

# Analytics Report

on the Hibbing-Chisolm Area and the  
Arrowhead Region of Northern Minnesota

## COMMUNITY ACCELERATOR



Intelligent Community Forum

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for the



Blandin Foundation™  
STRENGTHENING RURAL MINNESOTA



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# Introduction

This report presents an analysis of the performance of the Arrowhead Region of northern Minnesota on the six Factors that make up the ICF Method. It is based on 41 data points, both quantitative and qualitative, provided in questionnaires from four representative communities in the region as well as a region-wide questionnaire capturing the leading examples of progress. ICF analyzed the data and is providing this report detailing the Region's strengths, weaknesses, opportunities and obstacles, as well as identifying areas where the communities can most effectively focus its efforts to make sustainable progress.

## The ICF Method

ICF evaluates communities using the ICF Method: a framework consisting of six categories of community performance that, together, provide cities, metro areas and counties with a durable advantage in building inclusive prosperity, achieving social health and enriching local culture in the disruptive digital economy of the 21<sup>st</sup> Century.

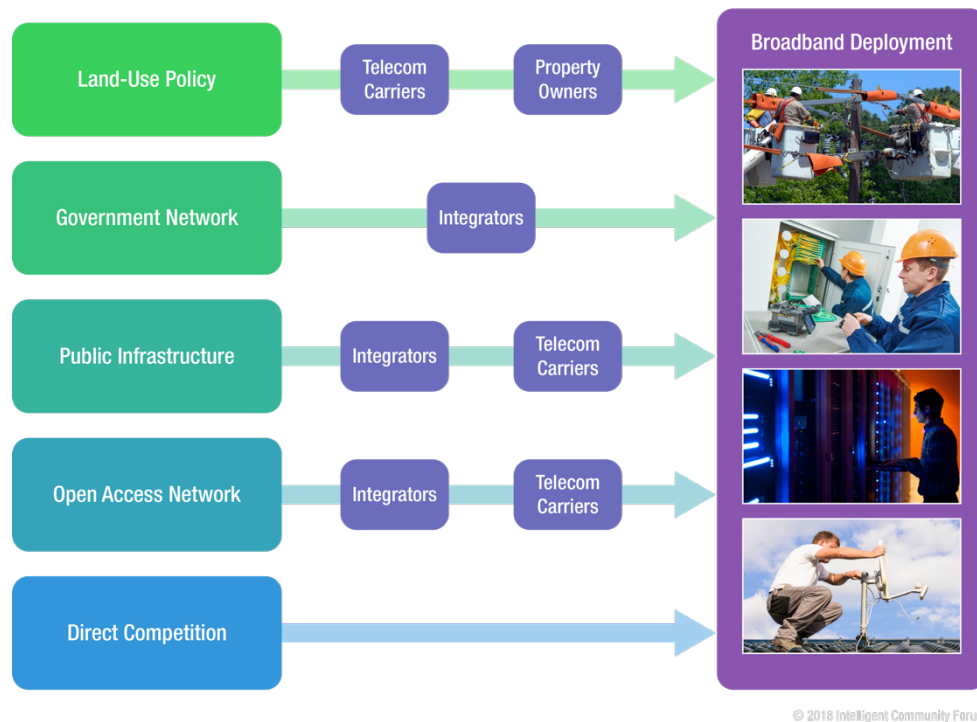


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## Connect

High-speed connections for computers and mobile devices are the infrastructure no community can do without. Through those connections come employment opportunity, education, commerce, information, entertainment and community participation. Businesses depend on them to manage their operations, reach customers and attract employees. Governments and nonprofits use them to deliver better services for less money to more people. Communications is not a traditional policy matter for local government. But local gov-

ernments today cannot afford to ignore it. Broadband connections are as vital as the quality of roads, water, electricity and the other essentials of modern life.



Creative governments can direct the accepted tools of **land-use policy** to encourage broadband deployment, including mapping existing coverage, improving access policies for poles and conduct, requiring installation of conduit during street excavations and updating building codes.

In most jurisdictions, **governments can build and operate networks** to serve their own facilities. This investment is easy to justify, because it replaces monthly telecom bills and typically pays off in less than five years. Using the network, government can deploy free Wi-Fi in public locations and develop online constituent services that increase user demand for broadband.

Building infrastructure is the traditional business of government. Some local governments build **public communications infrastructure**: conduit networks, optical fibre networks and wireless towers. They market this infrastructure to carriers and organizations with major communications needs. Those buyers install equipment, activate circuits and deliver services. Lease payments from these users cover the capital, maintenance and upgrade costs of the network. This approach steers clear of concerns about government competing with the private sector while creating greater competition in the market.

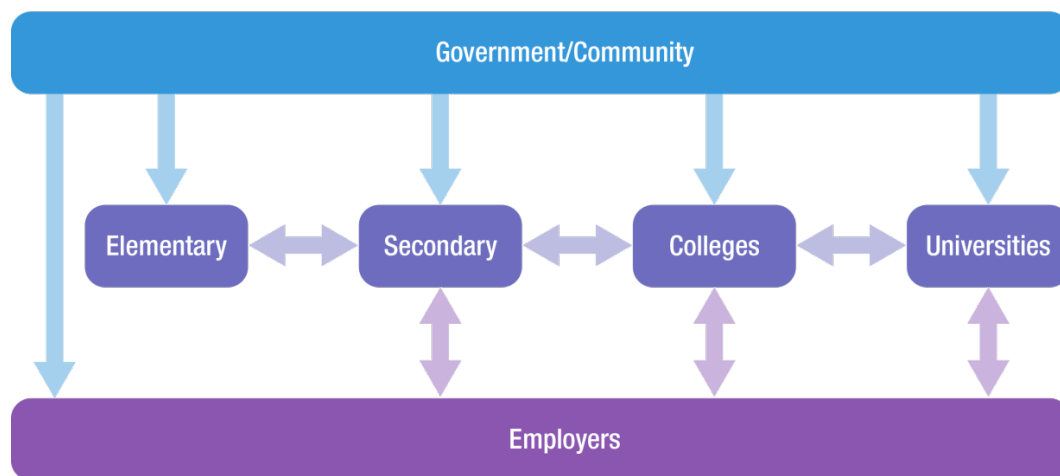
Some communities go beyond this “dark” infrastructure to create **open access networks**. They build, activate and manage a government-owned or public-private network. It provides the “transport layer” – the foundation level of digital connection between physical locations. On this foundation, companies and carriers operate the services that meet the

needs of their users. By further reducing the costs and risks for the private sector, open access networks have proven their ability in many different markets to produce a sharp increase in competition.

The most extreme step communities can take is to **compete directly** with the private sector. This typically happens when private telephone and cable incumbents oppose all efforts at collaboration, most often in rural communities where not even the construction of dark or open access networks can make the market attractive to outside competitors. It may take advantage of municipally-owned utilities whose existing infrastructure reduces the capital needs of network construction.

## Work

Management consultant Peter Drucker coined the term “knowledge work” in the Fifties, when he predicted that it would soon become impossible to live in the middle class if manual work was your only skill. His prediction has come dramatically true, as all opportunity for meaningful, well-paying employment has shifted to those with skills, from the construction trades and automated factories to technology, finance and business management. Intelligent Communities create a knowledge workforce through strong and continuing collaboration among local government, employers and schools. Together, they turn education into a ladder of opportunity that teaches skills that are in demand and connects young people with opportunities in the region to strengthen the community’s economic and social foundation. They also create avenues for lifelong learning to ensure that the skills of their people continuously evolve to equip them for new job opportunities.



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Local, regional and state/provincial **governments** play a leadership role in this ecosystem. Where elementary and secondary schools are involved, government determines what can be taught and how programs can be funded. For all levels of education, government can play the crucial role of convening: bringing together educational leaders through com-



missions, advisory boards and other structures that create a permanent platform for collaboration.

Intelligent Communities build a knowledge workforce through collaboration between government, employers, and schools. Knowledge Workforce programs seek to balance the supply of skilled employees with employer labor demand.

- **Universities** interconnect with career-focused **colleges** to share research programs and career courses, and provide college students with access to 4-year degrees
- Universities and colleges interconnect with **secondary schools** to provide students with advanced learning opportunities.
- Secondary schools send students and programs into **elementary schools** to make an early introduction to content on future local careers and excite younger children about education.

At each of these levels, institutions interconnect with **employers**, bringing real-world career content, business mentors, work-study programs, internship and other programs into education. These programs expand students' awareness of their local career opportunities and create hope for the future.

## Innovate

Economist Robert Solow won the Nobel Prize in 1987 for proving that 80% of all economic growth comes from developing and using new technology. That's a stunning number. It means that if the employers, institutions and government of your city or county are not creating new opportunities or putting new technology to work, you are missing out on 80% of the potential growth in today's economy. That's why every place needs an innovation strategy. Intelligent Communities pursue innovation through a relationship between business, government and such institutions as universities and hospitals. The Innovation Triangle or "Triple Helix" helps keep the economic benefits of innovation local and creates an innovation ecosystem that engages the entire community in positive change. Investments in innovative technology by government contribute to that culture and improve service to citizens while reducing operating costs.

The chart below displays a thriving local ecosystem of innovation, which draws on **vocational schools, two-year colleges, four-year universities** and **citizens** of the community who have a passion for making something new. To turn those assets into a continuing cycle of innovation, local government and institutions create programs and facilities that encourage and challenge talented people to innovate.

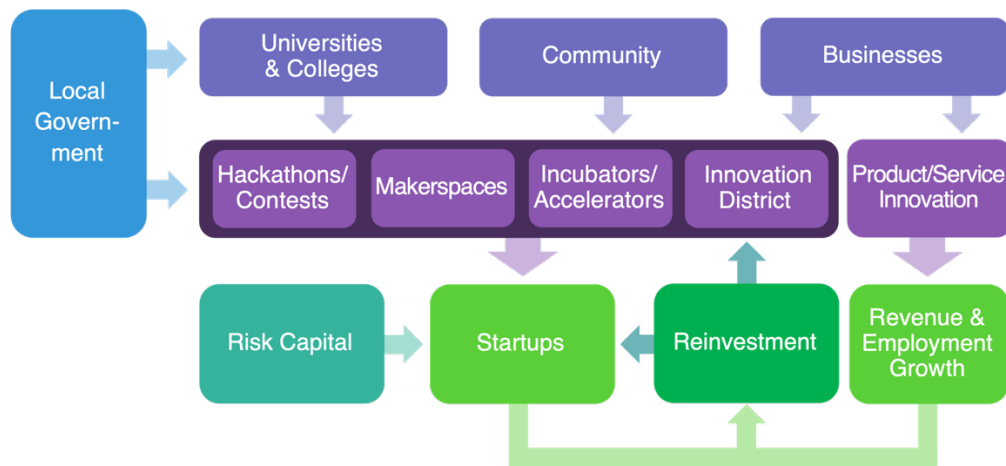
These range from public **hackathons, apps contests** and other STEM events to **makerspaces** where anyone can bring an idea and make it real (and potentially profitable) with the informal support of other innovators. They include **incubators** – typically academic-business or academic-government partnerships – where potential entrepreneurs go through a disciplined process to turn concepts into saleable products and services, then find their initial





customers. **Accelerators** take the survivors of incubation and help them mature into sustainable enterprises with growth potential.

Makerspaces, incubators and accelerators breed **startups** that bring innovation to market. The most successful attract **risk capital** from angels, grants, venture funds and private equity that permit them to scale the business significantly. At the end of the road for the most successful entrepreneurs is an **exit**: a transaction that transfers some or all of their ownership to investors or acquiring companies in exchange for a payout.



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The end of the road, however, is also the beginning of the next journey. Successful entrepreneurs tend to want to play the game again and, specifically, to **invest** in the innovation ecosystem from which they have benefited. That investment may go into R&D by colleges and universities. It may go to create the next makerspace, incubator or accelerator. It is succeeding generations of innovators who ultimately come to drive the innovation ecosystem that has been so carefully constructed and nurtured by leadership in local government, educators, nonprofits and businesses working in close collaboration with each other.

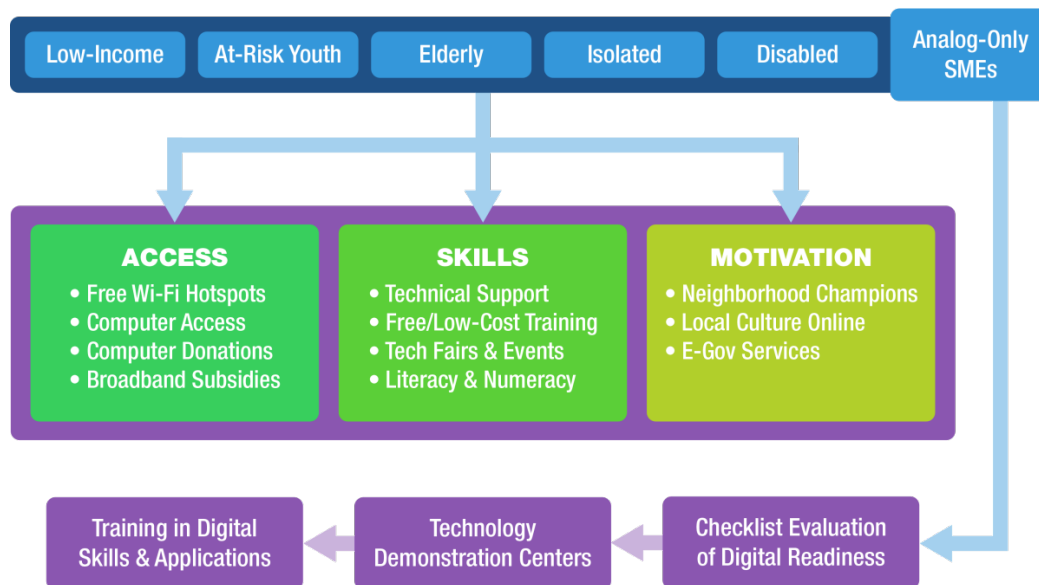
## Include

The explosive advance of the digital economy has worsened the exclusion of people who already play a peripheral role in the economy and society, whether due to poverty, lack of education, prejudice, age, disability, or simply where they live. It has also disrupted industries from manufacturing to retail services, enlarging the number of people for whom the digital revolution is a burden rather than a blessing. Helping these people find a place in the digital economy is a practical as well as moral imperative. Effective digital inclusion programs target three aspects of exclusion: affordable access to digital technology and connectivity, the skills to put the technology and connectivity to work, and motivation for the unconnected to adopt digital habits.

Intelligent Communities pursue digital inclusion for reasons both moral and practical. The moral imperative is to provide equal opportunity for all citizens to benefit from the digital

economy. The practical motive is to reduce demand for social services, criminal justice and emergency healthcare, as well as the intangible contagion of social injustice.

Intelligent Communities identify their populations most in need of intervention, as well as employers that are missing the economic opportunities of going digital. They focus their efforts on providing **access** to broadband and information technology and on **equipping individuals and organizations with the ability to use them**. The most common access points are public libraries, but communities also bring technology to such meeting places as community centres, retirement homes and technology demonstration centres for business. Skills training takes place in any of these locations and may involve library staff, students or the staff of local colleges and universities.



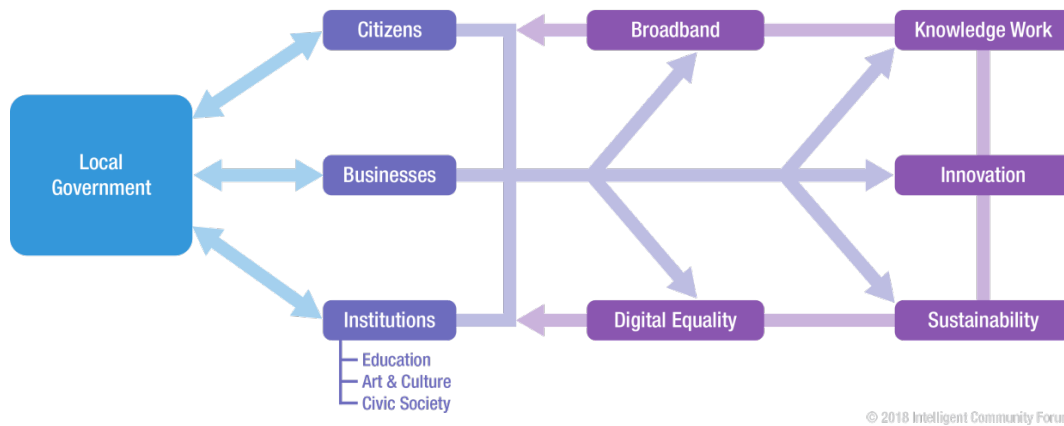
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Just as important as access and skills is the **attitude** needed to acquire them. Intelligent communities create programs that give people and organizations motives to adopt unfamiliar technology and use it to improve their lives.

## Engage

More than ever before, citizens and organizations in the community have digital tools at their disposal for communicating, developing coalitions, coordinating action and turning the fears or enthusiasms of a few people into a community-wide movement. Engagement today means using the traditional tools of community development and the new generation of digital tools to educate citizens and organizations and to seek their real involvement in decision-making. It is about giving them a framework for understanding, listening to them and letting them know they have been heard. Engagement is the glue that binds Intelligent Communities to a better future. It is the deliberate effort through civic leadership to engage

citizens, business, institutions and community leaders in understanding the need for change, identifying opportunities and becoming champions of that change.



**Local government** connects with **citizens**, **businesses** and **institutions** through events, discussion forums and brainstorming that educate them on the challenges and opportunities facing the community. They combine physical meetings with digital interaction that ensures broad participation. They target recognized leaders of the community, who can serve as champions for their followers and convincingly explain the emerging vision and its benefits.

It is in close collaboration with these constituents that Intelligent Communities develop an **action plan** based on the framework of the Intelligent Community Indicators. Government plays its essential role at convening, turning ideas into specific strategies and plans, and marshalling resources to carry them forward. Citizens, business people and nonprofit leaders, however, provide the energy and commitment that make change possible. Taking energy from early successes, the community continuously raises its expectations and revises its vision, daring to do things that once seemed impossible.

Successful engagement provides the foundation for the community's public identity in its outreach to the world. It energizes economic development, investment attraction and business generation, because the community has built a unique vision of its character and its future. In their own eyes, its people are no longer just living in one community among hundreds of thousands like it. They are in the best place to live, work, start a business, raise a family and pass their heritage to the next generation.

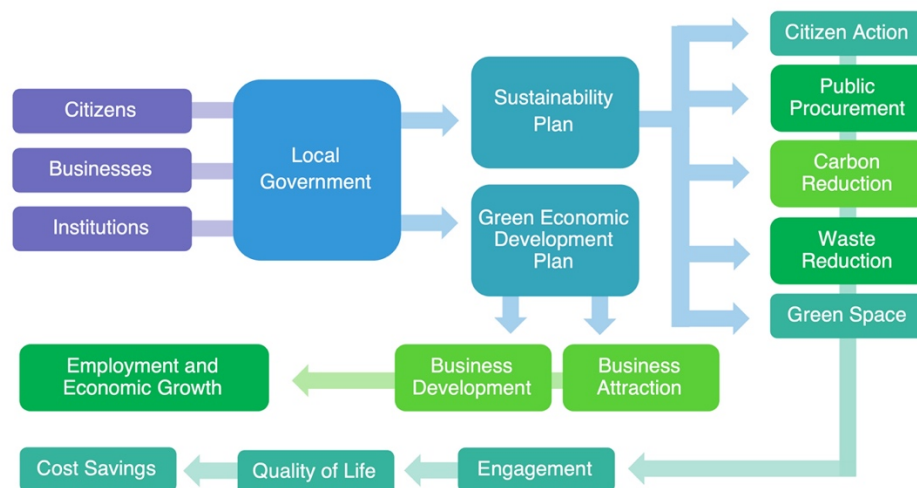
## Sustain

Environmental sustainability is a global concern with local impact. A community's people experience the environment at the local level, from air quality to water pollution. When communities make sustainability a goal, they energize community groups, neighborhoods and community leaders with the promise of making a difference. The work of these groups meets sustainability goals – but just as important, it strengthens the community's identity and creates civic pride that powers more positive change. Sustainability is also good for the economy. As the world is turning its attention to reining in human impact on the planet,

sustainability is generating substantial new opportunities for technology advance, business growth and employment in green industries.

**Local government** engages **citizens, businesses** and **institutions** to learn their concerns and collaborate in setting priorities. The issues are environmental – but also about quality of life, property values, government budgets and the cost of living and doing business.

The vision and priorities guide the creation of a **Sustainability Plan** that sets goals and identifies specific actions. These range from citizen action groups to changes in public procurement and land-use, and from waste reduction and recycling to energy conservation. They address water quality, air quality, alternative energy, and the resilience of the community to climate change. Smart City technologies ranging from Internet of Things devices and platforms to cameras, drones and measuring devices play an important part.



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Intelligent Communities set out on the sustainability path expecting results. The Sustainability Plan documents specific objectives for cost savings, lower emissions, reduced consumption and improved quality of life. Government measures and reports on results, and works with **citizens, businesses** and **institutions** to make course corrections as needed and re-energize community participation.

## What We Measure

ICF evaluates a community's performance and readiness for action along the six indicators of the ICF Method using select data provided by the community. The analysis in the following pages is based on:

### Connect

- Percentage of all premises that have access to broadband (availability).

- Percentage of all premises that subscribe to and use broadband (adoption).
- Number of competitive broadband service providers
- Gaps in broadband coverage affecting a percentage of premises.
- Quality of projects to promote deployment, access or use of broadband.

The broadband metric does not measure the overall quality of service or the broadband capacity available in the community.

## **Work**

- Educational attainment of the population today.
- Adoption of technology in elementary and secondary schools.
- Access to higher education in the community or within commuting distance.
- Quality of projects that use technology to improve educational outcomes, equip students with digital skills, and/or connect students to local employment or entrepreneurial opportunity.

The knowledge workforce metric is not able to assess the quality of educational services provided or educational policy in the community.

## **Innovate**

- Existence of an innovation policy.
- Presence of growth industries with offices or facilities in the community.
- Public/private innovation programs available in the community.
- Online services provided by local government.
- Quality of innovation projects that involve collaboration among business, institutions and government.

The innovation metric is not able to measure outcomes of innovation in terms of business start-us, company growth or job creation.

## **Engage**

- Programs for educating and engaging citizens and leaders in positive change.
- Programs for communicating the economic development story to the outside world.
- Existence of an Intelligent Community strategy.
- Existence of task force or administrative unit charged with carrying out Intelligent Community initiatives.

The engagement metric is not able to measure the level of community engagement created by programs or the outcome of economic development strategies.

### **Include**

- Percentage of premises with internet access at any speed including dial-up.
- The monthly cost of a minimum, median and maximum-speed broadband connection.
- Facilities and services offered to residents to promote digital adoption.
- Facilities and services offered to organizations to promote digital adoption.
- Qualify of projects to increase digital inclusion for residents or organizations.

The digital inclusion metric is not able to measure the quality of programs or the impact in terms of citizen participation and business growth.

### **Sustain**

- Metrics for air quality, indoor water use, recycling of municipal waste, non-auto trips and green space.
- Level of local government support for sustainability initiatives.
- Quality of projects that engage citizens, businesses and institutions in sustainability and produce meaningful results.

The sustainability metric is not able to measure the outcome of projects engaging the community in sustainability.

## The Arrowhead Region



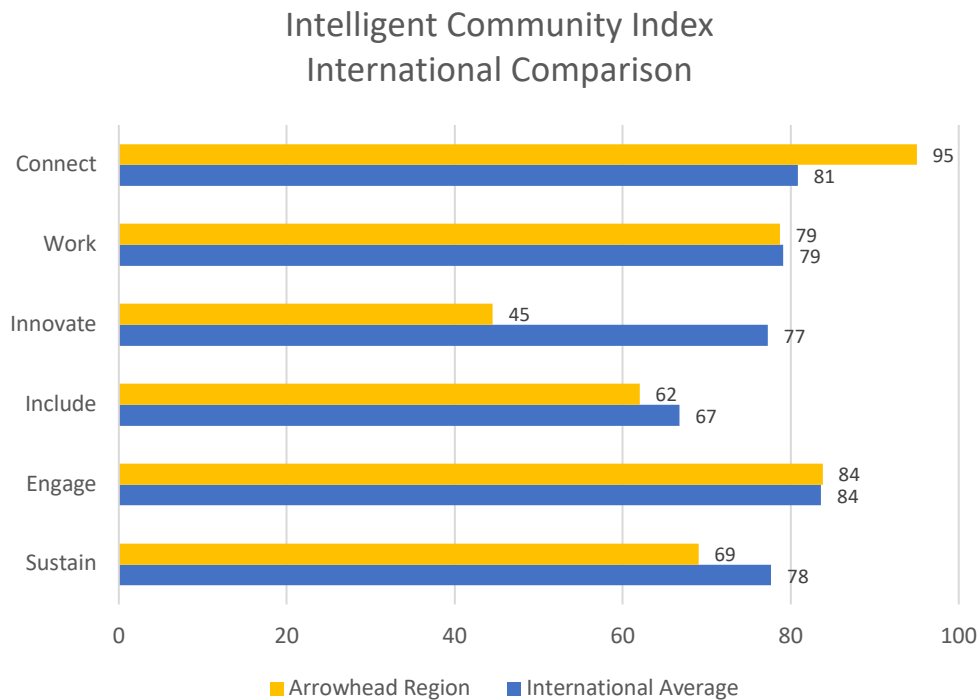
The Arrowhead Region of Minnesota, named for its shape on the map, consists of seven counties in the northeastern part of the state. The region stretches across the Boundary Waters Canoe Area Wilderness and Voyageurs National Park in the north to Lake Superior in the south, and it extends westward into counties in the heart of Minnesota's Northwoods. It is home to more than 325,000 residents spread across 18,200 square miles.

Major industries include aviation and aerospace, mining, back office, wood and paper products, shipping/transportation, health care, metal fabrication, utilities, and hospitality and tourism. The region offers convenient access to air through three commercial airports, four Class I railways, and highway transportation. This network, plus an inland seaport, offer border to border and global shipment of goods. It features excellent K-12 education and 13 higher education campuses and successful medical campuses. The four largest communities are Duluth (86,238), the Quad Cities (17,000) and Hibbing (16,300) in St. Louis County and Cloquet (12,000) in Carlton County.

### Comparing the Region to ICF's Global Data Set

The following are a set of charts that compare the region to ICF's global data set of Intelligent Communities. The regional data comes from a questionnaire submitted by the Blandin Foundation that aggregates the best examples of development practice and assets across the region. It therefore represents a somewhat idealized picture of the region's performance.





As represented by the assets and examples in the “best of the region” questionnaire, the Region’s greatest strengths are in connectivity (95% of available points) engagement (84%) and knowledge workforce (79%). Sustainability (69%), digital inclusion (62%) and innovation (45%) are not as strong.

In comparison to ICF’s global data set, the Arrowhead Region outscored the average in connectivity, while matching it in knowledge workforce development, inclusion and engagement. The Region underperformed the average in sustainability (by 9 points) and innovation (by 32 points). Too much should not be read into the high Connect, Work, Include and Engage scores, however: it means that the best of the Region is competitive with Intelligent Communities around the world but does not suggest that this high level of performance is evenly distributed across the Arrowhead.

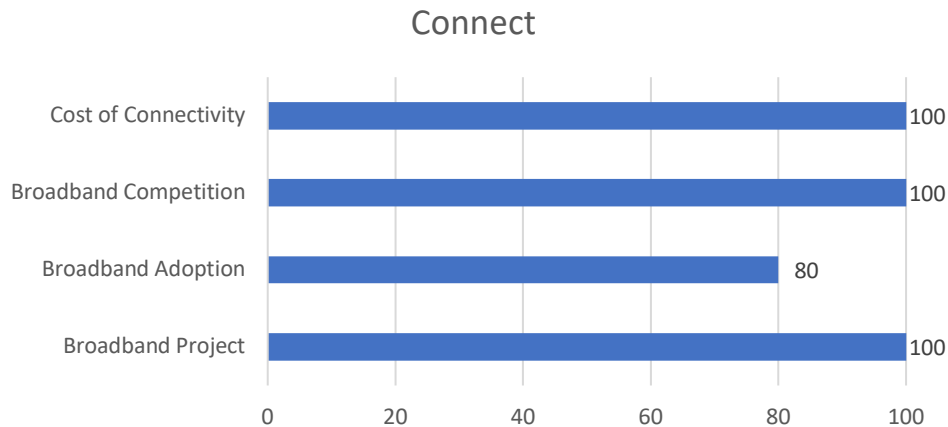
## Connect

On a best-of-the-region basis, the Region received top scores on the cost of connectivity, the number of competitors in the region, and projects including:

- Northeast Service Cooperative Fiber Project, which spans eight counties to connect 332 critical site services for anchor institutions for high-speed middle-mile service.
- The broadband projects of Cook and Lake Counties, which brought fiber internet services to residents, overcoming serious barriers.
- The Blandin-IRRRB Broadband Communities program, using the ICF Method, which has led to \$35 million in connectivity investments reaching 10,000 homes, half directly

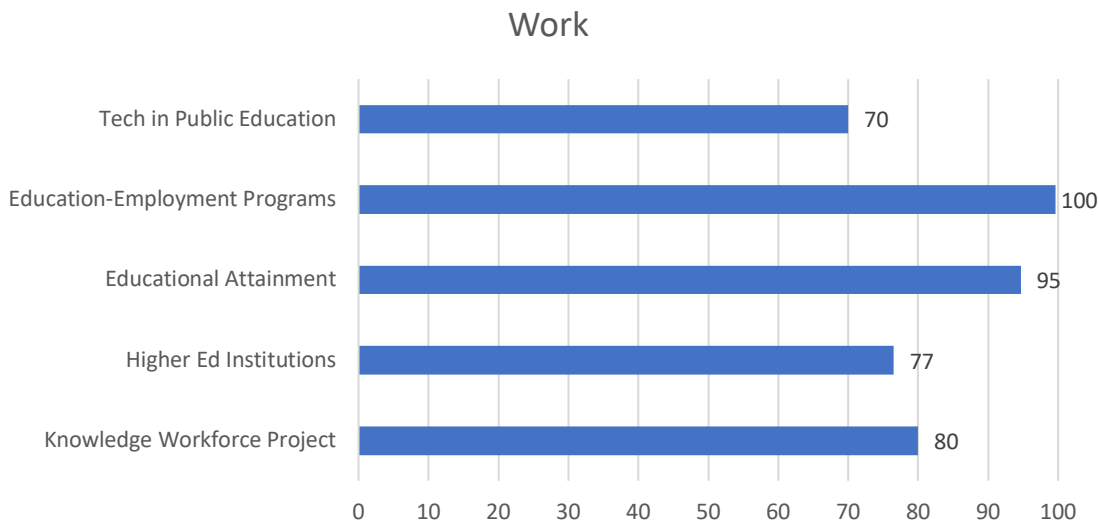
funded by the program and the other half through carrier investment and grant-funded projects. .

Adoption, at 75%, scored lower, reflecting the Region's variances in broadband availability.



## Work

In the development of a knowledge workforce, the Region scored highest in the number of education-to-employment programs it reported and the educational attainment of the population. Scoring somewhat lower were the number of technology offerings in schools and access to higher-education institutions in the large and predominantly rural area.



The projects received a strong 80% score based on evaluation of:

- Northforce community-based talent retention and attraction, which has over 4,400 registered candidates (25% from outside the Region), 1,000 employers and has distributed nearly 20,000 job opportunities.

- Iron Range Engineering programs for high school students, which unites state government, schools and employers to graduate students ready for employment, with 60% finding jobs within 6 months of graduation.
- Multiple workforce development programs across the Region: a total of 14 community-based and state-funded programs helping improve skills, attract talent and ease the school-to-work transition.

## Innovate

Innovation was a relatively weak point for the Region. The projects reported in the questionnaire that aim to stimulate and support innovation scored significantly higher, at 75% of available points, than the current reality as reflected in the other questions. They included:

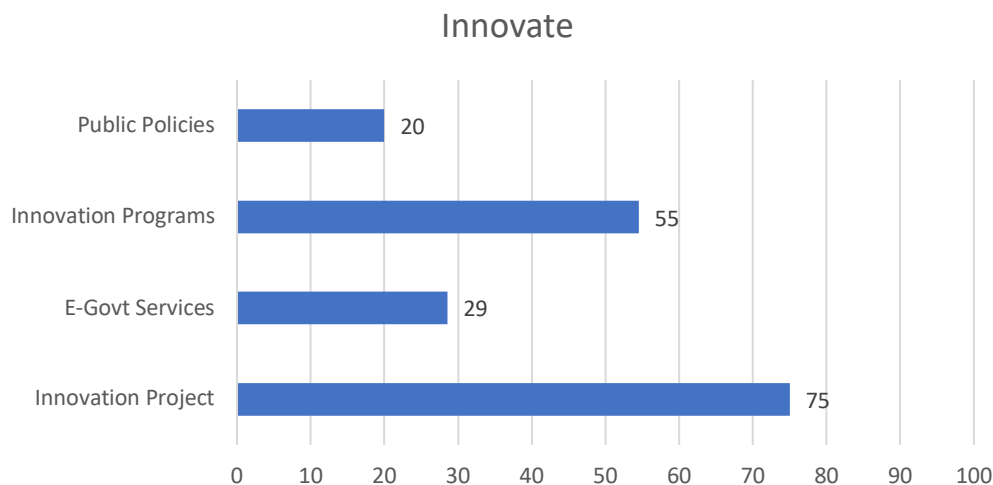
- SBDC Small Business Technology Assessment and Consulting Program, funded by Blandin Foundation and IRRRB, brings training from Northland and the Northeast MN Small Business Development Center to community-led programs across the region.
- MN Department of Iron Range Resources and Rehabilitation, a regional development agency funded by a portion of a taconite production tax, works to foster growth and economic prosperity in the Region.
- Natural Resources Research Institute, a partnership of the University of Minnesota and DIRRR, researches and identifies innovation opportunities taking advantage of regional resources and skills.
- St Louis River Estuary Cleanup project unities the work of multiple agencies and organizations engaged in remediating significant environmental damage to the river, and has overseen investment over more than \$900 million, with estimated economic impact of \$5-14 billion.
- Minnesota Natural Resources Atlas, developed by state government, provides GIS mapping of the natural resources of the Region.
- Regional Broadband Feasibility Studies in 2018-19 and 2019-20 identified specific areas for broadband deployment, which educated and engaged community leaders in the issue of availability and opened the eyes of broadband providers to opportunities to expand their networks with the help of grants.

The ICF Method puts a strong emphasis on collaboration among business, government and institutions to generate an innovation ecosystem. Relevant to that goal is the work of the Small Business Technology Assessment program, DIRRR, and the Natural Resources Research Institute. Regarding the other projects:

- The Estuary Cleanup project describe did not make any connection to innovation clear and would have been better used in the Sustainability section.

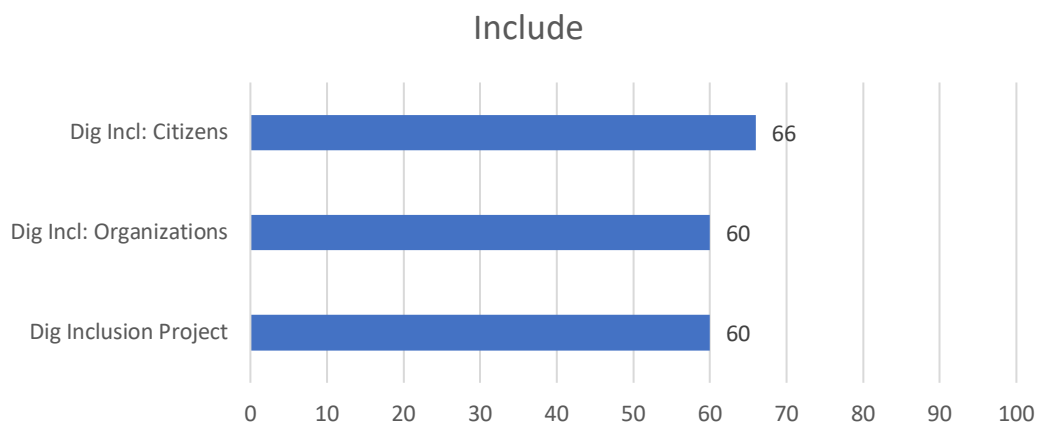
- The Natural Resources Atlas is principally a governmental planning tool, with little impact beyond such purposes, though it does relate to the overall goal of economic development.
- The Broadband Feasibility Studies are of high value in terms of broadband deployment but of limited application the creation of an innovation economy.

The Region does have a reasonable number of innovation programs taking place, earning 55% of available points. E-government services, however, are significantly underdeveloped and there are no public policies on innovation topics.



## Include

Digital inclusion efforts in the Region received about 2/3 of available points across the Board. There are an adequate if not stellar number of inclusion facilities and services for citizens, and a somewhat lower number of facilities and services for organizations. (The availability of an evaluation checklist backed by general classes and customized training, however, are of high value in equipping business for online competition.).



The projects effectively target access and skills for individuals and organizations:

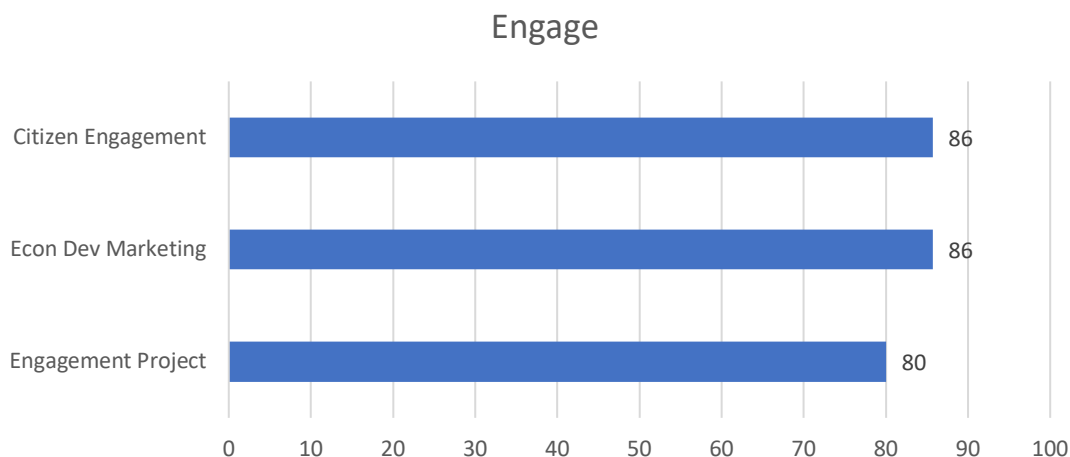
- PCs for People distributes refurbished computers to community organizations that work with low-income households, which offer technology, support and training.
- Duluth Digital Inclusion Initiative, a community-wide initiative, provides free computers and Wi-Fi hotspots to job seekers, low-income households, older adults and schools, and has funded train-the-trainer courses to build competency among educators.
- Arrowhead Libraries offer free Wi-Fi, mobile hotspots and educational support over the summer months.

All three are of value – but also represent fairly “standard issue” inclusion programs, which entitled them to 60% of available points.

## Engage

The Region scored well on engagement activities, with documented strategies and task forces dedicated to carrying them out, and a large number of education and communication activities aimed both inside the Region and outside. The projects were also impressive, including:

- Iron Range Broadband Communities, bringing the ICF Method to communities across the Range
- Recharge the Range, a short-term citizen, leader and business engagement about the future of the region, and the Laurentian Vision Partnership for envisioning new purposes for abandoned mines.
- Blandin Community Leadership Program, building capacity for community leadership at the local level.



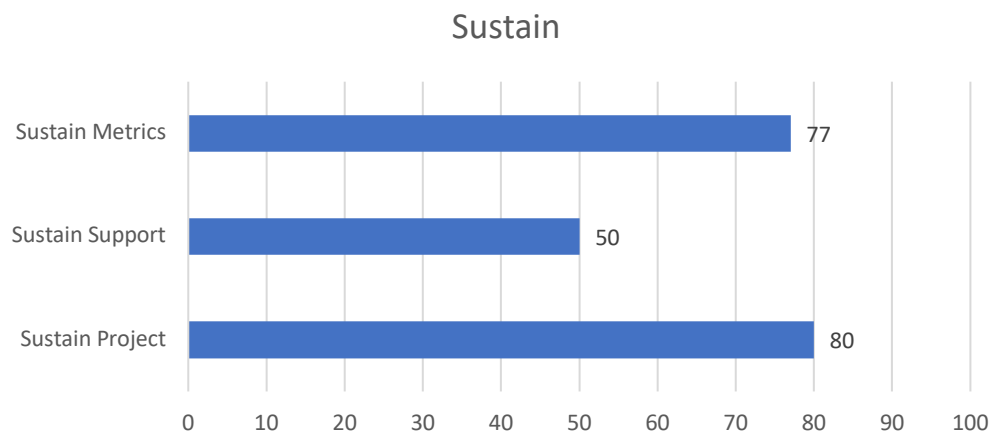
## Sustain

The Region’s sustainability metrics were relatively strong, with excellent air quality and relatively low diversion of waste to landfills. Public policy at 50% of available points, has

not kept pace with the metrics, due to lack of guidelines, policies or laws approved by authorities. The projects were also relatively strong:

- Northeast MN Sustainable Partnership, a joint project of community group and the University of Minnesota, to develop projects across the region on local foods, healthy homes, peer-to-peer learning and public environmental awareness.
- IRRRB Business Energy Retrofit Program provides grants covering up to 33% of project costs for lighting, storefront improvements, roofing, insulation, HVAC and renewable energy projects.
- Reclamation of Mine Waste Dumps for Recreation and Redevelopment has engaged mining companies, local governments, IRRRB and community groups to convert abandoned mining areas into recreational and renewable energy facilities.

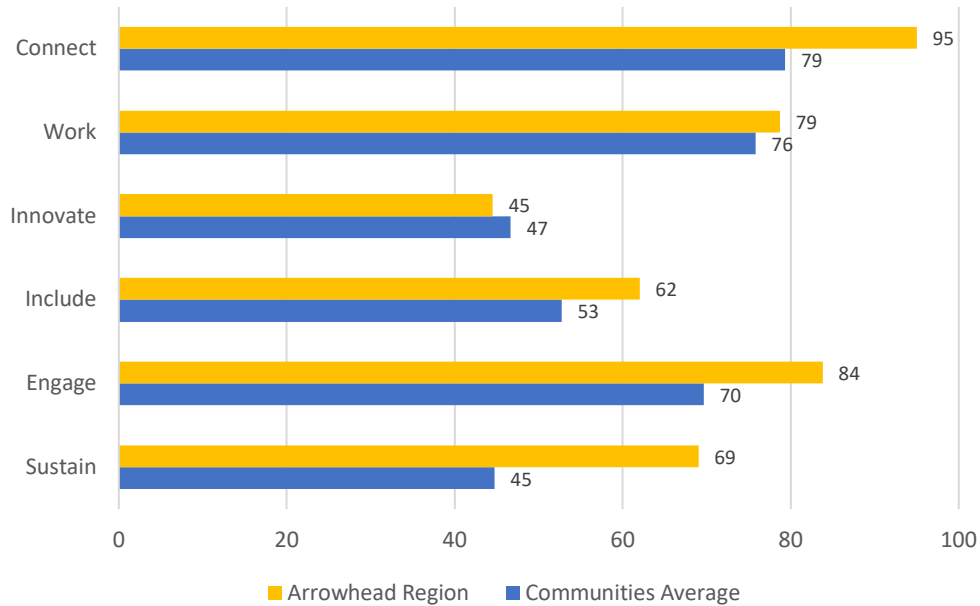
Two of the three make a major commitment to engaging the community and stakeholder organization in environmental transformation, which generates energy for other forms of engagement that powers positive change. The Energy Retrofit is presented as a principally financial program. If it includes education and engagement, there is no mention of it.



## Comparison to Communities

Five communities and counties engaged in the Arrowhead Region initiative submitted ICF questionnaires, which provide the opportunity to evaluate a more representative sample of cities and counties. The following charts aggregate their results and compare them with the best-of-the-region scores.

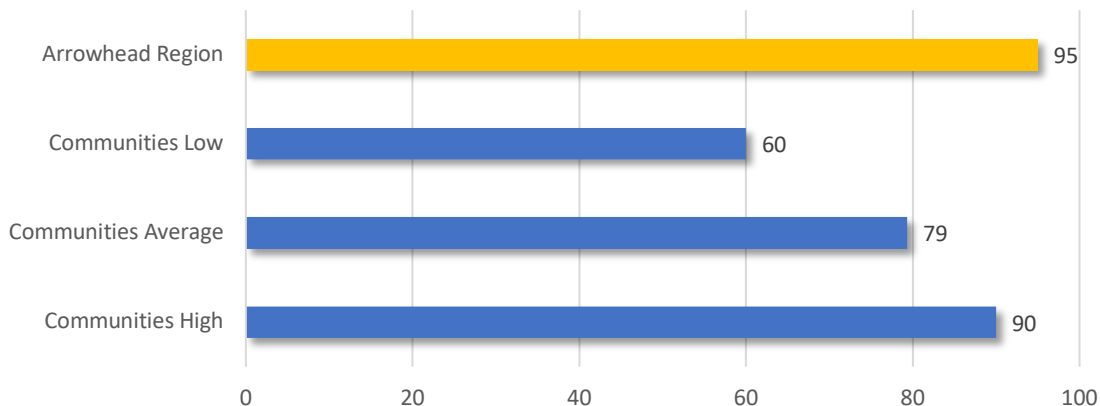
### Intelligent Community Index Regional vs. Individual Communities



The overall pattern of relative strength and weakness is the same: both the aggregated communities and the best-of-the-Region data show strength in connectivity (where communities have concentrated most of their efforts to date), engagement and workforce development. The biggest divergence is in sustainability, where the aggregated communities scored at only 65% of the best-of-the-region level. As we will see later in the report, some of this divergence is due to submitting incomplete data, which is penalized in the analysis.

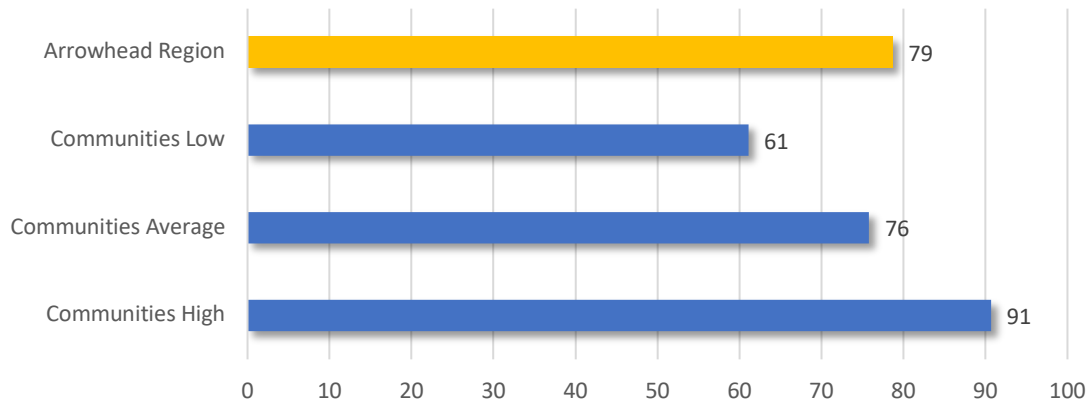
The following charts break down these comparisons in more detail. For each Factor, they present the best-of-the-region score and the low, average and high scores among the four regions submitting data.

### Connectivity Score

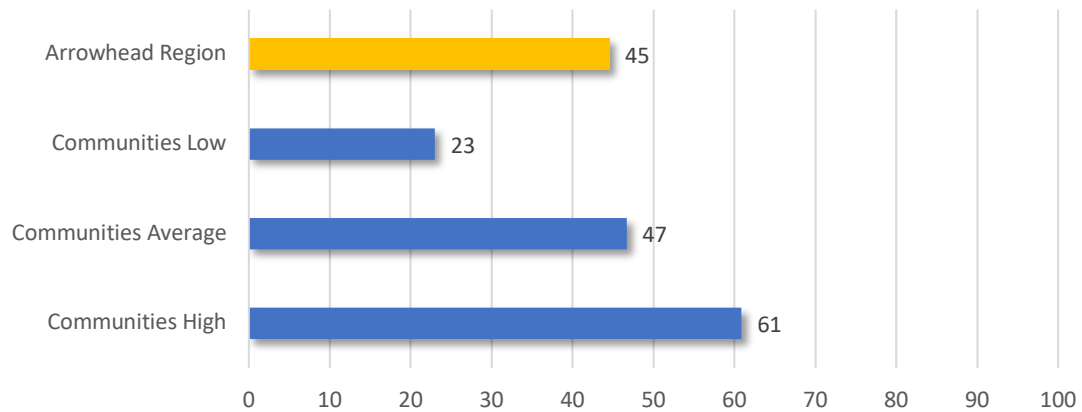




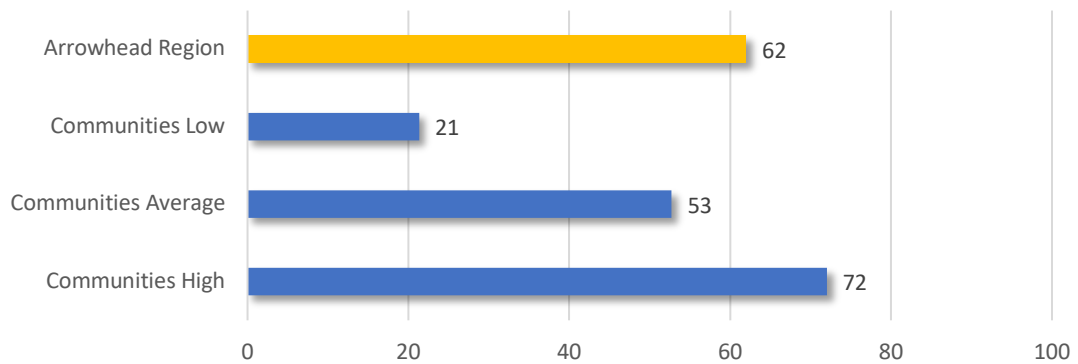
### Knowledge Workforce Score

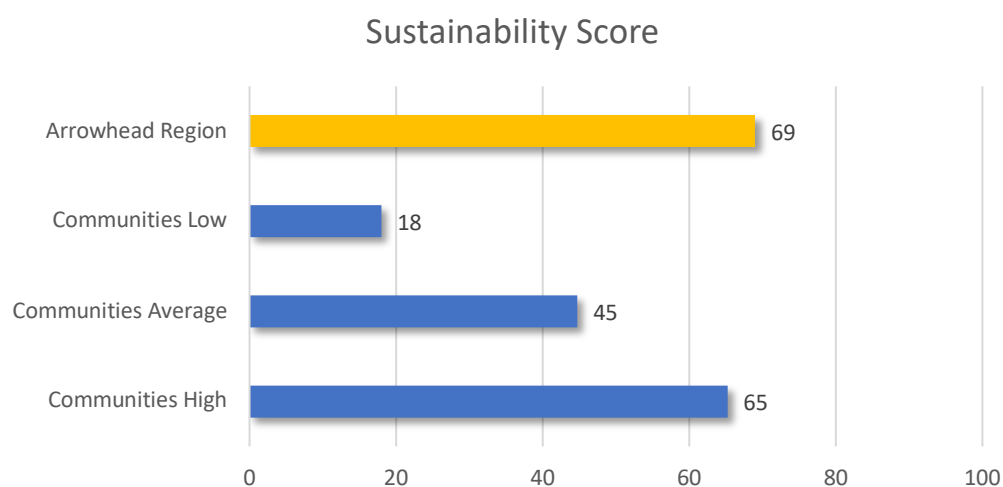
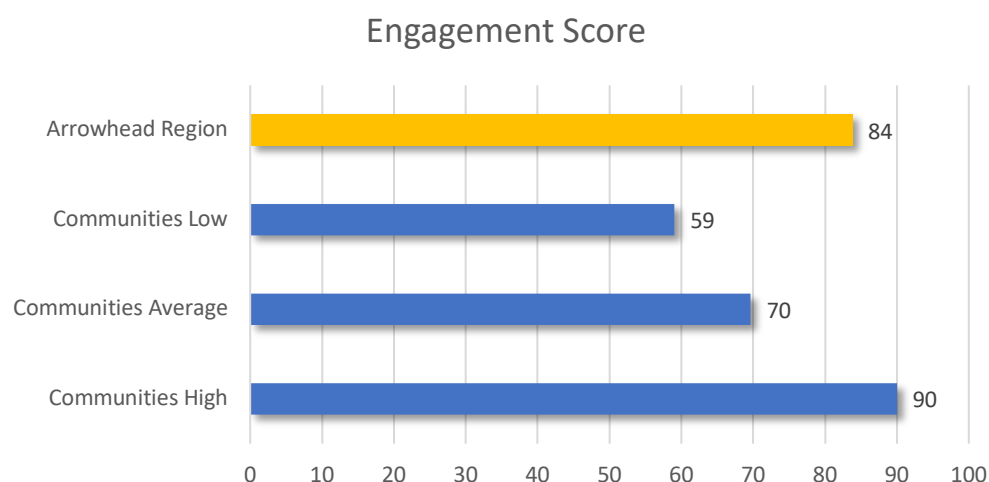


### Innovation Score



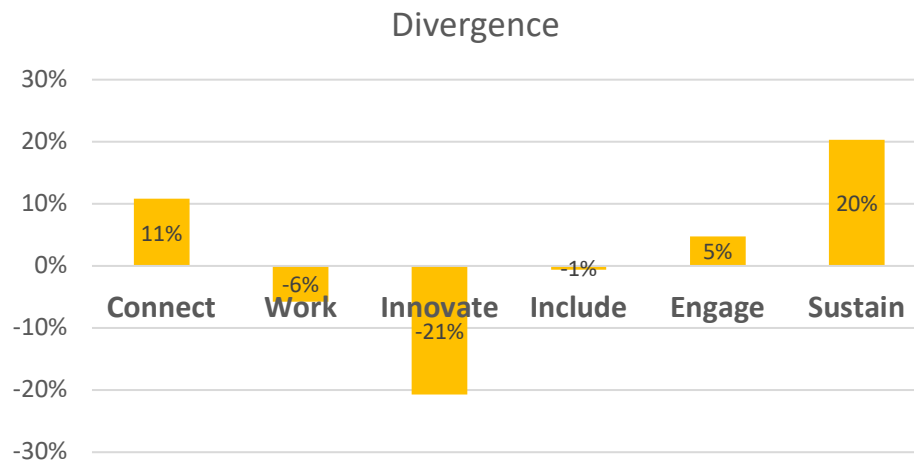
### Digital Inclusion Score





One question raised by the available data is how representative the best-of-the-Region scores really are. We can gain some insight by measuring how they diverge from those of the five communities providing more granular data. To create a meaningful comparison, the chart below shows how much the best-of-the-region score for each factor diverged from the combined high and average scores of the communities. The high-average combination was selected as likely to be closer to the best-of scoring than would be the average of the communities.

For the Work, Include and Engage Factors, the best-of-the-Region and combination of the high-average scores for the four communities were in reasonably close alignment, which suggests that the data and projects included in the best-of-the-Region questionnaire were reasonably representative.



For the Connect, Innovate and Sustain Factors, however, there was a large divergence. Positive divergencies mean that the best-of results exceeded those of the high-average, while negative divergences mean that the high-average results exceeded the best-of. The sample is extremely small, but the negative divergence for Innovate may indicate that there are pockets of innovation in the region not reflected in the best-of questionnaire.



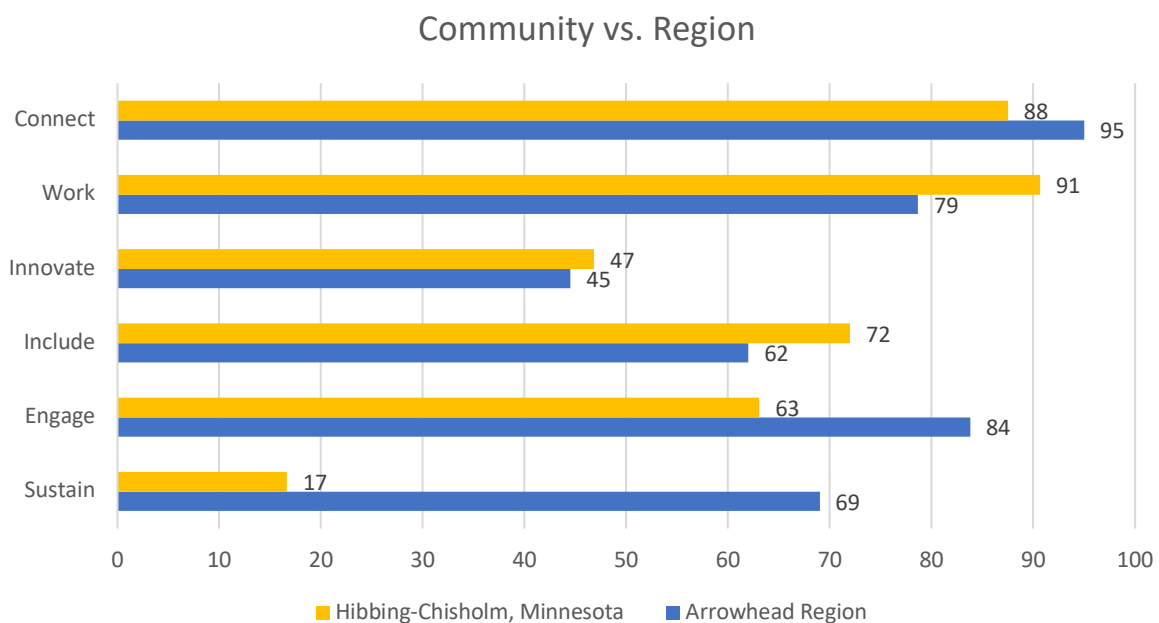
## The Communities

# Hibbing-Chisholm Area



The Hibbing-Chisholm Area in Saint Louis County includes the cities of Hibbing and Chisholm, with a combined population of more than 21,000. They had long been mining towns in the Mesabi Iron Range, and Hibbing is home to the largest open-pit iron mine in the world, whose development caused the city to relocate in the early part of the 20<sup>th</sup> Century to open up more land for the mine. Hibbing is home to Hibbing Community College, a two-year community and technical institution.

The chart below shows how Hibbing-Chisholm compared with the average of the Arrowhead Region across the six Indicators.



The Area's scores align with those of the best-of-the-Region in two Factors, Connect and Innovate, while diverging in four others:

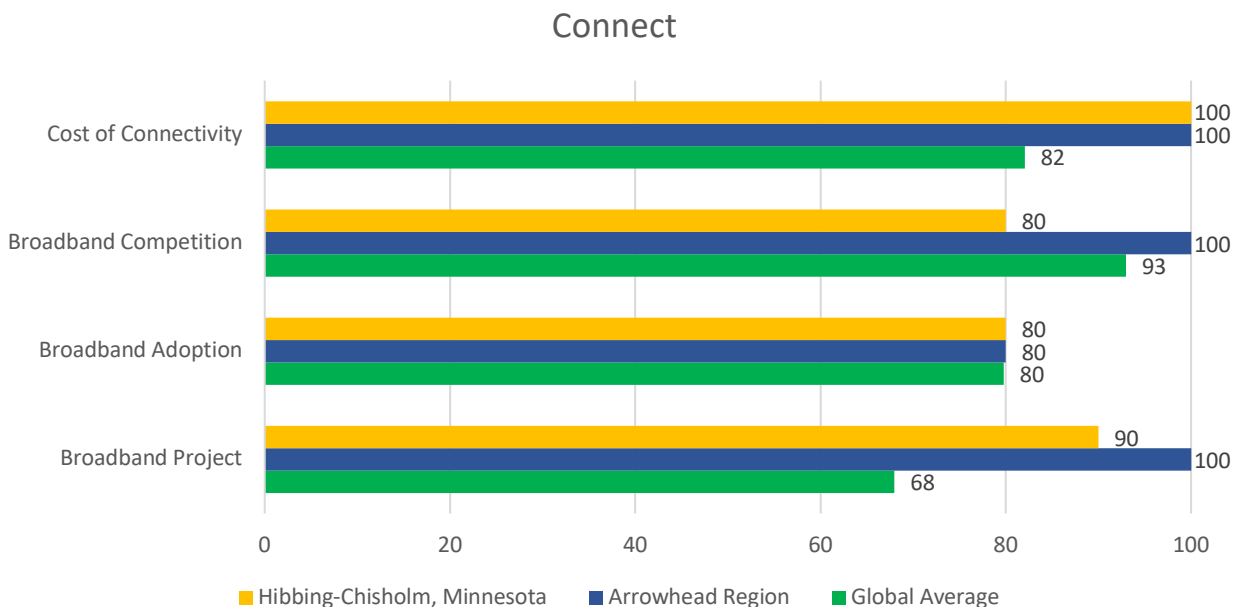
- Work, where the Area scored 12 points below the Region
- Include, where the Area outscored the Region by 10 points
- Engage, where the Area scored 21 points below the Region
- Sustain, where the region scored 52 points below the Region

The analysis of the individual Factors below goes into more detail on these outcomes.

## Connect

Hibbing-Chisholm was a strong performer in this Factor. The Area –

- Received 100% of available points for the cost of connectivity, equal to the best-of-the-Region and compared to 82% for the global average.
- Scored 80% for the competition that helped achieve those costs, compared to 100% for the best-of-the-Region and 93% for the global average.
- Received 80% for broadband adoption, equal to the best-of-the-Region and the global average.
- Gained 90% for its broadband projects compared with 100% for the best-of-the-Region and 68% for the global average.



The three broadband projects described in the questionnaire were:

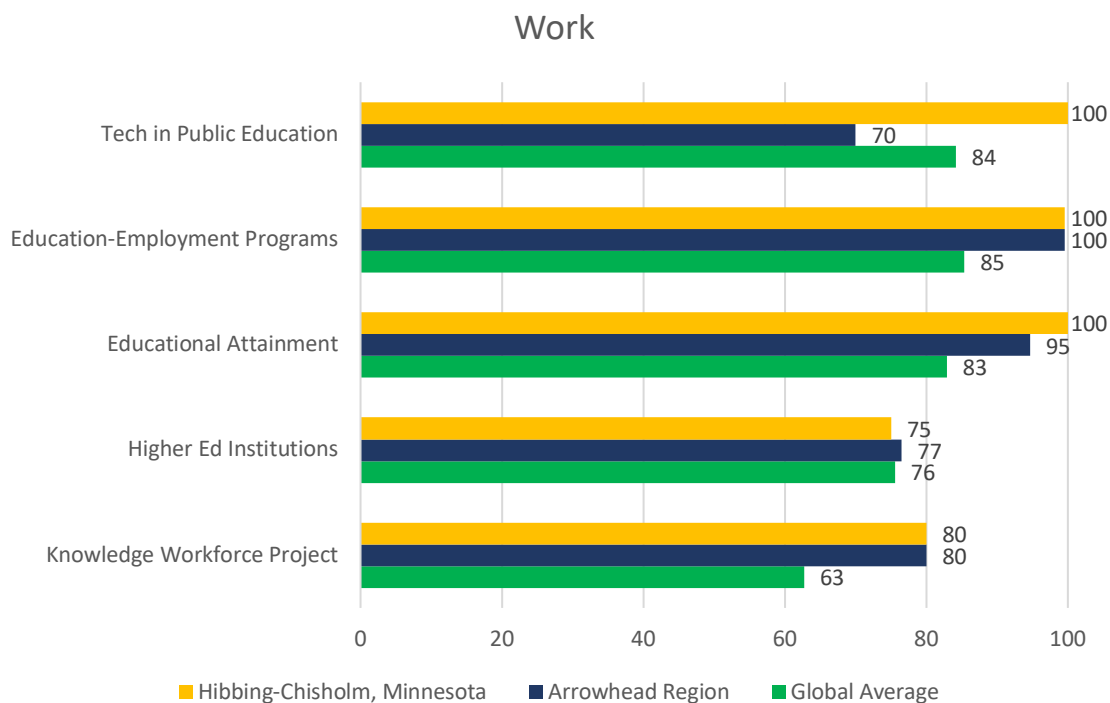
- Iron Range Feasibility Study, which provided a data-based roadmap for broadband solutions for unserved and underserved households in the Central Iron Range, and played a significant role in educating and engaging community leaders in the issue of

broadband availability, and in transforming the competitive environment by engaging carriers in competing for community interest and partnership in grant programs.

- Leveraging Federal and State Funding for Rural Broadband Expansion to serve 1,000 unserved or underserved households.
- NESC Backhaul & Business Connectivity in Opportunity Zones, bringing fiber broadband and technology auditing and support to opportunity zone business centers.

The high score of these projects reflects their range of realistic approaches to expanding broadband connectivity for offline residents and businesses with high-level connectivity needs. Feasibility studies do not typically score well in our process, because they represent only a modest step toward real change, but the questionnaire clearly explained how the study results have been used to drive greater awareness and engagement with the issue and equip broadband champions to make their case and broadband providers to see their opportunities in a new light.

## Work



Knowledge work was another area of strong performance for Hibbing-Chisholm. The Area:

- Received 100% for its deployment of technology in schools, compared with 70% for the best-of-the-Region and 84% for the global average.
- Gained 100% of available points for its education-to-employment programs, compared with 100% for the Region and 85% for the global average.



- Received 100% for the educational attainment of the population, compared with 95% for the Region and 83% for the global average.
- Was awarded 75% of available points for access to higher education, equivalent to both the best-of-the-Region and the global average.

The knowledge workforce projects received 80% of available points, equal to the Region, and compared with 63% for the global average. The three projects were:

- Iron Range STEAM Summer Institute Collaboration, a new collaboration among nine school districts to create a financially sustainable summer program for students in grades 5-8.
- Hibbing Career Academy, which provides education, guest instructors from local business and work experience in a set of career pathways in demand in the Area.
- Chisholm Connected Classrooms, which piloted online education in local schools just in time for the arrival of the pandemic.

The Summer Institute and Career Academy are ideal implementations of the ICF Method for this Factor. They target two distinct needs: to offer young people in the crucial years of 5-8 grade the opportunity to engage in STEAM learning, and to connect older students with real-world career training and employer engagement with a clear on-ramp to employment. The Connected Classroom project is also of high value – not just for equipping students with technology at home but training and equipping teachers in classrooms to integrate online learners into their teaching. The questionnaire did not indicate that these projects were part of a comprehensive strategy, but they are well aligned with such a strategy when it is fully developed and activated.

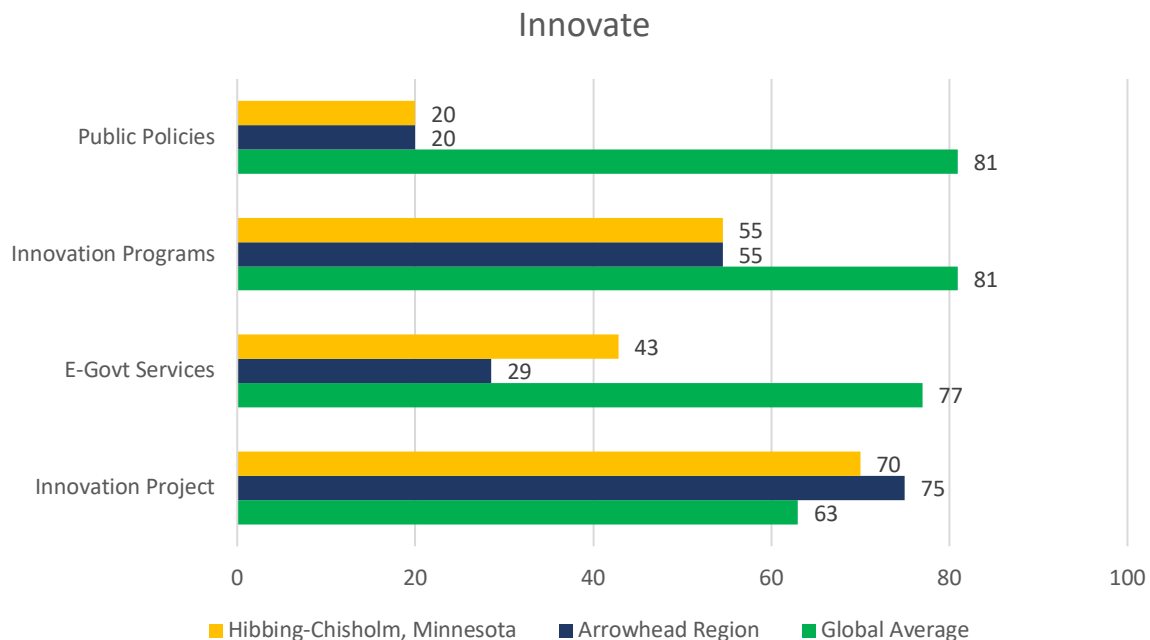
## Innovate

The Area's performance in the Innovate Factor did not reflect the same level of creativity and commitment seen in Work. Hibbing-Chisholm received:

- 20% of available points for the lack of any innovation policy from local government, equal to the best-of-the-Region and compared with 81% for the global average.
- Despite the policy gap, 55% of available points for innovation programs, based on identifying 5 of 11 possible programs, equal to the Region and compared with 81% for the global average.
- 43% of points for e-government services, based on identifying 3 of 7 possible services, compared with 29% for the Region and 77% for the global average.

The Area's highest score, however, was for projects, which received 70% of available points compared with 75% for the best-of-the-Region and 63% for the global average. They included:

- Chisholm Community Portal 55719, a collaboration between the Chisholm Chamber, school district and city for a deliberately simple landing page showing a shared community calendar, social media feeds and links to each partners' website.
- Online broadcasting of Council Meetings and non-real-time posting of Council meetings to Vimeo and YouTube to increase public access to decision-making.
- Fairview Health Technology, which distributed iPads for use by patients undergoing cancer treatment, first responders and emergency room staff to improve communication and allow remote screening of patients.
- Northforce Regional Talent Portal with Local Services, a regional job listing service that attracted more than 1,000 businesses and served 4,300 job candidates in 2020.
- Iron Range Makerspace, a regional co-working and business incubation facility in Hibbing with 300 members that has led to the startup of six new businesses.
- Technology/Marketing Technical Assistance, providing 1-to-1 digital marketing consulting to businesses in Chisholm and Hibbing to equip them for successful online marketing and sales.



The ICF Method guides communities in developing a self-sustaining ecosystem for business innovation, to which government contributes by investing in e-services among other actions. In this context, the projects presented a mixed group rather than a coordinated strategy – but one aiming at the right objectives.

The Chisholm Portal and online broadcast of Council meetings are simple e-government services, though they lack interactivity that would give them greater value. Northforce, the Makerspace and Technical Assistance program aim to make matching talent to opportunities

more efficient, to stimulate business formation and to increase the digital capacity of existing businesses. These are vital parts of a working innovation economy. The Fairview Health Technology example is not at the same level, being a small-scale effort to use digital technologies to improve outcomes.

## Include

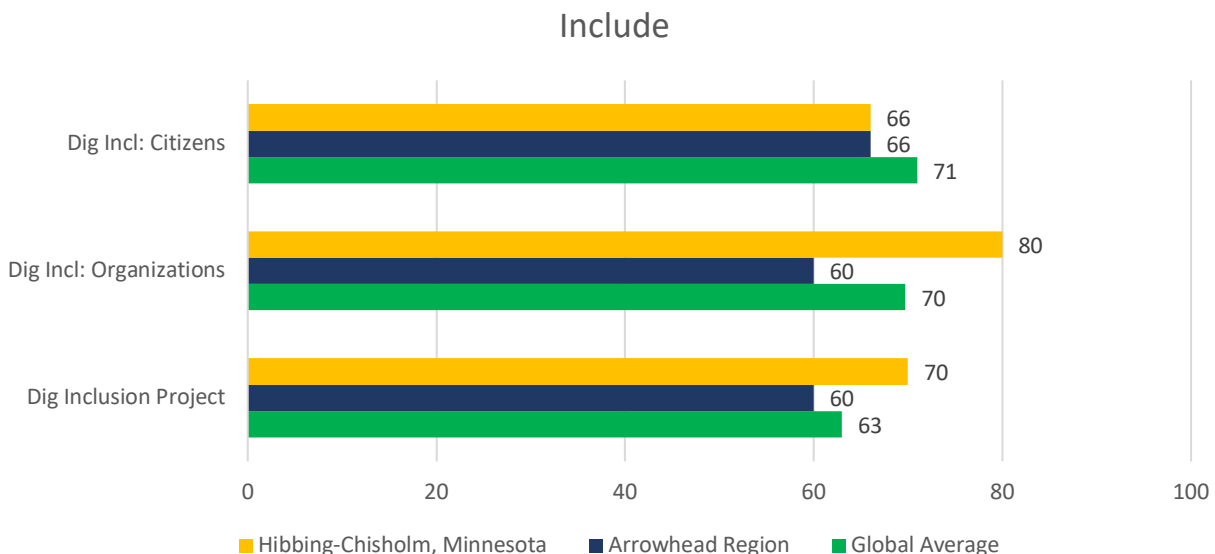
Digital inclusion was another area of strength for Hibbing-Chisholm:

- Its digital inclusion programs for citizens received 66% of available points, equal to the best-of-the-Region and only slightly below the global average of 71%.
- Digital inclusion programs for organizations scored even higher, receiving 80% of available points compared with 60% for the Region and 70% for the global average.

The Area's digital inclusion projects earned 70% of points, outscoring the Region's 60% and the global average of 63%. They included:

- Access North Age-in-Place Project, which provides improved routers and digital technology that allows senior to safely remain in their homes longer while enjoying a good quality of life.
- Small Business Training and Tech Assistance has been provided by multiple organizations in the Area over the past 30 years, ranging from training to audits to 1-to-1 assistance.

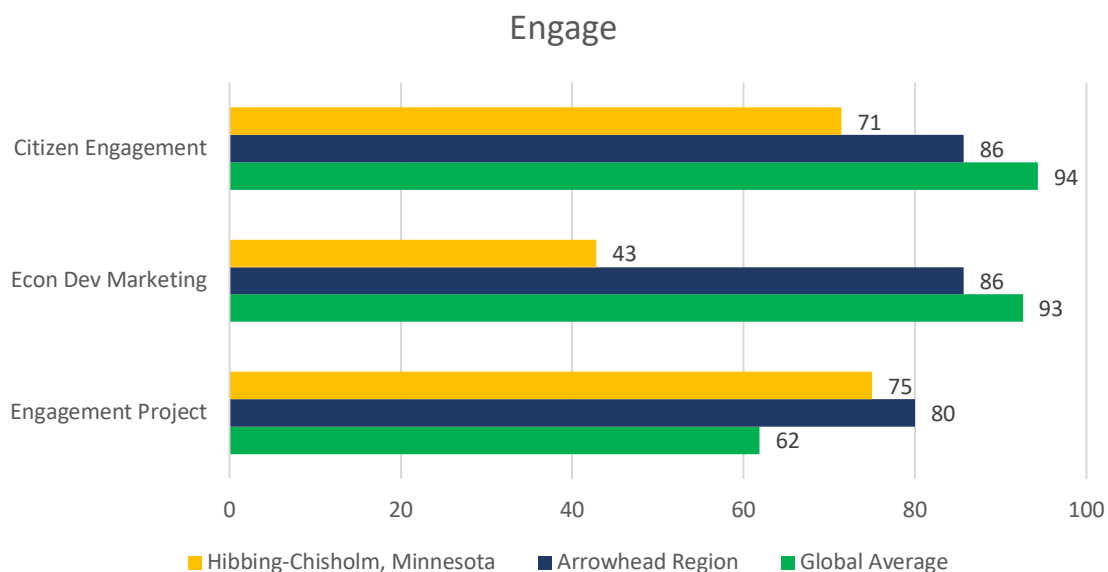
The relatively high score for the projects reflects how they targeted specific digital inclusion needs for both residents and organizations.



## Engage

Hibbing-Chisholm scored somewhat lower on engagement questions than on digital inclusion:

- The Area does not have a documented strategy or group dedicated to carrying it out, which is required to make engagement an ongoing priority for the communities.
- It received 71% of available points for citizen engagement, citing 5 of 7 possible programs, compared with 86% for the best-of-the-Region and 94% for the global average.
- For communicating its economic and community development story outside the region, the Area cited only 3 of 7 programs and received 43% of points, compared with 86% for the Region and 93% for the global average.



The Area's engagement projects earned 75% of available points compared with 80% for the best-of-the-Region and 62% for the global average. They included:

- Community Wide Leadership Programs, including the Blandin Community Leadership Program, which has graduated 100 residents of the Area, and the Hibbing Chamber Leadership Program, which has had 700 participants.
- Local Chamber Candidate Forums, which provide a non-partisan format at which the public can learn about local, state and congressional candidates, with in-person participation augmented by television and online streaming coverage.
- Iron Range Blandin Broadband Communities Program, which has launched over 20 projects in broadband, workforce, digital inclusion, sustainability and innovation.

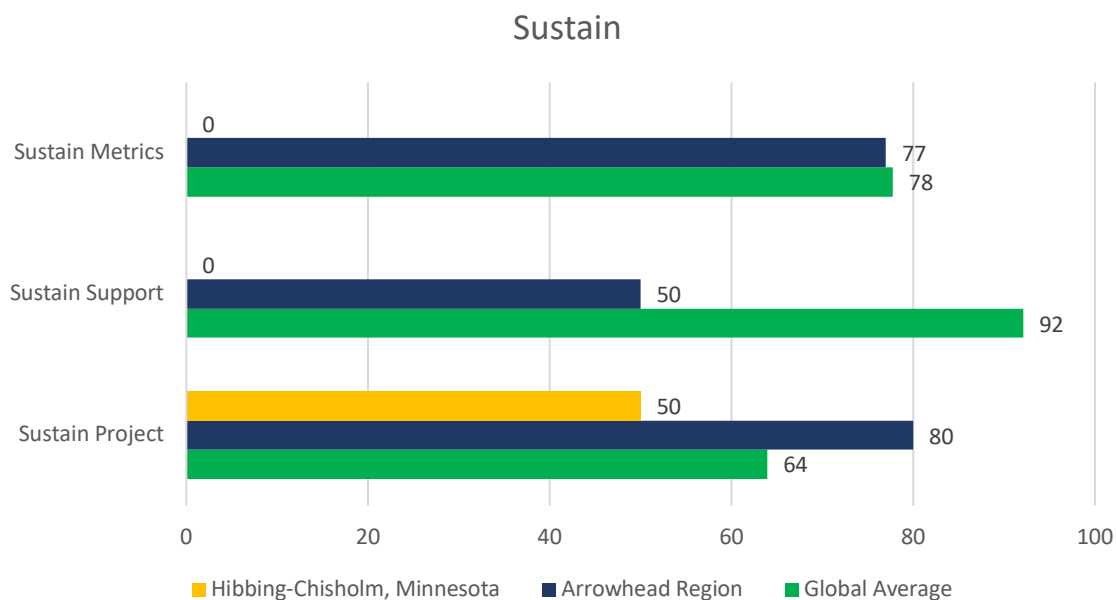
Of these programs, only the Candidate Forums seek to directly engage the public. The Leadership Programs train citizens in community leadership, and we assume that

development projects, attracting volunteers and resources, and building capable teams are all part of the training. The Broadband Communities Program creates many valuable projects improving quality of life on a broadband foundation, some of which may involve public engagement.

In the ICF Method, engagement means a deliberate effort to help citizens, businesses, institutions and community leader understand the need for change, identify opportunities and become champions of positive change. By engaging the passions and concerns of the community, engagement also energizes economic development, investment attraction and business generation, because the community has built a unique vision of its character and its future. As with other Factors, the Area has components of this approach but lacks an overall structure to make engagement a driver of change on multiple fronts.

## Sustain

Hibbing-Chisholm scored extremely low for sustainability, largely because it provided no information about such sustainability metrics as air quality, indoor water use and municipal waste diverted from landfills, or on governmental commitments to sustainability practices. The impression created is that sustainability is a low priority for the Area.



Hibbing-Chisholm cited three sustainability projects:

- Business Energy Retrofit Grant Program, which incentivizes businesses to invest in energy efficiency improvements.
- Recreation via Reclamation, a series of project to reclaim abandoned mining sites as recreational areas offering hiking, off-road cycling and the Minnesota Discovery Center.
- Champions of Sustainability, a grassroots community group that educates, engages and organizes residents on sustainability issues.

Together, these projects received 50% of available points, compared with 80% for the best-of-the-Region and 64% for the global average. For ICF, sustainability is important at the local level for reasons that go beyond preserving the environment on which we all depend. As a quality-of-life concern, it the power to engage the community in many parts of building a better future. It makes the community more attractive to investors and new businesses and represents a significant growth industry for the future. The Area's projects represent components of this more ambitious approach and provide a foundation for progress.

## Recommendations

The Hibbing-Chisholm Area has made substantial progress as measured by the ICF Method and has numerous opportunities to accelerate its efforts.

- **Connect.** The Area has strong metrics for broadband connectivity but lacks a vital measure of its success: adoption of broadband by households and businesses. The lack of adoption tracking leaves decision-makers in the dark when evaluating the success of programs. Periodic surveying requires effort and some expense but will pay off in the ability to direct support programs where they are most needed.
- **Work.** The Area has an excellent foundation for development of a knowledge workforce. Local government now needs to enlarge its collaboration with employers and educators to establish a shared vision of next steps, based on ICF's roadmap for the knowledge workforce, and unite these programs with others to be developed to fill gaps.
- **Innovate.** As with Work, the Area has a multi-project foundation for progress in creating an innovation economy. What is needed is a set of policies and a development strategy based on ICF's roadmap to tie them together and develop new capabilities.
- **Include.** Digital inclusion is an area of strength for the Area. The questions in this section did not directly address digital inclusion for people who are not seniors, but information in the Work section suggests that reaching families with school-age children is another priority. We have no significant recommendations in this Factor.
- **Engage.** The Area has effective programs engaging the community in specific areas. We recommend a broader-based view of engagement for its power to create positive change. As with other Factors, a strategy to tie project together can have a large impact on overall outcomes.
- **Sustain.** The absence of sustainability metrics or policy calls into question the degree to which sustainability is a priority for the Area. It is ultimately a question to be decided by leadership, citizens and employers. If sustainability is important, there is much value that Hibbing and Chisholm can gain from a more comprehensive approach to it.



## Conclusion



As a large rural region of many municipal and county governments, the Arrowhead is diverse in terms of people, landscape, infrastructure and economic activity. The recommendations in this report are based on the ICF Method, which applies the same framework to understanding every community's challenges and recommends similar strategies to all, regardless of size or location.

How those strategies are carried out – and the extent to which they are already in motion – will be different in each one. The goal is not to make all the municipalities and counties within the Arrowhead into identical units; it is to help each fulfill its potential as determined by the ambitions of its leaders and the wishes of the people who call that community home.