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Operationalize Security in Smart City Effectively

EC Call	SU-INFRA02-2019
Call name	Protecting the infrastructure of Europe and the people in the European smart cities
Deadline	22 August 2019 17:00:00 Brussels time
Type of action	IA, single stage
Potential requested funding	8 Meuro
Duration	24 Months
Referent person	Besnik Mehmeti ANCI Toscana besnik.mehmeti@ancitoscana.it www.ancitoscana.it
Other Web sites of services from TRL5 (on high scale) up to TRL7:	(see TRL definition of EC on: https://en.wikipedia.org/wiki/Technology_readiness_level)
Initial Partners	- Association of Tuscan Municipalities (ANCI Toscana) - Tuscany Region - University of Florence (DISIT and DidA labs) - National Research Council - CNR (ISTI and IIT)

Brief description of the project idea

The global trend of smart city implementation has pushed major investments towards the deployment of smart technologies (e.g., environmental sensors, traffic sensors, public Wi-Fi) in the urban area trying to bridge the gap between the number of critical events occurred in the city and the level of awareness of the operators to manage them properly.

However, sometimes examples of smart city solutions are actually examples of smart silos (smart mobility, smart water, smart energy, etc.): areas where certain cities are particularly thriving, though they do not tie into a coherent bigger picture. In fact, a (smart) city can be considered a network of networks (NoNs) whose interdependencies are numerous, complex

and mostly hidden or emergent. The lack of a holistic-driven technological framework able to manage such a complexity may prevent the administrations of the possibility of exploiting the huge amount of data (Big Data) generated in the city properly. This is particularly relevant in the field of security, where the ability to respond effectively to threats is critically dependent to the capacity of (a) reducing knowledge uncertainty, (b) sharing timely information to relevant decision makers (c) supporting coordination and communication among operators in real time.

The generation, processing, and sharing of large quantities of data enabled by the smart technologies make smart cities potentially more responsive. Smart cities by exploiting wide networks of detection and data can improve first responders' actions enhancing their situational awareness, communication, and coordination. However, the opportunity to keep under control the solutions services for the city users conflicts with cyber-security weakness related to the presence of a large amount of data and smart services in the area used by the city users such as smart mobility and transport, smart health, environmental data, social media, etc.

The cybersecurity weakness is related on the fact that, large networks of services and large collection of data may enable service and at the same time they may be also sources of information for those that would be interested in attacking the system, to understand how the people move, which are the most sensitive areas and services.

So that, most of these smart micro infrastructures may constitute “soft targets” which can be addressed by low-cost attacks impacting on the city users. Moreover, large infrastructures which are present as regional smart city data are even more interested for cyber-attacks, including the IOT/IOE aspects and networks. Furthermore, the field of Crime Prevention Environmental Design (CPTED), which identifies the environmental and social characteristics capable of favoring or accelerating criminal acts, can contribute to the issue, creating an innovative link between urban space and cybersecurity.

The main objectives of the proposal would:

- Enhance the capability of operators to detect and responds to multiple threats;
- Protect citizens against well-known and emergent threats to soft targets in a smart city;
- Validating the solution with a set of Pilot cases, one for each Local Govern involved;
- Standardization and wide dissemination;
- Managing urban development, growth, and competitiveness goals;
- Involving stakeholders of the territory for collecting critical issues and needs over those already identified by the responsible experts of the abovementioned infrastructures,
- Experimenting the solutions in the multiple regions/cities: Tuscany plus other two cities / metropolitan areas in two EU Member States;
- Defining guidelines.