ATTACHMENT 3

civitium
Powering the Digital City

Municipal Wireless

Request for Proposal (RFP) Best Practices

July 2005

www.civitium.com

Greg Richardson
Managing Partner

info@civitium.com

© Copyright Civitium, LLC 2005

Preface

Over the past year, Civitium has worked with numerous cities on municipal wireless initiatives, tackling issues such as strategy, policy, education, demand assessment, community outreach, stakeholder analysis, feasibility, business plan development and technical evaluation and diligence. Through that work, many lessons have been learned, sometimes through hard work and discipline, and other times (admittedly) through trial and error. This paper intends to communicate some of those lessons learned in the hopes that they are helpful to other cities involved in similar initiatives.

As municipal involvement in broadband initiatives has become more commonplace, the issuance of a Request for Proposal (RFP) by cities has become somewhat of a status symbol; a statement to the market that a city is "on the ball", that a plan has been developed and that the city is prepared to solicit partners to help them execute the plan. More importantly, an RFP presents a unique opportunity for cities to:

- Articulate community needs in a clear and concise way
- Leverage the knowledge and assets of the vendor community to learn about new innovative approaches for addressing these needs
- Validate business and technology assumptions made during the planning process
- Collect multiple, and hopefully diverse, proposals that can be evaluated to strike favorable terms during contract negotiation

Civitium has learned to think about the RFP holistically; as a process rather than an event. There are important steps that need to taken prior to issuance of the RFP, as well as following the selection of a proposed solution, and the quality the overall process is often directly related to the quantity and quality of proposals received.

While technical requirements are obviously a critical component of any RFP, these requirements vary greatly from city to city, and from project to project. Attempting to dive into specific variations of those requirements goes beyond the scope of this paper, however we have provided a summary-level outline of the most common requirements.

Finally, there is no reason any city should have to "reinvent the wheel" when going through this process. A great deal of work has been done by other cities, and much of this work has resulted in valuable resources materials. This paper will also provide links to many of those resources.

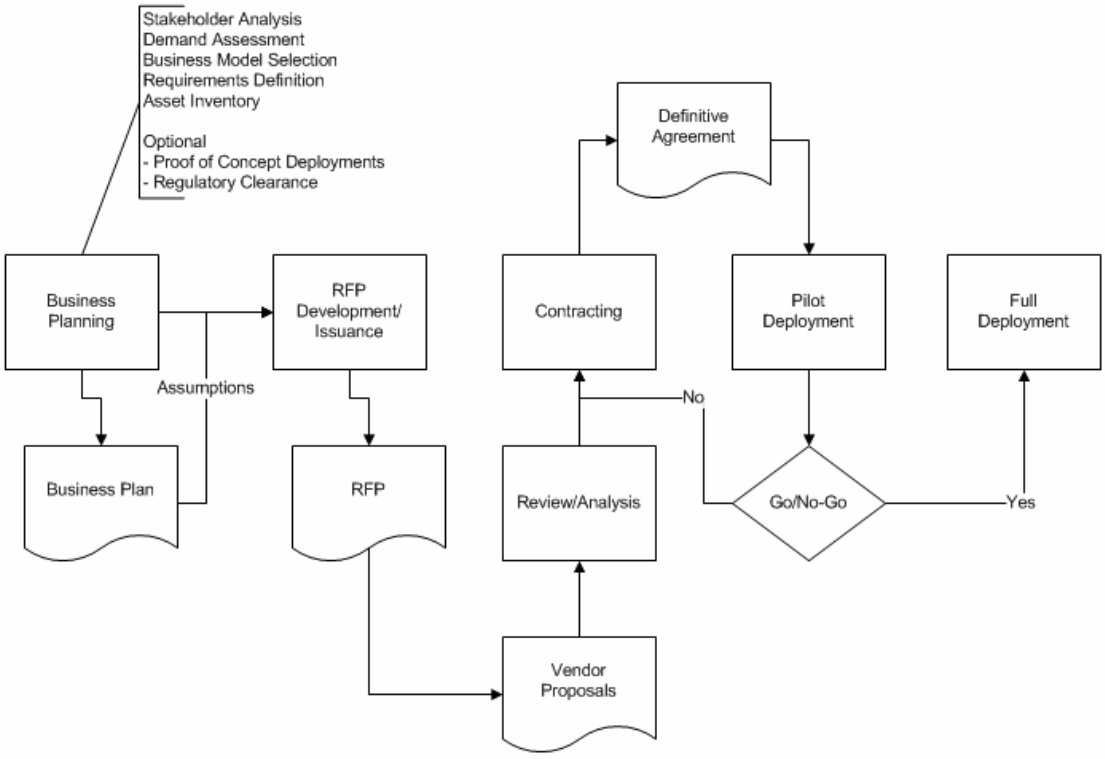
We hope that this paper provides value to you, and as always, we welcome your feedback and suggestions on how to make it better.

Greg Richardson
Managing Partner
Civitium, LLC
greg@civitium.com
www.civitium.com

© Copyright Civitium, LLC 2005

Lifecycle Process

While the lifecycle of a municipal wireless RFP (including pre and post-RFP activities) will vary depending on each city's strategy, policy, business model, procurement process and other factors, the below diagram represents the most common approach taken by cities.



Highlights of this approach include:

- A business planning process precedes the development of the RFP. This is where most of the assumptions, inputs and data that will be required for the development and documentation of the RFP are created. These prerequisites will be covered in more detail in the following section.
- A city may optionally choose to conduct proof-of-concept (POC) projects during the business planning process. POCs are limited deployments whereby the city engages with vendors who are motivated to showcase their technology/solutions for a brief period of time.
- In projects where the network will support public access, cities may also need to have legal counsel review and provide feedback on how existing or pending legislation may impact their business model choices.

© Copyright Civitium, LLC 2005

- Once the RFP is issued, proposals are then received, reviewed and analyzed. A decision is made to move to contract negotiation with at least one vendor. A "backup vendor" may be asked to honor the terms of their proposal for an extended period of time in the event the winning vendor fails to meet defined pilot terms or service levels.
- Once a definitive agreement is reached (likely with a contingency defined), a pilot deployment may be required by the city to validate the winning vendor's solution prior to a broader citywide deployment.

So, this seems like a completely logical, straightforward and simple process, right? The answer is yes, it can be, but once again, this high-level description of the process assumes:

- A leader exists in the community who has the passion, commitment and ability to ensure that the process moves forward throughout the entire lifecycle. This issue is often overlooked and its impact on whether the project succeeds cannot be overstated. Having dozens of government and community leaders *involved* in the process will benefit the process only if there is a *focal point* for driving the process to completion.
- Substantial effort and discipline is applied to the business planning, proposal review/evaluation, pilot and other processes. The RFP, once developed, must make a clear and concise statement about the objectives, goals, business model, requirements and other assumptions of the city. This is critical to ensure that multiple and varied proposals will be presented by the vendor community.

  It is evident to the vendor community once an RFP is issued where focus on these areas has been applied and where it has not. For example, an RFP that defines page upon page of technical requirements for the network, with no statement as to who will own the network, where funding will come from, the role of the city, what services are required, what assets will be made available, etc. will only result in a confused vendor community.

© Copyright Civitium, LLC 2005

Business Plan Inputs

No doubt the reader of this paper is now saying "I thought this was a paper about writing an RFP. What's with all this business plan stuff?" A great question that deserves an explanation.

Civitium's experience has shown that the actual *writing* of an RFP in this area, despite the fast pace of the technology surrounding it, is a relatively simple process; procurement templates that define city's policy and T&C information, checklists of technical features of a wireless network, samples of RFPs from other cities and lots of other materials exist already.

Then why are there so many examples of 50-page RFPs, followed a month later by 300-page Q&A/clarifying documents? Well, the answer is that most of the effort to make the process work is done prior to ever writing a single word of the RFP. If you find yourself scratching your head and calling meetings to answer many of the questions in the section below, with a deadline of 2 weeks to "get the RFP out", our suggestion (respectfully) is to take one giant step backwards and reconsider the need for more work in the business planning process.

So, what are the various RFP inputs that should result from the business planning process? The following section outlines five areas for input and some of the methods that can be used to collect them.

Stakeholder Feedback

The general and specific feedback from a diverse set of stakeholders in the community about the need for the network, the value it might provide, their level of support for the project, etc.

Collecting feedback from numerous and a varied stakeholder is a tedious process, but can be done through:

- ***Focus group sessions*** – Facilitated meetings with representatives from various community groups (e.g. government agencies, education, healthcare, chambers of commerce, nonprofits, incumbent service providers, etc.)
- ***Town hall meetings*** – Open sessions whereby the public can learn about the initiative, provide feedback on the process, voice any concerns they may have and ask questions.

© Copyright Civitium, LLC 2005

- ***Surveys*** – By far the most complex and expensive approach for gathering stakeholder input, however surveys can be used to produce statistically-valid, quantitative results, particularly for harder-to-reach parts of the community.

Method	Type of Stakeholders	Type of Feedback	Directness
Focus Groups	Representatives	Mixed	Indirect, by proxy
Town Hall Meetings	Open public	Qualitative	Mixed
Surveys	Hard to reach	Quantitative	Direct

By taking a close, objective look at the needs of various stakeholder groups, it allows the city to:

- Uncover needs that may exist with one group in the community that may not be common across all groups
- Demonstrate the city's goal of making their municipal wireless initiative a "community initiative", not just another government project
- Identify and consider objections and concerns from those who may not be supportive of the project
- Educate the community about new technologies, and the steps being taken by the city to improve the community

Finally, even in communities where the support for improvements in broadband infrastructure appear well-understood, and there is consensus to the point where people say "we know what we need to do, let's just do it", there is still a need to validate anecdotal feedback from informed, passionate leaders with real data on the needs of the community, and understand how those needs vary from one stakeholder to another.

Demand Assessment

> The process of defining any needs in the community that are not being met and forecasting the value of the network's ability to meet those needs.

While there are many methods for performing demand assessment, and many sources of data available, the end goal is often to answer questions such as:

- To what extent are existing broadband services available throughout the community?

© Copyright Civitium, LLC 2005

- What percentage of households and businesses has access to existing broadband alternatives?
- To what extent is the price paid for existing services an inhibitor to adoption?
- What other inhibitors might exist for broader adoption by the public? PCs in the home? Literacy? Support mechanisms? Content?
- What existing services are relied on by government agencies? What price is paid for those services? What are the term and termination issues with those services that may affect the city's ability to migrate them to a new network?
- How does (or is) broadband availability and pricing affect small business growth in the community?
- What are the detailed characteristics of existing broadband alternatives (e.g bundling arrangements, length of time to provision, activation fees, contract term/termination penalties)
- What, if any, grass-roots community networking initiatives are underway, and how will the city's plan coexist with those initiatives.
- How can broadband services be made more available to benefit tourists, business travelers and other "nomadic" visitors to the city?
- What future applications are being considered for use within and across government agencies?
- How might the network affect the interaction between government agencies and citizens or the efficiency of delivering government services?
- What subscriber projections can be made for each "user domain" and type of service (e.g. government agency employee, tourist, citizen, small business)

In many communities, wireless technologies are considered not only as an alternative for existing, fixed, last-mile solutions, but also as critical for supporting new usage models and applications (e.g. nomadic, portable and mobile). For this reason, it is important to assess demand in the community not only on the basis of bandwidth, speed, Mbps, fixed locations served, etc., but also on the basis of demand for these usage models, which fixed broadband services cannot address.

Communities who embark on municipal wireless initiatives may face opposition from incumbent providers, questions from the press and rebuttals from "think tanks" questioning the city's policy and/or the viability of the city's plan. Again, having real data, backed up by diligent efforts allows the city to say "we hear your concerns, but we've done our homework, we know our community and here are five issues that we uncovered that justify our plan to move forward."

© Copyright Civitium, LLC 2005

Business Model Assumptions

The definition of how the city envisions their role in the initiative, and the role of other organizations. This can also be expressed as the "value chain structure" for the network.

Defining a set of assumptions about the business model desired or assumed by the city, and communicating those assumptions in a clear and concise way, may in fact be the most important issue that determines a competitive (if not successful) RFP process.

If, after reading the executive summary for a city's RFP, the vendor community can answer most of the following questions, this is a good indication that the city has accomplished this goal:

- What are the city's (and the various stakeholders') goals and objectives for the project? Economic development? Social? Reduced cost of government services?
- Who will fund and own the network?
- What role does the city anticipate playing in the process? Catalyst? Service provider? Provider of assets?
- Will the value chain of providers be "vertically or horizontally integrated"?
    - Vertically-integrated refers to a business model where one organization (which may or may not be the city or an authority created by the city) funds, owns, operates and deliver services over the network.
    - Horizontally-integrated refers to a business model where various organizations (possibly including the city) cooperate as a "consortium" to fund, own, operate and deliver services over the network.
- Will the network support open access to multiple commercial (e.g. ISPs) or institutional (e.g. educational) service providers? This is sometimes referred to as a "wholesale" model.
- If a wholesale model is proposed, will the party who owns the network also market services to residential and business subscribers or will they be "wholesale only"?
- Will the network be single-purpose (e.g. used for municipal agency needs) or multi-purpose (e.g. also made available for public use)?

© Copyright Civitium, LLC 2005

- Does the city envision that access to the network will be fee-based or free to citizens and/or businesses? Will free access be provided in public spaces?

- If the network will be privately-owned, is the city proposing to be an anchor tenant?

- If the network will be privately-owned, is the city attempting to "auction" rights to certain assets through the RFP process?

Requirements Definition

The definition of technical requirements that must be met to respond to the community's needs.

The definition of requirements (assumed here to be technical requirements) for the network is a delicate issue, mainly due to the need for the city to communicate architecture, design and other assumptions, while at the same time not dictating a "hard coded design" to the vendor community. To the extent that a city will rely on a partner responding to the city's RFP to (possibly) design, deploy and/or manage the network, the expertise of the vendor community needs to be assessed through the RFP process.

By dictating a design and "asking vendors to bid on construction of the city's design", the city can open up various accountability issues. For example, should the network, once constructed, not meet the city's required service levels, the winning vendor may respond "well, I built just what you told me to build", which results in finger-pointing that most city's would prefer not to deal with.

So, the trick in defining requirements is to state *what* is needed, but not *how* it is to be achieved, allowing the vendor community the flexibility to architect and propose a solution.

For example, it might be appropriate to say "We have a requirement for 802.11g service to be available throughout the city limits", but it might be going too far to say "We have a requirement for an 802.11g solution, using rapid spanning tree routing protocols, with a density of X nodes per square mile, with Y backhaul gateways for every Z nodes, throughout the city limits". The former is a requirements and the latter is a design mandate.

In the example above, it's clear that there are many approaches to make Wi-Fi service available over a city and by dictating *one* of those approaches, the city will have a less diverse set of proposals to evaluate.

© Copyright Civitium, LLC 2005

One of the most effective ways to define detailed technical requirements (which tend to be specific to each project) is to first outline categories of requirements. Some of the most common categories are listed below for reference, and the links to various RFPs at the end of this paper provide an additional resource for making sure that your list is complete.

- Network Infrastructure
- Security Infrastructure
- Network Management
- Business Support Systems (BSS)
- Operations Support Systems (OSS)
- Leased Telecommunications Services
- Architecture and Design Services
- Deployment and Installation Services
- Warrant, Maintenance and Upgrades Services
- Software Hosting and Data Center Services
- Customer Service and Technical Support Services
- Program and Project Management Services

Asset Inventory

With most municipal wireless initiatives, particularly ones where the network will be owned by a private provider, a disclosure of information about all assets that the city may contribute to the process is required. These assets often include:

- City-owned utility poles
- City-owned street lighting
- City-owned buildings where rooftop rights may be available
- Water towers and/or tanks
- City-owned fiber optic cabling
- City (and/or county) owned communications towers
- Existing conduit and/or duct work
- Existing public works initiatives (e.g. a new sewer project)
- Geographic Information Systems (GIS) data showing multiple layers of data
- Information on city ordinances governing the use of all assets
- Information on established prices for lease rights to all assets

In addition to an inventory of these assets, detailed information about each asset is also required in most cases. For example:

- For utility poles, valuable data might include the GIS coordinates, street intersections, height above ground level, characteristics of power availability and connections, statement as to whether power is supplied 24x7 (or only at nighttime), etc.

© Copyright Civitium, LLC 2005

- For communications towers, data such as GIS coordinates, ground elevation, height of the structure above ground level, availability of mounting rights at various heights, availability of facilities at the base, physical security of the tower, etc.

The list of characteristics varies for each type of asset, but the key point here is that the more data that can be collected and disclosed, the better solution vendors can design and propose during the RFP process.

It is also critical that cities understand and document the detailed process for securing rights to these various assets when going into the RFP process. It is not uncommon for city-sponsored wireless broadband projects to proceed to the point where a vendor award is imminent, only to find out that there are regulations and/or other processes that must be worked through. Collecting this information often requires detailed interviews during the business planning process with:

- Legal Counsel (federal, state and/or local regulatory issues)
- Public Works Department
- Streets Department
- GIS Department (typically part of the city's IT/telecom group)

Finally, many projects require access to certain assets that are not city-owned, such as investor/shareholder-owned utility poles (very common in large cities). Since the federal rate setting regulations for utility poles apply to telecommunications providers (phone and cable companies in this context), but not for "Wireless ISPs", securing these rights can be a lengthy and difficult process of negotiating rates with each utility company.

© Copyright Civitium, LLC 2005

Policy and Procurement Questions

There are a number of issues that relate to the city's overall policy and procurement process. These issues border on being outside the scope of this paper; however we are compelled to outline the most common questions that cities may want to consider in advance of issuing the RFP.

- Will the city disclose the names of vendors who register during the RFP process? Attend the pre-proposal conference? Submit bids?
- Will attendance at the pre-proposal conference be mandatory?
- Will the city publish their evaluation criteria for proposals?
- Will the city require a proposal bond? If so, how much?
- Will the city consider counter proposals for a business model (e.g. ownership of the network) that differs from the city's plan/assumption?
- Will the city disclose a contract template and ask bidders to agree to general T&Cs during the RFP process?
- Does the city plan to invite finalists for an oral interview/presentation?
- Does the city plan to "short list" more than one bidder and move to a "best and final" negotiation with multiple bidders?
- Will the city require a winning bidder to deploy a pilot network before proceeding to a larger deployment? If so, how will milestone payments be negotiated for the pilot?

© Copyright Civitium, LLC 2005

Resources and Additional Information

Wireless Broadband – The Foundation for Digital Cities
A Cookbook for Communities
http://www.muniwireless.com/reports/cookbook1form.html

RFP Heaven from Muniwireless.com
http://www.muniwireless.com/reports/docs/rfpheaven-pdf.pdf

Wireless Philadelphia PA Business Plan and RFP
http://www.wirelessphiladelphia.org

Tempe AZ RFP
http://www.tempe.gov/purchase/bids/BidSummary.asp?BidNumber=05-084

Grand Rapids MI Vendor Invitation
http://www.muniwireless.com/reports/docs/WirelessVendorInvitation.pdf

Minneapolis MN RFP
http://www.ci.minneapolis.mn.us/procurement/wirelessrfp.asp

Los Angeles CA RFI
http://www.labavn.org/index.cfm?fuseaction=contract.rfp_general_view&actiontype=view&ContractID=2276&page=1

Washtenaw County MI RFI
http://wireless.ewashtenaw.org/

Ottawa County MI RFP
http://www.muniwireless.com/reports/docs/OttawacountyRFP.pdf

Intel Digital Cities Initiative
http://www.intel.com/business/bss/industry/government/digicity.htm

© Copyright Civitium, LLC 2005