D54.3 Improve the risk Reduction System
Public Summary Only (PS)
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1 Public Summary

This report presents the results from WP54 Performance Benchmarking. The objective of WP54 was to perform an assessment of all proposed security solutions that were considered in the project. The focus was on evaluating the specific capacities that were demonstrated in Madrid, Paris, Milan and Berlin. Results from the satellite demonstration in Lisbon are also included in this work. The overall assessment used a two-step process, where we started with a coarse look at all declared capacities and then narrowed the focus, using the detailed results from the demos. A common framework was used for evaluating individual capacities and systems, using these aspects:

- Acceptability (legal, regulatory, societal, ethical)
- Suitability (for the mass transport sector)
- Effectiveness (in terms of risk reduction)
- Cost (rough order-of-magnitude estimates for acquisition and operation)
- Maturity (technical and operational)
- Flexibility (adaptable to many situations)

Starting with over 100 proposed solutions, or capacities, 77 of these were included in at least one demo. Within the demonstrations, these capacities were combined to form smaller or larger systems that were tested. We selected 20 of these and evaluated them using the common framework. Examples of promising solutions directly related to demonstrated SECUR-ED systems are:

Integrated Security Management Systems

These systems provide a unified way to aggregate real-time information from many kinds of sources, e.g. CCTV cameras, motion detectors, access control devices and more advanced sensors (e.g. CBRN-E) and reports from front-line security personnel. The benefits are mainly that more information sources provide a better general awareness of the security situation, higher effectiveness in managing security incidents, while reducing the burden of personnel in security operations centres.

Early warning systems

An early warning system aims to detect and report events that are seen as indicators of a potential threat, thus giving time to operators to take preventive actions in order to avoid security incidents. As control centres strive to collect more and more data from more sources, this type of solution soon becomes necessary to handle the large amount of information. An early warning system acts as a filter, raising only those alarms that requires an action from the operator, and has the capability to identify potentially threatening situations from patterns and weak signals that human operators might miss.

Architecture and Interoperability solutions, communications infrastructure

In the SECUR-ED system of systems approach, increased security derives more from interconnecting different systems, rather than improving performance of individual systems. To make this interconnection work requires standardised architecture and interoperability solutions, together with a good communications infrastructure. SECUR-ED has developed and demonstrated a number of such standards, and solutions, e.g. for geo-location and CCTV applications. These kinds of solutions are vital to deliver the potential benefits of other proposed solutions.

Training programmes

Training of security personnel in all positions is essential. SECUR-ED has demonstrated the usefulness of relatively simple training programmes that can be adapted to different needs. The main advantage of this way to prepare and perform training sessions is the low cost, speed and ease of modification.

In addition to these examples, which stand out based on actual results seen in the demonstrations, there are other proposed solutions that have shown great value in other parts of the project but were not easily tested in demos. Prominent examples are various procedures and methods, e.g. risk analysis methods and standardised operational procedures. Lessons learned about these solutions are documented in other reports from SECUR-ED.

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