

Cities of the Future – Where Is the Actionable Geospatial Information?

Kimberley Worthy (Australia) and John Kedar (United Kingdom)

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SUMMARY

Sensors will collect vast amounts of data, structured and unstructured, but is it the right data for a smart city, and how can a city use it within its wider data infrastructure? What is the real requirement for actionable geospatial information?

Improved availability of fundamental, actionable, geospatial data, the foundation for better cities, leads to more transparency, effective urban planning, improved resilience, increased resource/asset and environmental management, and new business opportunities. But little investment is being made into city geospatial information capabilities with these end benefits in mind; the arguments still need to be won.

What are the challenges faced in meeting a city's data needs? Of many, these include:

- (1) Understanding City and citizen priorities. Starting at the end point, e.g. 'Dubai, the happiest city on earth', and work back to the data and infrastructure needs. Then communicating the benefits that GI brings into achieving these priorities.
- (2) Cost of maintained data services. Innovative approaches can reduce this, including remote sensing, automated feature extraction, managed services and crowd sourcing, particularly as mobile sensors dominate.
- (3) People – whether in businesses, government or are innovators – need the understanding, skills and environment to deliver benefits.
- (4) Policy to drive new behaviours.

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(5) A project approach to delivering outcomes. Transforming a city to be smart, integrated or digital is a long term and sustained programme of activity.

In Summer 2018, the United Nations Committee of Experts on Global Geospatial Information Management endorsed the first part of the Integrated Geospatial Information Framework and the structure and style for the rest. This is a landmark step in guiding nations and cities on a geospatial journey. It provides both a strategic approach and the means to justify, plan and deliver geospatial enablement.

In the same meeting the Committee also endorsed 14 fundamental geospatial data themes; the core data themes deemed appropriate for all nations, a piece of work led by Great Britain's Ordnance Survey.

In agreeing these, two powerful tools were unleashed onto the global community in one meeting. These global frameworks will enable better data integration and interoperability across cities and with wider public and private sector, whether Digital Twin, integrated planning or smart cities are the intent.

This paper explores how these tools can be used at city level to overcome the challenges above and thereby enable resilient and smart cities where innovation thrives.

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