A Smart city is a complex ecosystem of people, processes, technology and stakeholders working together. The systems, data and artifacts of a Smart city are not the exclusive property of the city. Urban innovation develops as a result of the interplay between many differing stakeholders. Smart city change is enabled when cities work to create optimal conditions where new and innovative solutions can thrive. This begins by knowing what and who is innovating and how they can be supported.

It is not about one single product or technology but an array of interconnected devices, services and people. A key part of the municipality’s role in seeding this ecosystem is knowing when and how to support it.

The journey towards becoming a smarter city or community is not driven by a top-down master plan or a technology partnership with one big player. It is rather the sum of intelligent initiatives and solutions that are developed and implemented by a large number of different private and public actors throughout the city and across different strategic fields of action.

A key challenge is finding the correct balance between supporting business opportunities and using them to drive a sustainable, inclusive and digital city transformation.

While infrastructure is vital, innovators need early access to many other non-physical things like funding, skills, data, early customers, promotion and marketing.
Key issues for SmartImpact partners

All cities are taking part in an overarching and rapidly evolving transformation towards a knowledge and service-based economy. This increasingly means that innovation becomes an underlying principle to the success of local development. Municipalities can drive innovation challenges and projects, inducing SME’s and start-ups to create solutions. In doing so they link business innovation with the development of the city.

Cities and societies that foster innovation will be successful in delivering better services, increased efficiency and better placed for sustainable growth.

Cities are emerging as hubs of technological innovation. As the economy evolves into what many think is a ‘third industrial revolution,’ traditional jobs are being eroded. The innovation ecosystem leads to new sources of employment and economic growth by the creation of new businesses and employment categories.

Cities are big data suppliers and users. They are big business for providers of technologies, equipment, social care and many other products and services. Every Smart municipality needs to undergo a cultural shift towards seeing its own operations and processes as opportunities to engage in new partnerships from its ecosystem of innovators.
Lessons learnt from SmartImpact partners

Here are a number of common lessons from the SmartImpact network’s discussion on innovation ecosystems.

Cities have a role to play when creating the best ecosystem for innovations to flourish. Building effective policies to support the growth and sustainability of urban technology ecosystems is an essential part of being a Smart city.

Innovation may begin as an idea but for it to develop and become useful or even successful it requires resources. Smart cities need to ensure there are the correct organisational and physical enablers. Innovative businesses, especially start-ups need good connectivity and affordable workspace or demo sites in proximity to other innovators.

Smart municipalities work in partnership with stakeholders that range from academia, private sector and start ups to citizen led groups. This promotes the municipality as both an innovator itself and a framework that supports the wider innovation ecosystem.

Smart cities are perfectly placed to lead the way in innovation. As both large data suppliers and users, they can ignite change by acting as launch customers for innovative products and services.

A primary way to generate new innovation is to ensure the city’s data is open and accessible in a secure way. This includes bringing together data from key stakeholders within the city and making it accessible to everyone from start-ups and citizens to communities and corporations.

Start-up ecosystems are important not only for growth and jobs but also in helping a city to solve local problems in new, relevant and cost effective ways.

By communicating real demands and everyday challenges, citizens can help government teams and departments better understand live problems. This may lead to new ideas and eventually real business opportunities.
Innovation ecosystems for smart cities

Innovating through procurement
Smart cities need to lead by example, acting both as the launch customer and driving the innovation ecosystem through procurement from local innovators. Smart cities can set the pace by working to identify city challenges and then translating these into an open call with an innovation led brief.

Municipalities need an integrated vision from across their organisation. In doing so, the local innovation economy can be holistically engaged through procurement and strategically supported through the process of test, validation, implementation and then scale up. Ideally, through the delivery of public digital services, using local innovation, there is a natural lift in the quality of city life and this adds value back into the ecosystem.

Living labs
Proactively, cities can also establish public infrastructure as living labs. Living labs are when the city defines a specific area as an open laboratory to test and pilot Smart innovations for improving city functions (lighting, parking, waste, citizen communication etc.). While the city provides the public space and basic infrastructure, companies provide their technologies. Through partnership both then strive to gain more knowledge about the impact of the innovations and ways to modify and scale them.

In Stockholm users play an important role in the development of digital services for mobile and fixed network applications. They participate in every aspect of the development cycle, from an early idea phase to the late test phase.

Innovation through hosting
Cities can boost their innovation ecosystem by being an excellent host. Any city can become an innovation destination through targeted investment and strategies that provide tax breaks, work space and business support. It is up to the municipality to facilitate, but not control, an ecosystem that proves beneficial for all.

As a host, a Smart city must invest in infrastructure. This is an essential element of a city's economic development and pivotal to the growth of a vibrant, local innovation economy. The city can also invest in accelerator programmes that boost their innovation ecosystem and meet new city challenges.

Manchester Digital (MD), is the independent trade association for digital and new media in the city. MD provides a wide range of services from business support to market intelligence, including promoting talent and skills development. Porto Innovation Hub creates opportunities for local people to get involved with innovation projects.

The city as strategist
Smart cities must be strategic in order to develop a successful local innovation ecosystem. Their strategy for innovation must be an overarching vision supported by key senior people and in-line with other stakeholder goals. Known as the ‘Quadruple Helix’ this engagement model for local innovation ecosystems seeks collaboration between citizens, public and private entities and allied research organisations.

Supporting Local Innovation Ecosystems for Smart Cities

This paper is intended to be a guide to some of the relevant issues arising in connection with how cities can use / create / develop governance structures that can help them to drive transformative change using technology.

The other theme papers in this series can be found at: www.smartimpact-project.eu

Further information on SmartImpact network visit: http://urbact.eu/smartimpact