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Digital Woes: The Challenges that Local Governments Face in the Digital Age

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In today's world, everything relies on computers. Information technology (IT) systems have revolutionized entire industries, created new tools for both work and play, and reshaped how people interact with one another. And the new digital gadgets and systems that modern society cannot function without will not be going away anytime soon.

But the effect of the computer revolution has been less pronounced in one particularly notable area: government and governance. Elected officials use Twitter to profess their views on hot-button issues, but computers have not radically changed the way that elected officials and government agencies function, especially on the local level. Why? The answer is simple—local governments face numerous challenges unique to the digital age. This article examines six such challenges: security, cost, coordination, data use, transparency, and lag time.

Security

Computer systems' security is an area of concern for local governments adopting new computer technologies. A recent study of local governments in Orange County, California found that local governments' security protocols are inadequate. When compared with federal "e-government" standards, the report finds, local governments fall short. Furthermore, the impact of security breaches at the local level is far greater than one might imagine. In the past decade, more than 54.5 million individuals' personal information was compromised as a result of 629 local government data breaches, according to a recent article by the International City/County Management Association (ICMA).

To ensure that local governments are able to use computer technology safely and securely, these organizations will need to prioritize security concerns. Strengthening security systems and implementing security best practices in conjunction with new information technology is a crucial step for local governments seeking to take advantage of computer technology, while at the same time protecting the integrity of their systems. Security best practices, as reported by ICMA, include monitoring networks for suspicious activity, creating incident response plans in advance, and installing effective antivirus software.

Cost

The cost of technology is often prohibitive for local governments seeking to take full part in the digital age. Local governments often have significantly limited financial resources at their disposal, and the latest and greatest technologies do not come cheap. This simple reality is compounded by outdated and inefficient procurement systems. Government contracting at all levels tends to favor the largest and most established companies, a fact that often stifles innovation and results in higher prices, according to a recent article.

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Furthermore, local governments are not effectively leveraging economies of scale to make purchases of computer technology cheaper. Collective procurement—a system that allows groups with similar needs to band together and secure bulk or subsidized rates on desired products—is an effective way for local governments to make IT systems more affordable. In fact, President Obama's White House Digital Government Initiative cites collective procurement as a valuable yet underused tool for making all echelons of government more tech-savvy and more cost-effective. Many local governments already have collective procurement agreements—expanding those agreements and applying collective procurement to computer technology would prove beneficial to public sector organizations across the nation.

Coordination

One of the key obstacles to taking full advantage of computer technology is a lack of coordinated and systematic planning. According to Suzanne Beaumaster, the author of a Virginia Polytechnic Institute paper on the role of technology in small- and medium-sized local governments, one of the most common issues officials face is the lack of a coherent IT implementation strategy. According to the study, the absence of a well-developed plan or a logical purpose for new technology creates confusion and detracts from the usefulness of new computer technology. Without centralized planning and implementation, IT services in local government remain fragmented and underused.

To counteract this problem, the paper notes, local governments can develop a strategic plan outlining, among other things, the purpose of the computer technology, the details of its implementation, and a process for continued technological support. Other aspects of the IT planning process are also important to local governments seeking to realize the promise of the digital age—administrative support and interdepartmental coordination, for example, create an environment conducive to technological success.

Using Data

Many local governments have difficulty making use of the information that they already possess. Public sector organizations across the country collect massive amounts of data, ranging from highway accident and arrest reports to trade and Census statistics. This veritable treasure trove of information has the potential to revolutionize the way that governments do business. For example, fire departments can begin to predict which buildings are most likely to catch fire by analyzing historical incidents, as the New York City Fire Department does. However, according to another ICMA article, many local governments lack the resources to analyze their data in a similarly effective way, and the information therefore lies fallow.

To remedy this situation, local governments can begin making more data accessible to the public. The White House Digital Government Initiative recommends making open data and web-based applications "the new default" for local governments, and points to several success stories as proof of how effective open-sourced government services can be. In San Francisco, the municipal government releases its transportation data on a public website that allows app developers to provide services to the city's inhabitants. These beneficial services are made possible by the government, but are not the government's responsibility. That is the power of making data public: people benefit, but the government does not get bogged down in the details. Open data has proven itself to be a democratic and

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effective alternative to in-house analysis, and is a path that holds great promise for local governments from coast to coast.

Transparency

Transparency is inexorably linked to the issue of how governments use the data they collect. At a recent Urban Institute event, panelists working with local governments found that city governments have not yet helped their citizens understand the importance of information collection in routine municipal operations. As discussed earlier, most governments across the country collect vast quantities of information as part of their day-to-day functioning. However, because people often do not know how that information is being used, trust in government is lacking in this area. Also, most data is not available to everyday citizens, an exclusivity that further diminishes the public's confidence. Local governments can help counteract this problem by prioritizing the security and privacy of citizens' information, and at the same time promoting transparency and ensuring that people understand how that information is being used.

Lag Time

This final computer problem facing the public sector is nebulous, and defies easy explanation. Government organizations often experience a "lag time" when adopting new technologies. The Virginia Tech study mentioned earlier also reveals that the public sector usually does not embrace new digital technologies until ten years after these tools first go on the market. This lag time can be even longer—up to 15 years—for smaller local governments. Because the delay is so long, technologies that were once cutting-edge are obsolete by the time they find their way into the hands of local officials and bureaucrats. This lag time thus perpetuates the technological inadequacies that IT investment aims to remedy.

The causes behind lag time are numerous. For one, as mentioned previously, local governments often lack adequate financial resources, with the result that only older equipment is affordable. Furthermore, without centralized strategic planning, local governments may not have the drive or the ability to overhaul their computer-based systems. Finally, institutional inertia might make local governments resistant to the idea of sweeping technological change. Lag time is not caused by just one factor, but rather by multiple challenges in aggregate. Likewise, the solution to this problem is not straightforward: local governments will first have to address institutional dilemmas (like lack of funding), organizational issues (like lack of centralized planning), and other complex problems before the ten-year lag time gives way to an up-to-date adoption cycle.