



Integrating Data & Indicators into Urban Planning Process

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What We Talk about When We Talk about Data and Indicators



Socioeconomic: population distribution and density, employment, GDP per capita (PPP)

Land: urban infrastructure, land cover, forest, crops, soil erosion, inland water

Risk: floods, land motion/subsidence, landslides, seismic



Image source: Department of Civil, Environmental and Geomatic Engineering at UCL



How Does GPSC Support Evidence-Based Urban Planning?

Data is an essential part of evidence-based planning, and indicators are about the interface between policies and data, informing policymakers on how and where they should target their efforts. As such, data, sustainability indicators, and tools are the first component of the GPSC.











EO4SD – Earth Observation for Sustainable Development – An ESA collaborate initiative for large-scale exploitation of satellite data in support of international development (started 2016)

Priority thematic areas:

Urban, Marine, Agriculture and Rural Development, Disaster Risk Management, Energy, Water Resources Management, Forest, Ecosystems, Fragile States, Climate Resilience and Proofing



Coordinator of the Urban subproject, one of the leading European Consulting firms in the field of geo-information; experienced in International Development, working with Financing Institutions, National Authorities & Organisations, Private Sector





Primary and Secondary Geospatial Product and Service for 27 cities



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The **Urban Extent 2015** map includes the classes

- urban (black) and
- non-urban (white)

Can be used as basis for monitoring the expansion of urban areas over time.



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DLR



[•] Credits: M. Marconcini, S. Üreyen, T. Esch, A.Metz, J. Zeidler

% Impervious Surface



Using City Data for Diagnosis in the Four-Stage Urban Sustainability Framework Process









Background

Urban planning is a powerful tool that can be harnessed to meet an area's economic, social, cultural, and environmental needs and to make visions for that area a reality. A host of factors contributes to the successful 2017-2018 plans, including strong institutional coordination, rule of law,

Technological and social innovations

Key strategies for integra urban planning process

Collaboration across agencies is key. Agencies often collect and manage their own data, and have little or no incentive to share it with others. Without a culture of collaboration and sharing between agencies, attempts to understand and analyze interrelated urban issues are unlikely to succeed.

A strong government mandate can provide a much-needed push. In A guidance on data management and strong government mandate was geospatial a capacity of assessmenticies to essential in pushing existing and ruture needs. culture. This culture is in line

with the wider whole-of-government approach to the delivery of public services.

Robust spatial data infrastructure must be established up front. URA's in-house planning tools could not have been **Data-Informed Urban Planning in Singapore:** Harnessing Geospatial Technology

In Singapore, planners at the Urban Redevelopment Authority (URA) are part of a collaborative, whole-of-government effort to utilize Big Data and analytics in order to understand the needs and trends driving the city-state's growth. Planners are equipped with customized analytical tools-built in house by URA-to distill data into information directly applicable to land use decisions. Among these tools is ePlanner, a one-stop platform that integrates data from multiple sources to enable easy visualization and analysis. The ePlanner tool has been shared with more than 25 other government agencies and provides a common platform for understanding and addressing land use challenges.

To see the value of such a platform, consider the example of amenities such as child-care centers. Demand for such centers is high in Singapore, but it varies from one town to the next. By overlaying statistical demographic data with information

about day-care waiting lists, planners can ascertain the locational severity of current shortages and project future demand, as well as determine where new facilities should be placed. Access to these data allows the Housing and Development Board, the agency responsible for providing housing to more than 80 percent of the population, to factor child-care needs into the design of upcoming developments. These data also allow planners to assess whether interim measures, such as locating a child-care center within a vacant state-owned property, are needed to address the immediate shortfall.

More advanced tools like GEMMA (GIS-Enabled Mapping, Modelling & Analysis) allow planners in Singapore to consider more complex urban



The ePlanner tool gives multiple government agencies access to spatial data, allowing for easy visualization and analysis of land use issues. Source: Urban Redevelopment Authority.



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Data is a powerful tool for development. Geospatial technologies such as GIS and remote sensing enable sophisticated data collection and analysis of spatial relationships at varying geographical scales. Learn how geospatial data can help cities understand its formation and transformation with much greater precision, and are indispensable tools for spatial, transport, and economic planning.

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Why are carefully designed, sensible policies too often not adopted or implemented? When they are, why do they often fail to generate development outcomes such as security, growth, and equity? And why do some bad policies endure? This World Development Report 2017: Governance and the Law addresses these fundamental questions, which are at the heart of development.

Policy making and policy implementation do not occur in a vacuum. Rather, they take place in complex political and social settings, in which individuals and groups with unequal power interact within changing rules as they pursue conflicting interests. The process of these interactions is what this Report calls governance, and the space in which these interactions take place, the policy arena.

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