



Alliance for
Internet of Things
Innovation

IoT week'18 – IOT4SCC workshop

IoT enabled smart cities, priority areas for future work

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IoT-enabled smart cities, where do we stand?

Read also: <http://news.itu.int/iot-enabled-smart-cities-3-priority-areas-2018/>

Connectivity,
plenty to choose
from

- No 'one-size-fits-all' connectivity solution
- Recent advancements in Low Power Wide Area (LPWA) are filling a major connectivity gap
- Choices should, however, be made with caution. Cities should avoid having to manage or use too many different types of networks

Open data is
starting to happen

- Data is the oil that will fuel the innovation for application developers
- Several cities are starting to open access to historical data in different file formats
- To move beyond static files, more effort is needed to provide datasets, including as they are generated, and use a uniform API for all city data

City-funded
projects are often
turn-key

- Cities buy a solution to solve a specific problem
- Projects will yield greater value if cities pay close attention to architectures and the component reusability of platforms during the procurement processes

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Commercially viable cross-application (and cross-domain) use cases are emerging

- Cross application and cross-domain use cases will come to form market drivers for horizontal integration, changing procurement processes in such a way that component re-usability and data sharing will be integral to such processes

Projects will only achieve significant scale if supported by a clear business / value proposition

- Proving a clear business case can be challenging for new innovations for which little historical evidence is available
- Identified risks should be viewed in comparison with the risk of not innovating and being left behind in emerging and evolving markets
- Key to success is the identification of commercially viable or economically sustainable use cases along with clear guidelines replication

No single IoT platform will dominate

- Smart Cities will be built on a combination of infrastructure from different players
- No single IoT platform will dominate
- Increasing need for IoT platforms to exchange data to address the requirements of cross-application use cases

Priority area 1

1. **Commercially viable cross-application use cases will be essential to the sustainable development of IoT-enabled smart cities:** The journey towards achieving the vision of fully integrated smart cities will be incremental. The industry is reaching a point where commercially viable and/or economically sustainable cross-application use cases are emerging and entering the mainstream. These use cases will continue to gain in commercial viability if they are built on common, interoperable platforms. They will help us to achieve horizontal integration at all layers, in line with the vision put forward by several of Europe's H2020 pilot projects (e.g. Synchronicity). Cities will still source solutions for specific problems, but they will do so with horizontal integration in mind.

Priority area 2

- 2. The industry must provide a solution for IoT platforms to exchange data:** Mere discovery and exchange of data across IoT platforms is a relatively simple issue to solve. The major challenge will be found in privacy protection and compliance with the European Union's General Data Protection Regulation (GDPR), where the set of problems to be solved will be much more complex. AIOTI promotes standards-based interoperability when it comes to addressing this priority area.

Priority area 3

- 3. IoT platforms must scale for stream processing, including video:** We knew real-time stream – be it time series data or video – processing was happening, but it’s now happening at a much faster pace. A mixture of edge- and central-cloud processing with high-performance computing capabilities will be needed, as pure centralised cloud solutions will simply not scale. The importance of this processing is explained by the Bell Labs initiative, [World Wide Streams](#): *“The emerging Internet of Things is transforming the world into a giant source of live data streams. These streams range from slowly-trickling sensor samples to bandwidth-hungry video streams. They carry valuable data that – when processed in a continuous and timely manner – hold the potential to significantly improve people’s lives.”* The value propositions include faster response to emergencies, improved decision-making and increased operational efficiency.

**Stay tuned, upcoming AIOTI
publication, coming up**

Smart City Replication Guidelines

**Part 1: Cross-Domain/Application
Use Cases**

Version 1.0

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