...] The Member States should develop and conduct, on the basis of risk assessment, regular training at local, regional, and national level.



Why a training curriculum by ERNCIP?

Deep understanding of both **technical issues** and **EU legislative** framework of **critical infrastructures**

Close links with **Operators, Policy Makers & Academia**

Gathering of **needs and gaps** for a wide range of **security issues** related to CIP through the **facilitation of the Thematic Groups.**

Help **operators** and **private sector** towards understanding and implementing **policies** in CIP in order to improve security of critical infrastructures

Capable of providing a **European approach** and focus on **cross-border** CIP issues



TRAINING

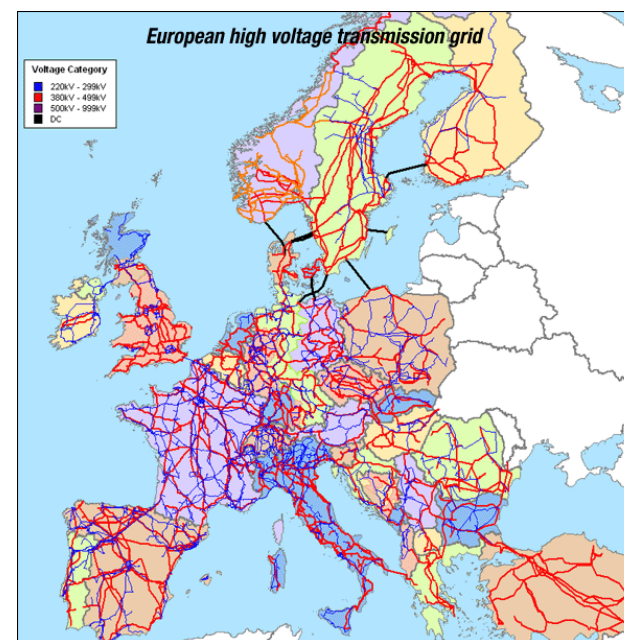
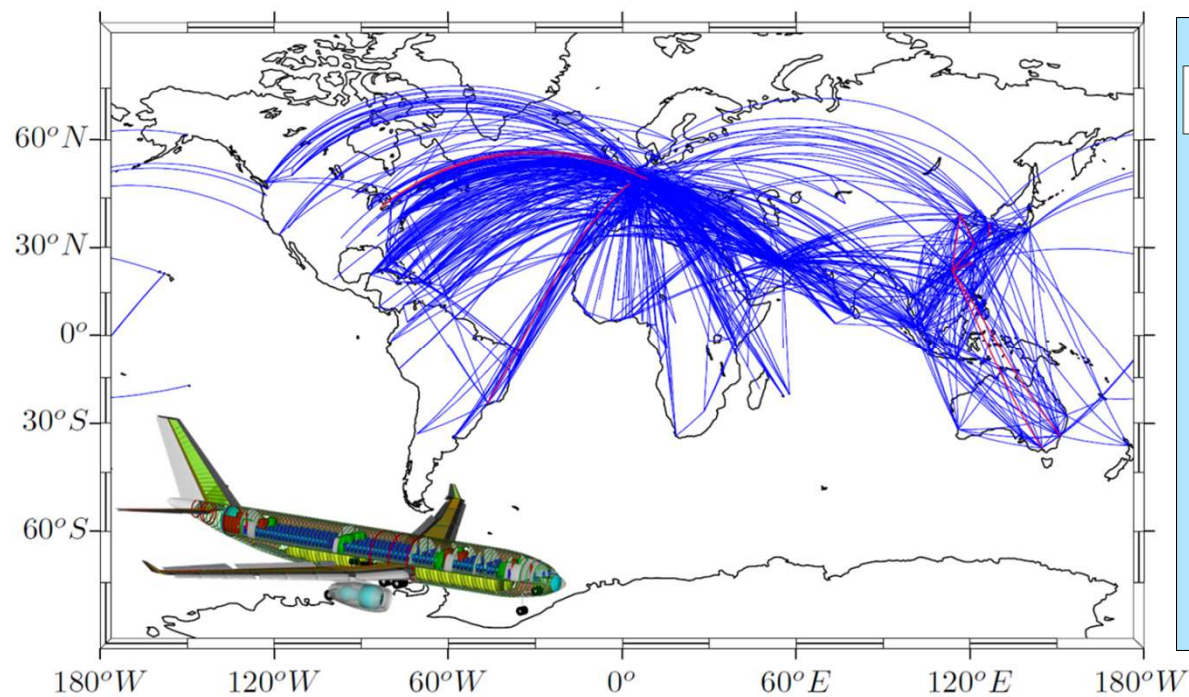


The Proposal

...development of **training** for professionals involved in the **safe** and **secure** design, **implementation, operation, management** and **regulation** of critical infrastructures, for their protection and resilience against technical failures, man-made attacks and natural damages.

The Object

Critical infrastructures (CIs)



The Motivation

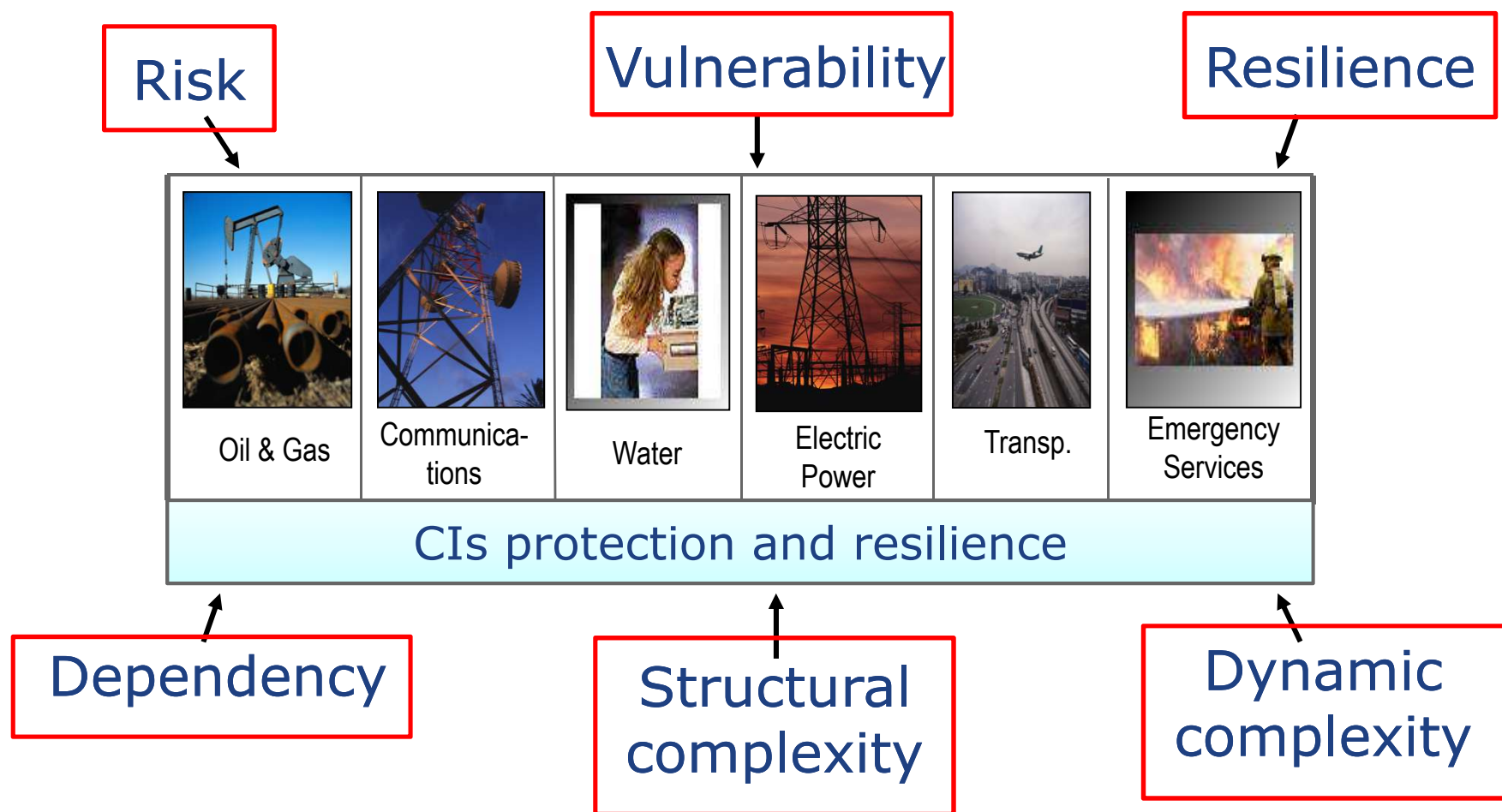
Why a training program in CIPR?

- Critical Infrastructures are complex;
- Different time scales (planning/design vs. emergency reaction);
- Spatial scales (including trans-nationality and system-of-systems);
- Room for improvement of skills and culture;
- Lack of 'big picture';
- Decision making might be very difficult.



European
Commission

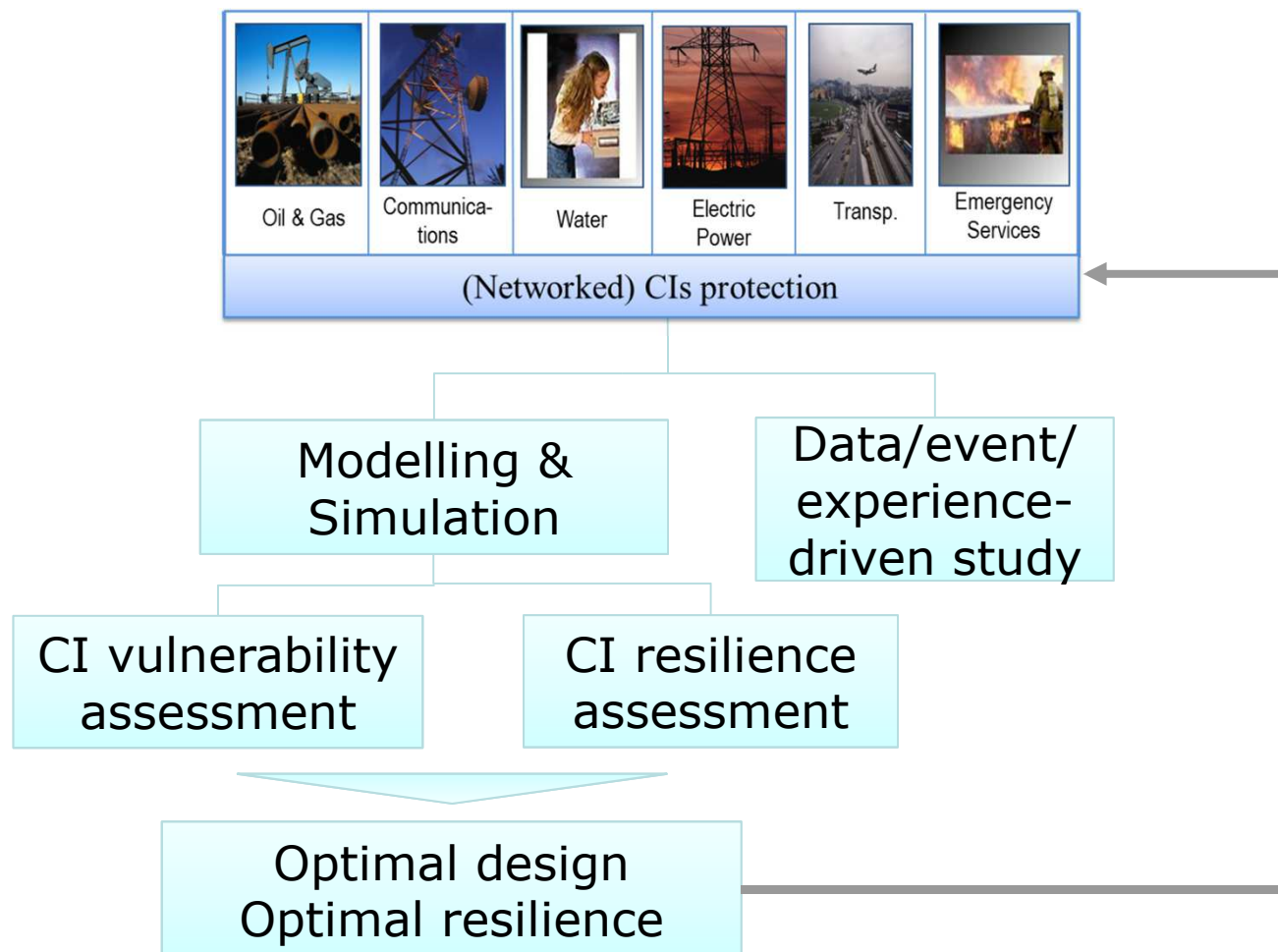
The technical challenges





European
Commission

The technical tasks





The target audience: Who

Mid-career managers:

- professionals have already background knowledge and practice upon which they base their work;
- training should provide them with new knowledge and understanding helpful for improving their performance;
- the training programs should inject research-based knowledge combined with experience-based best practices to provide the opportunity for scientific support to be transformed into improved work practice.

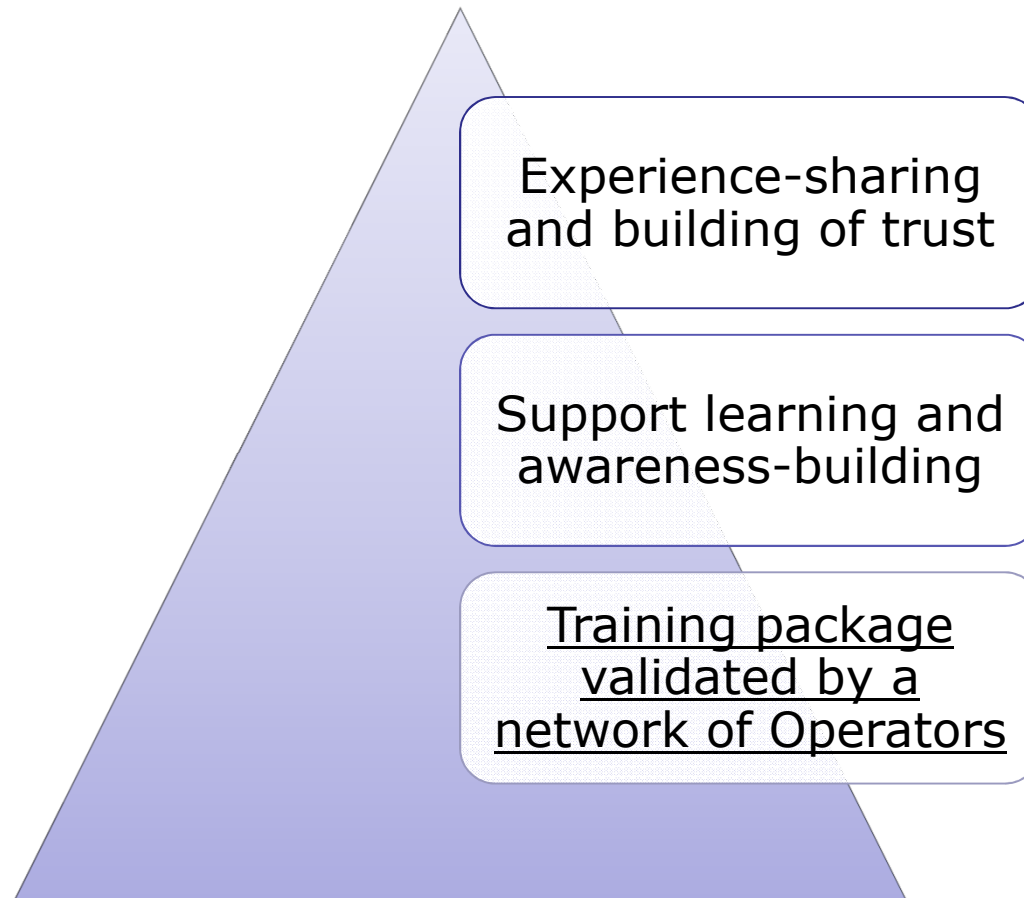


The objectives

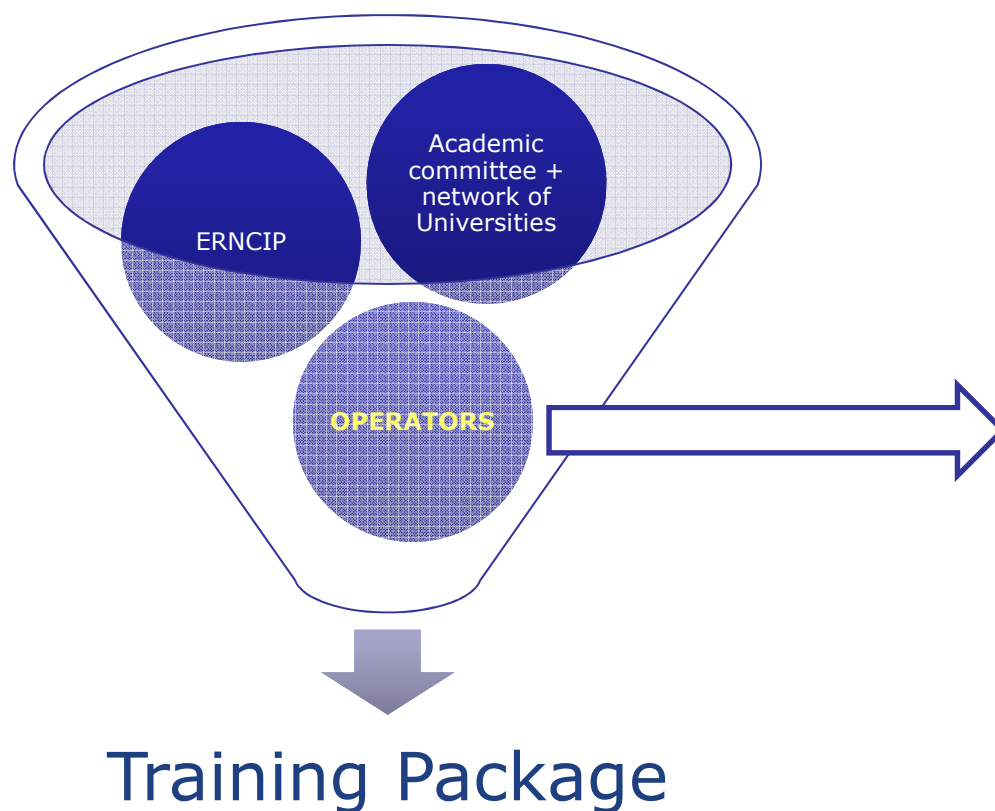
To train mid-career managers or operators on:

- methods, techniques and practices for developing and implementing solutions and strategies for CIPR;
- system-of-systems framework of analysis and a holistic strategic context encompassing risk analysis and prioritization, risk mitigation and management, performance management, incident and crisis management, public-private partnerships, organizational, regulatory, legal and ethical issues, information sharing and communication;
- growing the awareness about the responsibilities and roles at the different organizations involved in the operation, management and regulation of critical infrastructures.

The focus



Some key elements for achieving the objectives



Training focused on Operators' needs and functional requirements.

Training based on case studies 'validated' by Operators



The structure

L1 - 3-day basic training:

45' lectures on core topics;

Interactive classroom discussions on reading material and selected issues ;

Possibility for a final exam delivering a basic "certificate" or "qualification".

L2 - 5-day intermediate training:

Idem plus in-class exercises;

Possibility for a final exam delivering an intermediate "certificate" or "qualification".

L3 - Advanced training (5-day training plus coaching support plus final case studies presentation):

Structured collaborative projects on case studies;

Report writing and submission;

Report presentation and delivery of an advanced "certificate" or "qualification".



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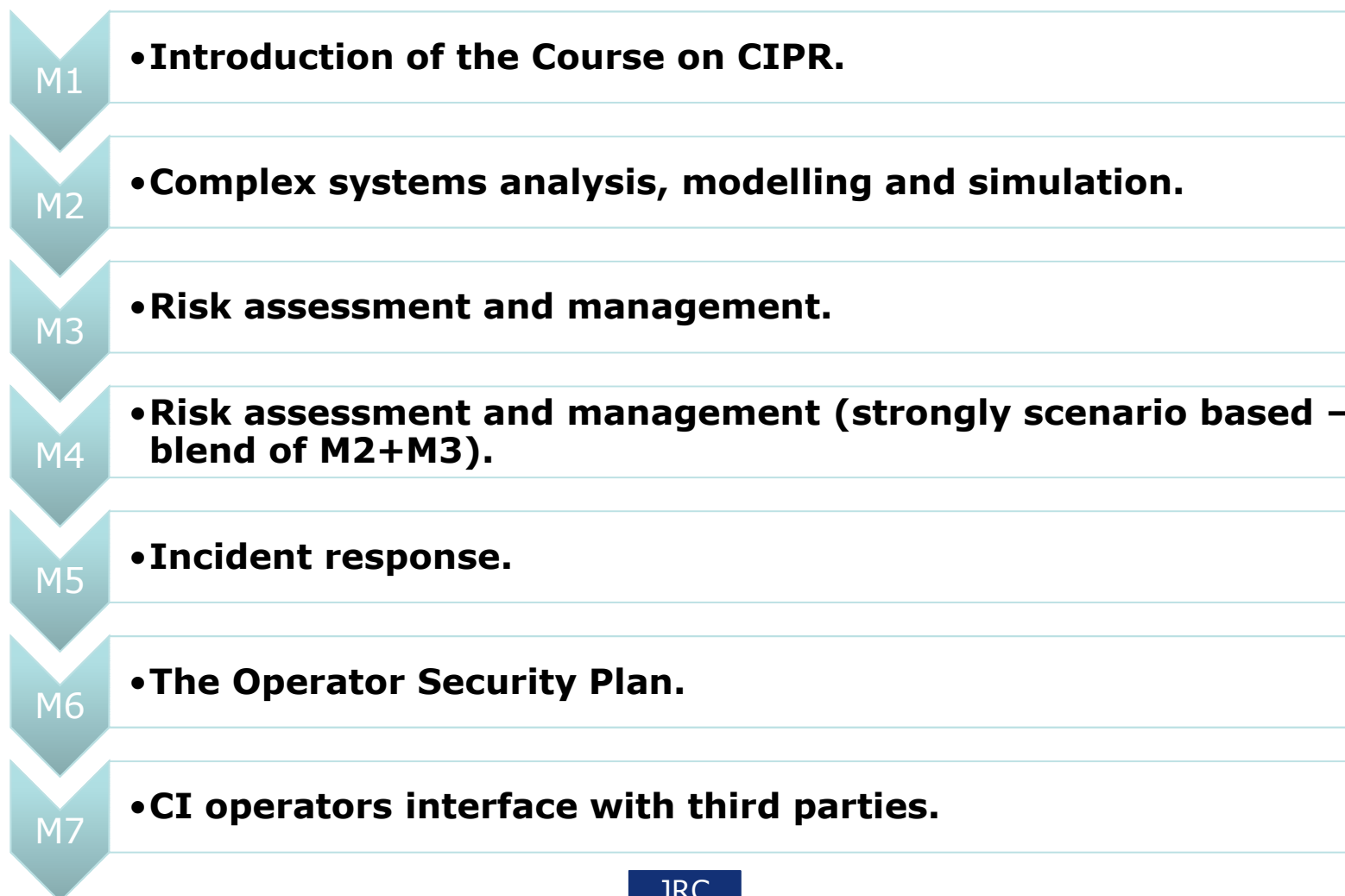
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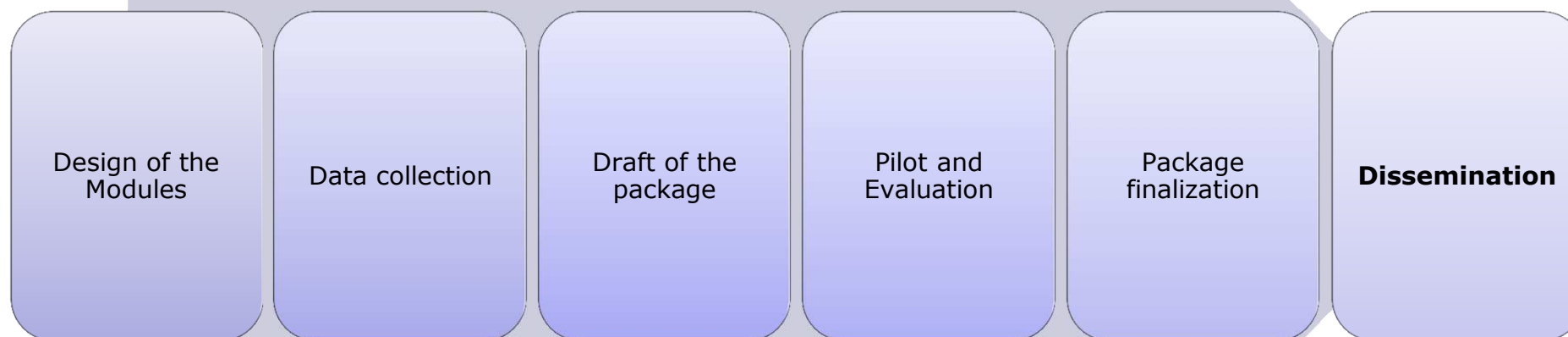
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The Modules



The development process...





Results of the “focus group with Operators” meeting of the 26th of February 2015

- Design of the structure of the Course (modules);
- Operators to provide narrative, data and scenarios to build Case Studies;
- Operators to send their Employees to the pilot course (to be held @JRC in 2015).



Next steps...

- Involve Operators;
- Identify Lecturers;
- Finalize training package;
- Run the pilot training course