
Preface

Congratulations Philadelphia! Through words and actions you have lead a national and international discussion on the value of deploying citywide broadband wireless. You have taken a great leadership role, together with Seattle, San Francisco, Austin, Portland and Atlanta, to become one of America's most unwired cities.

There is no right way or wrong way for this journey but you are on your way. The process and decisions you made will potentially help the other 14,428 cities in America, and even more importantly, help urbanized communities find their path to connectivity. This book is an in-depth "How to."

We are evolving into a networked society where connectivity is the key to increasing the quality of how we live, work, play and learn. The economics of providing connectivity are changing with a communications variant of Moore's Law—that bandwidth is becoming more robust and more economical every 18 months. Not so long ago the mantra was that FTTH (Fiber-to-the-Home) made business sense even though it was an expensive undertaking. While wireless can't deliver the bandwidth of fiber and probably never will, it offers ample if not robust bandwidth at costs one-tenth of FTTH and prices are continuing to drop. At these cost benefits, forward-thinking local governments can get truly serious about connecting their constituents more economically than thought possible.

Those of us in the public sector participating in the telecommunications policy reform debate are keenly aware of the 'build-out' issue wherein the communications giants seek only to serve those segments of a community that meet well defined, bottom-line business objectives. For those reading this book from a private sector and not a public policy view let me say that the economics of wireless connectivity can be used to balance these digital divide issues.

Wireless services are especially important in addressing rural and low density connectivity which, in the political scheme of things, is critically important to the majority of the Senate membership representing constituencies with keen rural interests. Wireless technologies offer an economical solution to those areas whose elected officials would like their constituencies offered any type of broadband connectivity. Simply, wireless connectivity has the potential to clear the logjam for national telecommunications policy reform and reduce the digital divide.

The clear winners in municipal provisioning, other than the residents, are the local business owners and *potential* business owners. Wireless connectivity is an attractive tool in municipal economic development and luring higher paying, white collar jobs to any community. New businesses are enticed by cheaper connectivity. Local and regional businesses, especially those with mobile workers, benefit from less expensive and faster mobile connections. Businesses in more rural communities have an option of less expensive broadband in their offices. At the end of the day, workers will be able to do more, do it faster, and do it cheaper.

As Craig points out, there are two choices for local government's deployment of wireless, partnering with providers or doing it yourself. His book documents and describes how Philadelphia made those and other choices. The message for local governments is not necessarily to copy Philadelphia's decisions but to emulate their process. Cities and counties should engage the discussion and decide if connectivity warrants the same level of attention and planning as other critical infrastructure elements such as water, power, sewers and storm drains. If it does, then begin the process of deciding how to get there. This book can help you think through that process.

Good luck Philadelphia and good luck America.

Lori D. Panzino-Tillery

*President, National Association of Telecommunications Officers
and Advisors (NATOA)*

Introduction

Let's get right to the heart of the matter. The decision in Philadelphia to deploy broadband wireless citywide was not a political one, though it obviously impacted many political decisions. It was a sound business decision made by an organization, a major customer of technology, to improve its ability to deliver a better product - government services - to its customers who are the citizens of Philadelphia.

Philadelphia's executive steering committee that was chartered to create a plan to make municipal WiFi work evaluated their technology options as does any prudent business. The committee then selected options that will give them the best performance while delivering the most effective results at the best price point. In fact, they did a more thorough job of analyzing end user technology needs than major corporations spending much more for their deployments.

The resulting frenzy of counterproductive legislation and legislative saber rattling really isn't about political decisions either. It's the disappointing consequence of business decisions made by a tiny group of companies attacking perceived threats to its market position that, in reality, is threatened by its business models which are at odds with the advance of technology.

Fighting the Good Fight is about smart business decision making municipal wireless broadband and mobile government workforce applications. It gives elected officials and managers in local governments, as well as their stakeholders, guidelines for making appropriate wireless plans to meet their specific operational and constituent needs. It gives government CIOs and IT staffs a good picture of vital business issues to address when selecting, then managing, vendors and technology products.

Follow how Philadelphia's project team approached its municipal WiFi decision, did extensive needs analysis, wrote a comprehensive business plan in just three months, launched pilot projects and selected the vendor team to do full deployment. The team withstood the slings and arrows of outrageous controversy that comes from being on the leading edge of muni WiFi deployments, and subsequently they have many lessons for those pursuing this technology.

When you look at the public face of municipal broadband wireless as presented in much of the media, you see political intervention and philosophical discord. You

see the needs of the underprivileged pitted against the interests of giant telcos and cable companies. Often you see a race to be “first” in muni Wifi, a fleeting concept at best. What’s missing is an in-depth discussion about the business issues.

Fighting the Good Fight starts with an overview of why now is the time for cities and counties to evaluate municipal WiFi. Apart from the representative side, government is a business that takes in revenue to pay employees to deliver services citizens expect. Local governments face increasing challenges that put a strain on financial and human resources as they attempt to achieve their mission. WiFi, when effectively deployed, radically improves how a government does business to the benefit of all of its constituents.

Philadelphia faces intense social and economic challenges that cities of all size face, and the city is meeting these in the conventional ways of many governments. But Mayor John Street felt they needed out-of-the-box thinking to do better. Though the project team had to adjust their thinking several times in the early stages, they never wavered in their belief that new technology can solve old problems.

The next two chapters address the business case for using WiFi and wireless applications for both government and constituent groups that augment the delivery of government services. Local governments need to deploy the WiFi infrastructure to wireless-enable its workforce, then use the resulting return on investment from increased productivity and reduced operating cost as well as creative business partnerships to achieve social objectives.

The \$2 million annually that WiFi is expected to save Philadelphia in telecommunication costs for its 2000 mobile workers and 300 remote offices makes for a solid business case. But then there are wireless applications within departments such as the Licenses & Inspections Department that will each generate their own ROI that should be greater as a result of the citywide WiFi network.

Chapters 4 – 6 address developing a winning project team, building consensus among a diverse assortment of stakeholders representing business, community, education, and other interests, and assessing constituent needs. These three tasks are the foundation which any successful deployment must have. Executing either task poorly leaves you vulnerable to failure, or at least failure to achieve the full benefits that the technology offers.

Pay careful attention here because, as focus groups facilitator Robert McNeil of the Ronin Group says, “You can really go by what Philadelphia did because Philly

did a lot of things right.” Their approach to picking a project team with the most inclusive representation of constituent groups, building consensus and soliciting feedback was downright obsessive. But it produced good – and unexpected - insights that cities ignore at their peril.

Chapter 7 addresses key issues that define your eventual wireless implementations. Many are technology related and affect workforce applications. However, a major defining issue for the broadband wireless infrastructure is what business model do you employ? Who owns the network? Is access free or paid? Philadelphia chose a “wholesale” model and created a non-profit entity, Wireless Philadelphia, to implement the business plan.

In Chapter 8, you will learn some valuable lessons on acquiring the right technology products or services based on the needs of government workers and constituent groups. There is an incredible array of options, particularly when it comes to wireless applications for mobile workers. You have to do some serious leg work before, during and after deployment to make sure what your users and constituents get is what they need.

Matching technology with mobile workers’ needs is relatively easy since they work within a centralized business structure. But Wireless Philadelphia’s project team was a little awed when it became apparent how much work must go into community relations to align technology with a crazy quilt of needs, skills, perceptions and expectations among constituent groups. Technology is actually just a part of the solution.

The logistics of deployment are covered in Chapters 9 and 10. I often wonder if the people announcing plans to make their cities wireless to improve operations and attack social issues truly understand the amount of work that lies before them. At one level, IT staffs understand basic technology deployment. But wireless technology fundamentally changes how businesses operate and people conduct business. Wireless deployment isn’t just building infrastructure or handing out products. It’s herding cats in the most extreme sense of the phrase.

The phase of implementation moving from technology selection to pilot projects to actual deployment requires a blend of business acumen, technology expertise and community relations that you can’t address haphazardly. The ability of CIO Dianah Neff and Project Manager Varinia Robinson to talk the talk and walk the walk equally well with businesspeople, techies and average citizens in the neighborhoods

is masterful. It's not building the network that assures their success, it's facilitating what constituents do with the network.

Two aspects of deployment that governments may not have faced to the extent they will with wireless technology is total cost of ownership (TCO) and return on investment (ROI). There are myriad costs of a wireless deployment beyond the price of hardware, software and services. If you don't prepare for these, down the road a lot of people could be unhappy.

Governments smart enough to act like a business must be good at predicting ROI before deployment and assessing it after deploying. The tricky part is that government differs greatly from many commercial entities in that so much of its ROI are intangible benefits. Saving and transforming lives are not balance sheet line items. Nevertheless, your wireless investment still needs to be balanced against what you achieve with it.

Since there are few citywide muni WiFi deployments completed, TCO and ROI are mainly accurate estimates, best guesses and logical conclusions. Luckily, there are enough benchmarks for mobile workforce applications, radio network deployments by emergency first responders and partial city WiFi deployments to guide the way and fortify confidence levels. Tie your TCO and ROI calculations to department and constituent-level deployments, while heeding advice offered by vendors involved with the Philly project to recommend ways to contain infrastructure costs.

Fighting the Good Fight concludes with an epilogue of forward-looking viewpoints from many of the people involved with the project. Here you get a glimpse of what lies ahead, both for Philadelphia and for you as your municipality begins or continues its muni WiFi efforts.

This book helps you understand what Philadelphia did, why they did it and how similar wireless initiatives can improve local government and the lives of its citizens. Imitation may be the best form of flattery, but you don't want to imitate the project team's decisions, you want to imitate the process by which they came to those decisions.

Municipal broadband wireless has an unprecedented opportunity to change the way in which local government manages the people's business, and in an incredibly short period of time. It may not be the ideal technology for every government or constituent group. But everyone owes it to their community to evaluate the potential, to explore the art of the possible.