

# Analytics Report

on the East Range and the Arrowhead  
Region of Northern Minnesota

## COMMUNITY ACCELERATOR



Intelligent Community Forum

April 12, 2021



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.

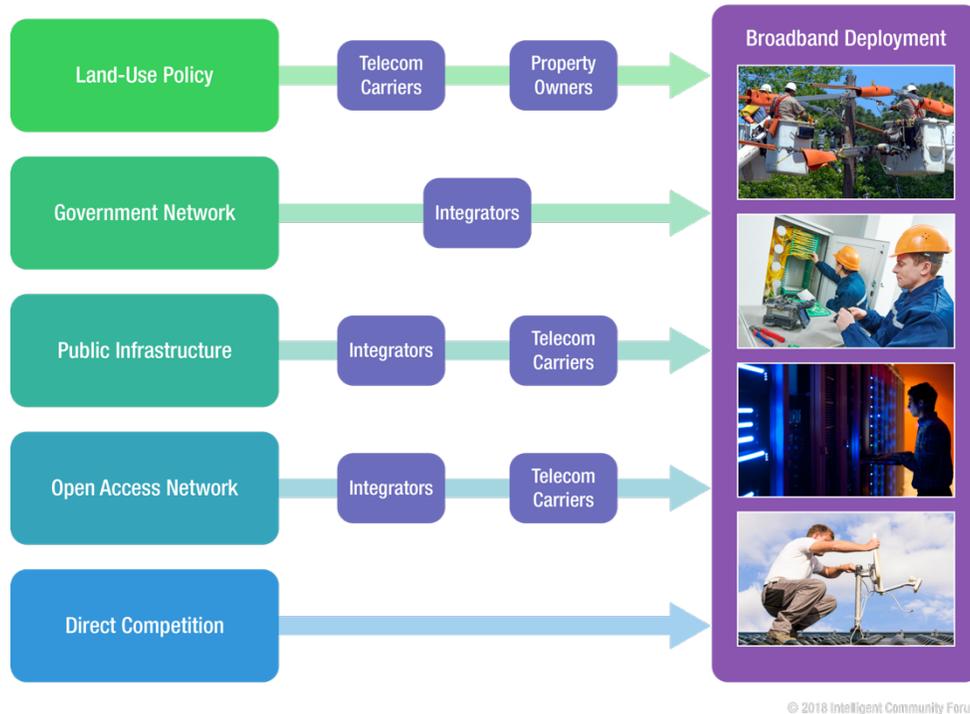


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### Connect

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.

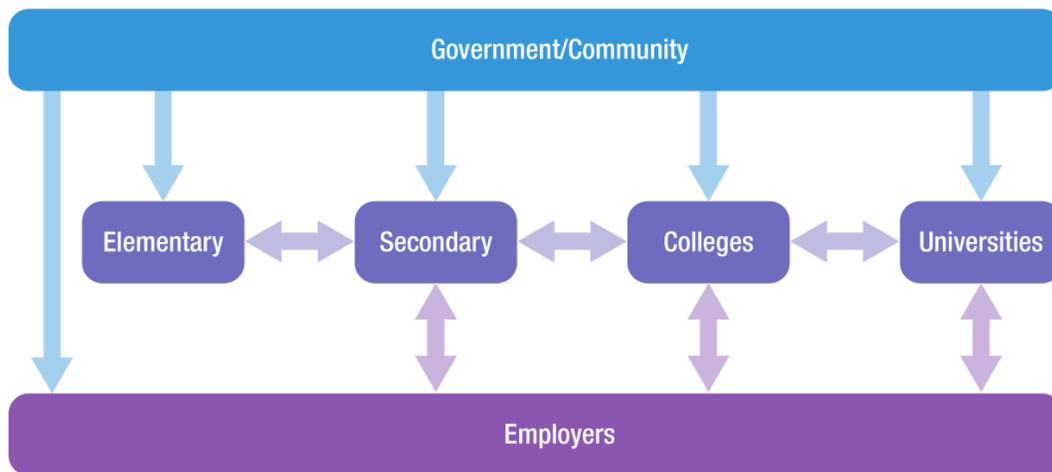
Some communities go beyond this “dark” infrastructure to create **open access networks**. They build, activate and manage a government-owned or public-private network. It provides the “transport layer” – the foundation level of digital connection between physical locations. On this foundation, companies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

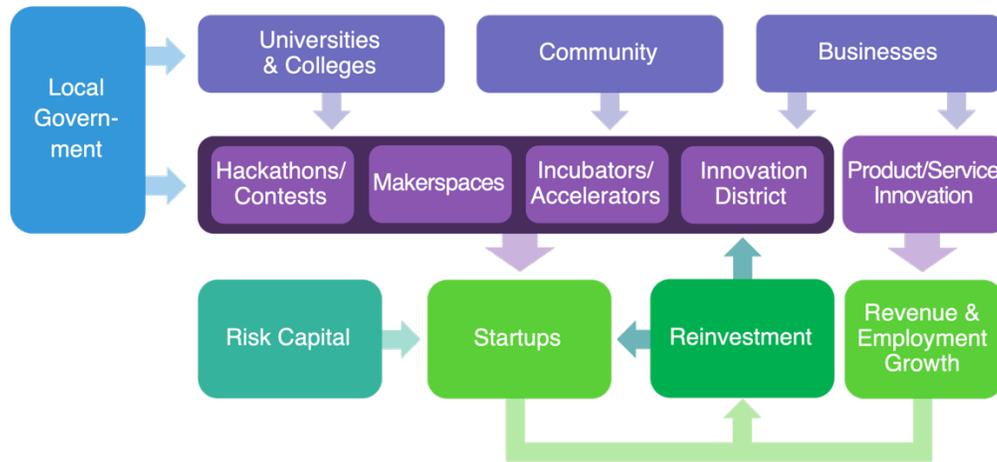
Economist Robert Solow won the Nobel Prize in 1987 for proving that 80% of all economic growth comes from developing and using new technology. That's a stunning number. It means that if the employers, institutions and government of your city or county are not creating new opportunities or putting new 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.

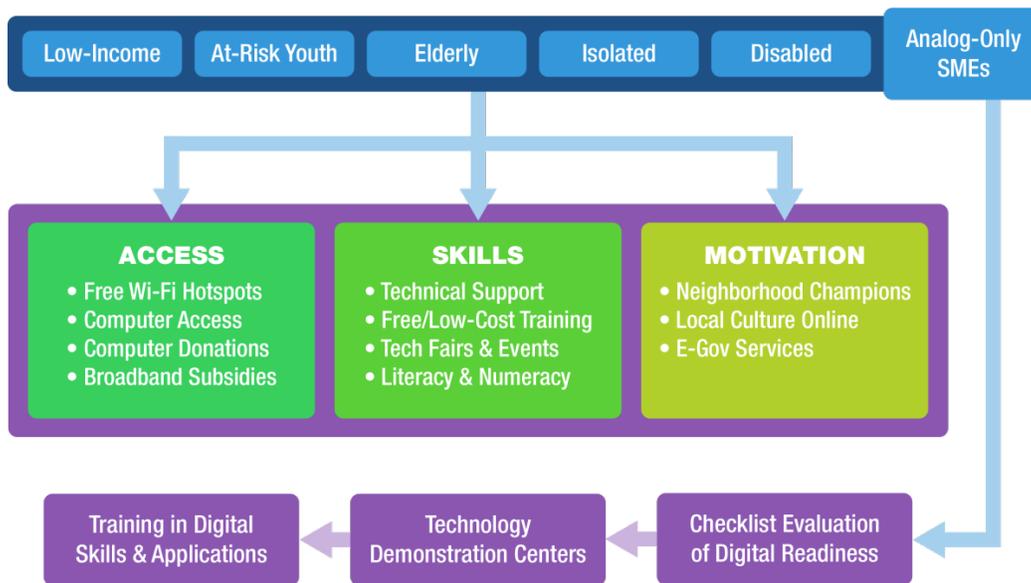
## Include

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.



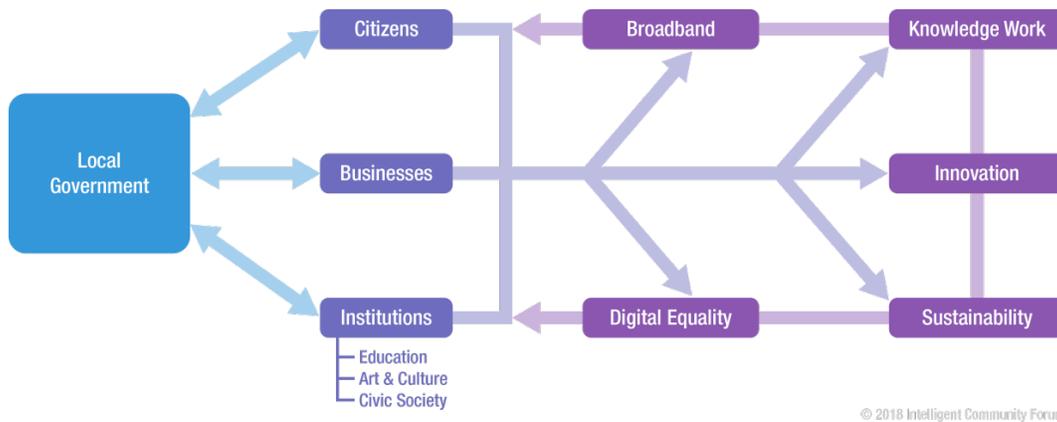
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Just as important as access and skills is the **attitude** needed to acquire them. Intelligent communities create programs that give people and organizations motives to adopt unfamiliar technology and use it to improve their lives.

## 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.

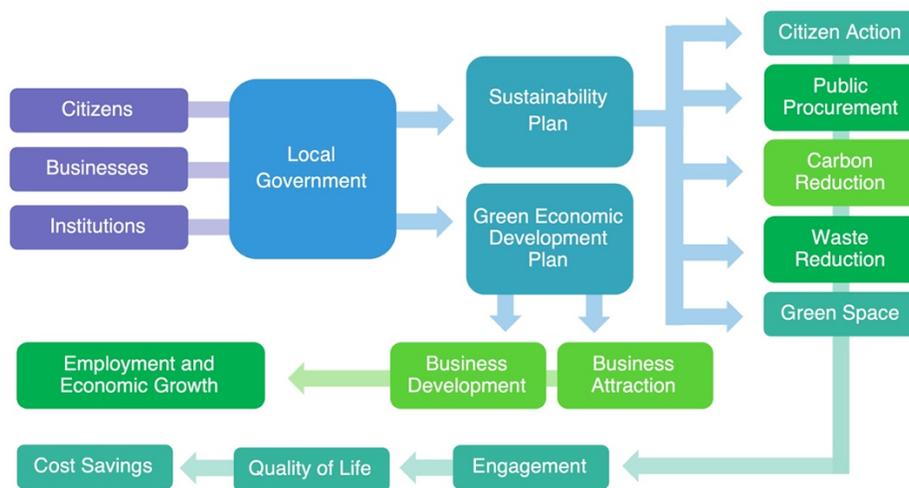
## Sustain

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-ups, 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



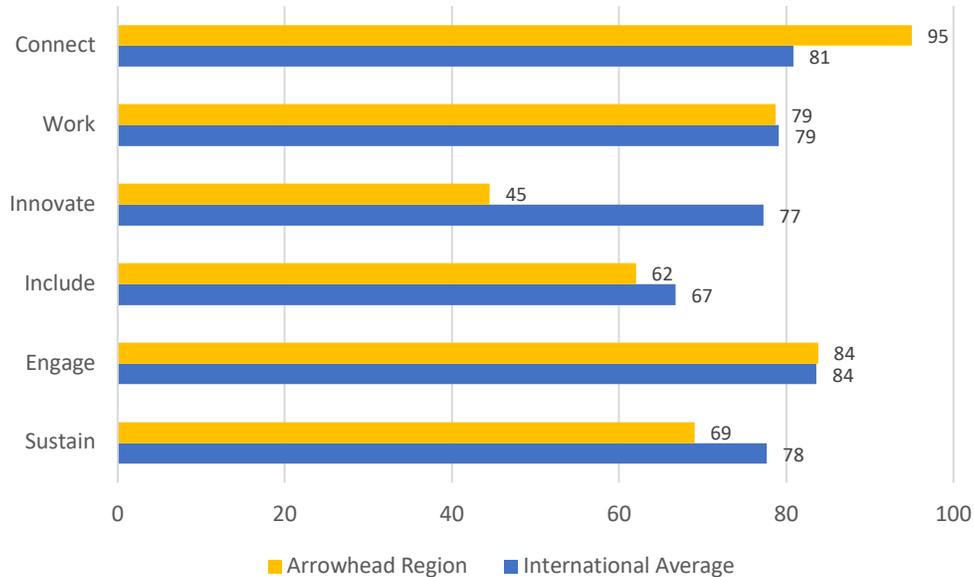
The Arrowhead Region of Minnesota, named for its shape on the map, consists of seven counties in the northeastern part of the state. The region stretches across the Boundary Waters Canoe Area Wilderness and Voyageurs National Park in the north to Lake Superior in the south, and it extends westward into 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.

## Intelligent Community Index International Comparison



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

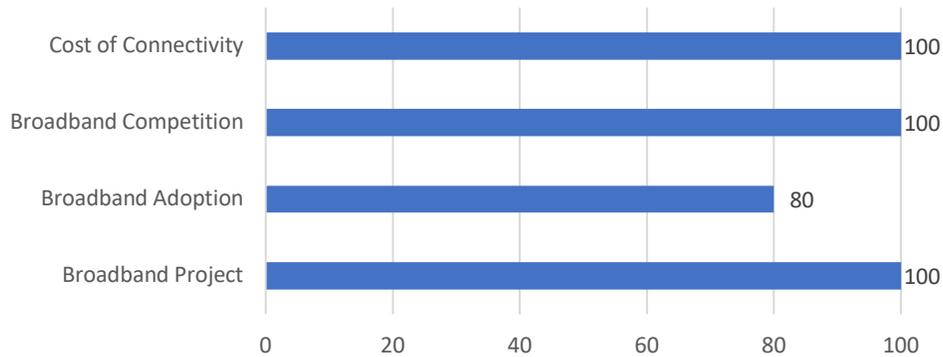
On a best-of-the-region basis, the Region received top scores on the cost of connectivity, the number of competitors in the region, and projects including:

- 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.

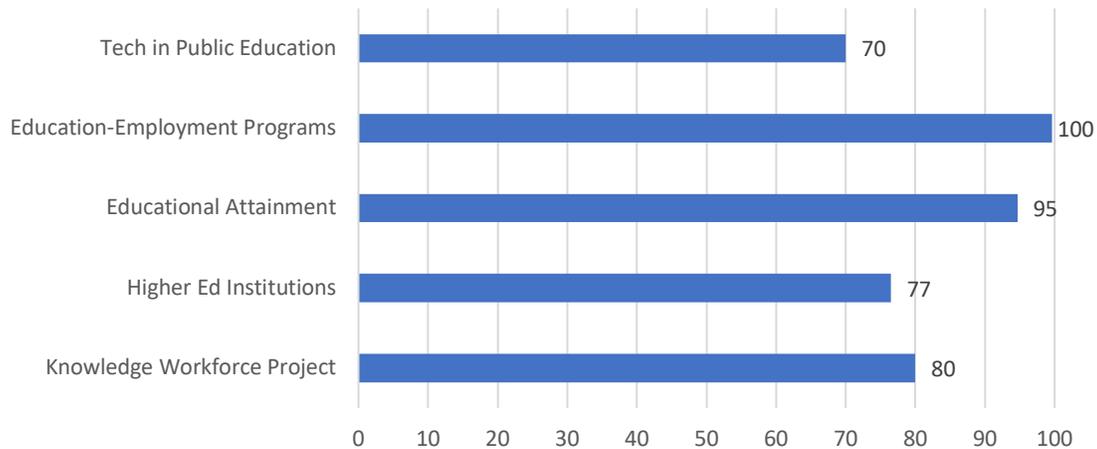
### Connect



### 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.

### Work



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:

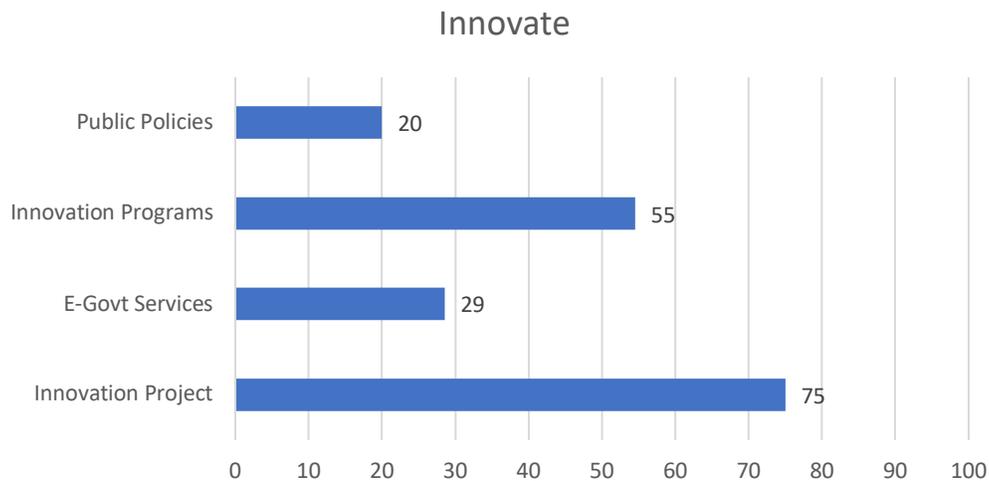
- SBDC Small Business Technology Assessment and Consulting Program, funded by Blandin Foundation and IRRRB, brings training from Northland and the Northeast MN Small Business Development Center to community-led programs across the region.
- MN Department of Iron Range Resources and Rehabilitation, a 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 unites 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.

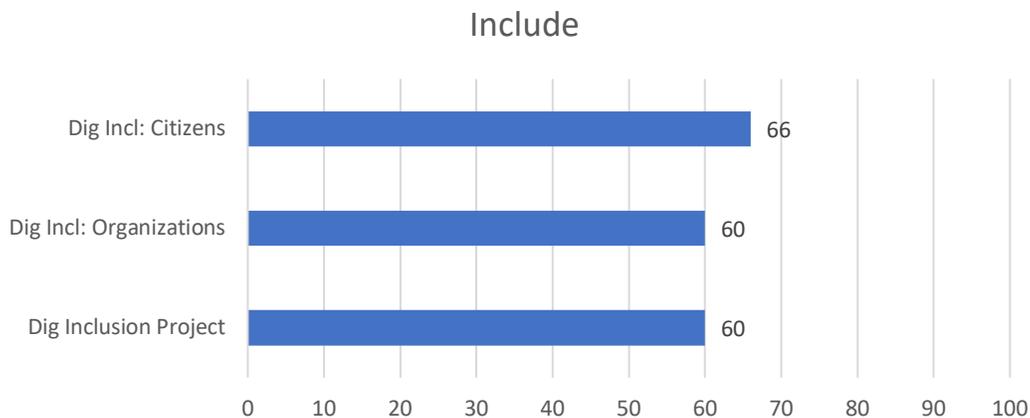
- The Natural Resources Atlas is principally a governmental planning tool, with little impact beyond such purposes, though it does relate to the overall goal of economic development.
- The Broadband Feasibility Studies are of high value in terms of broadband deployment but of limited application the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

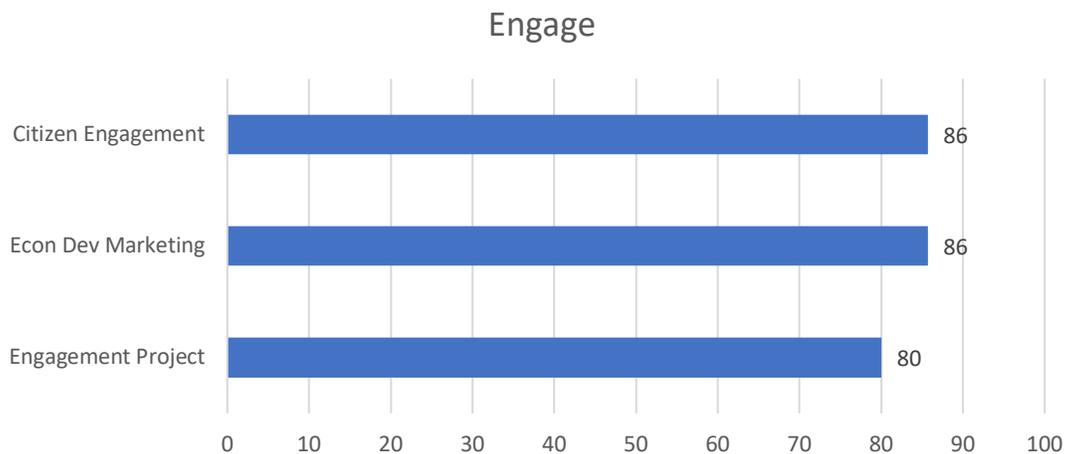
- PCs for People distributes refurbished computers to community organizations that work with low-income households, which offer technology, support and training.
- Duluth Digital Inclusion Initiative, a community-wide initiative, provides free computers and Wi-Fi hotspots to job seekers, low-income households, 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.



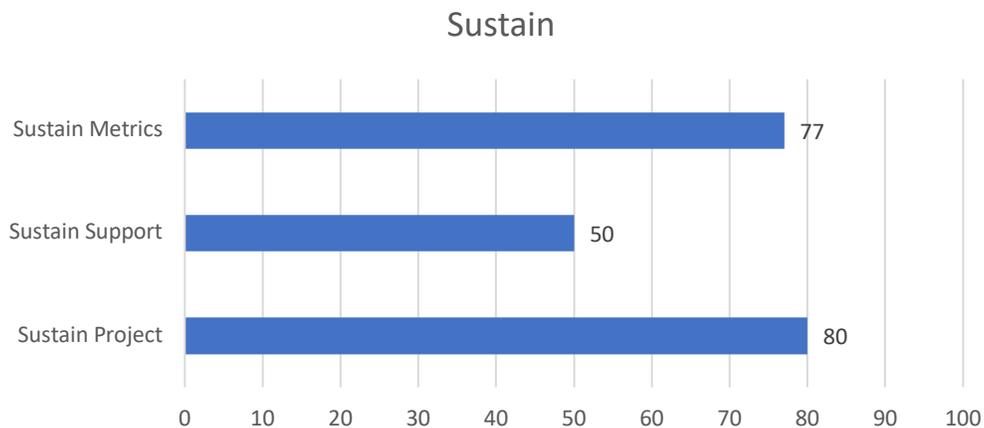
## Sustain

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.

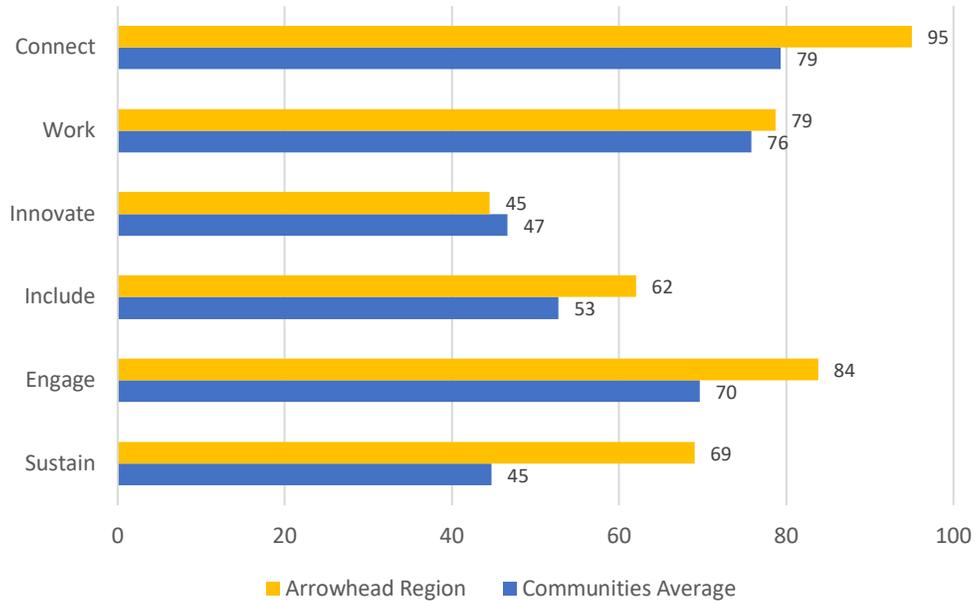
Two of the three make a major commitment to engaging the community and stakeholder organization in environmental transformation, which generates energy for other forms of engagement that powers positive change. The Energy Retrofit is presented as a principally financial program. If it includes education 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.

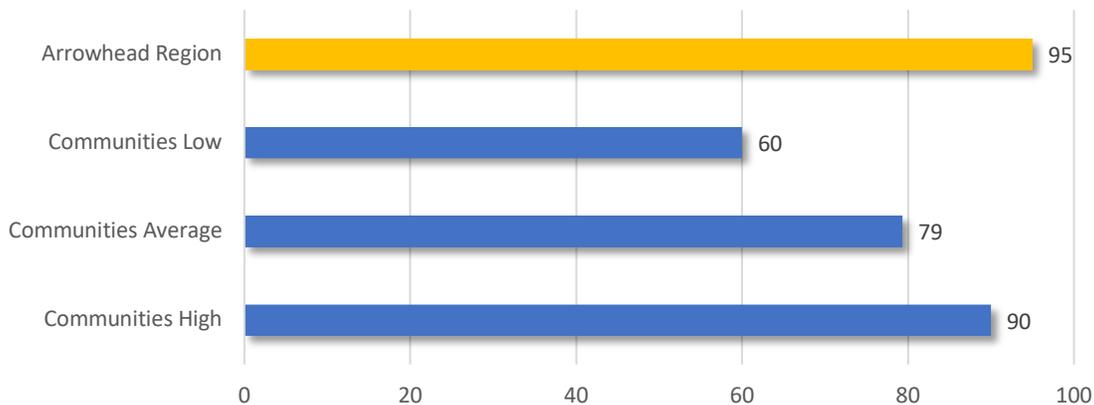
### Intelligent Community Index Regional vs. Individual Communities



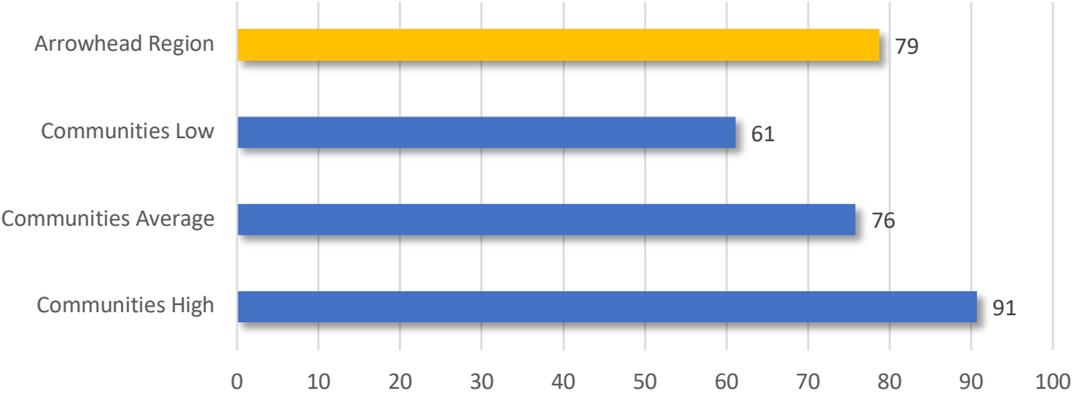
The overall pattern of relative strength and weakness is the same: both the aggregated communities and the best-of-the-Region data show strength in connectivity (where communities have concentrated most of their efforts to date), engagement and workforce development. The biggest divergence is in sustainability, 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.

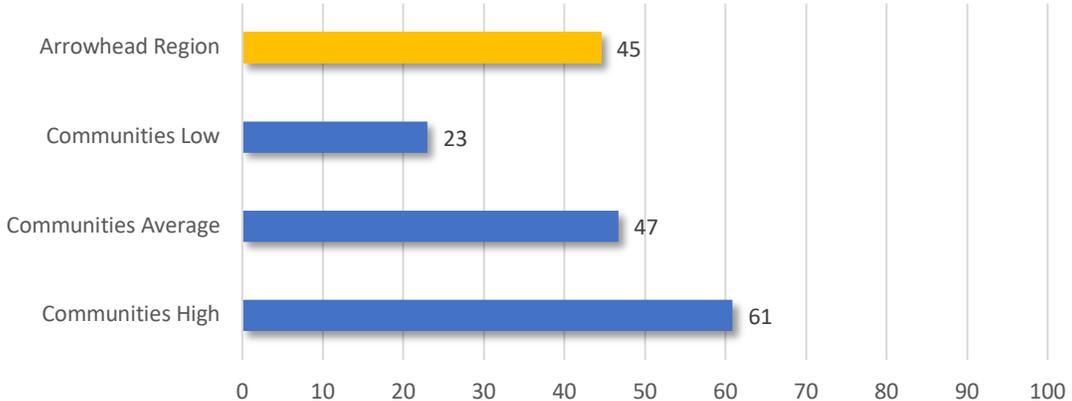
#### Connectivity Score



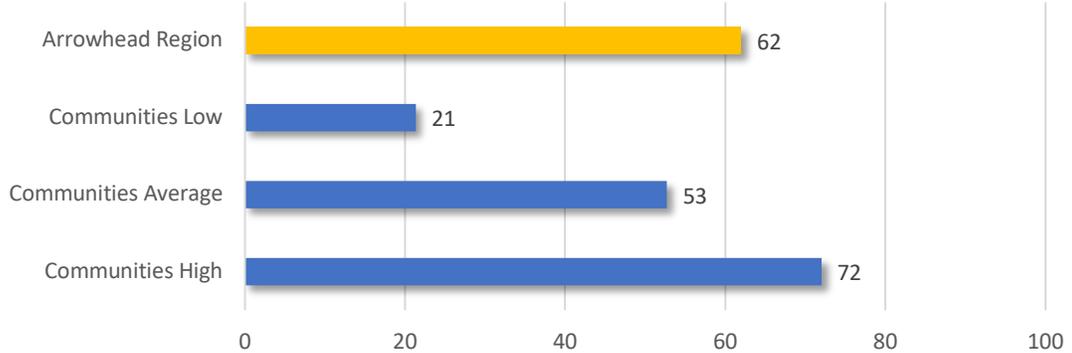
### Knowledge Workforce Score



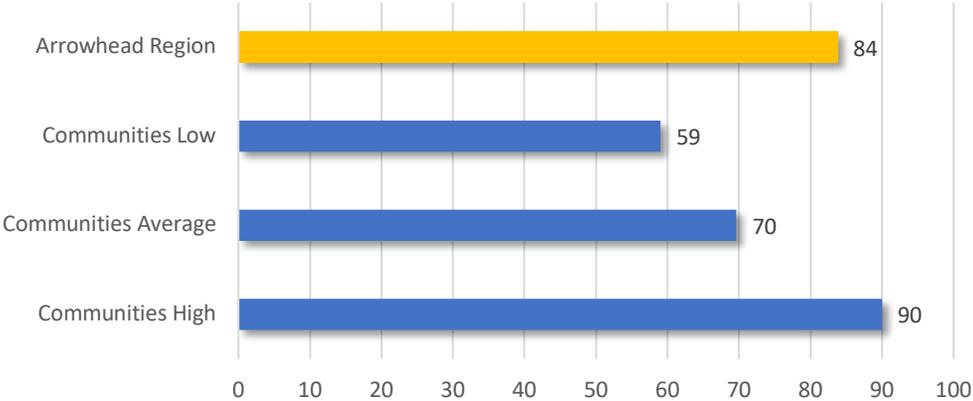
### Innovation Score



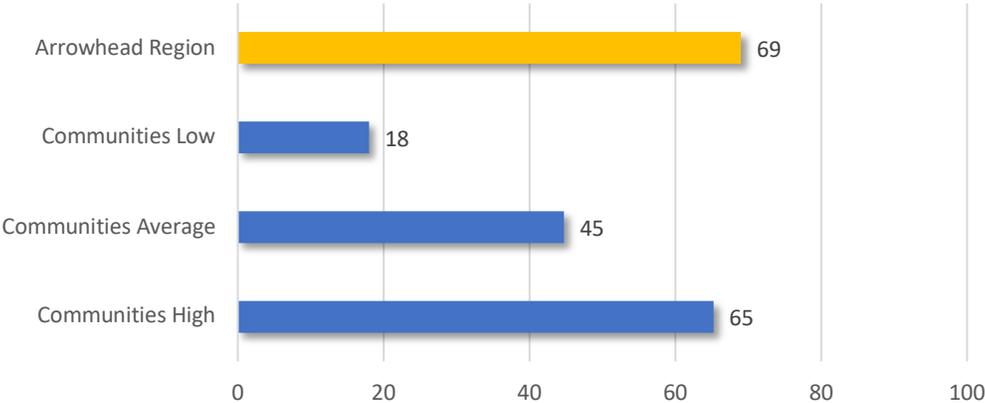
### Digital Inclusion Score



### Engagement Score



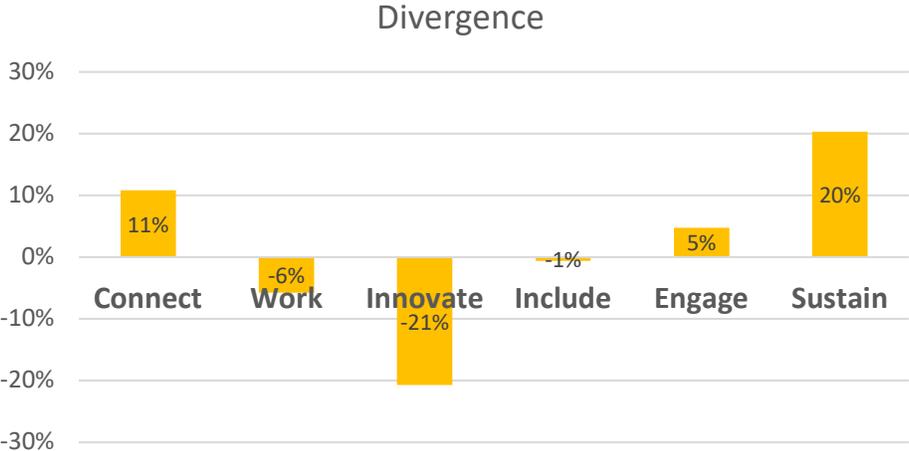
### Sustainability Score



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.



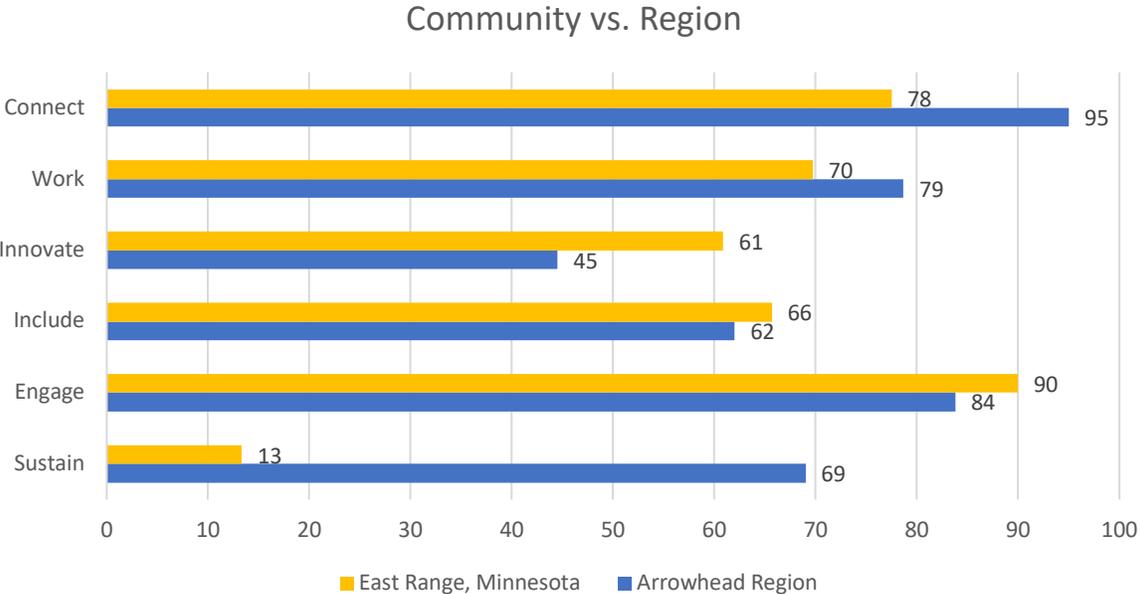
# The Communities

## East Range



The East Range is a cluster of small communities – the cities of Aurora, Biwabik, Hoyt Lakes and the Town of White) – with a combined population of 5,900. Located in northeastern Minnesota’s Mesabi Range, the area produced a large quantity of the nation’s iron and taconite ore. Today, tourism is a major industry, featuring the Superior National Forest, Giants Ridge Golf and Ski Resort numerous ATV and snowmobile trails, and festivals including the Northern Lights Music Festival in Aurora and Weihnachtsfest in Biwabik.

The chart below shows how the East Range compared with the average of the Arrowhead Region across the six Indicators.



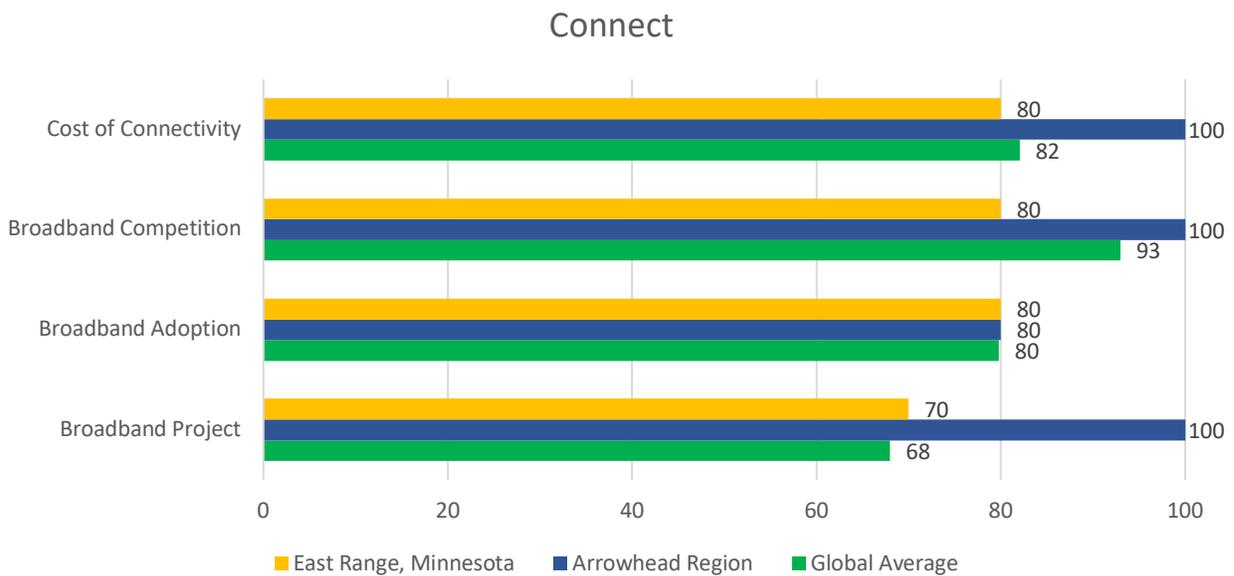
The city's scores align with those of the best-of-the-Region in three Factors – Work, Include and Engage – with an average 8% variance. The outliers are:

- Connect, where the East Range scored 17 percentage points below the Region
- Innovate, where the East Range scored 16 points below the Region
- Sustain, where the East Range scored 56 points below the Region

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

## Connect

The East Range received 80% of available points for the cost of connectivity and the competition among providers that helped create those costs, compared with 100% for the best-of-the-Region. It received 80% of points for broadband adoption, equal to the best-of-the-Region and the global average.



The East Range received 70% of available points for two projects (out of three examples that were requested), compared with 100% for the Region and equivalent to the global average:

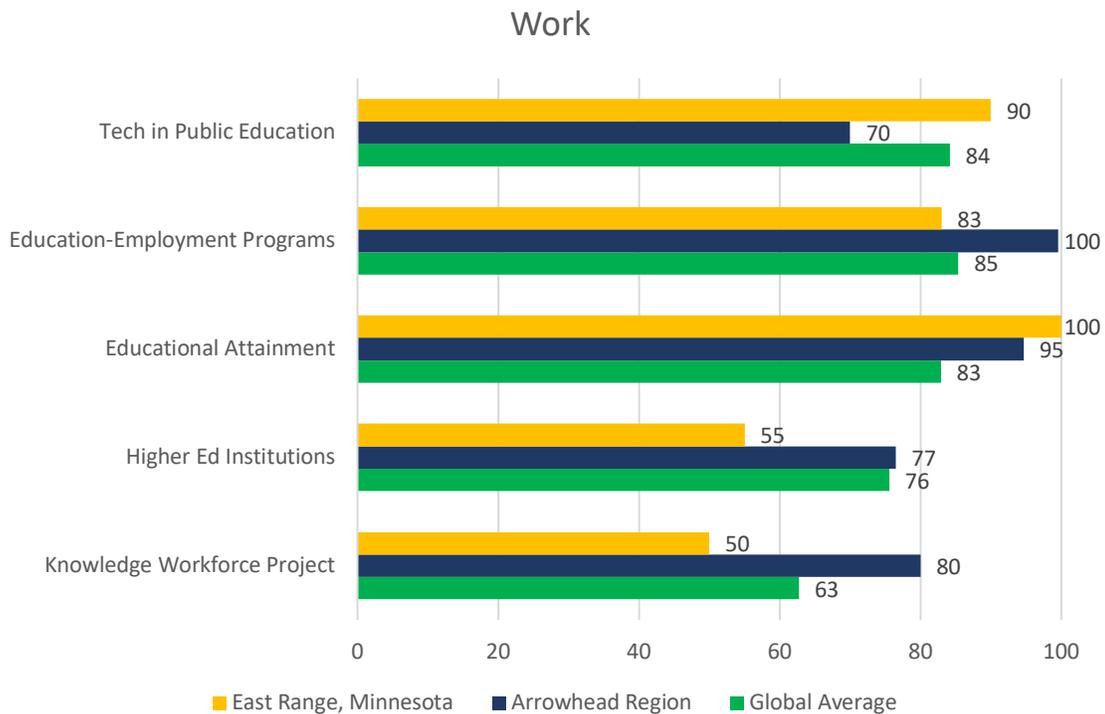
- LTE Feasibility Study, which used grant funding to create a business case for fixed wireless broadband solutions for rural and underserved communities.
- Blandin Broadband Communities Program, through which the East Range worked to define its technology goals, measure broadband access and use, and seek technical assistance, completing a total of six projects.

Both projects appear to align with the ICF Method and offer value in expanding broadband access and adoption. The descriptions, however, are so sparse that it is difficult to measure their impact. Funding the Feasibility Study is an achievement, but the real point is to carry

forward its business case and try to implement solutions, and the questionnaire should have included results to date. Funding and completing projects within the Broadband Communities Program is good, but absent any description of the projects, it is not possible to determine their true value. One fact jumps out: if the Broadband Communities Program seeks, among other things, to measure access and use, the East Range should have information available on current levels of adoption.

## Work

The East Range outscored the best-of-the-Region by 20 percent points for technology in public education and 5 percentage points for educational attainment of the population. In other categories, it scored below the Region: by 17 points for education-to-employment programs, 22 points for access to higher education and 30 points for its knowledge workforce development projects. Its scoring largely tracked the global average, with the variance across all categories averaging only 3%.



These comparisons mask strengths. For education-to-employment programs, the East Range received 83% of available points based on identifying five out of seven types of programs. Access to higher education is largely a matter of geographic luck, and the East Range identified 9 technical, community, undergraduate and graduate schools within commuting distance. Given the lack of local institutions, the high educational attainment of the population is impressive.

The three knowledge workforce projects scored lower in the analysis, receiving only 50% of available points. They were:

- Mesabi East Foundation, which funds post-secondary scholarships for high school students.
- Mesabi East Wi-Fi on Buses, which has equipped four school buses with onboard Wi-Fi to let students complete schoolwork on the way to and from school and events.
- Mesabi East – Communications, which installed TV screens and technology throughout a school to allow for easier updating of announcements.

The ICF Method calls on communities to bring together educators and employers to rethink how education is delivered to all ages, and how employers' needs for talent can be met, so that education equips people young and old with the skills needed for a good career in the community. Though a challenging process, it generates sustainable prosperity over the long term while equipping the next generation with marketable skills. The Mesabi East Foundation takes this long-term view but is small in scale and does not provide local transformation. The other two projects have value in terms of technology upgrade but do not appear to be guided by a larger strategy for engaging educators and employers in creating a ladder of opportunity from the classroom to the workplace.

## **Innovate**

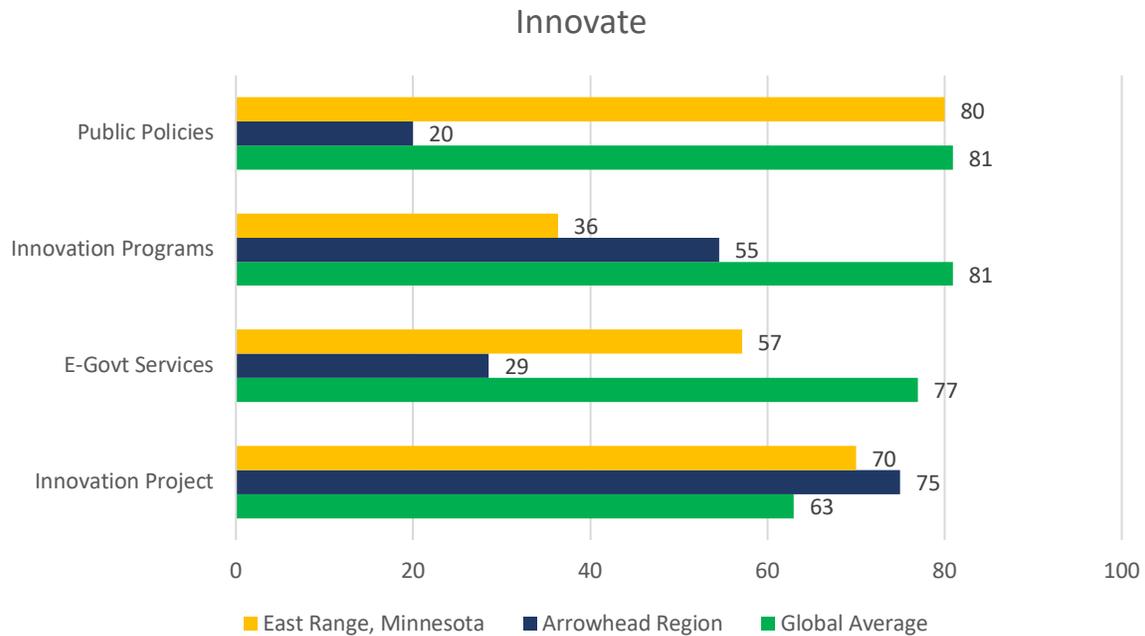
In terms of innovation, the East Range differed significantly from the best-of-the-Region, both positively and negatively, across categories:

- Public policies received 80% of available points, equivalent to the global average but 60 points higher than the region, based on having written policies approved by Council.
- Despite the strength in policy, actual innovation programs received only 36% of available points compared with 55% for the best-of-the-Region and 81% for the global average. Out of 11 possible programs, the questionnaire identified only 4 in operation.
- E-government services received 57% of available points compared with only 29% for the best-of-the-Region and 77% for the global average. The questionnaire identified 4 of 7 possible categories of e-government services in operation.

The East Range received 70% of available points for the innovation projects it described, compared with 75% for the best-of-the-Region and 63% for the global average. Included in the questionnaire were:

- East Range Police Department and Hoyt Lakes Fire and Ambulance Tech Upgrades, funded by a Blandin Broadband Community grant, replaced outdated software and equipment in police, fire and ambulance vehicles to produce quicker response times, improved coordination among departments and better outcomes for the communities.

- Palo Volunteer Fire Department Tech Initiative replaced paper-based processes with mobile and fire office IT, and training in the new system.



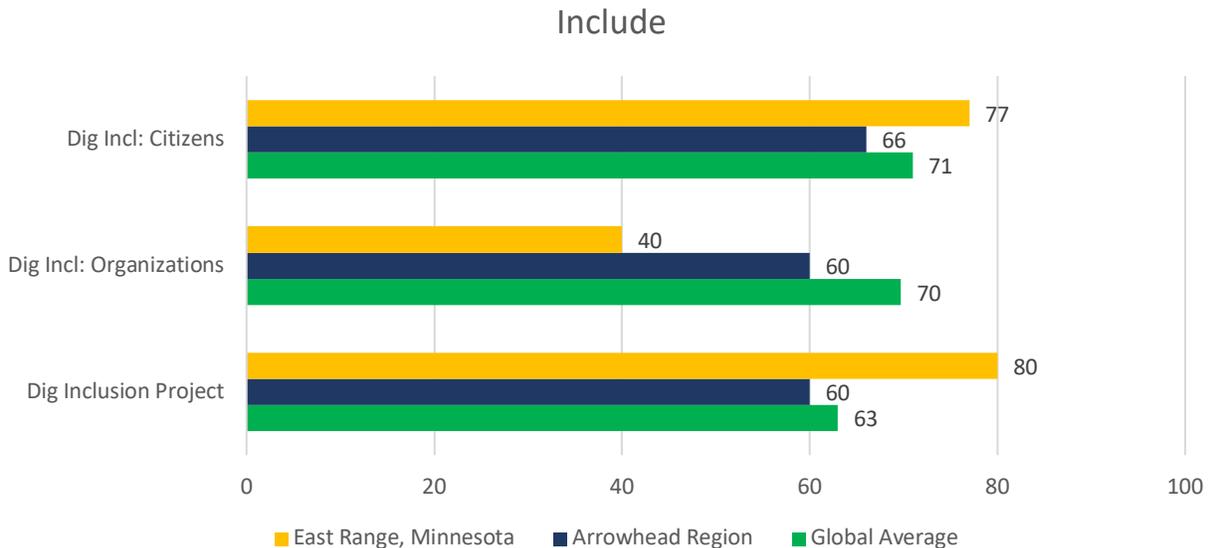
- Hoyt Lakes Public Library created STEM Kits to Go for community members of all ages to borrow for learning about coding, apps and virtual reality.
- Golden Paws Dog Training implemented virtual training services in response to the pandemic, which has expanded their service area far beyond the East Range.
- East Range Joint Powers Board creates joint services, facilities and programs based on collaboration among local, regional, state and federal communities and agencies to develop new resources and align projects that contribute to quality of life.
- Minnesota Power Community Advisory Panels attract local and regional government officials, local business owners, community representatives and school officials to a regular education program on local projects and regional industries.

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. The projects described in the questionnaire represent individual elements of such an effort. What appears to be lacking to date is a strategy to coordinate these elements and develop new ones, and a specific focus on connecting local companies with educational resources to help them develop new products and services, while targeting local entrepreneurs and potential entrepreneurs for development support. Organizations like the Joint Powers Board and Community Advisory Panels represent structures that could be used to advance this more ambitious mission for the long-term benefit of the East Range economy.

## Include

Digital inclusion is a strength for the East Range, though there is a significant gap when it comes to helping businesses adopt digital technology and practices:

- Inclusion for citizens received 77% of available points compared with 66% for the best-of-the-Region and 71% for the global average, based on identifying 7 out of 9 categories of program in operation.
- Inclusion for offline employers, however, earned only 40% of available points compared with 60% for the Region and 70% for the global average. This reflected the availability of only two out of five programs.
- Inclusion projects gained 80% of available points, significantly higher than the best-of-the-Region at 60% and the global average at 63%.



The projects described included:

- East Range Business Technology Audits and Grants, which funds technology consultants to work with business owners to audit and upgrade their technology and training.
- Hoyt Lakes Public Library Training Lab, which brings equipment and trainers to individuals and groups in the East Range, though it has been postponed in the interests of pandemic safety.
- PCs for People, a state-wide nonprofit that distributes computers to libraries and families lacking technology and access.

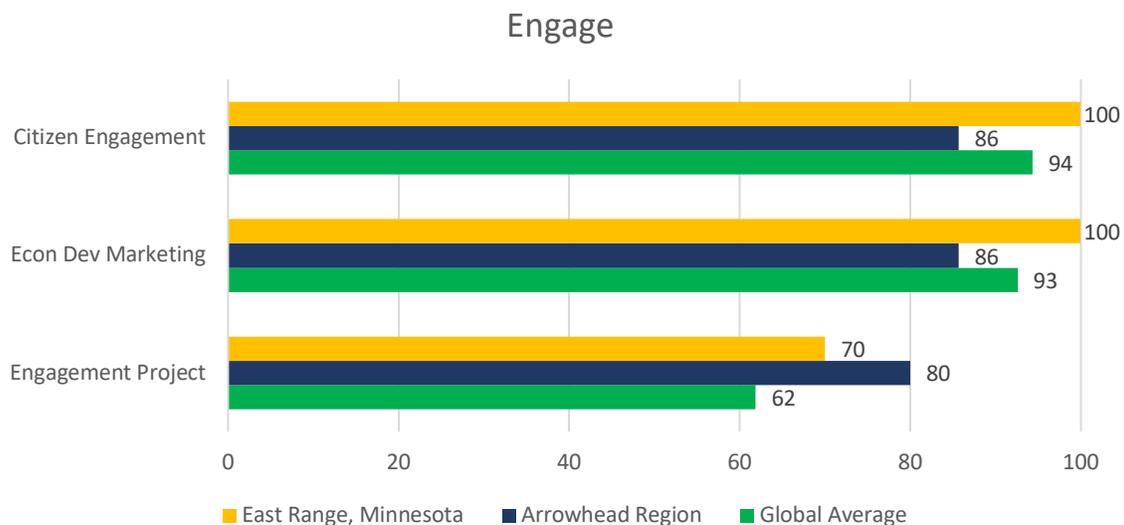
All are solid programs that deliver meaningful results. They also represent, however, a foundation on which more ambitious and innovative programs can be built.

## Engage

The East Range communities scored strongly in engagement. They received top scores for citizen engagement and economic development marketing activities. Engagement projects received 70% of available points compared with 80% for the best-of-the-Region and 62% for the global average. The engagement projects were:

- Blandin Leadership Program, which has trained 31 community leaders in the skills needed to build and sustain healthy communities.
- East Range Broadband Steering Committee, made up of public and private-sector individuals who cooperate on advertising grant opportunities, approving grant applications and promoting broadband.
- East Range COVID Response Team, made up of city and town officials, school board representatives, police and healthcare staff, who managed public communications and response to the pandemic.

All are good examples of engaging citizens in understanding and advising on issues of importance to the community. They would have scored higher if there was evidence of a strategy to engage the passions and concerns of the community across many fronts. This can energize economic development, investment attraction and business generation, because the community has built a unique vision of its character and its future.

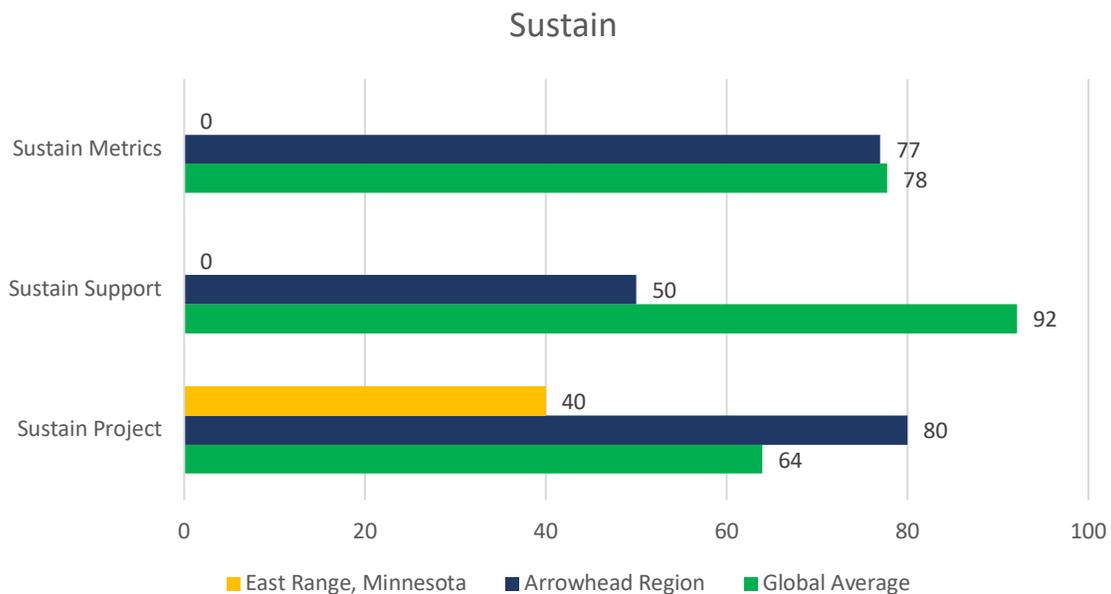


## Sustain

The extremely low score of the East Range was the result of inability to provide any of the metrics requested in the questionnaire. It is an old adage that you can only manage what

you can measure, and if sustainability is to be a priority for the community, it must track its performance on a substantial range of factors.

The projects described in the questionnaire – Electric Vehicle Charging Station in Aurora and the Ranger Snowmobile ATV Club Trail Groomer Safety Enhancements – did not contribute much to a higher score. The groomer safety enhancements bore no relationship to sustainability, and installation of a single charging station for electric vehicles is more of a symbolic than substantive project. For ICF, sustainability is important at the local level for reasons that go beyond preserving the environment on which we all depend. Because it concerns local quality of life, it has the power to engage the community in building a better future, and the habit of engagement inevitably crosses over into other development priorities. It also improves quality of life, which makes the community more attractive to investors and new businesses. And sustainability is becoming a significant growth sector with enormous potential. It should be part of every community’s economic development strategy – but can only succeed with genuine community support.



## Recommendations

The East Range has both strengths and weaknesses from the perspective of the ICF Method, and we recommend the following steps to improve its long-term performance.

- **Connect.** The inability to report on broadband adoption puts the East Range at a disadvantage in promoting broadband to its citizens and employers. We recommend that its communities launch a survey project to assess adoption, following the best practices described by the Blandin Foundation and other supporting groups, and repeat it periodically to make adoption a benchmark for success in this Factor.

- **Work.** The East Range has in place many of the programs needed to develop a knowledge-based workforce. Its next step is to develop a larger strategy involving local governments, educators and employers to rethink how education is delivered to equip people of all ages with the skills needed for a good career in the community. The ICF Method provides a specific roadmap for this work, and reports and books available on our website go into detail.
- **Innovate.** The East Range has good policies supporting innovation in business and government but a significant lack of programs to carry out that policy. As with Work, what's needed is time and energy put into a strategy that coordinates what is already going on and identifies new initiatives to be developed. On the positive side, organizations like the Joint Powers Board and Community Advisory Panels offer structures that could be used to advance this more ambitious agenda.
- **Include.** This is a strength for the East Range, and our only recommendation is to continue and increase the ambition and reach of programs that bridge the digital divide.
- **Engage.** This is another area of strength. At the risk of repetition, the same emphasis on developing an ongoing strategy for strengthening community engagement overall will power progress in all other Factors in the ICF Method.
- **Sustain.** From review of the questionnaire, it would appear that the East Range has not made sustainability a priority in its most basic environmental sense and has therefore not used it as a tool for engagement, for improving local quality of life and for attracting or developing companies working in the field. Starting at the beginning will mean identifying people and organizations that are already championing sustainable practices and inviting them into consultation with local government.



# 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.