



THE BENEFITS AND RISKS OF POLICYMAKERS' USE OF SMART CITY TECHNOLOGY

Smart cities—places where connected devices, big data, the urban environment, and city dwellers intersect—have been widely lauded for their potential to improve government services and transparency. However, while most coverage of smart city innovations has focused on their potential benefits, these technologies also carry real risks for residents' safety and civil rights.

A new study from the Mercatus Center at George Mason University looks at both the positive and the negative aspects of smart cities. The study incorporates numerous case studies from cities that have experienced both success and failure in implementing smart city tools. The study recommends that reformers focus on the incentives of local officials, not just on the promises of new technologies, to ensure that smart city innovations provide a true benefit to citizens.

To read this study in its entirety and learn more about its author, Mercatus Policy Research Manager [Emily Hamilton](#), please see "[The Benefits and Risks of Policymakers' Use of Smart City Technology](#)."

SMART CITIES WITHOUT ROMANCE

Much of the literature about smart city innovations focuses on the leadership of politicians who have spearheaded smart city policies, and reports generally assume that these leaders are motivated solely by the prospect of making life better for their constituents. To understand why these innovations can fail, however, it is necessary to understand the incentives of public officials who look for profits in the form of campaign contributions, future job opportunities, and personal prestige.

Self-interested incentives may lead policymakers to implement new technologies without making real changes in the quality of service delivery. Technological innovations can be used as a tool for rhetoric and posturing, and the public-private partnerships that provide many smart city services are riddled with incentive problems that may produce outcomes that benefit politicians more than the constituents they serve.

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BENEFITS OF THE SMART CITY

- *Transparency in government.* Transparency improves government services by reducing information asymmetries between government officials—who typically have secure jobs in which their productivity is not rigorously measured—and their constituents. Programs such as Boston’s smartphone apps for reporting complaints about city services give residents access to the mechanics of city operations, improving employees’ incentives to complete their tasks efficiently.
- *Data access.* Open data also create opportunities for new private-sector services that improve residents’ lives. For example, transit information lends itself to the creation of mashup apps that combine city, weather, and traffic data to help transit users decide whether a bikeshare, bus, or train is their best option on a given day.
- *Efficient pricing of congested goods.* Sensors in street parking spots allow a network of computers to maintain availability on each block by adjusting parking prices. This reduces the wasted time and increased congestion caused by drivers looking for parking. These systems typically pay for themselves because they increase compliance and enforcement efficiency.

RISKS OF THE SMART CITY

- *Privacy risks to citizens.* Although data sharing between agencies may improve bureaucratic outcomes, data breaches at the federal level cast doubt on local governments’ ability to keep data safe, and smart city tools also make possible the sale of personal data to private firms. Meanwhile, increasing governments’ capacity for surveillance raises concerns about civil rights and privacy.
- *Skewed incentives.* Smart city tools also raise concerns about unhealthy incentives. For example, there is evidence that the statistics-driven policing tool CompStat motivates officers to patrol minority neighborhoods where they focus on minor, easily prosecuted crimes. These strategies divert resources from more important but difficult cases and erode trust between police and the communities they serve.
- *Cover for ineffective reforms.* Politicians who lack the incentives to pursue meaningful change will often deploy technological “solutions” that fail to produce results. Examples in Washington, DC, and Philadelphia show that technological gimmicks can sometimes take the place of meaningful reforms.

CONCLUSION

Smart city innovations have the potential to improve government programs and increase transparency. However, these tools are also likely to increase privacy risks and substitute gimmicks for real reforms. Smart city tools will be successful only if policymakers are mindful of the incentives that individual government officials face as they advocate for and operate these systems.