

CASE STUDY 10

Introduction

From the standpoint of modern public managers, the demands of running government organizations are heavy, complicated, and certainly not as neat, tidy, or simple as many management theorists suggest or have us believe. Indeed, today the reality of much of government sector activities is accomplished in partnership with a maze of for-profit, nonprofit, and other government entities. There is little left of “solo in-house” public management enterprise. To do the public’s work requires instead that chief executives cooperatively manage numerous complicated systems involving multiple organizations, often crossing national borders, even spanning the globe, relying upon sophisticated technologies and professional expertise to make them operate, as well as on numerous other organizations for support to achieve their mission(s).

The following case study, “Government as Catalyst,” Professors Abhijit Jain, Munir Mandivilla, and Rajiv D. Banker illustrates the important public management dimensions involving local government efforts to promote technological innovation for its citizens. During the last two decades, the Internet has become increasingly indispensable for achieving individual as well as corporate success in the global economy. For American cities in particular, the Internet is considered an essential prerequisite in order for its residents to exploit global opportunities in the economic marketplace. Urban growth (and stagnation, for that matter) often turn decisively on whether or not communities and their citizens have easy access to the Internet. The application of municipal wireless networks (MWNs), which allow for wireless Internet access, has thus become a vital, necessary instrument for urban development.

Practically how can this new technology be employed to serve the public sector needs? This case explores how Philadelphia—the largest American city to date to attempt this model—effectively planned and implemented a community-wide MWN. It demonstrates, as its title suggests, that municipal government can act as a catalyst by carefully managing diverse stakeholder involvement, technological change, funding support, and public/private sector cooperation. Threaded throughout Philadelphia’s complicated endeavor to develop its MWN was a critical collaborative public management dimension that effectively integrated state and federal entities. Collaborative public management, as this case emphasizes, was essential in order to accomplish this significant project and turn it into a “win-win” for all concerned. To be sure, as you will discover, how and why this became a reality relates directly to Professors Thomson and Perry’s central thesis that twenty-first century government must embrace collaborative processes in order to make things happen for the communities and public that administrators serve.

As you read this case study, give thought to the following:

How did Philadelphia officials identify the problems, subsequently frame the options for solution, and finally fashion a workable plan of action to implement an MWN?

Why did public administrators require collaborative processes to create a workable MWN for Philadelphia? Which key actors were involved in this collaborative process? Why was their specific participation necessary?

Can you identify the essential dimensions of collaborative management in this story? Did it follow the five dimensions as defined by Thomson and Perry’s foregoing essay? Or, would you suggest altering their model in order to explain adequately what occurred in this case study?

Why was collaboration so vital to turn MWN into a reality for Philadelphia? Why was it so complicated to practice in reality?

In general, what does this case tell us about the importance of public administrators' leadership roles within any effective, collaborative public management activity?

Government as Catalyst: Can It Work Again with Wireless Internet Access?

ABHIJIT JAIN
MUNIR MANDVIWALLA
RAJIV D. BANKER

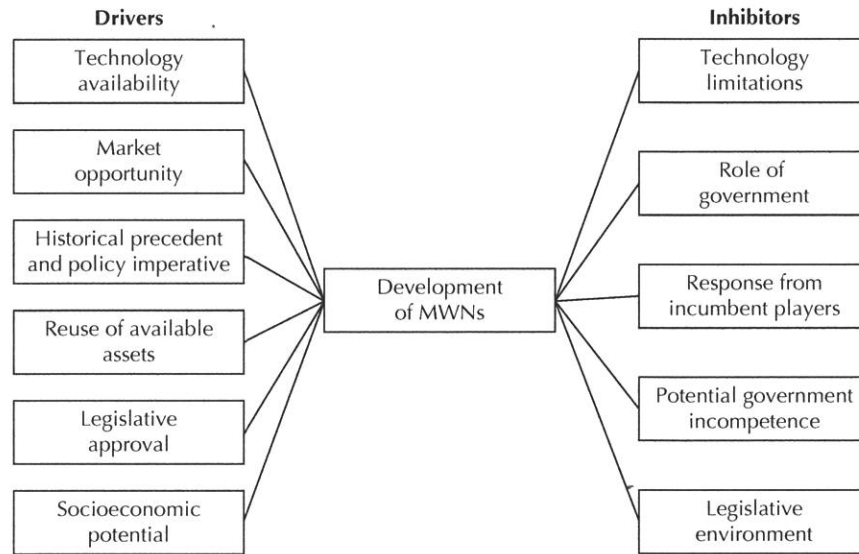
In our global information society, the centrality and importance of the Internet cannot be overemphasized. For individuals and institutions alike, it is a critically important platform for communication and interaction. It has the potential to be a leveling agent for existing economic systems and the inspiration for the development of new systems. In the city of Philadelphia, 40 percent of the population identify themselves as nonusers of the Internet. If 40 percent of the population of a large American city cannot participate in the Internet revolution—no matter what the reason—there can be serious repercussions for the economic, political, educational, and social future of that city. In the face of considerable opposition from political and commercial entities, the city government of Philadelphia decided to address the access problem and create a municipal wireless network (MWN) to provide affordable, reliable, and high-speed Internet access.¹ Eventually the city was able to close a deal with a private contractor who would fund the entire cost of building the network and provide sustainable funding and tools to address the city's digital divide.

The essay is organized as follows: We first discuss the emergence of MWNs as a prominent new information technology (IT) infrastructure concept, as well as the drivers and inhibitors of MWNs. Next, we provide a detailed analysis of the Philadelphia wireless project using a stage-based framework to delineate key milestones. The essay concludes with a summary of key lessons learned and relevant research issues.

This essay is based on a detailed analysis of 12 focus groups involving 120 stakeholders relevant to MWNs in Philadelphia, intensive work with the city task force on the project, work helping the city write the business case for the wireless initiative, interviews with vendors and leaders of other MWN projects in the United States, and a detailed usage analysis of the initial city wireless pilot in "Love Park" in Philadelphia. Although the work presented here is based on a single case, we believe the breadth and depth of our analysis will be of general interest.

The Emergence of Municipal Wireless Networks

Through there has been impressive growth in the number of people accessing the Internet over the past decade, this growth has not been uniform. A confluence of factors has recently made MWNs an increasingly feasible and attractive option for municipal governments that seek to act as catalysts in promoting more equitable and universal access to the Internet within their communities. An MWN is defined as a wireless Internet access network that is created with active local government leadership and involvement. MWNs are currently among the most talked about innovations involving Internet access. In the United States, sales of wireless Internet access-related hardware are expected to grow from under \$100 million in 2004 to around \$1 billion by 2009 (Lawinski 2005), driven in substantial part by investments related to MWNs. There are more than 300 MWN projects currently

Figure 10.3 Drivers and Inhibitors of Municipal Wireless Networks

under way in the United States and at least another 100 worldwide. To better understand the nature of the interest, we discuss the drivers and inhibitors of MWNs (see Figure 10.3).

Drivers of Municipal Wireless Networks

Technology availability. Recent developments in broadband wireless standards and technology, coupled with steep declines in prices, have made the deployment of broadband MWNs more convenient and cost-effective than ever before and a viable alternative to cable, DSL, and other wired technologies. The concept of MWNs emerged in a bottom-up manner through the efforts of end users and communities. In the United States, certain bands in the radio frequency spectrum, such as the 900 MHz, 2.4 GHz, and 5.8 GHz bands, are available for unlicensed usage by the general public. These radio frequency bands are used for applications such as cordless telephones and remote-controlled car keys. In the late 1990s, home and office Internet users started creating wireless local area networks (WLANs) using these unlicensed radio frequency bands. The coverage area of such a network, typically a few hundred feet, is called a "hotspot." It is estimated that there are now more than 10 million WLANs in homes across the United States and at least an equal number in commercial locations (Fleishman 2006).

Users realized that it was possible to connect proximate hotspots to create larger wireless networks spanning the areas covered by individual hotspots. Such networks are called "mesh" networks, and certain low-cost and off-the-shelf devices called "meshing" devices are needed to link the hotspots together. Because no license fees are required and there is no need to install fiber or wires, mesh networks can be deployed quickly and cheaply to provide large areas with wireless Internet access. These meshed networks have the potential to offer a radical departure from existing capabilities. For example, wireless, ubiquitous broadband Internet access could inexpensively support interactive television broadcasts and Voice-over-Internet Protocol mobile telephony or new kinds of applications such as handheld wireless devices that provide tourists in a city with rich and interactive information.

Market opportunity. In the United States, telecommunications firms have traditionally ignored or underserved poorer urban and rural communities. Other firms see this as an opportunity. For example, Internet service providers (e.g., Earthlink) are creating business units to service municipalities that are interested in creating wireless networks. Several major hardware vendors have created units to promote and support wireless networks (e.g., Intel and Cisco). More recently, Internet aggregators such as Google have announced plans to create such networks for their local constituencies.