City of Hudson, Ohio

Broadband Needs Assessment
& Business Plan
Executive Summary

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1. Executive Summary

Broadband is a vital element of the City of Hudson's economic vitality and welfare that affects nearly every function within the community. Where the roads provide the infrastructure necessary to connect communities physically, broadband provides the digital infrastructure necessary to connect communities virtually to the rest of the electronic world. As more of Hudson's citizens, businesses, and community organizations are connected to the Internet, the more reliant they become on high quality, affordable broadband services; more and more devices are requiring higher bandwidths.

Broadband is high-speed connectivity to the Internet that takes a variety of forms, including DSL, cable, and fixed and mobile wireless. In Hudson, most residents and businesses subscribe to either DSL or cable services. These services have some potential to provide greater speeds to Hudson's consumers who utilize more and more bandwidth. However, the demand for bandwidth is outpacing the supply because of inherent limitations in traditional broadband technologies.

It is unlikely that DSL and cable technologies will meet the long-term broadband needs of Hudson's community.

Hudson's small and medium business community reported many issues with their current broadband services, citing poor reliability and performance as negatively affecting their ability to do business in the City. Many businesses wanted to upgrade to a better service but found that they could not afford to do so. This is a critical issue for Hudson's economic development. It limits Hudson's ability to attract and retain business in the City. Without affordable, next-generation broadband readily available, Hudson is not able to effectively compete with other cities that have access to these services. In addition, this issue also affects the retention of existing businesses, as the high price of broadband is a negative aspect of operating a business in the City.

95% of Hudson residents surveyed said that they could not live without their Internet connections.

58% of Hudson businesses surveyed said that their current Internet services do not meet their needs.

Although broadband providers have made fiber-optic broadband services available to Hudson's business community, only larger businesses can afford and actively utilize them. This leaves Hudson's small and medium businesses, which represent over 58% of total GDP with limited options for their Internet connectivity.

To resolve this issue, next-generation fiber-optic broadband technologies are being deployed in cities across the country to provide much greater speeds, reliability, and performance. These fiber-optic technologies provide a solution to the problems faced by communities like Hudson that are equipped with traditional broadband technologies. Cities that are fortunate enough to have next-generation broadband are well positioned to thrive and take full advantage of every opportunity the Internet has to offer. Unfortunately, Hudson is not positioned as one of those cities in its current state.

Realizing the importance to their communities, many cities are taking an active role in how broadband develops in their communities. The City of Hudson Broadband Needs Assessment and Business Plan provides an analysis of Hudson's current and future broadband needs and proposes initiatives that the City can undertake to ensure these needs are met. It provides a range of options for the City to consider based on leveraging the City's existing fiber-optic network, strategic investments in broadband infrastructure, and broadband-friendly public policy tools. The following recommendations present the most plausible broadband initiatives for the City to consider that (1) fall within the City's core capabilities as a public organization, (2) utilize the City's strengths in infrastructure and policy to positively impact broadband development, (3) are economically and financially sustainable and (4) cultivate key public and private partnerships to increase the effectiveness how the community is served with broadband services.

Goals of the Broadband Needs Assessment & Business Plan

1. *Document Hudson's current broadband environment and identify current gaps and potential future shortcomings.*

2. *Identify feasible ways for the City to enhance broadband services to residents, businesses and community anchors.*

3. *Expand and formalize public policies to accelerate the deployment of broadband infrastructure.*

4. *Determine feasible business models and key partnerships that the City can utilize to expand broadband services to the community.*

5. *Select the most plausible opportunities and develop an action plan to implement strategic broadband plans.*
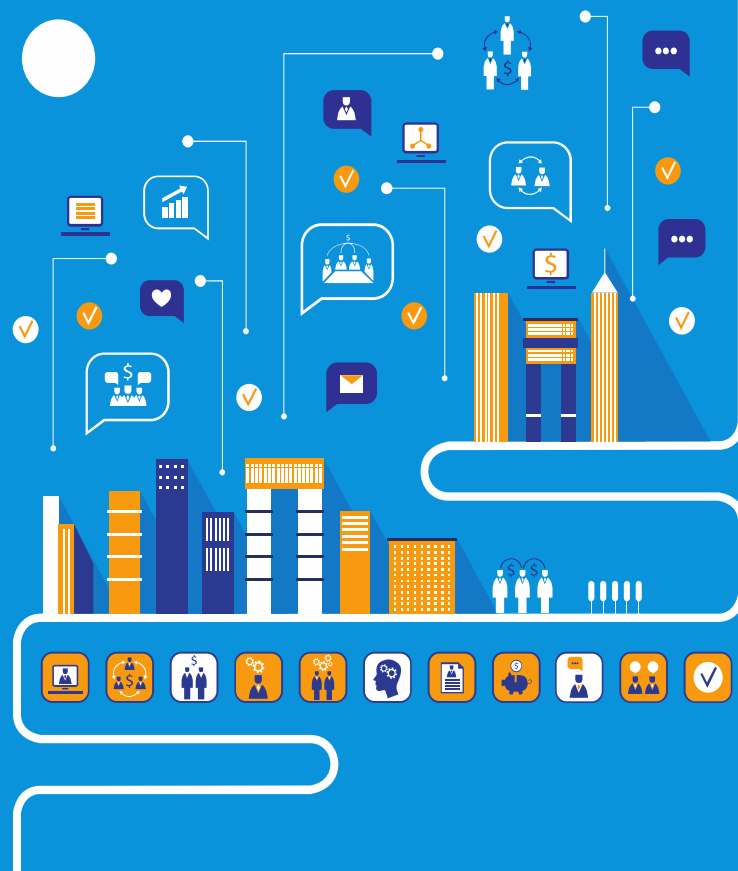
A. Summary of Potential Benefits to Hudson

- **Reduce the costs of doing business in the City.**
- **Enable small and medium business to be more competitive.**
- **Spur economic development by designating Hudson as a Gigabit City.**
- **Drive new private sector investment in local broadband.**
- **Build a platform to serve long-term residential needs.**
- **Enable new Smart City innovation for municipal efficiencies.**

B. Summary of Recommendations

The City should plan strategic investments in broadband infrastructure to first serve Hudson's business community and subsequently serve its residents. Doing so requires the City to select the right business model, which will depend on how broadband providers choose to collaborate with the City. Therefore, the first recommendation is for the City to engage broadband providers to determine their role in the initiative. If broadband providers agree to utilize an open-access network owned and operated by the City, the City should proceed in building broadband infrastructure into the business corridors and enabling broadband providers to utilize the network to serve Hudson's businesses. This model could then be expanded to Hudson's residential communities.

If providers are unwilling to partner with the City, the City should consider becoming a retail provider of broadband services to its business community (and possibly, a residential provider in the future), as laid out in Section 7 of this Study. The retail option should only be considered if the City is not successful in implementing the open-access option because it requires the City to (1) make additional investments in capital (2) increase its operations and maintenance expenses (3) take on responsibility for providing business Internet and telephone services. If broadband providers are willing to utilize the City's open-access network, the City should not need to enter the retail market. However, if they are not, the City should be prepared to take the lead and provide these services directly to ensure that its community has the broadband services they will need to succeed in the future.

Figure 1-1 illustrates summary financial information on the project, based on an evaluation of the open-access and retail provider options for the City. These two options show the expected funding required for the City's initial buildout to the business community under an average case.

Figure 1-1. 10 Year Analysis

10 Year Analysis	Open Access Provider	Business Service Provider
Total Funding Required	$4,900,000	$6,500,000
Businesses Connected	339	377
Percent of Market Served	25% - 45%	35% - 55%
Positive EBITDA	Year 3	Year 4
Positive Net Income	Year 3	Year 4
Estimated Payback (After Debt Service)	9 Years	11 Years

Recommendation 1: Work with broadband providers to determine what role they will play in the City's broadband initiative.

1. Formally engage broadband providers to determine their interest in:

    a. Partnering with the City on its broadband initiative;

    b. Operating on a City-owned open-access network; and

    c. Signing a letter of intent to provide services on Hudson's open-access network.

Recommendation 2: Build out broadband infrastructure in key areas of the City to expand access to businesses and residents

1. Use a phased approach to build out to the business community first;

2. Build on success and identify opportunities for residential buildout; and

3. Partner with broadband providers to deploy services to residents.

Recommendation 3: Adopt policies that incorporate broadband as a utility and create a policy framework to promote deployment in public and private projects.

1. Tailor draft policies and standards to the City's specific needs and adopt them into local policy, codes, and standards (including policies, dig-once, joint trenching, engineering standards, etc.).

2. Incorporate broadband in the City's Development Impact Fee program and the City's Capital Improvement Plan (CIP) as appropriate, and make a commitment to fund broadband infrastructure.

3. Identify opportunities to install broadband infrastructure in conjunction with public and private construction projects as appropriate.

4. Develop a process so that Planning and Public Works and Electric Departments coordinate with IT to identify projects that could install this infrastructure at reduced costs.

5. As the City makes key infrastructure investments, maintain broadband infrastructure in the City's GIS system, requiring GIS-based as-builts and implementation of other means for accurate documentation.

6. Create policies to streamline the broadband permitting processes within public rights-of-way to ensure broadband providers do not face unnecessary obstacles to building infrastructure.

7. Normalize fees levied on broadband providers for constructing broadband infrastructure to ensure they do not discourage broadband investment.