

Scaling Smart Cities: Design and Planning for Smart Urban Communities

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Smart Cities as an Enabling and Evolving Industry

Economic Competitiveness for Cities and Regions

Constructing Smart Cities Markets

Design, development, and deployment of an emerging class of cross-platform, service-integrated, technology products to enhance performance or create a platform for development

Understanding “Smart Cities” as a Technology Diffusion Project

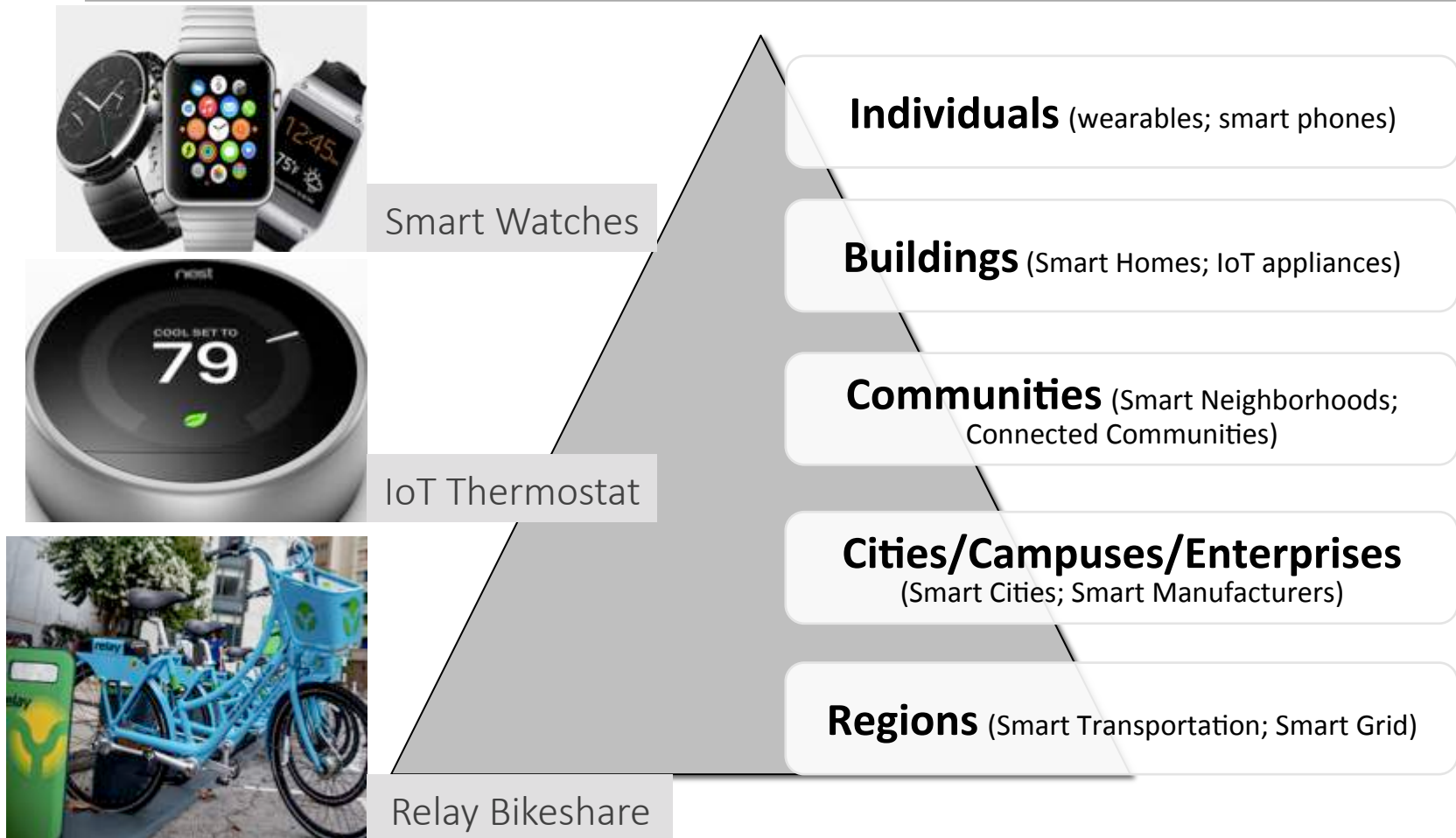
Products: 1) Smart Cities Objects, 2) Smart Cities Systems, 3) Smart Cities Platforms (“intelligent infrastructure”)

Actors: Public sector, private sector, philanthropic, and “civic” intermediaries (firm partnerships and 3rd sector networks)

Processes: Technology diffusion for public sector commercialization (“upgrading,” efficiency, access); national and regional innovation systems

Geographies (Scales) of Implementation: Test-beds (selected places and technologies)

The Scales of Smart Cities

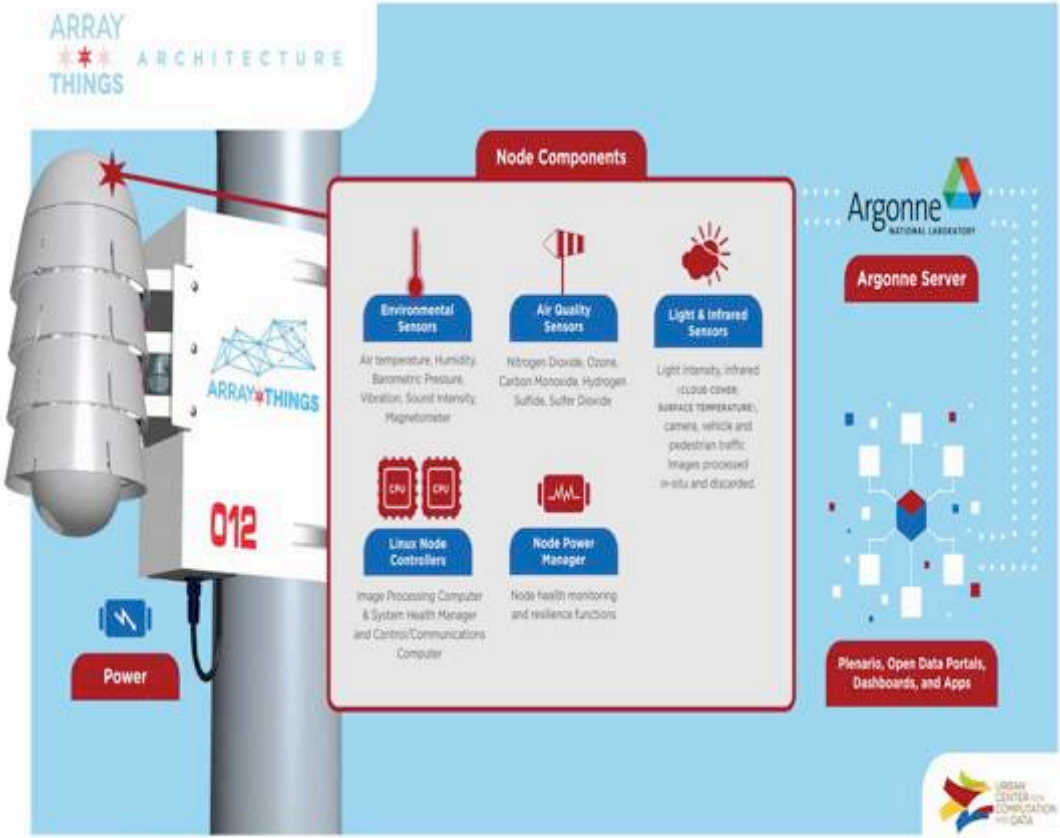


Smart Cities Objects



Smart Trash Cans: Wireless Hotspots, Solar Powered, Embedded Sensors

Smart Cities Systems



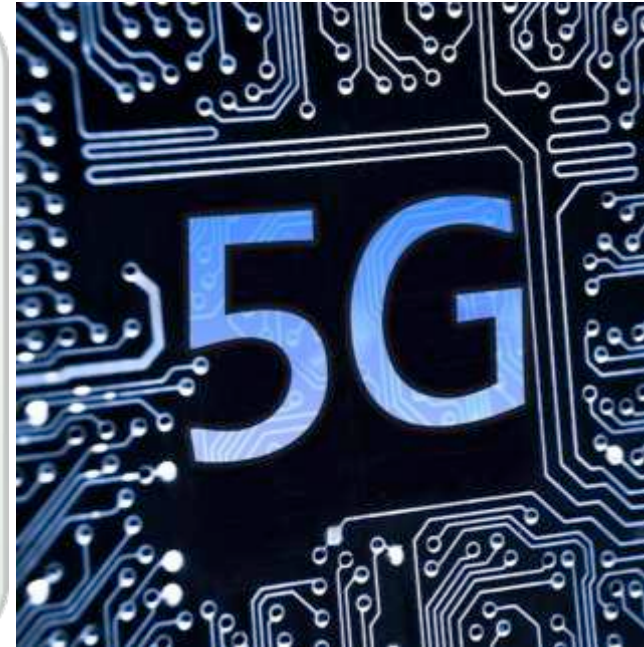
Smart Cities Platforms: “Intelligent Infrastructure”



Energy: Smart Grids



Transportation:
Sustainable Mobility



Communications:
Connectivity (5G Data)

Strategic Selection of Scale: Jurisdiction Shopping for a Lead Market



Consumer/Individual/
Resident



Property Owner or
Operator



Community or
Neighborhood
Leadership



Mayor; CEO;
Administrator



Governing Authority;
Regional Coalition

Locating Smart Cities Demand

Narratives of Competition and Collaboration

- Challenges,
- Networks,
- Coalitions,
- Strategic Partnerships

Citation: Clark, Jennifer (forthcoming 2018) Making Smart Cities: Innovation and the Production of New Urban Knowledge. New York: Columbia University Press.

Open Innovation 2.0?

Bottom UP?: Social and Civic Entrepreneurship

- Civic Innovation: Hack-a-thons, crowd sourcing
- Prioritizes user connectivity, mobility, accessibility
- Prioritizes open platforms and interoperability for persistent innovation
- Grafts onto urban form/existing infrastructure

Top DOWN?: Industry-led and Market-driven

- Large scale implementation and proprietary systems
 - Prioritizes systems optimization: power, ICT, urban infrastructure
- Redeploys urban form/new infrastructure

Citation: Clark, Jennifer (2017) *Resilient Regions and Open Innovation: The Evolution of Smart Cities and Civic Entrepreneurship*. Tim Vorley and Nick Williams, Eds. [Creating Resilient Economies: Entrepreneurship, Growth and Development in Uncertain Times](#). Northampton, MA. Edward Elgar. p. 109-122.

Privileged Places, Privileged Technologies, Privileged Firms

Privileged places are emerging --- recipients of the demonstration project grants and resources

- Philanthropic investments (Smart cities as targeted values: sustainability, equity, resilience, civic engagement)
- Private sector partnerships (Smart cities as new markets)
- National governments (Smart cities as development strategy)

Emphasis on integrated, **proprietary platforms** with existing firm partnerships (software, hardware, and connectivity) and scalable solutions

Planning for an Intelligent Infrastructure Enabled Economy

Interoperability and Resilience

Policy questions about proprietary platforms, distributed systems, intentional redundancy, rehabilitating/integrating legacy systems

Expertise and Knowledge across Disciplinary Boundaries

Policy questions about labor markets and education, upskilling, technology integration, and core domain knowledge

Equity and Sustainability

Policy questions about the distribution of investments, establishing baselines and industry standards (certification, specification), addressing market failures

Citation: Clark, Jennifer (2017) *Policy through Practice: Local Communities, Self-Organization, and Policy*. In Gordon Clark, Maryann Feldman, Meric Gertler, and Dariusz Wójcik, eds. *The New Oxford Handbook of Economic Geography*. Oxford: Oxford University Press. p. 810-825.

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