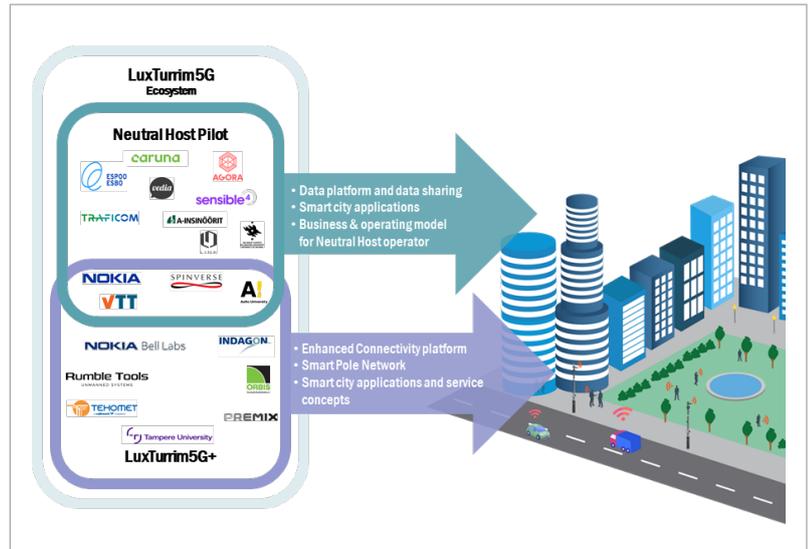


Neutral host data ecosystem

beyond the obvious

Background

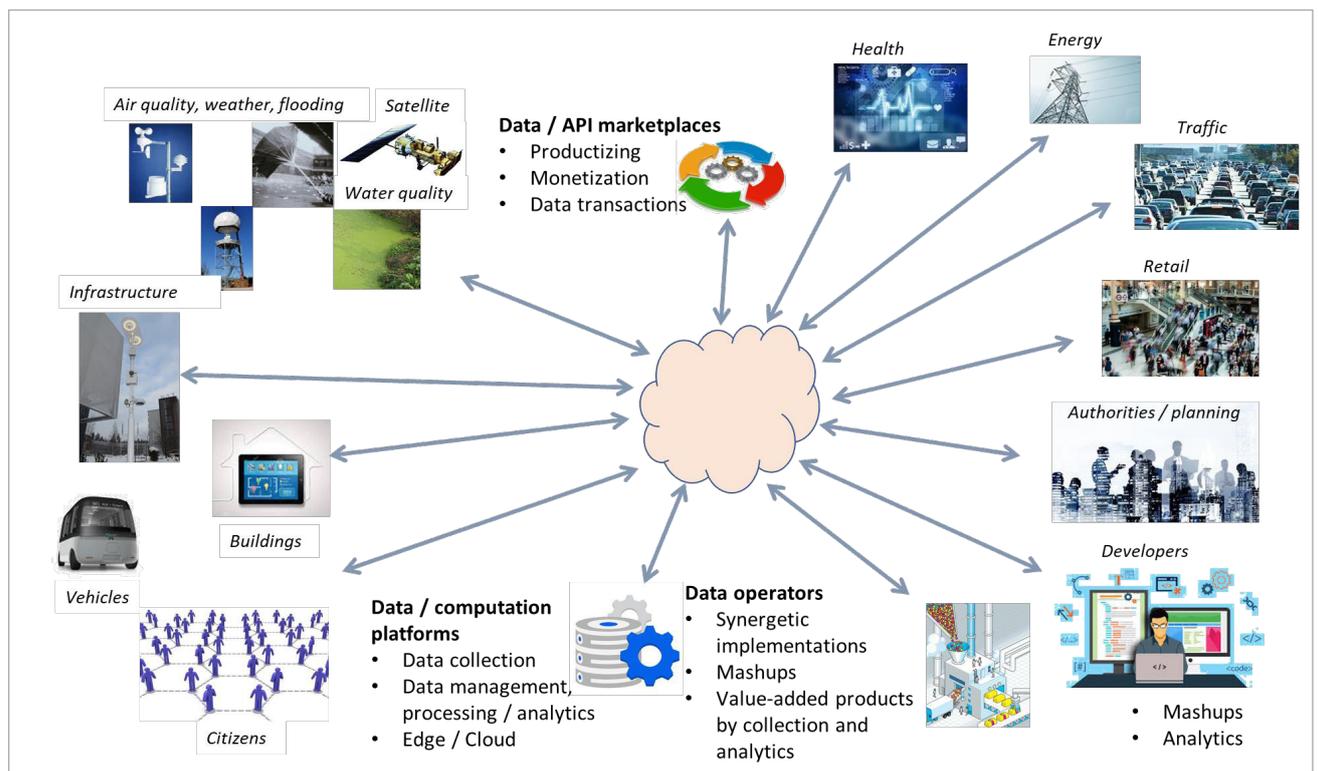
LuxTurrim5G ecosystem (www.luxturrim5g.com/) is aiming at a new smart city data ecosystem and data markets based on 5G connectivity. The key idea is to develop a lighting pole network that integrates 5G connectivity and sensor technology, as well as a data platform and a data marketplace to facilitate the data delivery to the end-user solutions. In addition, a business model is developed for a neutral operator of the connectivity network, the data platform and marketplace, called Neutral host.



Luxturrim5G ecosystem is led by Nokia and consists of companies and research organisations working in two projects, LuxTurrim5G+ and Neutral host pilot.

Smart city data ecosystem

A future smart city produces and consumes data fluently. This includes data from various sensors, buildings, homes, vehicles, people, infrastructure, etc. Whatever data that can be shared are used optimally for new value creation in applications related to health, energy, traffic, security, retail, planning, etc.

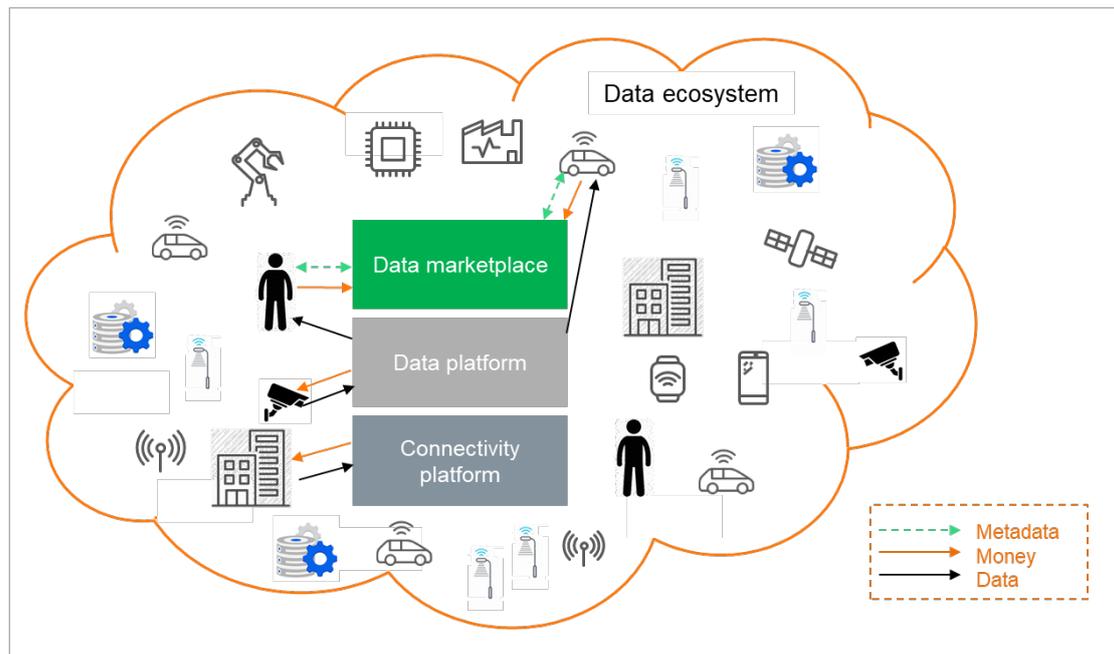


Architecture

The architecture for creating the data ecosystem has three layers: connectivity, data platforms and data marketplaces. Connectivity provides 5G low-latency and high-bandwidth communication, data platforms are for data storing, cloud and edge processing and delivery, and marketplaces with UI for humans and API's for machines handle the metadata about data products and mediate data transactions.

MyData needs

Part of the data in the ecosystem consists of data from and about humans. Cameras in lighting poles record pictures of humans walking and driving along the street. In addition, people provide their own observations like pictures about the city infra and activities, and data collected by their wearables, like health-related measurements. Privacy-preserving data processing and consent management are crucial technologies to implement our vision of a data ecosystem utilising also sensitive data in various applications and creating new value for citizens and businesses.



CONCLUSION

- LuxTurrin5G aims at a smart city data ecosystem powered by 5G connectivity
- Aim is to create new services and value from existing data and new data sources
- Beyond state-of-the-art architecture is needed to provide an automatic data economy where humans and machines trade data fluently and create new value while preserving privacy and confidentiality.

VTT is a visionary research, development and innovation partner. We drive sustainable growth and tackle the biggest global challenges of our time and turn them into growth opportunities. We go beyond the obvious to help the society and companies to grow through technological innovations. VTT is at the sweet spot where innovation and business come together.

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