Arthur D Little

Bringing Smart City Technology to Life

InterComms talks to Agron Lasku of Arthur D. Little

The 'smart city' concept has moved from a futuristic buzzword to an actionable goal, with technological ideas that have been under discussion for years being put into practice, according to the international consultancy firm Arthur D. Little.

Smart cities use information and communications technology in an integrated, collaborative and sustainable way to meet the needs of citizens, organisations and other important stakeholders, according to Agron Lasku, a Stockholm-based principal for Arthur D. Little. This is made possible through connectivity and open data, integrated platforms, sensors and other technologies, with solutions delivered into infrastructure, data orchestration, service enablement and applications.

"Public spending on smart cities is set to grow by 16.8% over the next two years, hitting $380 billion by 2020" says Lasku. There is a huge range of projects under this banner, from isolated city-specific initiatives in the Western world to national initiatives in other regions. The area includes limited pilot schemes to holistic undertakings in places like Singapore and Barcelona, and covers 'invisible progress' in areas like city management to interactive technologies that citizens can see and touch.

"There are many reasons for this shift from strategies to action" said Lasku "First, there is a convergence of digital technologies, with sensors, the Internet of Things and mobile devices becoming ubiquitous and cheap enough for mass deployment. This allows cities to reach the critical mass required for smart city initiatives."

"The second crucial factor is the surge in urbanisation, with the number of 'mega cities' in the world rising from 10 in 1990 to 28 today and forecast to hit 41 in the next ten years. This means there is an increasing demand for the limited resources and services that cities can provide, creating challenges – including population density and pollution – alongside opportunities, such as the capacity to leverage a huge number of connected devices and sensors to serve citizens' needs."

"The concept of the smart city has gone from being a buzzword with little real-world implications to a way to tackle problems and enable opportunities for millions of city dwellers every day. We will only see interest and spending in smart cities increase as we are on the verge of capturing the immense benefits and growth."

Arthur D. Little has overseen numerous consultancy projects in the smart city space, for cities including Amsterdam, London, Seattle and Hong Kong. A typical project involves developing a vision, strategy development and wide-scale execution, with Arthur D. Little working on strategy definition, investment cases, funding, market surveys and a range of other functions.

Lasku highlights the firm's work in Stockholm, where it has served as a strategic partner in developing a smart city vision and has supported the development and implementation of a multitude of digital initiatives. This has involved a range of technological initiatives, such as smart garbage bins that alert when they need to be emptied, the real-time display of travel time on highways (which is estimated by analyzing the Bluetooth and wi-fi signals of passing cars), a digital library of e-books for children and smart city lighting, which leverages LED and motion sensing to halve electricity consumption.

There were five high-level takeaways from this work, Lasku says: the need for a clear vision, strong governance, a common platform, phased implementation and citizen awareness. Arthur D. Little also took some specific lessons from the project, such as the importance of building technical solutions in a modular fashion and the need to ensure that a long-term perspective permeates all investments.

Stockholm is an advanced city with a very strong tech sector. However, while this foundation can be helpful, it is not essential, Lasku says. There are examples of cities where proximity to a strong tech sector has not translated to an equally smart city, while other cities are 'leapfrogging' ahead.

"What is striking about the smart city is that it is truly a global phenomenon," he says. "From Moscow to Dallas, Seoul to Rio de Janeiro, we are seeing various ways the inhabitants benefit from smarter cities."

As an example, Lasku said that more than 500 Chinese cities, including 95% of provincial capitals, initiated smart city

projects in 2017 alone. Sweden has long been viewed as a leader in the area, "but is now taking lessons from cities that are far away, not just geographically but also in terms of ICT expenditure."

Looking forward, Lasku expects more politicians to see the value of smart cities as drivers of municipal and national prosperity. He believes that funding will increase and more companies will develop flexible technological solutions to meet the needs of different cities, while there will also be greater collaboration between cities.

Many of us have been living in what Lasku terms 'sensing cities' for decades now, with data collected on various parts of our daily lives. Officials can use this data to take action in various ways. However, Lasku envisions a future of interactive or responsive cities, in which the very building blocks of city life can be manipulated or influence behaviour dynamically for a range of outcomes, from safety to leisure.

"This is when citizens will start to notice and feel the difference – the city will be dynamic and respond to the needs, wants and desires of every citizen."

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