



# Machina Research Smart City Playbook highlights

Executive Summary

## How does a city become smart, safe and sustainable?

That was the question we wanted to answer when we asked Machina Research to survey 22 cities around the world and find out how they're pursuing smart city goals. Our aim: to draw on cities' real-life experiences and share their emerging best practices with other municipal governments — helping them create cities that expand the human possibilities of the connected world. The resulting Machina Research Smart City Playbook provides unique insights into the ways cities are transforming themselves into the urban centers of tomorrow — today.

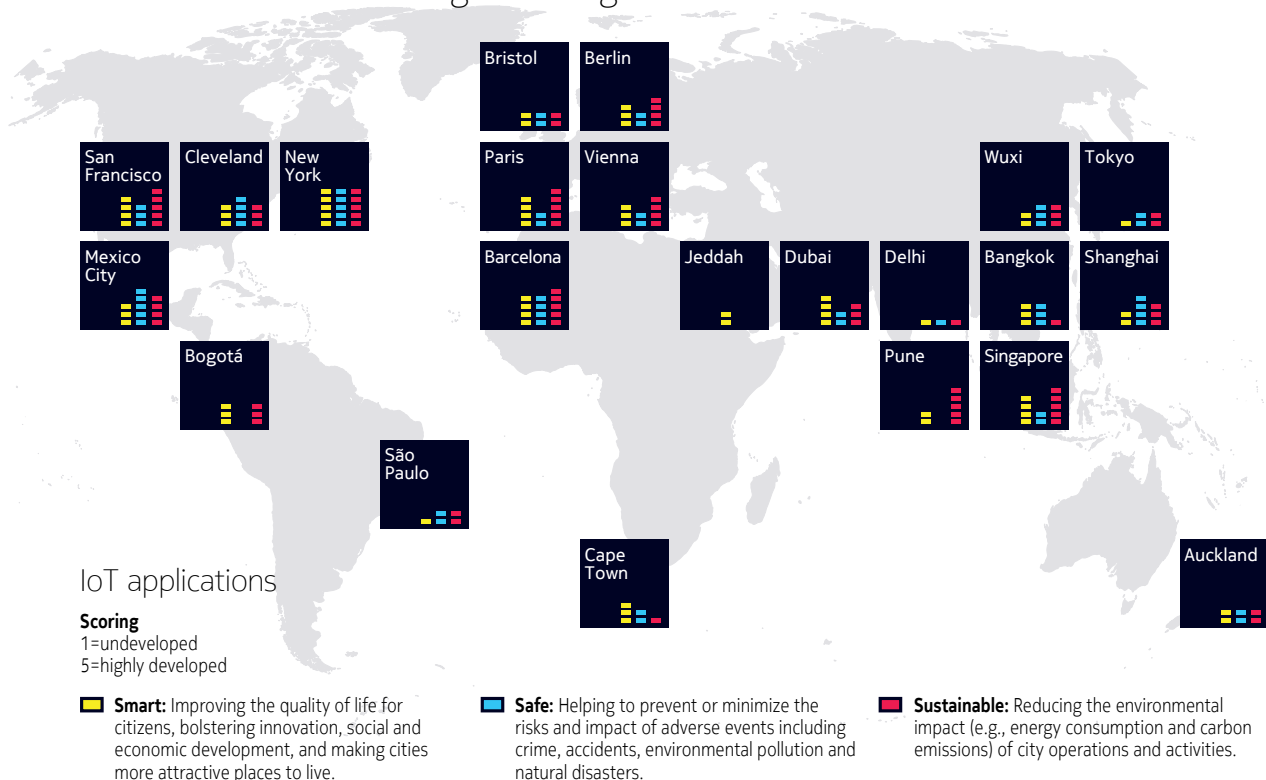
## Why smart cities?

With half the world's people living in urban areas — a figure expected to reach 70 percent by 2050 — cities are being affected by powerful demographic, environmental, financial and economic forces. In response, many are looking to become:

- Smart — using technology to improve people's quality of life, bolster innovation and social and economic development, and make cities more attractive places to live, visit and do business.
- Safe — preventing or minimizing the risks and impact of adverse events including crime, accidents, pollution and natural disasters.
- Sustainable — reducing the environmental impact of municipal operations, local business activities and people's everyday lives.

## World map of smart, safe, sustainable cities

Machina Research scoring & findings



## What's the way to "smart"?

While there is no set process for becoming a smart, safe and sustainable city, Machina Research found many cities take one of three routes as they mature: the "anchor" route, "platform" route or "beta city" route. Identifying these three routes sheds important light on the options available to cities, and the pros and cons of the choices they make starting out:

<p><b>The anchor route:</b> Cities deploy a single, key application for which there is a clear and pressing need, then add others as they become necessary.</p> <p>Advantages</p> <ul style="list-style-type: none"><li>• Short path to deployment</li><li>• Use case driven</li><li>• Concrete gains and clear ROI</li></ul> <p>Disadvantages</p> <ul style="list-style-type: none"><li>• Future integration can be difficult</li><li>• Lack of synergy between applications</li></ul>	<p><b>The platform route:</b> Cities focus on building the technology infrastructure to deliver a wide range of potential smart applications and services.</p> <p>Advantages</p> <ul style="list-style-type: none"><li>• Synergies between applications are possible</li><li>• Smooth path to integration</li><li>• Active third-party engagement via APIs and open data</li><li>• Designed-in capabilities and performance</li></ul> <p>Disadvantages</p> <ul style="list-style-type: none"><li>• Risk of lock-in</li><li>• Upfront investment without initial ROI</li></ul>	<p><b>The beta route:</b> Cities prioritize hands-on experience and launch multiple pilots to see how they perform without immediate concern for long-term deployment.</p> <p>Advantages</p> <ul style="list-style-type: none"><li>• Citizen engagement</li><li>• Access to funding for trials and research</li><li>• Easy involvement of start-up and small companies</li><li>• Opportunity to use many tools including consumer-grade Internet applications</li></ul> <p>Disadvantages</p> <ul style="list-style-type: none"><li>• Hard to go beyond pilot and achieve operational deployment</li><li>• Diffusion of focus</li></ul>
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## Best practices for becoming a smart, safe and sustainable city

Machina Research's Smart City Playbook identifies a number of leading practices in use today that can be adopted by cities everywhere:

### 1. Establish clear rules, policies and governance structures for how data will be used

Cities must be transparent about how people's data is collected and used, with clear rules and business models that protect privacy while encouraging data sharing and third-party contributions and that address the monetization of data resources.

### 2. Coordinate smart city initiatives with forethought and leadership

To break down departmental silos and take advantage of synergies between and integration between applications and datasets, smart initiatives must be run by cross-departmental teams or coordinated by a single, centralized agency.

### 3. Make the benefits of smart initiatives visible to citizens

Citizens are more likely to support initiatives they can see are relevant to their lives. Many cities are using platforms that not only publish data but also allow citizens to co-create and suggest ideas for smart city applications.

### 4. Build procurement capacity for smart technologies

Smart city solutions are complex and don't fit well with traditional purchasing models, so municipal procurement teams need to be educated about how to buy complex, interconnected solutions.

### 5. Take advantage of the capacity of smart technologies to revitalize local economies

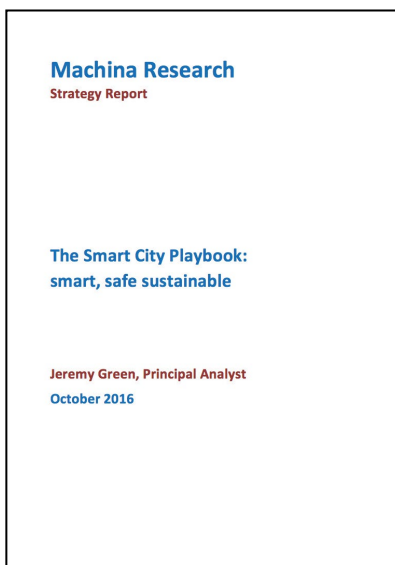
Smart city solutions can support technology-led urban regeneration and may give access to wider sources of funding for urban development initiatives.

### 6. Build the right relationships with ICT vendors

Technology vendors can be important partners in — and funders of — smart city projects. Cities should cultivate good relationships with vendors, without becoming dependent on any one vendor alone.

“City authorities need to be transparent in what they are doing, at the same time as defining rules, practices and business models which encourage data sharing, third party contribution, and appropriate monetization.”

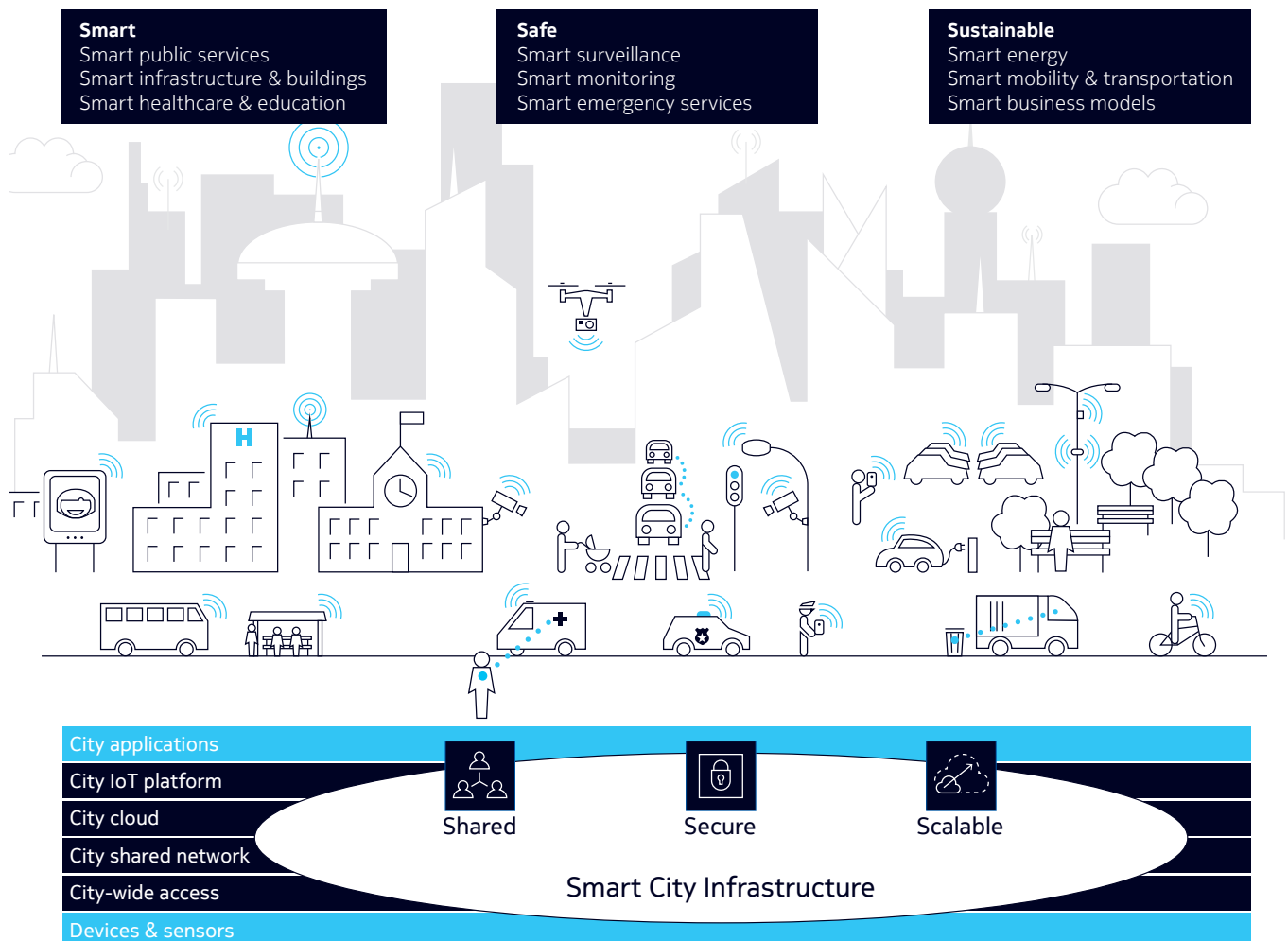
Machina Research, Smart City Playbook



Read the full Machina Research  
Smart City Playbook at  
[nokia.ly/smartcityplaybook](http://nokia.ly/smartcityplaybook)

# Enabling the human possibilities of smart, safe and sustainable cities

Nokia is uniquely positioned to help governments, communication service providers and large enterprises deliver on the promise of smart cities. Nokia's solutions are designed to provide a shared, secure and scalable platform that ensures the best use of urban resources and data to enable the human possibilities of smart, safe and sustainable cities. Working with a full and open partner ecosystem including diverse organizations — technology vendors, application developers, service providers, system integrators, utility companies, research institutions and others — Nokia continuously explores new systems, applications, content, devices and services. Learn more at [nokia.ly/smartcity](http://nokia.ly/smartcity).





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