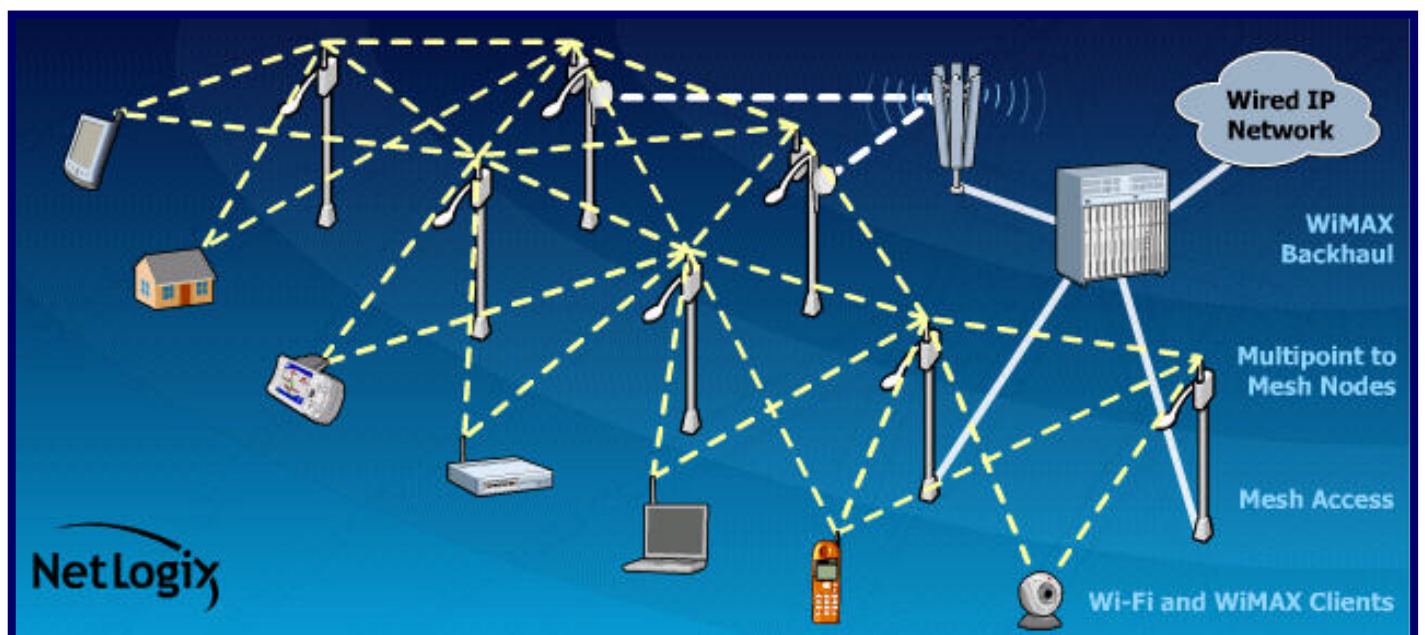


NetLogix

The Wireless Broadband Experts



Building a Municipal Wireless Ecosystem

About NetLogix

NetLogix is the premiere wireless broadband consulting, engineering, and network management services company focused on WiMAX and Municipal Wireless networks and technologies. We focus on our strengths – that being our experience with WiMAX and Citywide WiFi technologies and applications. We are experts at the approach and management of wireless broadband deployments. Our clients include many of the leading network operators in the WiMAX and Municipal Wireless markets.



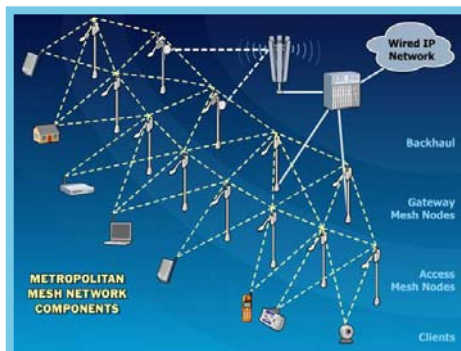
Our History in the Wireless Industry – Global Achievements

The NetLogix Team has held senior roles in the following wireless industry achievements:

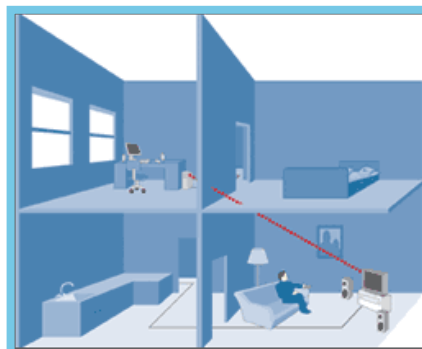
- ▶ Deployed 1st CDMA network in the world (AirTouch, Korea)
- ▶ Deployed 1st GSM network in the world (AirTouch, Germany)
- ▶ Deployed 1st PCS market domestically (SprintPCS, USA)
- ▶ Deployed one of the 1st national licensed wireless broadband networks (Clearwire)
- ▶ Deployed one of the 1st unlicensed wireless broadband networks (SkyRiver Communications)
- ▶ Deployed one of the 1st Citywide WiFi Mesh Networks in world (Cerritos, CA)
- ▶ Deployed 1st Mobile WiFi network in world

NetLogix provides consulting services to public and private organizations in order to enable Digital Communities. We focus on our strengths – that being our experience with WiMAX and WiFi Mesh technologies and applications.

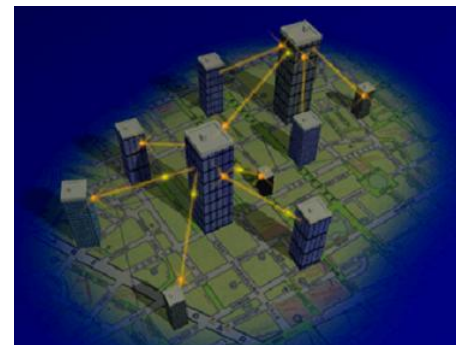
Our clients are some of the largest Telecommunications carriers and technology vendors in the world. Despite their size and financial resources, they still have a need for our expertise in business modeling, technology assessment, network design, testing, implementation, and optimization – we even manage many of those networks.



Municipal Mesh Networks



Enterprise WiFi Networks



Point-to-Multipoint Networks

Our Municipal Wireless Experience

- Engineering Services Service Provider Clients include: EarthLink Municipal Networks, MetroFi, MobilePro/Kite Networks, Airmesh Communications, Covad Communications, Penn Telecom, County Road Communications, and more.
- Municipal Clients include: City of Corpus Christi (TX), City of Maywood (CA), City of Seaside (CA), City of Carlsbad (CA), and more.
- Provide Network Management services for several large-scale Municipal Wireless Networks in the USA.
- Partnered with W2i for the *Digital Cities Convention™* series to perform full-day educational seminars on *Municipal Wireless Networks & Technologies*.
- Provide ISP-in-a-Box solutions including Portal and Free Advertisement-subsidized business models, Full Service Help Desk/Technical Support, OSS/CRM solutions, etc.
- Partnered with SeaKay for non-profit organizational needs that assist Municipalities in addressing digital inclusion requirements (providing low cost PCs, stakeholder organization, corporate sponsorships, etc.)
- Operate Municipal Wireless test lab for extensive product testing and evaluation with hands-on experience and certification with most major wireless mesh technologies.
- Provide a variety of financing resources including municipal loan packages and performance contracting options.



Municipal Wireless Networks

A Growing Necessity

According to our tracking of the Municipal Wireless industry, there are approximately 700 cities in the USA that have investigated some form of Municipal Wireless initiative at the City Council level. That number is up 1000% from just one year ago. The increased interest is for good reason: government and community leaders have learned that applying wireless broadband technology to improve public safety capabilities, increase efficiencies, promote economic development, and introduce free and ubiquitous Internet access to the community represents a variety of sociological and economical enhancements.

Most communities are under the impression that releasing an RFP is the road to a digital utopia. In reality every community is different, each with a unique set of technical requirements, business plans, city policies, assets, geography, demographics, and economics.

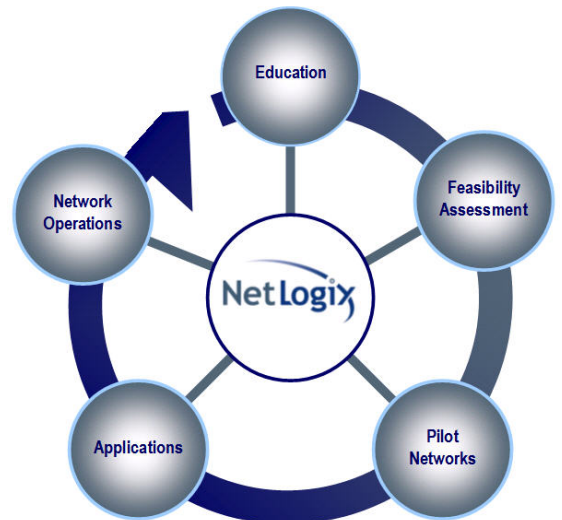
Copycatting the RFP process is simple. Unfortunately, 90% of the Municipal Wireless RFPs we come across are severely lacking in empirical data, proper due diligence, technical detail, process facilitation, path forward implementation strategies, and economic impact. We continue to be amazed at how commonly accepted this practice has become.

Our Vision

We consult to Service Providers, Municipalities, and Technology vendors so we understand each aspect of the Municipal Wireless ecosystem. We have yet to find a consulting group with our degree of practical, hands-on experience in the design, deployment, and ongoing management of Municipal Wireless Networks.

We focus on education, technologies, applications, implementation, and proof-of-concept models that public and private organizations will need to embrace.

We see Municipal Wireless Networks as a growing necessity. As technologies and applications continue to emerge, there will be increased stories of how ubiquitous wireless access has improved the quality of peoples' lives. It is our hope that we may foster these improvements by leveraging our expertise with technologies to deliver the applications a Municipality will use.



Stages of Development – NetLogix Services

Education	Understanding the Technologies, Assessing Needs, Model Development, Non-Profit Assistance
Feasibility	Evaluating Deployment Viability, Network Design & Planning, Applications Development
Pilot Networks	HotZone Deployment, Proof-of-Concept, Capturing Reporting Metrics, Testing
Applications	Portal Development, Ad Serving Solutions, Smart Meters/AMR, Mobility, Video Surveillance, Etc.
Network Operations	NOC/Network Management, Ongoing Maintenance, OSS/AAA Back Office Solutions, Tech Support

Getting Started: Education

While all communities are different in scope and process, they all follow a similar path. The initial step is to educate yourself (and your community as well) on the value, viability, and best processes towards bringing a Municipal Wireless solution to your community.

NetLogix offers to communities, Government IT Associations, and Municipalities the opportunity to "suitcase" our training events. Our curriculum is also delivered at Digital Cities Conventions™.

Training Seminar Curriculum Details

- **Industry Overview** – A broad picture of who, what, when, where, why, and how the Municipal Wireless industry is taking shape.
- **Introduction to Municipal Wireless Technologies** – Helping you understand the basics of how wireless broadband technologies applicable to Municipal Wireless networking work
- **Developing a "Digital Community"** – Organizing your community, gathering internal data, identifying and inventorying assets
- **Feasibility Assessment & Business Modeling** – Determining the right approach, recognizing savings and efficiencies, understanding the business models and cases
- **RFP Best Practices** – How to develop a thorough RFP to attract the right partner if that is the path you choose, Do's and Don'ts, etc.
- **Building & Operating a Wireless Network** – Organizing processes, Rights-of-Way, understanding the processes of a Citywide WiFi service provider
- **Applications** – Understanding the many ways to economically justify a Municipal Wireless Network.



What can you expect?

This seminar is designed to equip you with knowledge that will empower you to better understand the complexities of Municipal Wireless Networks. Our training is the highest rated session according to attendees of W2i Digital Cities Conventions with hundreds of cities trained to date. Here's what some had to say:

"The best seminar I've ever been to...and I've been to many of them!"

--- Sally Koenecke, Lake Minnetonka Communications Commission

"NetLogix's real world experience has proven to be a reliable and a valuable source of information and expertise on Municipal Wireless and we consider them a trusted advisor."

--- Ken DesForges, City of Diamond Bar, CA

We are focused on WiMAX and Citywide WiFi Networks & Technologies. We've worked with several wireless technologies and built numerous wireless carrier networks around the world. Based upon our industry experience, we've developed the most thorough training curriculum you can find. By the end of the day you will have gained the requisite knowledge to make better informed decisions.

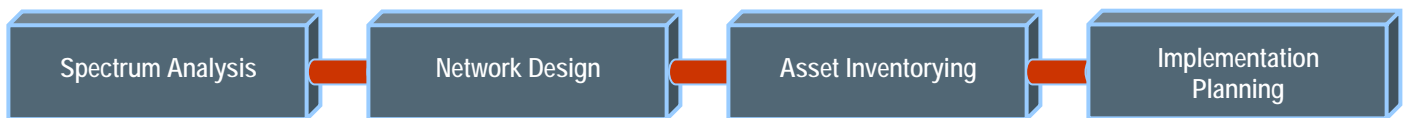


Feasibility Assessment Services

Is a wireless network right for your community?

This is a real question and one every community needs to understand. Different models are applicable to different communities. More importantly, the technology may not be technologically feasible based upon a variety of circumstances.

NetLogix provides feasibility assessment services for cities looking into whether or not a Municipal Wireless network makes sense. NetLogix's strength is in our engineering "know how" when it comes to properly architecting a wireless broadband network. It's this hands-on experience which differentiates NetLogix from other wireless consulting firms. From our extensive experience in evaluating potential coverage difficulties, to details coverage analysis with propagation details, to power source solutions, etc....we can help you get the answers you need.

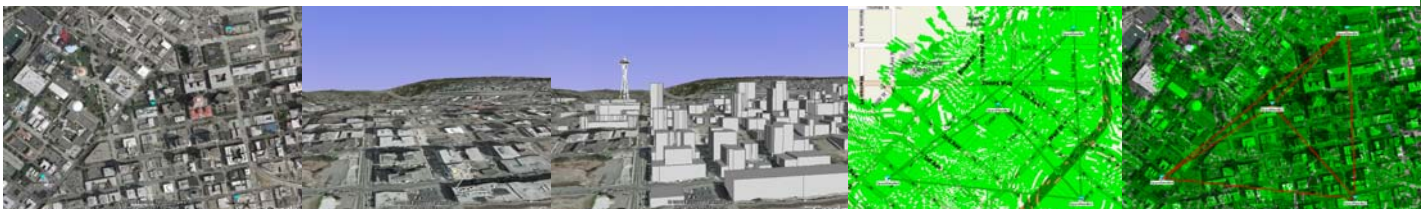


Spectrum Analysis

The single most important aspect to deploying a Municipal Wireless network resides in the availability of wireless spectrum. Without available spectrum, the entire exercise of assessing needs and developing a model is rendered useless. NetLogix is highly experienced in RF ("Radio Frequency") networks. We have all the in-house tools and expertise in order to perform a variety of spectrum analysis functions.

Network Design

Understanding the expected coverage area based upon usable mounting assets is going to be vital to your coverage proposition. NetLogix provides software tools which provide predictive results based upon equipment type, output power, and most importantly...the client device. Our approach and proven processes have helped get numerous networks off the ground and operational quickly.



NetLogix's approach towards Network Design & Planning may entail a variety of studies to ensure success.

Asset Inventorying

One of the most often overlooked elements of pre-deployment planning is gathering an inventory all of the assets applicable to network functionality. We create a database of elements such as light poles, street lights, power regulation, parks, parking structures, water towers, public safety vehicles, and any city-owned infrastructure. We then gather all the applicable information related to access: telecom access areas, personnel in charge of access, time locations can be accessed, etc. It is our goal to leverage our network design and deployment experience to facilitate the access to assets which we deem critical to successful implementation.

Implementation Planning

The primary reason most Municipal Wireless networks experience delays in the deployment process is due in large part to the absence of implementation planning. Whether NetLogix works directly with a Municipality or not, we recommend giving attention to the following components vital to an expedient deployment.

NetLogix Pilot Networks

We understand the complexities a Municipality is faced with when it comes to implementing a wireless network strategy. The degree of research and education can be intimidating for any city representative just starting out. Inevitably, a proof-of-concept pilot network is the fastest, lowest cost and most practical approach to evaluating your community's needs and opportunities around Municipal Wireless Networks.

Undoubtedly the best source of tangible data.

No matter what you hear, the best way to gather information about WiFi demand in your community is to put up a network. No matter how many stakeholder interviews, surveys, focus group meetings, and other city involvement research studies you perform, they won't capture real world metrics. Only a well architected, properly managed network can yield the results you will need.

NetLogix Full Turnkey Solutions

NetLogix has removed the barriers to entry with our Municipal Wireless Pilot Network Program. We make it simple for Municipalities to observe usage without impacting internal resources.

Why Start with a NetLogix Pilot Network?

- ▶ **Develop real world metrics for Municipal Wireless Initiatives.**
- ▶ **Understand the performance capabilities of WiFi technologies.**
- ▶ **Develop a "Proof of Concept" to support citywide expansion.**
- ▶ **Develop leverage points with vendors**
- ▶ **Test applications**

Here's what we provide

NetLogix will provide everything required – and at a very appealing cost.

- ◆ WiFi Mesh Radios
- ◆ Core Network Equipment
- ◆ Portal Content Design/Development (Templates)
- ◆ Implementation Documents
- ◆ Installation
- ◆ Help Desk Support
- ◆ Warranty Support
- ◆ Field Maintenance
- ◆ 24x7 Network Monitoring
- ◆ Network Reporting

NetLogix provides customizable solutions designed to meet your city's requirements



Applications

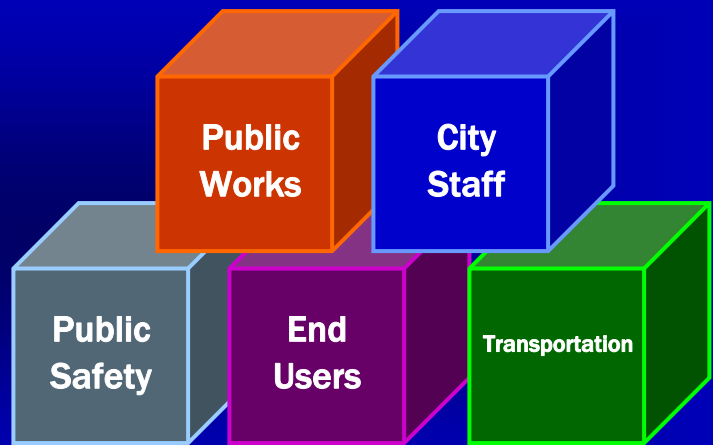
NetLogix has developed a diverse blend of strategic partnerships with vendors whose products and solutions can make use of a Municipal Wireless network. It is our goal to assist our Municipal clients to improve efficiencies, and help justify expenditures.

Building a Cohesive Digital Community

We provide a suite of options and are constantly adding new products and solutions to our services portfolio that may enhance our clients' Municipal Wireless Networks.

Municipal Wireless Building Blocks

Ubiquitous WiFi can immediately introduce a variety of efficiencies – eventually revolutionizing the way cities function today.



**Remote
Asset
Management**

**Public
Safety**

VoWiFi

**Ad Revenue
Solutions**

Video Surveillance



Smart Metering



WiFi Electric Meters

WiFi Gas Meters

WiFi Water Meters

NetLogix can work with you to provide a comprehensive financial analysis for an Automated Meter Reading solution.

We can often leverage our AMR partners to develop this data for your community for little-to-no cost.

WiFi
Parking
Meters



Full Turnkey Network Operations

Many of the earliest Municipal Wireless deployments ran into issues with coverage, performance, throughput, and inconsistencies. The problems can really be attributed to poor network management. Without a long history of managing wireless broadband networks, it is practically impossible to deliver carrier grade reliability over a Municipal Wireless Network.

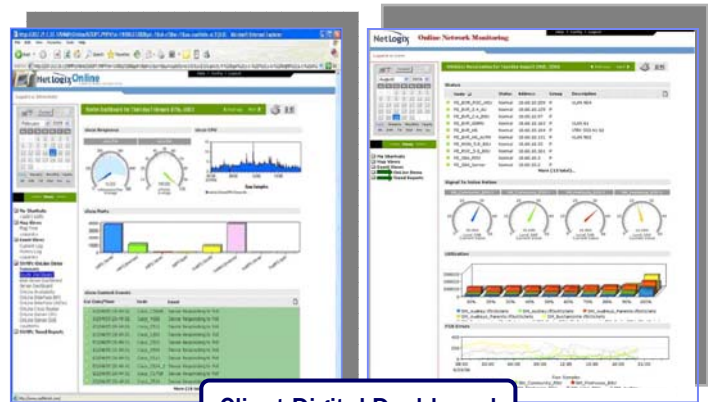
Our goal is to eliminate the need for Municipal resources to get involved in Network Operations. We give our clients the option of allowing us to take care of the day-to-day operations of the network.

NetLogix maintains over 5,000 Municipal Wireless radios under 24x7 Management.

- NetLogix Network Operations Includes:**
- ✦ **Help Desk Support**
 - Technical Support for End-User Assistance
 - ✦ **Online Trouble Ticketing System**
 - For Real-time Help Desk & City Alerting
 - ✦ **Private, Secure Portal Development**
 - For Real-time Access to Network Health
 - ✦ **Monthly Reporting**
 - Usage Metrics

Monitoring & Maintenance

- ▶ Online Trouble Ticketing System
- ▶ Monitoring of all Network Devices
- ▶ Help Desk Support
- ▶ Tier 2 & 3 Remote (and On-site Support)
- ▶ Observe and Track Real-time Usage Statistics
- ▶ Secure Read/Write Access
- ▶ Develop Tangible Usage/Take Rate Metrics
- ▶ "Free or Pay" Capabilities
- ▶ Monthly Reports via Email



BUILT-IN REPORTS	CUSTOMIZED SOLUTION	SCALABILITY
<ul style="list-style-type: none"> ◆ Specialized Reporting ◆ High Level Report Overviews ◆ Device Overviews 	<ul style="list-style-type: none"> ◆ Custom Dashboard ◆ Map & Event Search Views ◆ Custom Tailored Presentation 	<ul style="list-style-type: none"> ◆ Large Network Support ◆ Highly Secure ◆ Adaptable Technology

www.netlogix.com

