

Unwired Village: Backgrounder

Infrastructure Needs



At each era in history, an **infrastructure innovation** has driven economic growth. The transportation of goods and information has, and continues to be, essential to business and economic development.

Throughout history, access to ports, riverways, the high seas, railroads, highways, airports were key drivers of growth. Today, highspeed access to the Internet takes its place along side these traditional types of infrastructure as a critical ingredient to economic development and the ability to compete as a business or a region.

When people first called the Internet “the information superhighway,” it was more than a buzz word. It was an accurate description of the emerging role connectivity plays in conducting business and transporting commerce in the 21st century. **Widely available access isn’t a social nicety – it is an essential for any business or region to compete today and in the years ahead.**

Broadband Wireless

Broadband wireless access to the Internet is the latest infrastructure innovation, offering businesses and communities the ability to **connect anywhere, any time**. Wireless access is a key element in today and tomorrow’s business and community infrastructure. Its presence can drive economic development and regional education, provide a jump-start to small businesses, and support the creative economy.

In addition, wireless access provides us with **unbounded mobility**. This is a key underlying concept for business competition today and it describes a way of working that lets us conduct business, connect with each other, and manage our businesses and lives from virtually anywhere.

About Unwired Village

The Unwired Village Orleans Project is the first step in developing and testing a regional Unwired Village solution. The project will provide public broadband wireless access to the Internet from public areas across Orleans. Orleans is the regional hub of the semi-rural Outer Cape and one of the regionally designated commercial centers. For many reasons, it is an ideal place to develop, test, and adjust the sustainable model in preparation for a regional rollout.

The project will be designed using a “franchise” model that can be easily and economically duplicated and will take advantage of emerging consumer-priced technology and applications of powerful Open Source code base solutions.

The project will:

1. **Deploy wireless technology** providing access within the core business areas of the town.
2. **Develop a self-sustaining business model** that may be easily replicated by other local organizations.
3. **Establish best practices** for the installation, management, and promotion of a community WiFi network
4. **Monitor and analyze use** and usability of this type of network.

Unwired Village: Technology Terms Glossary

Some terms one may hear when talking about Unwired Village:

Access: The ability to connect to a network and send or receive data while connected, for example, browsing a webpage, reading an email, or accessing an online application.

Broadband: Fast connectivity, enabling people to send or receive large amounts of data quickly and easily. The exact speed of “broadband” varies depending on who is defining the term.

Wireless, Unwired: Two works which are sometimes used interchangeably, the ability to access a network without being physically connected with a cable.

Wifi: WiFi is short for **w**ireless **f**idelity and is the term used generically when referring of any type of 802.11 network, which is the current technology being used to provide wireless access today.

WiMax: The emerging next generation technology for wireless access. Currently in test mode, its wide-spread commercial applications are generally believe to be about 3 years away.

Hot Spot: A hot spot is an area of wireless access. One of the goals of this project is to use WiFi technology to create multiple hotspots throughout Orleans.

WiFi Cloud: A WiFi cloud is many smaller WiFi areas connected together to create an area of seamless wireless access. One of the longer term goals of Unwired Village is to create a process that would make it easy for many villages to set up hotspots, thus creating a WiFi cloud across the Cape, Islands, and Southeastern MA.

Community WiFi: A WiFi network developed by and for the community for the mutual good of business, government, citizens, and visitors. It may be administered by a municipality, a local business group, a non-profit, or a for-profit entity. It is generally freely accessible by everyone.

Public Network: A network that is shared by the public at large. It is not designed to replace private networks, but rather to augment them in public areas for applications which are appropriate to shared networks.

Broadband Agnostic: A wireless network that is not tied to any one carrier or broadband method. For example a broadband agnostic solution might include any combination of cable broadband, DSL, and broadband power, based on which is more effective, available, and economic at any given location.

Open Source: A way of creating a product in which the source material is widely accessible and shared by the community which creates or uses the product. *Open source software* is a common implementation of both the philosophy and the process. Open source software, such as Linux or Free BSD, is developed, maintained, and may be adapted and used by the community at large. It is not owned or controlled by any one commercial entity creating proprietary products. This means it is both cost-effective and offers a standards-based approach for building applications such as wireless network management.

Unwired Village Orleans: Urban Myths Debunked

As with any new innovation, there are many misunderstandings about what wifi is and isn't and what role it does or doesn't play. Here are a few of the commonly repeated 'urban myths' and the truth behind them.

MYTH: Community wifi is unfair to private enterprise

REALITY: Community WiFi is NOT a competitor to existing private enterprise.

Rather, it is an **extension and an adjunct** to the private sector, one that is likely to generate business for private access vendors. It enlarges the potential market and helps to sustain young business and create new jobs, and exposes the benefits of access to people who may not have been exposed to it previously.

In this region, community wifi supports emerging business, the creative economy, and tourism. It supports early stage companies until they have the ability to install their own connectivity and networks, developing a base of future business for the private sector. It increases demand for connectivity services among consumers.

MYTH: Roving bands of teenagers/social misfits/thugs will use the system to download porn, send spam, and create havoc.

REALITY: Community wifi is used for mundane tasks, like looking at information in a web browser or checking email, and the people who use it look like you and me.

In the unlikely event that massive downloading or uploading were to happen, there are existing safeguards within the technology to automatically shut off the user and report a misuse problem. In addition, part of Unwired Village Orleans is a research to better understand which applications are used most often and what usage patterns emerge, to make it easier to spot deviations and prevent any potential misuse of the resource before it begins.

MYTH: It is dangerous and insecure.

REALITY: Community WiFi is not a security risk. It is not designed to be a system for people to send secure documents across or to handle private network transactions; these types of use requirements are appropriately the purview of personal/business products from private enterprise access providers.

While community wifi is never intended as a fully secure network, it does incorporate levels of security that can be set and managed, which make it perfectly safe for normal use. For example access to certain domains or applications can be controlled and managed based on a variety of factors. And, education about security and proper data use in general can address many of the perceived fears.