Security, a new Dimension of CIP

INTERNATIONAL WORKSHOP ON EMERGENCY MANAGEMENT FOR CRITICAL INFRASTRUCTURES CRISES - 04 October 2012

SERIT – SEcurity Research in ITaly

SERIT is the **Italian Technological Platform**, jointly launched by CNR and Finmeccanica, which brings together Italian **industries** (both large industries and SMEs), **academia, research cenrtes** and **end-users**, in order to promote and develop a **Research Agenda for future technological developments,** answering to the identified **National Security needs**.

SERIT aims to:

- **Reinforce** the **networking** among national researchers, industries, end-users and institution's representatives and allowing them to cooperate on common interest projects;
- **Activate** a **public-private partnership**, including also SMEs;
- **Strengthen** national and international **participation** to **research programs** (including National research/national cluster activities and Horizon 2020)

SERIT – SEcurity Research in ITaly

- SERIT is the Italian answer to the European Trend of **Open Innovation**
- The platform represents a **pool** of industrial and academic **experiences**
- It reflects the different **Security requirements** of the whole **country**
- It draws the **guidelines** towards the new developments and knowledge in Security domain
- SERIT follows the **iterative process** that transforms a need in a new idea and a further implementation, by **sharing expertise** and **promoting** a **competitive knowledge** in the Security domain.

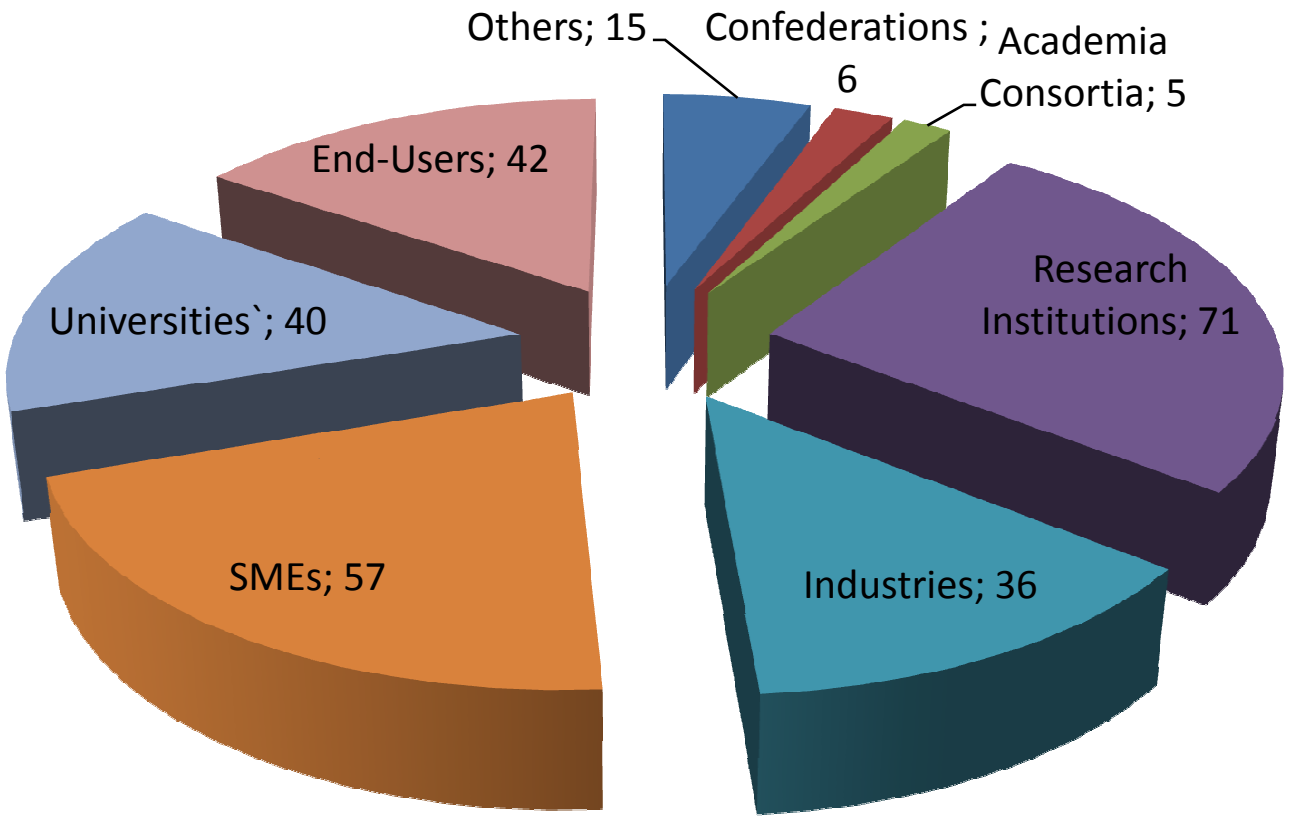
The latest achieved results of the joint activity in 2012 has been the publication "**SERIT vol.2**", where a **Roadmap** driving the **future technologies** for **Security** has been presented, together with an **evaluation** of the current **level** of different maturity technology (**TRL**) and an **estimation** of the **effort** (funding) necessary to successfully **carry on activities** for further **developments**.

SERIT – a Matrix Organization
Technological Areas and Sectors

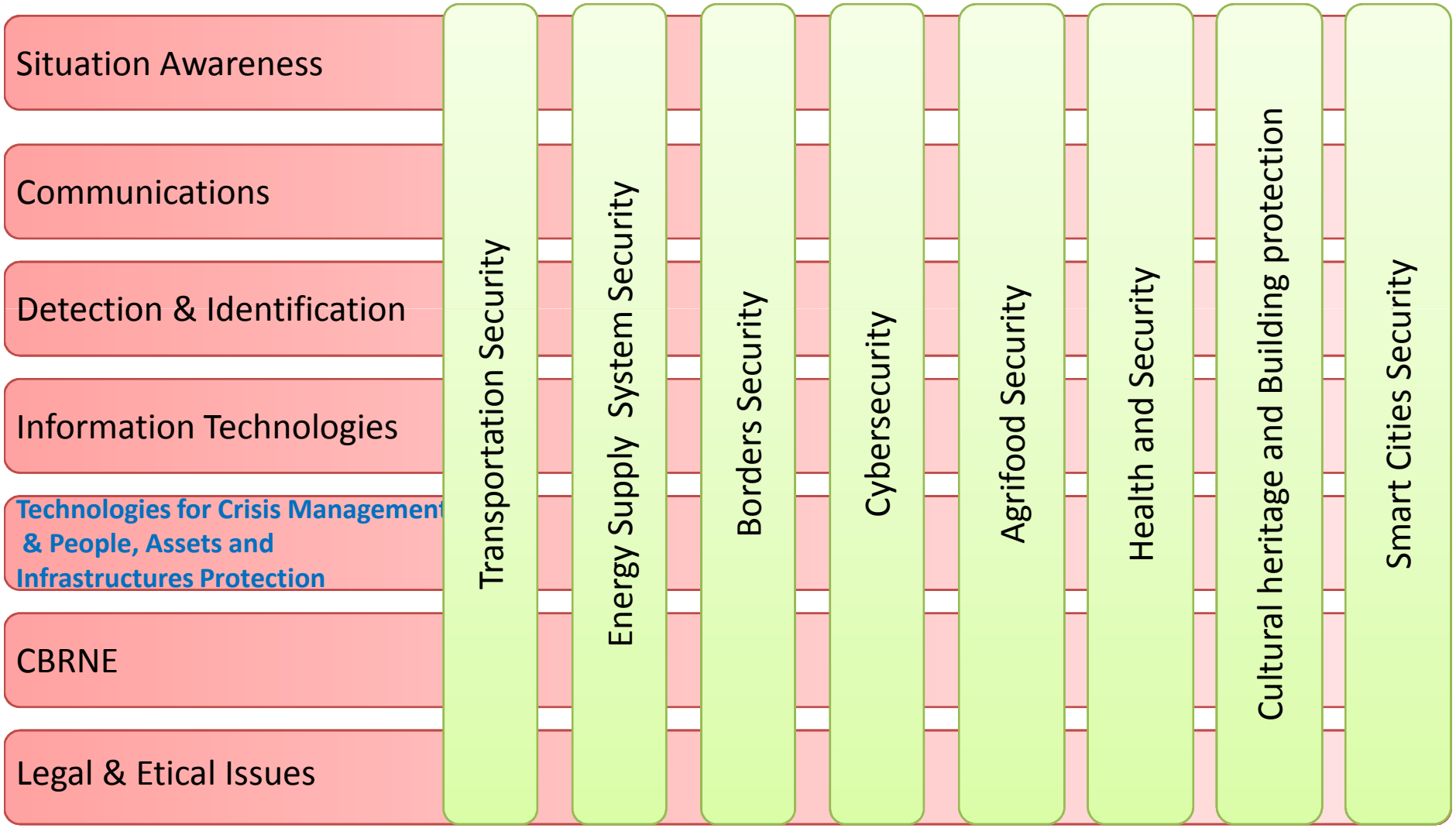
SERIT had been organized according a **Matrix** structure composed by **8 Sectors** (representing the different area where Security needs to be investigated in Italy) and **7 Technological** Areas (identifying the technological priorities).

The structure has been **aligned** with a wider **European strategic vision**, always keeping into account the national requirements and priorities identified, by SERIT Members.

SERIT is composed by more than 300 members representing more than 250 different organizations

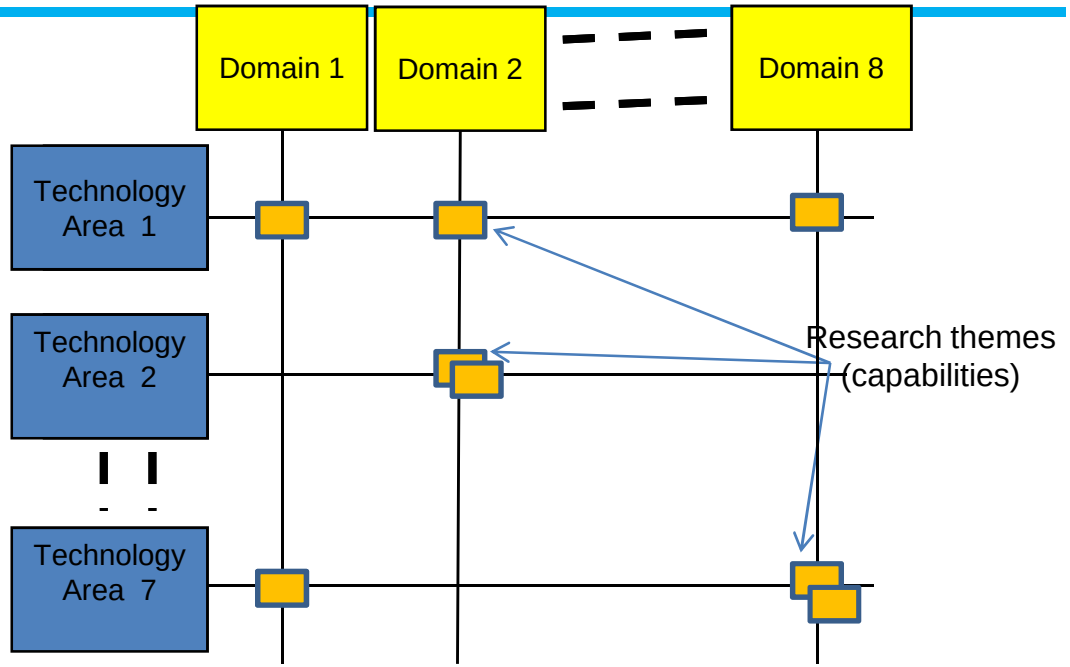


Matrix


Situation Awareness
Communications
Detection & Identification
Information Technologies
Technologies for Crisis Management & People, Assets and Infrastructures Protection
CBRNE
Legal & Etical Issues
Transportation Security
Energy Supply System Security
Borders Security
Cybersecurity
Agrifood Security
Health and Security
Cultural heritage and Building protection
Smart Cities Security

Methodology : how to develop Technologies enabling the needed capabilities for each Domain

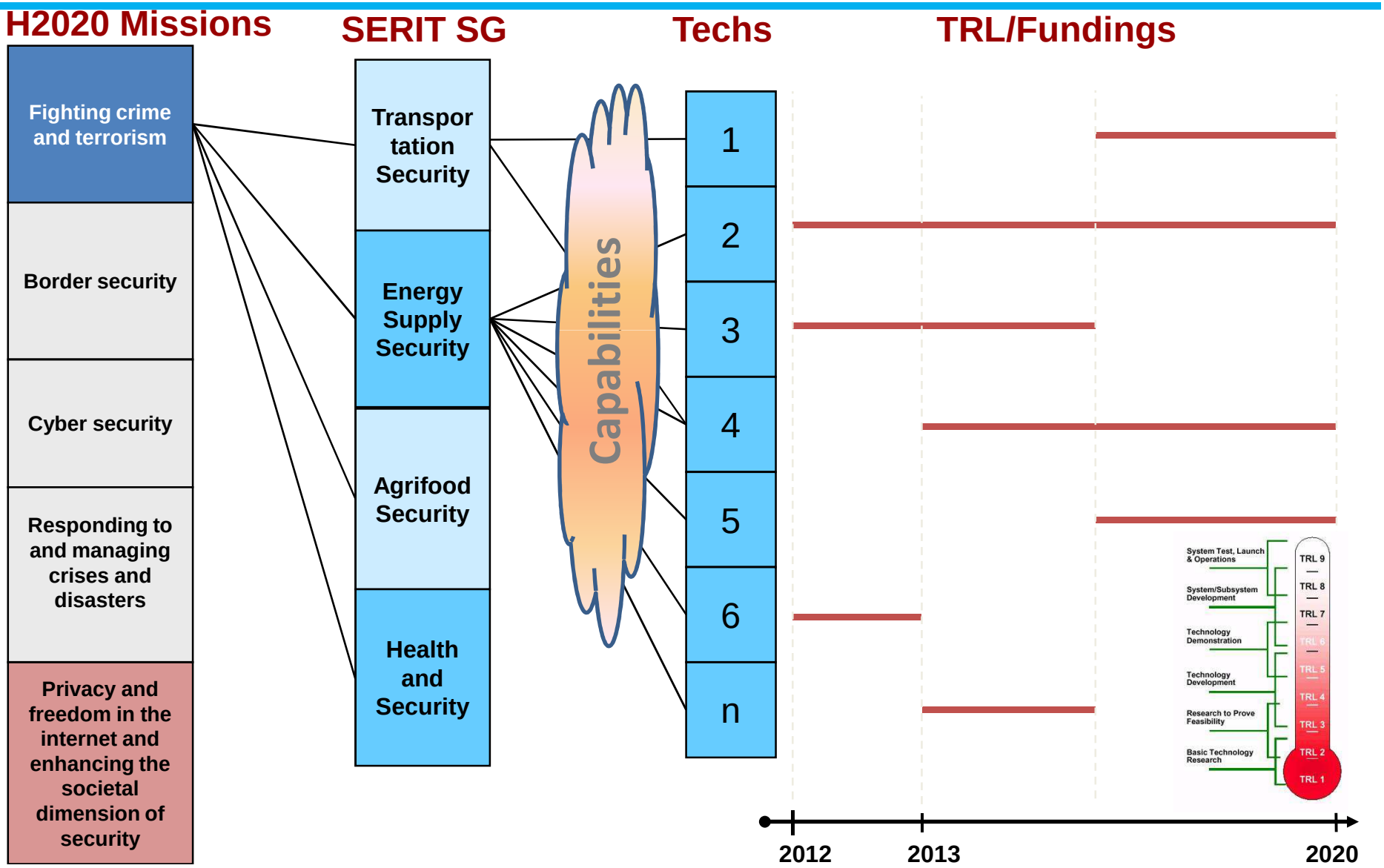
In the first year (**2011**), SERIT was mainly focused on the **identification** of those required **capabilities** at **National** level, through the jointly activities among Sectors (application domains) e Technological Areas representatives (results presented in **vol.1**);



Then, a further identification of priorities for research, taking into account European Programs (FP7, H2020, etc) guidelines;

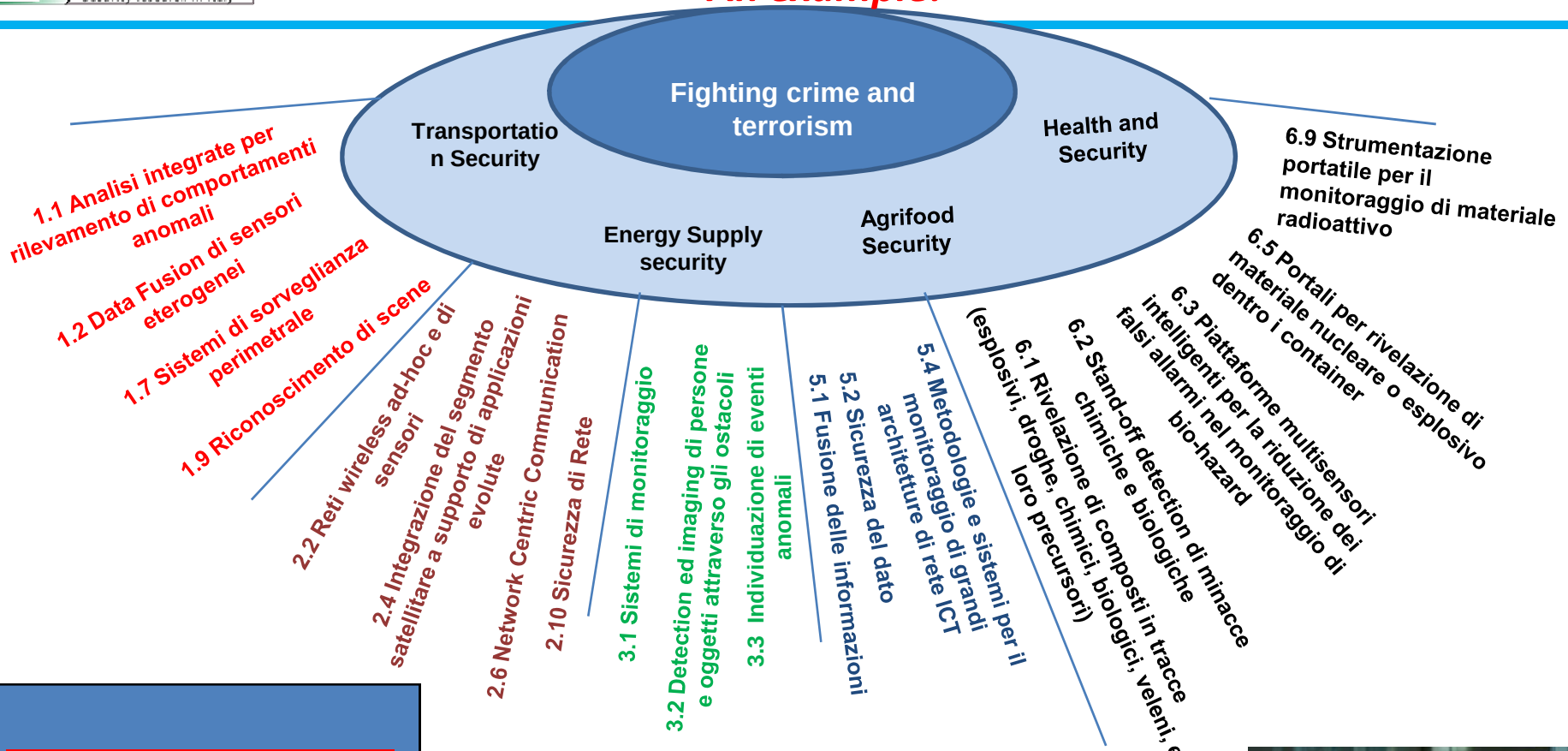
Latest results achieved on this year (2012),have been published on SERIT vol.2, showing the Research Priorities definition process, gap analysis, costs associated for further developments, evaluation of TRL , and innovation as a result of technological roadmap

SERIT Roadmap – the concept vs H2020



SERIT Roadmap – the concept vs H2020

An example:



Sorveglianza & Situation

Comunicazioni

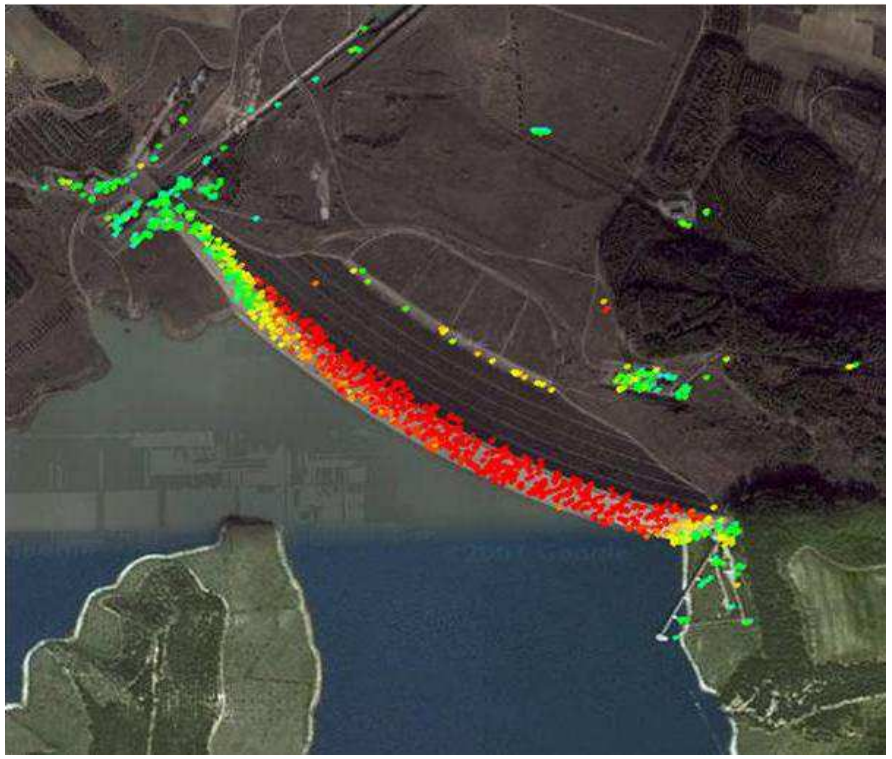
Detection & Identification Systems

Information Processing and Management

CBRNE

Technologies for Crisis Management & People, Assets and Infrastructures Protection (1/2)

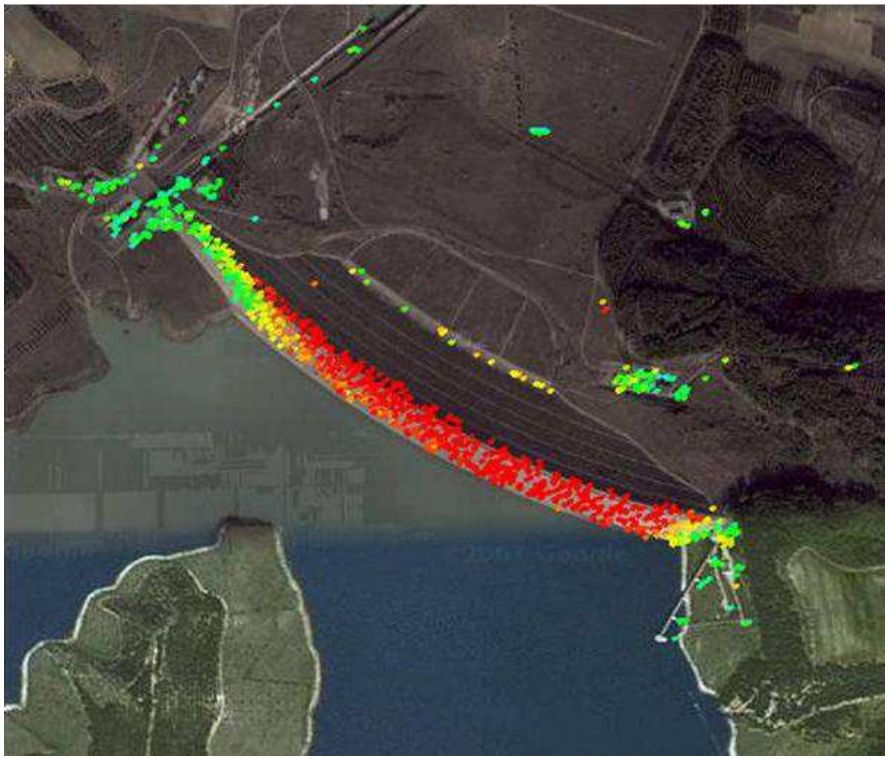
<u>Crisis management</u> means those capacities to organize a prompt, effectively and efficiently response in order to mitigate the negative effects that can harm people and things



Necessary actions in this field are:

- To assure **interoperability** between different systems which cooperate in critical event managing;
- To implement **Command & Control Centres** for operating management;
- To **share information** between **cooperating** authorities;
- To assure access to **shared data/information** in a **secure** way;
- To adapt and reconfigure, when needed, **operating processes**, to optimize the **response** to the **crisis**;
- To provide for operators/First Responders **training** and **equipments**

Technologies for Crisis Management & People, Assets and Infrastructures Protection (2/2)



Protect People, Assets and Infrastructure is the ability to secure people, facilities and other physical assets in order to reduce the inherent vulnerability and increase resilience

Protection technologies include:
• Constant **monitoring** (gathering and processing of different kind of data/information):
• **access control**;
• local **alarms management**;
•**fusion/processing** of data/information – also related to Surveillance, Detection & Identification areas;

• **Early warning** analysis (Forecasting and precursor data analysis);
• **Safety plans** development (to assure effective preparedness and prevention);
• **Protection** by means of physical barriers (active/passive fences for access control in protected areas).

Main Capabilities:

4.1 Sistemi innovativi di anti-intrusione

4.7 Metodologie e strumenti per l'analisi del rischio

4.2 Analisi della deformazione e dei danni dell'infrastruttura in seguito ad atti terroristici o eventi

4.3 Sviluppo di componenti, tecniche e metodologie per lo studio e l'analisi dei rischi sugli edifici e sugli impianti (mappe di vulnerabilità delle aree fruibili, controllo di valori soglia, etc)

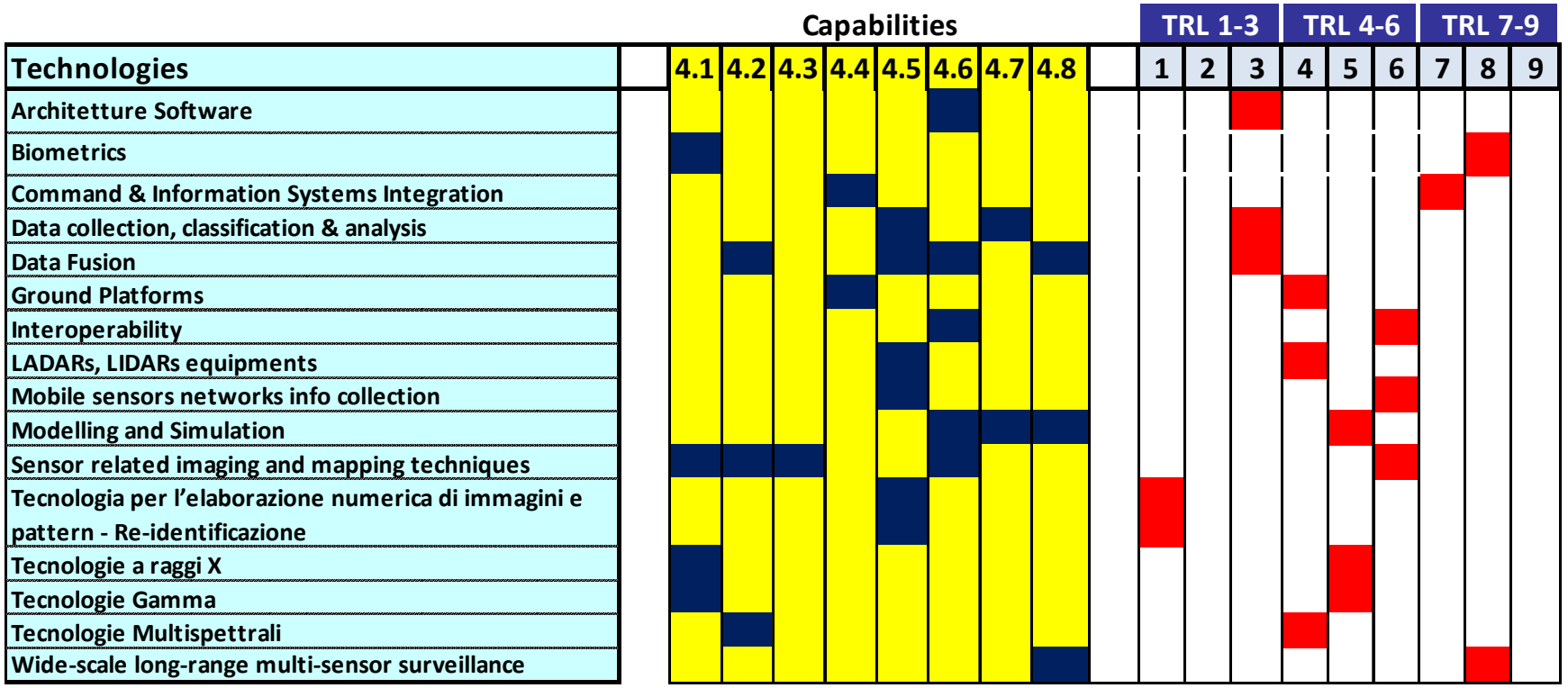
4.5 Sistemi di assistenza e/o cooperativi per i veicoli di soccorso e di intervento

4.8 Sistemi di Situation Awareness per gestire localmente situazioni anomale con l'obiettivo di prevenire effetti domino e circoscrivere le conseguenze

4.4 Sistemi robotici cooperativi

4.6 Piattaforme e sistemi di comando e controllo, mono o multi - operatore, di vario livello (da C2 a C4I)

Associated Technologies



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