

Competing Municipal Network Business Models

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BUSINESS. TECHNOLOGY.
ONE WEEK. ONE PLACE.

Asking the tough questions

- How does the municipality benefit and at what costs?
- Will ***all*** of our constituents realize benefits from this?
- Can this plan meet all of our partner's financial needs?
- Will this infrastructure meet our current *and* future needs.

Collecting the necessary information

- Ask, “*What is a world class city?*”
- Solicit the business community for their present **and** future needs
- Involve the public in the dialog
- Study and visit other municipalities
- Look internationally – We're way behind
- Design what should be built and then build a business model that supports it

Benefits to the municipality

- Economic Development stimulation
- Cost Avoidance/budget reduction
- New applications increase efficiency
- Revenues from E-Government fees
- Revenues earned from profit sharing
- Improved public access to government
- Public Safety technologies implemented

Benefits to the constituents

- Pervasive mobile and fixed connectivity
- Stimulated Economic Development
- Better access to government services
- Lowered government cost = less taxes?
- Digital Inclusion removes Digital Divide
- Reduced crime rate enhanced with improved First Responder technology
- Enhanced perception of the community

Financial incentives for your potential partners

- Solid business model documenting a very strong return on investment
- Access to municipal resources
- City participation in construction costs
- City participation in ongoing expenses
- Contractual obligation to buy services and/or reduced infrastructure fees
- Streamlined paperwork/permitting

Future proofing the infrastructure

- Communicate a clear vision of concept
- Mandate backbone expansion needs
- Equipment must be upgraded/reused
- Set expected lifespan for infrastructure
- Design for present and future services
- Leverage current applications for profit
- Reserve funds for inevitable upgrades

Optional network considerations

- Life expectancy = upfront cost
- Will this design allow for today's AND tomorrow's requirements?
- Can this network be easily managed and is it upgradeable?
- Is this an open access network capable of supporting multiple service providers or is this a closed infrastructure?

The “Top 5” business models

- Municipality owned
- Privately owned*
- Private/Public Partnership
- Non-profit based
- Community network
- *Performance based contracts

Municipality owned

The advantages

- Total ownership
- Total control
 - Choose the network
- Set the rules for the network
 - Franchise fees
- Corpus Christi, Chaska

Municipality owned

The disadvantages

- Political football
- Ongoing management
 - Cost control/upgrades
 - Security headaches
- Perception that public funds are competing against business
- Responsibility/blame

Public/Private Partnership

The advantages

- Municipality owned
 - Choose the best network
- Privately operated
 - No ongoing management responsibility
- Low to NO cost to municipality
- Potential for revenue sharing
- Free from political attachment

Public/Private Partnership

The disadvantages

- Limited municipality control
 - Need to create an ironclad contract
- Private businesses need profit
 - Market dynamics drive pricing
 - Unknown disruptive technology
- Partner bankruptcy concerns
- Unexpected additional expenses
- Unintentional monopoly created

Privately Held

The advantages

- Privately owned and operated
 - Operator chooses the network
- Low or NO cost to municipality
- Potential municipal revenue
- No ongoing network oversight
- Limited political risk
- Google, MetroFi, WazTempe

Privately Held

The disadvantages

- Limited municipality control
 - Need to create an ironclad contract
- Private businesses need profit
 - Market dynamics drive pricing
 - Unknown disruptive technology
- Partner bankruptcy concerns
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- Unintentional monopoly created

Non-Profit Based

The advantages

- Separate entity formed to establish and manage network
- Responsibilities are chartered
- Municipal oversight possible
- Service (not profit) driven
- Management team can be changed
- Limited political liabilities

Non-Profit Based

The disadvantages

- The project will only be as good as the management team placed in charge
- Failing to meet expectations
- Political appointee issues?
- No profit motive for success
- Due diligence is critical
- Creating a potential roadblock

Community Network

The advantages

- Zero cost to the municipality!
- No municipal management or oversight
- Increased innovative uses
- Users experience free Internet service
- Complete upgrade flexibility
- Small business opportunities
- Cambridge, Champagne Urbana

Community Network

The disadvantages

- Not universally available
- Limited reliability/uses
- No city run applications
- No municipal revenue sharing
- Low bandwidth/Legal issues?
- No oversight/No control
- ISM noise floor pollution

Performance Based Contracts

- Allows municipality to offload both the responsibility and the expense of building a network.
- The initial expense to build the network is financed by the contractor and payment returned based on savings realized.
- This can be an excellent option

Key considerations to be examined

- It is critical to have an **independent** site survey and network design put in place
- Make sure you give residents *real* solutions - not problems
- Create the foundation for the future – not roadblocks that prevent future innovations

	Municipality chooses hardware	Municipality Owned	Municipality maintained	Charge for use	Franchise fee
Municipal Network	■	■	■	■	■
PPP	■	■		■	■
Privately Held					■
Non-Profit					■
Community Network					■

The “Gotchas”

- **Municipally owned networks**
 - You pay for it and you run it!
- **Public/Private Partnerships**
 - Negotiation and compliance can be expensive and time consuming
- **Privately Held networks**
 - Profit motive driven
 - Can lead to inadequate network management and cost reduction through using inadequate network equipment!

Building a strong business case.

- Regardless of which business model you choose, having the correct information will help make the case for your project.
- The next five slides lay out many of the data points you will need to deliver so as to provide the complete picture.

What you need to start with

- A complete audit of ALL city telecommunications expenses
 - Every phone line, *including fax, cell phone and mobile data users*
 - Add in PBX systems, including the monthly service fees, costs for maintenance and buyout penalties
 - Full list of Internet locations and costs
 - All metropolitan LAN connections

Compile a wish list Of what services you **need**.

- Are city employees part of the network wherever they are?
- *Are your Public Safety personnel using mobile data devices? (EVDO, Etc.)*
- *Are all of your facilities connected on one network?*
- *Does your city utilize AMR?*
- Do you offer Telecommuting?

Establish what your municipality spends

- Add your total expenses for all of your telecommunications and advanced data services in use including Internet
- *Add in your total expenditures for telecommunication services and advanced data service hardware*
- *Assign realistic costs to any services that are not currently utilized but should be*

Compile a list of revenue streams.

- Internet, VoIP, Personal LAN, Mobile WiFi Phone Connectivity, etc.
- *Business class services (T1, DS3, PBX)*
- *Utility services (AMR, Fleet Monitoring)*
- *Government network services*
- *First Responder/DHS services*
- SCADA information collection

Compile a list of all municipal assets.

- Dark or dim fiber assets
- *Existing wireless equipment*
- *Rooftops assets for antennas*
- *Inventory utility poles, ownership, make ready work and recurring attachment fees*
- *Public right of way locations*
- Employees assets!!!!

The Next Phase - Network Specifications

- Establish coverage area
- Specify backhaul throughput
- Specify end user data rates
- Specify uptime reliability
- Mandate network monitoring
- Mandate upgrade thresholds
- Include penalties for non-compliance and/or non-performance

Scope of Work

- The network specifications need to be clearly delineated
- All expectations of quality of service, reliability, pricing, performance and sustainability must be clearly written out
- Include all data from the site survey and conceptual design
- Submit this for legal review

Putting it all together

- Do you wish to include any exceptions for low income or digital inclusion needs?
- Are you looking for free accounts for government employees?
- Will you ask for fixed pricing for all service levels?
- Any other special requests?

Justifying the build

- Now, aggregate the demand that your business/residential clients showed so as to prove you have real revenue to offer.
- The current municipal budget adds more revenue to the bottom line or helps to justify why the funds you are considering offering offsets the free (or reduced rate) services you wish to receive ongoing.

Evaluating the results.

- At this stage you should have received several responses from interested parties.
- Are the respondents qualified?
- Can these businesses meet or exceed your requirements?
- Will these companies post a sizable performance bond?
- Who has a functioning network?

Overbuilding the network for the future

- Is it possible to design that will be obsolete before it is fully operational?
- How do we build in adequate protection from obsolescence?
- Why is this concept important?
- What is the worst possible failure that could happen?

Let's look at the near future

- Joost – The video on demand application that is going to be an unmatched nightmare for every connectivity business.
- Recently featured on SlashDot and in Time Magazine, Joost is taking off faster than any application since Napster

Let's look ahead at one product available now.

Polycom's Telepresence System



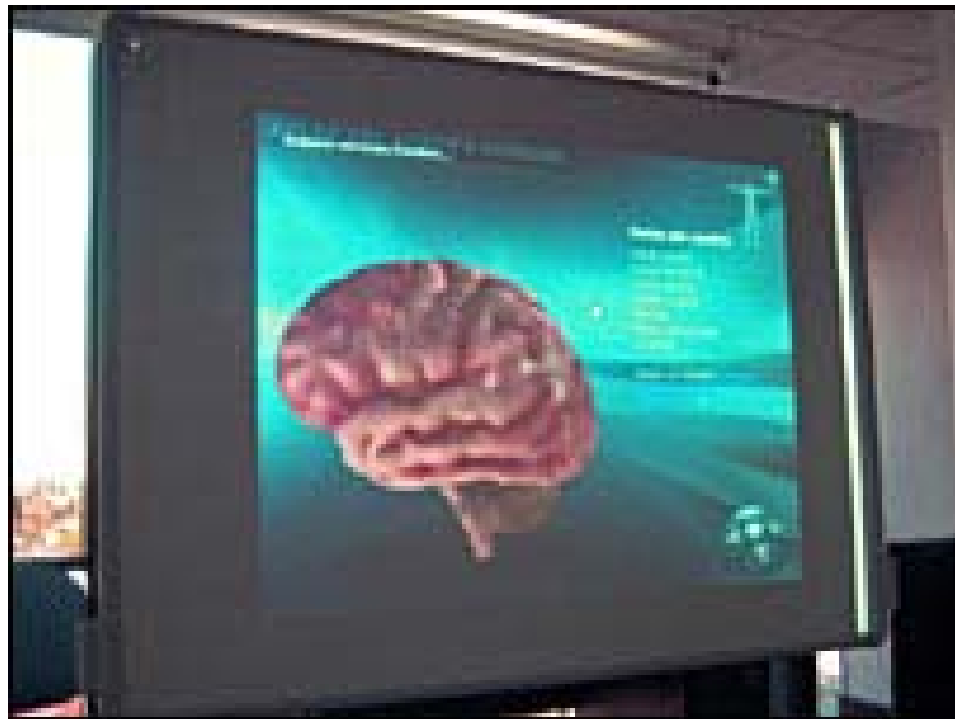
Another look at
available technology

Cisco Telepresence



Mexico's new educational tool

Enciclomedia – It's all fun!



Links

- Joost (SlashDot) - <http://tinyurl.com/2yc28b>
- Joost (Time Magazine) - <http://tinyurl.com/34oxmf>
- Polycom Telepresence (VON) - <http://tinyurl.com/2vxqfu>
- Cisco Telepresense (Cisco) - <http://tinyurl.com/y3q9vq>
- Mexico's Enciclomedia (BBC) - <http://tinyurl.com/29cgbz>

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