A red-tinted photograph of a small town street. In the background, a large, ornate clock tower with a red roof stands prominently. The street in the foreground is lined with buildings, including a brick building on the left and a taller structure with a balcony on the right. A yellow diagonal bar runs from the bottom left to the top right, partially obscuring the image.

CULTIVATING ENTREPRENEURSHIP: Higher Ed's Role In Rural Innovation Ecosystems



Center
on Rural
Innovation



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REPORTS FROM THE FIELD

Higher Ed in the Rural Economic Crisis

What Rural Higher Ed Institutions are Facing

Even before COVID-19 hit, higher ed institutions in the U.S. were facing a difficult landscape: total enrollment has been [falling](#) for nearly a decade, and students' needs and priorities have been shifting rapidly. As non-traditional students seek [flexibility](#), and traditional-age students and their parents demand an economic [return on investment](#), these pressures have proved too great for many institutions to withstand, triggering a wave of [closures and consolidations](#) across the country.

As these challenges have grown, the rural communities where these institutions are located have struggled as well. Hit hard by the twin pillars of automation and globalization, and largely left out of the digital revolution, once-vibrant small towns across the country have struggled. From 2010-2016, just three percent of the country's [job growth](#) came from rural areas. Education levels are disproportionately low: only 20 percent of people in rural areas hold a [bachelor's degree](#), and many rural youth who attend college ultimately move to urban hubs for [opportunity](#). Making a tough situation worse, COVID-19 is widening these urban-rural economic divides.

Further, much of rural America is disconnected from the digital economy, which has provided a vastly [disproportionate share of recent job growth](#). 39 percent of rural America [lacks access to high-speed broadband](#), while 90 percent of all [innovation sector jobs](#) from 2007-2017 came from just five major metro hubs.

[Automation](#) is projected to disrupt traditionally rural industries the hardest. Entrepreneurship, which [offers a promising solution](#) for rural recovery, has sputtered, with the percentage of [startups in non-metro areas](#) falling from 20 percent in the 1980s to just 12.2 percent this decade. Venture capital which could fuel rural startups is [virtually nonexistent](#).

These local economic pressures spill over into obstacles for their higher ed institutions. Recruiting top notch faculty can be difficult when competing with better-endowed research universities in thriving metro areas. Poor local job growth makes it more likely that students seeking economic opportunity will enroll in schools closer to cities. Difficulties in recruitment stem from the reality that most college students attend school within [50 miles of home](#); young people living close to rural institutions are less likely to attend college and are often less prepared when they do. Even when rural students do attend college, many [leave their hometowns](#) to pursue greater perceived opportunities in cities. And a disconnect between local rural economies and the jobs of the future makes it harder to create local opportunity.

The problem hurts both the institutions and their communities. Rural higher ed institutions are often economic anchors in their communities—major employers and drivers of local economic activity. The challenge is cyclical: While higher ed institutions need vibrant local economies to be able to recruit students and staff, the health of local economies often [depends](#) on the higher ed institution itself. This interdependence means that the struggles of higher ed institutions in rural areas have an outsized impact. It also means that those institutions can [play an important role](#) in rural economic development.



Building Resilient Entrepreneurial Ecosystems

Many rural communities and higher ed institutions across the country understand that they need to work together to build vibrant economies, grounded in future-oriented skills, innovation, and entrepreneurship. This need has only become more urgent as COVID-19 continues to wreak havoc on higher education institutions—and the communities they serve—nationwide. However, we have found that the playbook for building this collaboration is not always well known. Due to our work with small towns across the country, the [Center on Rural Innovation](#) (CORI) is regularly asked for examples of rural colleges and universities that have successfully partnered with local communities to build resilient entrepreneurial ecosystems. People know that these success stories exist, and want to learn how they came to happen.

In this report, we set out to highlight how rural higher ed institutions can work with communities to build resilient entrepreneurial ecosystems. To ground our findings in real-world efforts, we engaged with 10 rural institutions from across the country. Providing notes, examples, and a framework for understanding their work, this report serves as an introduction to the landscape of rural higher ed institutions that are taking an active role in spurring innovation and entrepreneurship in their communities. While this report is by no means a comprehensive summary of all rural innovation efforts, it offers insight into potential paths forward for communities and institutions looking to begin or deepen their own rural innovation efforts.

What We Did

Research universities have increasingly participated in “[technology transfer](#),” the process of using research to create new

technologies and products that benefit the public. This tech transfer can lead to a more direct engagement in local economic development planning and strategy. To understand how this type of engagement can apply to rural-serving institutions, we spoke with the [Association of Public and Land-grant Universities](#) (APLU), the [National Governors Association](#), entrepreneurship program leaders at [Ohio University](#) and [Lehigh University](#), and the [University Economic Development Association](#). From a pool of several dozen higher ed institutions doing innovation-related work that were identified from the U.S. Economic Development Administration, University Economic Development Association, other national awards programs, and our own [Rural Innovation Network](#), we selected 10 higher ed institutions doing notable work to profile.

In selecting institutions to profile, we focused on public regional and private undergraduate institutions, given their prominence in rural communities and their role as anchor institutions. We sought to profile institutions in different economic and geographic landscapes, with varying student populations, and unique approaches to engaging in ecosystem development.

To develop an on-the-ground understanding of the landscape of higher ed and rural innovation, we conducted five site visits:

- [Central Washington University](#) (CWU) in Ellensburg, Washington
- [The University of Idaho Coeur d'Alene Outreach Center](#) and [North Idaho College](#) in Coeur d'Alene, Idaho
- [State University of New York College of Agriculture and Technology at Cobleskill](#) (SUNY Cobleskill) in Cobleskill, New York
- [Northern Michigan University](#) in Marquette, Michigan
- [Colby College](#) in Waterville, Maine

We also conducted phone interviews with faculty and staff at five more institutions:

- **Franklin Pierce University**
in Rindge, New Hampshire
- **James Madison University (JMU)**
in Harrisonburg, Virginia
- **Pittsburg State University**
in Pittsburg, Kansas
- **St. Mary's University of Minnesota**
in Winona, Minnesota
- **University of Maine**
in Orono, Maine

The Ecosystem Approach

Innovation Ecosystems

Innovation and entrepreneurship doesn't happen in a vacuum: this work is nurtured by a rich environment, from human capital to placemaking. A strong innovation ecosystem gives entrepreneurs the support they need to start and scale their businesses. The Kauffman Foundation's Entrepreneurial Ecosystem Building Playbook identifies eight elements of a thriving ecosystem; they are as follows:

- **Entrepreneurs** who aspire to start and grow new businesses, and the people who support entrepreneurs
- **Talent** that can help companies grow
- People and institutions with **knowledge and resources** to help entrepreneurs
- Individuals and institutions that serve as **champions and conveners** of entrepreneurs and the ecosystem

- **Onramps** (or access points) to the ecosystem so that anyone and everyone can participate
- **Intersections** that facilitate the interaction of people, ideas, and resources
- **Stories** that people tell about themselves and their ecosystem
- **Culture** that is rich in social capital – collaboration, cooperation, trust, reciprocity, and a focus on the common good – makes the ecosystem come alive by connecting all the elements together

Although today's largest innovation ecosystems are found in major cities, innovation can happen anywhere. To take just one example, new incentives such as Opportunity Zones can help leverage investment across a greater diversity of regions and bring capital to the rural entrepreneurs sparking innovations. This can create a more equitable economy across geography, with widespread innovation making the nation stronger.

How Higher Ed Can Help Build Rural Innovation Ecosystems

The role of larger "tier one" research universities in innovation ecosystems is well-studied. The triple helix concept of university-industry-government relationships in the innovation system provides a clear framework anchored in research and technology transfer. A 2013 review by the U.S. Economic Development Administration found that many research universities across the country made entrepreneurship a central part of their curricula and missions.

But most rural higher ed institutions are regional universities or smaller undergraduate colleges—not major research universities. In places like these, the roadmap for creating innovation ecosystems has been much less developed.

In this report, we aim to offer rural-specific insights into how institutions are engaging in direct ecosystem-building activities—such as shaping a regional vision for growth through local economic development, adapting curriculum to the local employer base, and directing their tech transfer and entrepreneurship toward the aim of employing graduates.

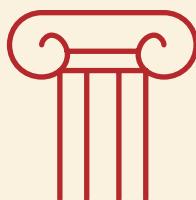
The Higher Ed Institutions Taking an Active Role in Building Rural Innovation Ecosystems

As higher ed institutions in rural settings begin to actively experiment with ecosystem building, these “reports from the field” are intended to describe examples of the work being done. As President Marion Terenzio of SUNY Cobleskill put it, “we approached economic development

in such different ways, but with common undercurrents and community needs.”

We hope this report will facilitate connection and cross-pollination between institutions and ecosystem builders across the country. We expect that these connections will prove virtuous to institutions and the places they serve.

To paint a composite portrait of the context each institution exists in, each profile opens with information both on the institution itself and the local economic climate. This information is gathered from [the College Scorecard](#), CORI’s [Local Leader Action Map](#), the [US Census Bureau](#), and interviews with participants. This information is followed by information and insights from interviews with local community and institutional leaders, organized around the five major themes we identified as crucial to ecosystem building.



As we spoke to institutions nationwide for this report, several themes emerged, many of which dovetail with Kauffman’s key elements of a thriving ecosystem. Importantly, we found a wide diversity of local efforts, often tailored closely to local contexts. Among these themes, we identified four primary categories of how rural institutions are contributing to ecosystem building, that we will use to help structure the case studies and our findings.

1 Digital Skilling Programs: these provide onramps, build an often diverse pool of talent, and provide knowledge and resources for entrepreneurs themselves

3 Physical Space and Co-location: these enable all-important intersections, provide accessible onramps, and help create a visible place for entrepreneurial culture to develop

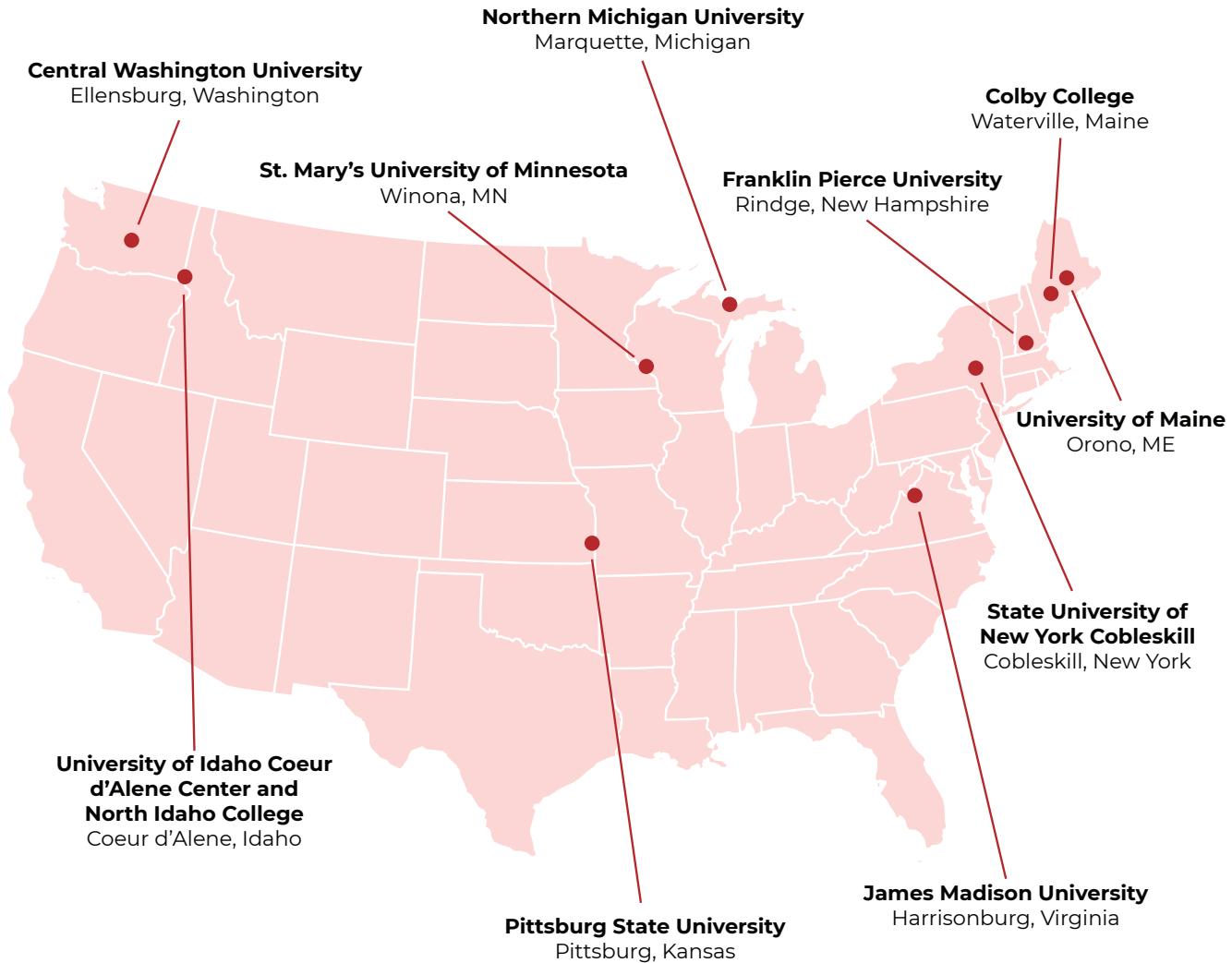
2 Formal Accelerator and Incubator Programs: these directly support entrepreneurs, providing knowledge and resources to help them start and scale their businesses

4 Collaboration Within and Across Institutions: this lets the university play the role of champion and convener, by telling stories, facilitating intersections, leveraging resources, and building culture

¹ In many cases, information from the College Scorecard is available only from students who received federal financial aid. More information on the College Scorecard’s data can be found [here](#).

² Where applicable, information is from Census Place-level data.

Rural Institutions of Higher Education



Innovation and Education

In selecting institutions to profile, we focused on public regional and private undergraduate institutions, given their prominence in rural communities and their role as anchor institutions. We sought to profile institutions in different economic and geographic landscapes, with varying student populations, and unique approaches to engaging in ecosystem development.

Northern Michigan University

MARQUETTE, MI

Institution and Community Profile:

SCHOOL PROFILE		NORTHERN MICHIGAN UNIVERSITY	
Institution Type	Public, 4-year		
Average Cost	\$14,502		
8-year graduation rate	58%		
Undergraduate enrollment	7,528		
Most popular major	Psychology		
Highest earning major	Computer Science		
COMMUNITY PROFILE		MARQUETTE, MI	USA
Population	16.3K		N/A
5 year population change	-1.40%		3.80%
Percent of population w/4yr degree+	39.10%		30.90%
Median household income	39K		57.7K
Poverty rate	25.30%		14.60%
Broadband coverage >10mbps upload	99.10%		59.70%
Top industry by employment	Healthcare		N/A
Percent of jobs with young firms	8%		9.90%



Interview Respondents:

Fritz Erickson, President; Kerri Schuiling, Provost and Vice President for Academic Affairs; Dave Nyberg, Director of Corporate Engagement



Northern Michigan University has embraced innovation, both on and off campus, with a spirit of “sisu”—the Finnish word for “grit” well known throughout the Upper Peninsula. NMU has made a conscious effort to address a shifting academic landscape and increase the accessibility of the college experience, with an emphasis on first generation students. The university sees its mission as intimately tied to the local economy. As President Fritz Erickson said when asked what motivated NMU’s outward-facing investments, “communities support universities that support communities.” Students and faculty want to “get to yes,” and the pride people feel towards the town creates strong university-community partnerships.

Collaboration Within and Across Institutions

In 2015, Erickson launched the Investing in Innovation [strategic plan](#), aimed in part at tailoring the academic experience to meet the demands of today’s market. The plan resulted in a new “Big Ideas” Program Investment Fund (PIF) with a \$1 million budget, which rapidly evaluated ideas from throughout the university community to reinvent existing or create new programs, many with an explicit focus on partnerships. All “approved” ideas moved into a pilot phase with a review, evaluation, and exit process; those that were successful went through a final process to become established as a new program.

One of the industry-university collaborations that emerged from the “Big Ideas” PIF is the first-in-the-nation medicinal plant chemistry program. [Shimadzu Scientific Instruments](#), which manufactures bioanalytical equipment, donated nearly \$851,000 in instrumentation as part of a broader academic partnership that focuses on research collaborations, student internships and co-ops, and training for faculty. The university-industry collaboration is

The university sees its mission as intimately tied to the local economy.

deepening the medicinal field’s research capacity while providing the industry with highly trained employees. NMU also established the nation’s first [cold-weather outdoor forensic anthropology research program](#), called FROST, proving how rural institutions can carve out a sustainable niche through leveraging their regional assets and a culture of “get to yes.”

In 2019, NMU created [SISU: The Innovation Institute at NMU](#) as the new formal home for NMU’s innovation efforts. Sisu is NMU’s hub of creativity, bringing together a cross-disciplinary group of students and faculty to execute design-thinking based projects. Sisu is designed to “cultivate a collaborative, interdisciplinary campus culture that supports novel ideas and the freedom to be visionary and entrepreneurial.” Students at Sisu have already created “skill sets for the 21st century”—giving them a new pathway to gain academic credentials most relevant to the modern workforces. Sisu embodies the importance of both boldness and evaluation for rural institutions; NMU’s “get to yes” culture encourages new ideas, and its formal process for program evaluation ensures that innovation translates into results.

Formal Accelerator and Incubator Programs

In 2014, NMU established the [Invent@NMU](#) program to support students, faculty, and staff, as well as community members, to take their ideas to market and launch new businesses. Over time, the program has expanded to serve entrepreneurs throughout the Upper Peninsula,



making it an important contributor to the regional entrepreneurial ecosystem. Invent@NMU is co-located with the local economic development entity, [Innovate Marquette Smartzone](#), just off campus. Through this strategic partnership, made possible with support from the City of Marquette and NMU, the organizations are able to provide integrated outreach, programming, and support services to community members and NMU students, faculty, and staff. Invent@NMU has supported the exploration of hundreds of ideas and the launch of nine companies and 12 products.

Digital Skilling Programs

Technology and innovation are at the core of NMU's successful new academic programs. In partnership with the Michigan Cyber Range, a collaboration of the Michigan Economic Development Corporation, Michigan Defense Center, and Merit, NMU in 2018 created the [Upper Peninsula Cybersecurity Institute](#) as a training hub on the Michigan Cyber Range. The only such facility in rural northern Michigan, located more than 400 miles from the nearest of the state's six other cyber training hubs, the Institute provides non-degree and industry credentials for careers in the field. The institute builds on NMU's four-year and two-year cyber degree programs, which now equip more than 60 students with high-tech 21st century skills. NMU also leveraged the

Technology and innovation are at the core of NMU's successful new academic programs.

Institute as part of a region-wide consortium of K-12 districts, industry partners, and economic development organizations in convening the U.P. Cybersecurity Talent Consortium through the State of Michigan's Marshall Plan for Talent. The consortium was awarded \$2.49 million in state grant funds to deploy a novel cybersecurity skills training partnership, including its own K-12 badging program that will align the university's academic programs and industry credentials offered at the Institute.

Investing in the community to build digital capacity across the region is also a priority for NMU. In 2017 NMU expanded on its [WiMAX](#) community broadband program to provide educational broadband throughout the Upper Peninsula and northern Wisconsin. The Education Access Network (EAN) now serves over 70 communities throughout the region that were previously unserved or underserved. This [Educational Access Network](#) is an excellent example of how rural higher ed institutions can leverage their connectivity to address the digital divide.



University of Idaho Coeur d'Alene Center and North Idaho College

COEUR D'ALENE, ID

Institution and Community Profile:

SCHOOL PROFILE	UNIVERSITY OF IDAHO	NORTH IDAHO COLLEGE
Institution Type	Public, 4-year	Public, 2-year
Average Cost	\$14,502	\$7,696
8-year graduation rate	58%	27%
Undergraduate enrollment	7,528	3,565
Most popular majors	Psychology	Liberal Arts
Highest earning majors	Computer Science	Nursing
COMMUNITY PROFILE	COUER D'ALENE, ID	USA
Population	48.6K	N/A
5 year population change	9.40%	3.80%
Percent of population w/4yr degree+	26.80%	30.90%
Median household income	\$47.6K	57.7K
Poverty rate	15.50%	14.60%
Broadband coverage >10mbps upload	100%	59.70%
Top industry by employment	Healthcare	N/A
Percent of jobs with young firms	9.90%	9.90%



Interview Respondents:

Ryan Arnold, Director of NIC Venture Center; Charles Buck, Assistant Vice President of U of I; Cynii Gilliam, President of CDA EDC; Nochole Kahler, CDA 2030 Executive Director; John Shovic, Research Faculty U of I; Robert Rinker, Assoc Chair College Engineering; Sheri Bullock, Community Dev, U of I; Mary Lee Ryba, Senior Director Development; Luke Hill, student; Frank Foster, Inspire ID; Ben Morton, Inspire ID



The University of Idaho Coeur d'Alene Center (U of I Center) and North Idaho College (NIC) have a deep and shared [commitment](#) to their region. They originally began collaborating academically in 1985 through shared space at NIC, and that partnership has expanded today to include a shared computer science program and co-location space for local engagement efforts, as well as shared engagement in the downtown Innovation Den. Leaders are committed to realizing opportunity for both students and the community at large.

Formal Accelerator and Incubator Programs

The U of I Center and NIC joined forces to support and directly connect their students to the emerging entrepreneurial ecosystem in the area. A local startup booster opened the [Innovation Den](#) downtown to draw in the growing group of entrepreneurs choosing to move to the area for lifestyle reasons. The U of I Center computer science department chose to locate classrooms, labs, and offices in The Den to contribute to the growing energy in the central business district. NIC's portfolio of activities, under the [Venture Network](#) banner, has been a critical gap-filler: The college offers a 15-credit hour certificate in entrepreneurship, houses the region's largest nonprofit community-serving makerspace called [GIZMO-CDA](#), and runs the Venture Center, a rapid-prototype facility funded by a U.S. EDA grant. These efforts have provided a critical degree of centralization that has made the delivery of business support services more efficient. In addition to its coordinating role, the U of I Center hopes to deliver on its targets of 20 new business starts and 25 new jobs.

The North Idaho region continues to attract high-income residents and outside venture capital

Furthermore, the North Idaho region continues to attract high-income residents and outside venture capital. [The Innovation Collective](#), which has its own venture arm, acts as an important conduit for capital connections by coordinating individual investors. NIC adds to the capital access equation through its leadership in a bi-state pitch competition and grantmaker, and the campus's [Avista Micro-Enterprise Loan Fund](#).

Physical Space and Co-location

Prior to the North Idaho College Venture Network, the region lacked a physical space to prototype, test, and launch new companies—space that can help an entrepreneurship ecosystem strategy scale. The idea for a North Idaho community makerspace, GIZMO-CDA, originated with two community leaders, was reinforced in the 2013 community plan (Coeur d'Alene 2030), bootstrapped by University of Idaho, and ultimately housed at NIC's former vocational education building through a formal partnership agreement. GIZMO-CDA expects to serve 3,000 individuals in 2020. The NIC [Venture Network](#) will use the remaining bay in the building for product development. Boeing has donated a robot, to be used in North Idaho College and University of Idaho's joint computer science programs. In one example of how dedicated space can support ecosystem dynamics, [Continuous Composites](#)—a 3D printing company that holds a patent for its technology—first pitched at a Den event and prototyped with support from GIZMO-CDA, and now manages its growing operations in multiple buildings downtown.

Digital Skilling Programs

In their work to spark entrepreneurial ecosystems, program organizers are thinking like entrepreneurs: by experimenting. They recognize the path is dynamic, not linear. [Inspire Idaho](#), for example, is a year-old workforce development program underwritten by



the U of I Center and run by volunteers. The initiative emerged from conversations about the Center taking on a “scouting” role for the university system—experimenting with ways to “disaggregate education,” reduce barriers, and realign knowledge programs to match the needs of the tech economy. The Inspire Idaho program—as well as the addition of a computer science bachelors-to-doctorate program in Coeur d’Alene—supports area adults seeking a credential to advance their earning potential, better serving the large population of non-traditional students in the area who interrupt their higher education attainment to focus on work or family life. Its goal is to teach the Apple iOS computer language, “and the logic of all computer languages,” said a volunteer mentor for the program, helping more people explore the new economy. Program officers have noted that the state’s most rural communities have been the “most inspired” to recognize the potential value for their local residents. The initiative was launched as a twin to the successful, seven-years-running K-12 coding camp, [Dig’nIT](#).

The state’s most rural communities have been the “most inspired” to recognize the potential value for their local residents.

Collaboration Within and Across Institutions

Collaboration inside and outside the higher ed institution is a hallmark of both institutions’ work, even when the work isn’t on the administration’s “to-do” list. This attitude extends to all regional partners. In Coeur d’Alene, for example, the economic development corporation “stays in its lane,” focusing on business attraction

and retention. But they see the burgeoning entrepreneurship ecosystem as part of their long-term success, and they lead with this vision when they engage with employers. In one example, the organization drove a local bond referendum to fund a new multi-school-district [STEM school](#).

As in many rural areas, local organization boards are cross-populated with the same leaders. The community makerspace, GIZMO-CDA, and [Envision Coeur d’Alene](#), the community long-range vision planning process, share members. Administrators at NIC, U of I, and Lewis-Clark State began to meet regularly when NIC chose to make technical education a focus about six years ago. The partnership has grown from there, with each campus picking up a piece of the work that aligns with their internal goals and resource capacity but adds to the larger agenda. A recently-opened “[joint-use](#)” building streamlines the student transfer experience and promotes collaboration and local programs among U of I, NIC, Lewis-Clark State, Idaho State University, and Boise State University.

The work has also enabled programmatic realignments, deeper coordination and new synergies. The long-established Small Business Development Center relocated next to the Venture Center and GIZMO-CDA, providing a physical link between the SBDC’s technical assistance and concepts—or new ventures—emerging from the lab, makerspace, or curriculum. Encouraged by the College’s president, the culture of the NIC’s facilities is one of open-access: the institution sees value in “layering” support for entrepreneurship—through technical tools, feedback, other resources—to reach different audiences on and off campus. Historically, Coeur d’Alene startups have been “lifestyle” businesses targeting the seasonal tourist population. NIC’s mission is to “excite the region [particularly rural communities] about growth companies” as a source of regional long-term prosperity, Venture Network director Ryan Arnold said.

Colby College

WATERVILLE, ME

Institution and Community Profile:

SCHOOL PROFILE	COLBY COLLEGE	
Institution Type	Private, 4-year	
Average Annual Cost	\$18,533	
8-year graduation rate	92%	
Undergraduate enrollment	2,000	
Most popular majors	Economics	
Highest earning majors	Economics	
COMMUNITY PROFILE	WATERVILLE, ME	USA
Population	16.4K	N/A
5 year population change	3.80%	3.80%
Percent of population w/4yr degree+	28.20%	30.90%
Median household income	37.1K	57.7K
Poverty rate	20.20%	14.60%
Broadband coverage >10mbps upload	96.80%	65.50%
Top industry by employment	Healthcare	N/A
Percent of jobs with young firms	7.10%	9.90%



Interview Respondents:

Brian Clark, Vice President of Planning; Garvan Donegan and Elaine Theriault-Currier with Central Maine Growth Council.



Colby College is embracing the need for technology and innovation, while embarking on a whole-hearted commitment to revitalizing its hometown Waterville, ME region. Colby, a highly-ranked and historic liberal arts challenge, believes that for a small school to thrive in a rural area, it must tap into place-based strengths and build partnerships with community innovators. The college sees its long-term viability as inextricably linked to the economic vitality of Waterville and central Maine. A vibrant and strong community will enable Colby to attract and retain talented faculty, staff, and students. To make this vision of a vibrant community reality, Colby has invested millions in downtown Waterville and the surrounding area, and expects that over time, the regenerative power of local economic growth will become self-sustaining, with the college remaining engaged as a community anchor.

For a small school to thrive in a rural area, it must tap into place-based strengths and build partnerships with community innovators.

Formal Accelerator and Incubator Programs

Without a business school, Colby found itself lacking an entrepreneurship program in the curriculum. But leaders decided that a 21st century liberal arts education has to inspire students to turn their ideas into action. So, Colby launched [DavisConnects](#), a hub preparing students for lifelong success that supports a culture of innovation and entrepreneurship. Students get connected with alumni entrepreneurs, and the program culminates

A vibrant and strong community will enable Colby to attract and retain talented faculty, staff, and students.

in a pitch competition funded and judged by alumni. DavisConnects is also piloting an exciting downtown incubation space, where groups of 10-12 students work on small business startups—most of which in the digital tech space, and many applying principles that have succeeded elsewhere to the rural Maine context.

Physical Space and Co-location

Colby has made a substantial commitment to the rural Waterville region, which was hit hard by the country's decline in manufacturing. While Colby is located outside of the downtown area, the College is investing in several catalytic projects on Main Street to spur economic growth, including a student residential complex, a 53-room hotel, two major art centers, and giving to a fund for downtown building facade improvements. In addition to Colby's direct investments, its alumni are also investing in Waterville, most notably with the renovation of a massive old mill building, which now includes a coworking and innovation space called [BRICKS](#), a brewery, and modern living amenities.

Digital Skilling Programs

Colby's [computer science program](#) provides students the chance to learn 21st century skills in software and robotics—while staying connected to the human principles at the core of a liberal arts education. In that mission, digital skills and technology are incorporated all across campus; the biology, environmental studies, music, and theater programs all offer

interdisciplinary computation majors. Further bridging the intersection of these disciplines, Colby is designing a new art center on campus that will serve as a laboratory for the creative and performing arts that also incorporates new technologies and incubation space to engage students across the sciences.

Students are also bought in on the importance of tech for 21st century jobs. One student living in a newly-renovated community dorm led a weeklong introduction to coding bootcamp for local area high schoolers.

Collaboration Within and Across Institutions

Because it is located outside of a major tech hub, Colby has embraced partnerships to grow their tech and innovation offerings. With partners, they can expand their small local entrepreneurship community and create a critical mass of students and community members dedicated to future-focused innovation. For regional and downtown investments, Colby works closely with local colleges including Thomas College and Kennebec Community College, as well as the [Central Maine Growth Council](#). To [connect](#)

With partners, they can expand their small local entrepreneurship community and create a critical mass of students and community members dedicated to future-focused innovation.

[students](#) with technology opportunities, Colby has partnered with Maine's three biggest research labs, allowing students faculty hands-on opportunity to work with cutting-edge tech at Jackson Labs, the Bigelow Center for Ocean Sciences, and the MDI Biological Laboratory. Colby has forged these partnerships in order to bring scale to operations and approach what major research universities are able to do, while maintaining its competitive advantage of a small, intimate, residential learning environment.



State University of New York College of Agriculture and Technology at Cobleskill

COBLESKILL, NY

Institution and Community Profile:

SCHOOL PROFILE		SUNY COBLESKILL	
Institution Type	Public, 4-year		
Average Annual Cost	\$15,373		
8-year graduation rate	42%		
Undergraduate enrollment	2,231		
Most popular majors	Business		
Highest earning majors	Agricultural Engineering		
COMMUNITY PROFILE		COBLESKILL, NY	USA
Population	4.7K	N/A	
5 year population change	-7.30%	3.80%	
Percent of population w/4yr degree+	24.30%	30.90%	
Median household income	34.5K	57.7K	
Poverty rate	24.90%	14.60%	
Broadband coverage >10mbps upload	100%	59.70%	
Top industry by employment	Healthcare	N/A	
Percent of jobs with young firms	2.80%	9.90%	



Interview Respondents:

Jim Feldman, Director of Communications and Marketing; Susan Zimmerman, Provost; Marion Terenzio, President; Amy Healy, Chief of Staff; Wendy Gilman, VP Finance; Stephen Weir, Faculty Fellow; Eric Stein, President of Cobleskill Regional Hospital, Coby EDAC; Lisa Weatherwax, Associate Director, Center for Career Development; Steve Wilson, Schoharie County Administrator; Phoebe Schreiner, CADE Executive Director; Bill Felter, Founder, Serious Brewing Co.; Jason Evans, Director of Schoharie County Enterprise Corp



SUNY Cobleskill, a public regional university in New York, has leveraged its connection to agriculture to drive local entrepreneurship and innovation. With a diverse mix of support from public and private partners, they have created modern rural opportunities for students and faculty alike.

They have created modern rural opportunities for students and faculty alike.

Formal Accelerator and Incubator Programs

SUNY Cobleskill is partnering with an area business accelerator to extend the reach of both institutions. As the SUNY system's agriculture school, Cobleskill has a close working relationship with a local nonprofit that promotes agriculture entrepreneurship: the [Center for Agricultural Development and Entrepreneurship](#) (CADE). SUNY acts as grant applicant and CADE is the application partner; the organization has facilitated \$600k in funding to businesses, supported \$1.2 million in sales, and served 500 entrepreneurs. Cobleskill invested in testing facilities for value-add entrepreneurs to develop their products, de-risk operations, and train employees, while CADE targets businesses that fill local procurement supply chain gaps. When business success creates visibility and local "wins," the Cobleskill campus, as an active participant, shares in the upside.

Collaboration Within and Across Institutions

SUNY Cobleskill sees itself as a steward of place; they have worked diligently to define their niche in an increasingly consolidated agriculture

sector, and have invested considerable resources into modernizing the historic regional culture of craft entrepreneurship by helping emerging entrepreneurs develop new markets.

The College's work in the region is now organized under the banner of the [Institute for Rural Vitality](#), the product of lengthy reflection and a comprehensive community needs assessment. Beginning in 2015, the College convened a series of roundtables focused on economic development with a broad group of public and private sector stakeholders; this group's ongoing collaboration has been a catalyst for action.

The Institute anchors regional and cross-sector work, frequently partnering with CADE and the newly-formed [Schoharie County Enterprise Corporation](#) (SEEC), which focuses on downtown redevelopment. The Institute has clarified expectations and provided a funnel for community requests, which has been "transformative" and has improved community relations, leaders said. Small business services are greatly improved as well. SEEC and other regional partners extend the Institute's "front door" for outreach and support to local businesses. The College plans to expand its programming, as further needs and skills gaps are identified, supplementing what the U.S. Small Business Administration had previously provided periodically from the state government.

SUNY Cobleskill's six dedicated fellows (currently funded through a \$750k grant from the U.S. Department of Agriculture's [NIFA Capacity Building Grants for Non-Land-Grant Colleges of Agriculture program](#)) at the Institute for Rural Vitality create avenues for faculty to apply their research, engage practicing professionals and their networks, build professional networks for students, and increase the school's visibility. Fellows report that their work has broken down bureaucratic barriers (both on and off campus) and helped solve regional problems, while helping to integrate and maximize campus assets.

Anecdotally, there is evidence of enhanced student outcomes as well, as we learned from our conversations with 10 students and four faculty fellows. Respondents said they and their peers chose Cobleskill for the experiential learning opportunities and are motivated to complete a degree or credential because of internships or the chance to work closely with fellows. The school's retention rate, however, has been affected by the "go-pro early" culture that has led to students being hired directly from internships.

Student research is increasingly impactful, leaders said; student ag-tech research in hemp, for example, has attracted a processor looking to benefit from the [START-UP NY](#) program, which offers new and expanding businesses 10 years of tax-free operation if they operate on or near eligible university or college campuses. A DOD-backed biofuel research project, biotech and plant science licenses, and the largest cold-water fish hatchery operation in the region have influenced a "Research I mentality" about their capacity, administrators said. Employers, meanwhile, report they are "energized" by the open-

Learning is itself a valuable outcome and it has had positive reputational impacts.

ended learning agreements promoted by the institution that have allowed for customization in their engagements with students.

The Institute has been a galvanizing force, focusing the regional conversation on the strategies and initiatives that can best contribute to vitality, and helping the institution better apply its resources to address such challenges as low enrollment and regional "brain drain." The work has revealed that such strategies can "be fluid without losing mission," leaders said. At this stage of the work, learning is itself a valuable outcome and it has had positive reputational impacts. Cobleskill is now seen as one of the few SUNY campuses that has significantly engaged off the campus and gotten involved in the local community for the purpose of economic development.

Central Washington University

ELLENSBURG, WA

Institution and Community Profile:

SCHOOL PROFILE		CENTRAL WASHINGTON UNIVERSITY	
Institution Type	Public, 4-year		
Average Annual Cost	\$15,175		
8-year graduation rate	60%		
Undergraduate enrollment	10,529		
Most popular majors	Business		
Highest earning majors	Construction Management		
COMMUNITY PROFILE		ELLENSBURG, WA	USA
Population	19.3K		N/A
5 year population change	6.10%		3.80%
Percent of population w/4yr degree+	41.40%		30.90%
Median household income	36K		57.7K
Poverty rate	34.10%		14.60%
Broadband coverage >10mbps upload	100%		59.70%
Top industry by employment	Education		N/A
Percent of jobs with young firms	9.10%		9.90%



Interview Respondents:

Linda Schactler, Chief of Staff, Office of the President; Carolyn Honeycutt, Executive Director, CenterFuse; Bill Provaznik, I4IE Director; Robert Lowrey, Communications Director; Kandee Cleary, VP Inclusion and Diversity; Andreas Bohman, VP Operations



Formal Accelerator and Incubator Programs

The Central Washington University College of Business wanted to increase the “real world” skills of their graduates, so they established the [Institute for Innovation and Entrepreneurship](#).

They brought in a serial entrepreneur as professor of practice, who in turn brought in successful business owners as instructors. His successor helped establish an entrepreneurship minor and the [Many Faces of Entrepreneurship](#) initiative, which champions self-employment and aims to “lock” the mostly-disadvantaged student body into a social network. The 2019 applicant pool to CWU was majority minority for the first time in the school’s history, and over 60 percent are Pell eligible.

The three-year-old program, funded by a local foundation, focuses on business fundamentals—legal, administrative, marketing—but they hope to hire full-time faculty with expertise in product development. Leaders want to advance the existing innovation capacity, despite lacking the research base or engineering programs to leverage it. Despite these hurdles, the program has seen a number of successes, including when a graduate of the first cohort launched a successful medical device company, [Life Improved Medical](#), now based in Ellensburg and employing 10 people. The Many Faces initiative also hosted its first pitch session in the Seattle area in the fall of 2019 in an effort to further link the central part of the state to the economic engines on the coast.

Collaboration Within and Across Institutions

Modern economic development work and ecosystem building requires buy-in on a common agenda and constant iteration. In Ellensburg, the incoming director at the Ellensburg Business Development Authority, [CenterFuse](#), wanted to transition from providing

property management services to a hands-on portfolio that helps accelerate local business, attracts “creative economy” technology workers and beverage makers, and supports innovators spinning out of the CWU College of Business.

Modern economic development work and ecosystem building requires buy-in on a common agenda and constant iteration.

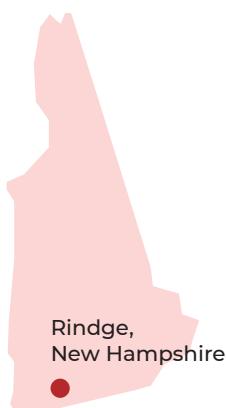
As the local economic development delivery system changes its strategy, so too has the involvement of CWU, the region’s biggest asset and employer. Historically, CWU did not have ground-level engagement with local business development, but the reformed economic development approach has prompted its deep engagement and leadership. One recent example: when a target company, a tech firm, decided not to relocate to the area, the CenterFuse director’s next call was to the CWU president’s chief of staff. The next tech company to show interest in relocating, a cybersecurity firm expanding out of Seattle, landed. Around the same time, the campus computer science department began incubating a cloud computing firm. CenterFuse is now working to find space downtown when that company is ready to expand.

Franklin Pierce University

RINDGE, NH

Institution and Community Profile:

SCHOOL PROFILE		FRANKLIN PIERCE UNIVERSITY	
Institution Type	Private, 4-year		
Average Annual Cost	\$30,134		
8-year graduation rate	51%		
Undergraduate enrollment	1,627		
Most popular majors	Health Services		
Highest earning majors	Nursing		
COMMUNITY PROFILE		RINDGE, NH	USA
Population	6K		N/A
5 year population change	0.10%		3.80%
Percent of population w/4yr degree+	28..7%		30.90%
Median household income	68.2K		57.7K
Poverty rate	9.60%		14.60%
Broadband coverage >10mbps upload	19.20%		59.70%
Top industry by employment	Retail		N/A
Percent of jobs with young firms	12.50%		9.90%



Interview Respondents:

Kristen Nevious, Director, Fitzwater Center;
 Norm Fiola, Dean of the College of Business;
 Mack Beam, Assoc Professor College of Business



Some institutions are seeing a clear connection between external engagement with the private sector (including startup businesses) and the institution's own financial success. Residents of the Keene-Rindge area of New Hampshire consider their community "centrally isolated." The region's industries, although diverse, are located across a large geography. In order to collapse the distance, Franklin Pierce University leaders have taken the lead in developing relationships with the private sector with the goal of funneling more graduates into local jobs. The school's well-known media studies center, which houses a national polling operation, recently began work to develop a broadcast-quality internet link between the university's two campuses in order to enhance rural connectivity.

There is also encouragement for faculty and leadership to "think outside the box" to sustain operational funding, faculty and administrators said. Working with entrepreneurial businesses has become one of those solutions. Early-stage businesses in the area—including a consumer

University leaders have taken the lead in developing relationships with the private sector with the goal of funneling more graduates into local jobs.

product company and health-tech startup—have come on as "clients" of undergraduate student consultants in the business school. Some of those relationships have even led to jobs. Program leads have about two years of metrics; in addition to hiring, surveys show satisfaction among students, who want relevant experiential opportunities, and companies, who report benefits from the technical assistance. The engagements have also improved the university's visibility in the community.

James Madison University

HARRISONBURG, VA

Institution and Community Profile:

SCHOOL PROFILE	JAMES MADISON UNIVERSITY	
Institution Type	Public, 4-year	
Average Annual Cost	\$21,281	
8-year graduation rate	83%	
Undergraduate enrollment	19,679	
Most popular majors	Mental and Social Health	
Highest earning majors	Information Science	
COMMUNITY PROFILE	HARRISONBURG, VA	USA
Population	53.1K	N/A
5 year population change	8.20%	3.80%
Percent of population w/4yr degree+	34.90%	30.90%
Median household income	43K	57.7K
Poverty rate	29%	14.60%
Broadband coverage >10mbps upload	70.90%	59.70%
Top industry by employment	Education	N/A
Percent of jobs with young firms	9.40%	9.90%



Interview Respondents:

Kary Lou Bourne, Director, Tech Innovation and Eco Dev

Via its tech transfer office and the leadership of its long-established director Mary Lou Bourne, James Madison University (JMU) has assumed a central role in delivering a new economic development initiative focused on building regional entrepreneurial capacity: the [Entrepreneurial Ecosystem Advisory Committee](#), which Bourne chairs. An agreement between JMU and the economic development council, [GO Virginia Region 8](#), allows Bourne to spend nearly half her time on coordinating activities and making connections focused on building the Valley's entrepreneurial ecosystem. As legislation advances at the state level to integrate research, commercialization, and investment, Bourne said, the state's economic development regions have stepped up their focus on the entrepreneurship sector, although the state's rural regions fear they will be priced out of this program if the state's investment requires a local match.

Another part of Bourne's role includes maintaining coalition partner websites to ensure resources are visible within the larger ecosystem. These partner initiatives include the [Shenandoah Valley Innovation Coalition](#)—a collaboration of business, government, community, and academic organizations working to make the region more attractive to tech companies—and the region's angel funding network, [Shenandoah Valley Angel Investors](#). The network has invested \$7.5 MM in 19 companies; four were started by JMU alumni. Almost all of its 29 members have invested in a diverse portfolio

Delivering a new economic development initiative focused on building regional entrepreneurial capacity

of growth [companies](#) in the area, including manufacturing and agriculture startups, as well as tech platforms for the medical, real estate, entertainment, and government sectors. Bourne said JMU's role in this work has given much-needed visibility across the region's expansive geography of 10 counties and eight municipalities. Allied stakeholders in the network fill in gaps: the [Staunton Creative Community Fund](#) is working on an asset map and aligning efforts across the broader region, and a member of the nearby Washington & Lee business school faculty is launching a coworking space in the City of Buena Vista.

Bourne's biggest take-away is this: the work starts with establishing trust among community partners so that entrepreneurs can readily tap into resources and find connections to take their companies to the next level. And while it is primarily grassroots work, institutional interest in economic development can positively magnify higher ed's role as a regional convener and collaborator.

Pittsburg State University

PITTSBURG, KS

Institution and Community Profile:

SCHOOL PROFILE		PITTSBURG STATE UNIVERSITY	
Institution Type	Public, 4-year		
Average Annual Cost	\$13,910		
8-year graduation rate	54%		
Undergraduate enrollment	5,067		
Most popular majors	Nursing		
Highest earning majors	Construction Management		
COMMUNITY PROFILE		PITTSBURG, KS	USA
Population	20.3K		N/A
5 year population change	0.40%		3.80%
Percent of population w/4yr degree+	31.70%		30.90%
Median household income	31.9K		57.7K
Poverty rate	28.60%		14.60%
Broadband coverage >10mbps upload	92.50%		59.70%
Top industry by employment	Education		N/A
Percent of jobs with young firms	5.30%		9.90%

Interview Respondents:

Shawn Naccarato, Chief Strategy Officer;
 Brett Dalton, Director of Social Media Marketing



Strong strategic planning can enable entrepreneurship support initiatives and community development more broadly. This can include creating new programmatic initiatives, de-risking financial investments, and building well-structured partnerships that include community and government actors. Pittsburg State University has done all of this in recent years. Its [EnterprisePSU](#) office has been revamped from a “loose collection of [business support] programs” to a more intentional strategy that coordinates services through the state’s SBDC and manufacturing and procurement technical assistance centers. The office has today helped articulate a vision for innovation and entrepreneurial growth in the southeast Kansas region. In 2019, EnterprisePSU co-hosted the region’s first Rural and Independent Innovators conference at the community’s entrepreneurship hub, [Block 22](#), with the U.S. Small Business Administration and the Kansas Department of Commerce.

Pittsburg State University forged a public-private partnership with the City of Pittsburg and a private developer to create Block 22, a mixed-use innovation hub, retail, and residential redevelopment project in the historic downtown. The project has been a vehicle for deepening university-community ties—from the university’s long-term lease agreement to house students at the property to its advocacy for local vendors during construction and procurement. Block 22’s role is to be a central physical point for people throughout the region to come together and share ideas, facilitating a

Strong strategic planning can enable entrepreneurship support initiatives and community development

strong innovation ecosystem. The main floor, in a historic anchor building downtown, includes a coworking space with local startups, event space, and a makerspace with an adjacent coffee shop. The upstairs houses residential apartments for students, with each unit bearing the name of a historic Pittsburg entrepreneur. The opening of Block 22 in 2019 has coincided with significant downtown redevelopment supported by strong relationships between the University and the town; over 17 new businesses opened in downtown Pittsburg in 2019.

The redevelopment project and the revamped EnterprisePSU are outgrowths of deep self-study, program officers said, as Pittsburg State sought to “redefine its public mission.” While “town/gown” relationships “had been good, they were not intentional,” leaders said. There is a sense now that the university is engaged beyond programmatic one-offs. A permanent structure, the Joint University Advisory Board, established from the community’s multi-stakeholder Forward Together campaign, will provide the structure to maintain the institution’s vision and support capacity.

St. Mary's University of Minnesota

WINONA, MN

Institution and Community Profile:

SCHOOL PROFILE

SAINT MARY'S UNIVERSITY OF MINNESOTA

Institution Type	Private, 4-year
Average Annual Cost	\$19,888
8-year graduation rate	67%
Undergraduate enrollment	1,409
Most popular majors	Business
Highest earning majors	Nursing

COMMUNITY PROFILE

WINONA, MN

USA

Population	27.2K	N/A
5 year population change	-2.10%	3.80%
Percent of population w/4yr degree+	33.60%	30.90%
Median household income	43.6K	57.7K
Poverty rate	20.20%	14.60%
Broadband coverage >10mbps upload	100%	59.70%
Top industry by employment	Manufacturing	N/A
Percent of jobs with young firms	4.30%	9.90%



Interview Respondents:

Christine Beech, Entrepreneurship Center Director

St. Mary's University of Minnesota, a private nonprofit university with campus locations in Winona, Rochester, and the Twin Cities, has a larger graduate than undergraduate population and offers an instructive perspective: scaling ecosystem-building work starts with the available assets.

The small undergraduate population at the rural Winona campus did not provide the density for recent programs like a "startup weekend" showcase, said Christine Beech, director of the school's Kabara Institute for Entrepreneurial Studies. This led her to seek out partnerships. The most successful to date has been the launch of a coworking space in downtown Winona, spearheaded by St. Mary's, Winona State University, the chamber of commerce, the city, and private investors, with programming focused on entrepreneurship. The strength of the Winona region's composite industry has informed the current focus on new product development, but Beech said tech-enabled startup support is a future goal. Entrepreneurs new to the Winona area—whom Beech said are moving away from urban areas in greater

Having new business startups that are not location dependent marks a "generational shift" in area economic development.

numbers these days—have been attracted to the space. Having new business startups that are not location dependent marks a "generational shift" in area economic development.

Beech, who also sits on the advisory board for the state-run startup grant program [Launch Minnesota](#), said the alumni-endowed institute strives for a middle ground between its core mission to help students develop business acumen and accelerate businesses in the area. But higher ed's role in ecosystem building can serve institutional interests as well, she said, because it can help more students land jobs.

University of Maine

ORONO, ME

Institution and Community Profile:

SCHOOL PROFILE		UNIVERSITY OF MAINE	
Institution Type	Public, 4-year		
Average Annual Cost	\$16,388		
8-year graduation rate	58%		
Undergraduate enrollment	8,861		
Most popular majors	Business		
Highest earning majors	Chemical Engineering		
COMMUNITY PROFILE		ORONO, ME	USA
Population	9.7K		N/A
5 year population change	5.40%		3.80%
Percent of population w/4yr degree+	61.80%		30.90%
Median household income	39.5K		57.7K
Poverty rate	37.50%		14.60%
Broadband coverage >10mbps upload	86.70%		59.70%
Top industry by employment	Education		N/A
Percent of jobs with young firms	5.10%		9.90%



Interview Respondents:

Business school faculty member

Practitioners will appreciate knowing that the university's role in supporting entrepreneurial development will not always follow a linear path. As we learned from business school professor and ecosystem advocate Jason Harkins, there is an upside: ongoing iteration has the potential to produce a more durable model.

The University of Maine is a public land grant institution with an established office to support technology transfer. Its presence directly influenced Harkin's capacity to launch a startup accelerator in the Bangor-Orono area. Since then, the university's ongoing involvement in entrepreneurial development has been under-resourced and not a focus of much time or attention at the institutional level, he said. The reason for this may prove to be the local example and the universal rule for higher ed participation in ecosystem development: tension between meeting the expectations of funders (public, in this case) to focus on student outcomes, and putting risk capital into programs that may benefit students but are complex to measure and take time to mature.

Harkin is pressing for increased coordination. He believes higher ed can play a unique role in ecosystem development, especially in rural, resource-limited regions. Institutions can

The university's role in supporting entrepreneurial development will not always follow a linear path

connect and aggregate talent and energy, leveraging local trust and institutional pride to make hard things happen. They can also share hard and soft resources like physical space and alumni networks, while providing support for funding and de-risking faculty engagement.

As important as higher ed participation in entrepreneurial development can be, Harkin said that achieving success requires an intentional approach. Institutions can play a thoughtful role in aligning incentives for all parties by minimizing their tendency toward bureaucracy in contracting and purchasing. They can clearly signal to faculty and staff when they are allowed and encouraged to engage in external affairs like ecosystem development. And they can play the role of collaborator, helping to accommodate the branding and marketing identities of multiple stakeholders.

OUR OBSERVATIONS FROM THE FIELD

Advancing the Conversation on Higher Ed and Rural Innovation

Digital Skilling is a Key Focus

The rise of the digital economy continues to upend traditional workforce development, prompting higher ed to expand its focus and include a broad range of training related to information technology.

COVID-19 has only intensified these pressures, as the pandemic has magnified the importance of connectivity and digital work.

The institutions we profiled believe growing the digital skills pipeline (to meet the demands of an increasing number of industry sectors) has the potential to drive regional growth and improve individual economic well-being faster and more broadly than other industries such as tourism. They have been key partners working to attract and grow advanced industries (including tech startups), retain skilled workers, and provide opportunity for advancement for the regional workforce. This tech-based strategy is different from the industries most of these institutions would have historically trained people for: natural resource extraction and agriculture. Even tourism, which many communities have turned to as a substitute, rarely supports livable wages or consistent employment throughout all four seasons.

The University of Idaho's expansion of its computer science program is a clear example of how digital skilling can succeed. By establishing a new department at the Coeur d'Alene Center and creating joint pathways with North Idaho College, students can better respond to the growing demand for tech skills from employers

on the Interstate 90 corridor between CDA and Spokane, WA, as well as the recent influx of high-income-earning individuals pursuing entrepreneurial ventures and seeking local tech talent. Central Washington University and SUNY Cobleskill show the importance of targeting training towards nearby industrial opportunities; their regions are traditionally dominated by agriculture, and the schools have been responsive to local ag-tech employers seeking local graduates with relevant skills. James Madison too has focused on training a remote workforce for the tech companies hiring in nearby northern Virginia.

Moreover, digital skilling can best serve students and communities when they have connectivity. Here too, institutions can play a role. For example, tech employers seeking a lower cost of doing business outside Seattle have begun to notice Ellensburg, but the inconsistent quality of local broadband services—despite the area's relative proximity to Microsoft HQ—has slowed their relocation. Working together, CWU and the city's development association applied for state grant funds to attract new service providers who can deliver consistent high-speed access. The campus is also seeking opportunities to leverage their recent investment in a datacenter.

SUNY Cobleskill and its economic development partners are also working to improve broadband service in their area. As a commuter school, many students return on weekends to homes without quality internet access. There are promising examples of how [public and land-grant universities](#) have deployed their unique assets to extend broadband service, as [Northern Michigan University is doing in the Upper Peninsula](#), and there is plenty of room for higher ed to make more progress in this space.

Institution-led Accelerators and Incubators Can Spark Local Innovation

Institutions that manage or partner with formal accelerators and incubators can provide needed support to budding and established



entrepreneurs. By making entrepreneurship a focus—and by providing resources, support, and even capital—higher ed institutions can provide a key component of 21st century education while directly benefiting the local economy. Often, these accelerators and incubators are most effective when they leverage institutional resources along with community space and connections. Northern Michigan provides an excellent example: the Invent@NMU program, run in partnership with the economic development group Innovate Marquette Smartzone, makes innovation support available to both students and the community. Idaho's Innovation Den also demonstrates how institutions can directly bridge education with entrepreneurship support, with its computer science labs located in the downtown Innovation Den. Accelerator and incubator programs like these create both real entrepreneurial opportunity and a culture of innovation that can spread through the community.

Physical Space Should be Accessible and Reflect Local Needs

Providing physical space for innovation and entrepreneurship activities demonstrates an institution's commitment and can integrate town-gown relations. But Gavin Fox, a professor of business at Washington and Lee, offered a word of caution: Doers need a place to catalyze their stuff, he said, but spaces must be intentional and well-thought out. What does the ecosystem demand? Opportunities for experienced founders and upstarts to network may not require the fully built-out accelerator space some places have pursued. Informality, he suggests, can be a feature, not a bug. Another distinguishing feature of the coworking and innovation spaces emerging from these partnerships include the co-location of key partners and resources, as is the case in Coeur d'Alene. Additionally, it is important to be in a visible space embedded in the downtown community—such as Block 22 in Pittsburg or BRICKS in Waterville—rather than tucked away on campus.

Collaboration and Implementation are Keys to Community Impact

No entrepreneurial ecosystem can thrive without collaboration. In the rural higher ed context, these necessary collaborations can take many forms, both within and across institutions. University-wide leadership is crucial: at Northern Michigan, part of why the Investing in Innovation strategic plan was so successful is that it engaged students and staff from all departments to explore how they could solve problems together. Smart and effective community engagement is critical, too. By collaborating with local economic development groups, entrepreneurship programs, or other local anchors, higher ed institutions can better understand the needs of the communities they serve—and work together to design solutions.

These collaborations can make a major difference for both institutions and communities when community impact is made a central goal. The growth of high-wage industries like tech comes with challenges; rising housing costs and increased demands for services are just some examples. SUNY Cobleskill, the U of I Center, and CWU have therefore played a prominent role in balancing the desire for high-wage industry growth with support for the economically distressed parts of their communities. [The Coeur d'Alene 2030 Vision](#) plan, for example, lays out specific strategies for this population: fostering soft and technical skills, helping improve affordability for working families, and encouraging economic developers to "opt out" of low-wage business recruitment. The Center for Community Advancement, one of five centers at the Institute for Rural Vitality at SUNY Cobleskill, focuses on quality of life in the surrounding community by coordinating student-driven community service and offering professional training. The early childhood degree program supports a daycare center on campus open to low-income families in the region.

It's also important to note that community-driven collaborations can be challenging; successfully implementing initiatives to benefit schools and



communities requires a clear commitment to effective implementation strategies and follow-through. Across the universities we profiled, we found that many hallmarks of effective implementation held true, including the importance of getting buy-in from leadership, engaging with local stakeholders, and soliciting meaningful feedback on the needs of the community. Providing dedicated staff time to ownership over building the innovation ecosystem was another component of an effective approach.

What We're Asking

We conducted a majority of these site visits and interviews from November 2019 through January 2020, before the COVID-19 pandemic hit the U.S. By the time we concluded our final interviews in March of 2020, it was evident that COVID was dramatically impacting institutions of higher ed. While the financial, instructional, and community impacts are still unfolding, there is a risk that institutions will pull back from ecosystem building in the face of extreme economic uncertainty. But given the daunting challenges that both rural communities and rural serving institutions of higher ed are confronting, now is the time to pull together.

Today, university partnerships are commonplace. And state divestment from public education, coupled with political pressures and demographic changes, have

made such [partnerships](#) broader and more intensive. Although university participation in entrepreneurship in metro areas has been widely documented, rural stakeholders remain eager for insights and playbooks from rural contexts.

In our conversations with stakeholders across the country, we encountered significant interest in this project.

Our reporting confirmed there is dynamic and early-stage experimentation happening at a range of higher ed institutions in rural settings, but much of it is not mature enough to definitively measure outcomes. It is clear this work does not unfold on a linear path; there is not one standard model that will make sense in all contexts. But there is immense value in following this developing field to understand more deeply how higher ed institutions in different rural settings can effectively contribute to ecosystem building.

Finally, we believe it could be valuable to convene rural higher ed ecosystem builders from across the country to cross-pollinate, share ideas, and document learning as a community of practice. Even before the advent of the coronavirus pandemic, this work was challenging. Now, it will be more important than ever to have rural institutions of higher ed find ways to actively engage in economic revitalization. Their futures, and those of their communities, might just depend on it.

As we advance the field of rural ecosystem building, particularly as it relates to the role of higher ed, we believe it would be fruitful to focus on the following questions:

How can multiple types of higher ed institutions (e.g., community colleges or regional universities) **create effective partnerships** to support local and regional ecosystem building?

How can institutions fund the activities involved in ecosystem building, and how can they **align incentives to enable faculty and staff** to do this work?

How can we continue to identify and scale creative and effective approaches to digital skilling—**particularly targeting underemployed, lower income adults and students**, and matching them with job opportunities?

How can college and university broadband infrastructure be leveraged **for ecosystem development**?



About the Center on Rural Innovation

The Center on Rural Innovation (CORI) is a dynamic social enterprise solving America's rural economic crisis by empowering small towns to build thriving digital economies. CORI's three major initiatives form a comprehensive approach to catalyzing the digital jobs that drive sustainable economic success: The Rural Innovation Network is made up of 20 small communities nationwide dedicated to digital economic development; the Rural Opportunity Map curates hundreds of datasets to surface promising rural areas; and the CORI Innovation Fund provides needed capital to innovative but underserved rural entrepreneurs.

To learn more, visit ruralinnovation.us.

