

THE CASE FOR RURAL: RUSTON, LOUISIANA & NEWPORT, ARKANSAS

A COMPARATIVE CASE STUDY BY THE CENTER ON RURAL INNOVATION
AND RURAL INNOVATION STRATEGIES, INC.

BUILDING INNOVATION IN RURAL AMERICA
FROM THE GROUND UP



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This case study examines the role that higher education institutions play in facilitating tech-based economic development in rural communities. As the fifth in a series of five, this case study offers a comparative perspective between Ruston, Louisiana, and Newport, Arkansas. Ruston is home to Louisiana Tech University, a large, four-year public university, and Newport is home to a local community college, Arkansas State University-Newport. Ruston has been building out its tech ecosystem for over a decade, while Newport is just beginning the process. Through the lens of these communities, we seek to inform local economic development leaders about how the partnership capacity, physical infrastructure, and talent development capabilities of higher education institutions can support tech-based economic development.



(Louisiana Tech University in Ruston, Louisiana; courtesy Rural Innovation Strategies, Inc.)



UNDERSTANDING THE RURAL-URBAN OPPORTUNITY GAP

The Great Recession exacerbated a growing opportunity gap between urban and rural economies. This was largely driven by gains in the digital economy, which enabled major urban areas to recover from the economic shock. Between 1997 to 2017, the digital economy grew more than four times faster than the overall American economy. In 2017, the digital economy represented 6.9% of GDP; in 2018, it accounted for 10.6% of real value-added ([BEA, 2019](#)). Following the recession, rural economies were not as resilient, and as the growing tech sector concentrated in urban areas, small towns were left without a path to sustainable 21st-century employment. Five major metropolitan areas accounted for 90% of innovation sector job growth between 2005 and 2017 ([Atkins, Muro & Whiton, 2019](#)). Although rural regions represent at least 15% of the workforce (using the CBSA rural definition), only 5% of computer and math occupation employment is located in rural counties. The goal is to bridge that gap and increase the number of tech jobs in rural areas to be 15% of the total rural workforce.

This growing geographic inequality has significant consequences for rural areas, as tax bases shrink and young people move to urban areas searching for aspirational jobs. But with the right tools and assets, small towns can participate in the innovation economy, owning and driving the means of production in today's digital marketplace. This case study, the fourth in a series of five, seeks to show the strategic work being done across rural America in grassroots efforts to foster the creation of digital economy ecosystems and tech-based economic development.



Understanding Tech-Based Economic Development and Digital Economy Ecosystems

In telling the stories of Ruston and Newport, it is important to have a grasp on a few terms relevant to the context. First is the difference between the **tech-based economy** and the **digital economy**. While those in the tech-based economy use specialized technologies as part of their day-to-day work — like those in high-tech assembly lines or in research and development — the work of those in the digital economy is centered on the development of computer-based automation technologies to make processes and markets more efficient. Professions in the digital economy can include computer programmers, cybersecurity analysts, IT specialists, data scientists, network engineers, and other tech-powered roles that are resilient in the face of automation.

(Tech Pointe, Louisiana Tech University in Platteville Wisconsin; courtesy Rural Innovation Strategies, Inc.)



Tech-Based Economies in Rural America

In 2010, federal spending in rural counties was an average of \$683 less per person than in urban counties, and between 1994 and 2001, rural areas received half as much investment per capita from the federal government as compared to urban areas ([Bishop, 2012](#); [WK Kellogg Foundation, 2004](#)). The same goes for philanthropic foundations: Between 2005 and 2010, the average real value of grants given to rural areas was half as much as that given to urban areas ([Pender, 2015](#)). The U.S. Economic Development Administration's (EDA) Build to Scale program supports organizations and initiatives that unlock equity capital to further inclusive investment, operate programs to accelerate sector growth, and/or enable technology commercialization to spur the next generation of industry leading companies. Within that program, EDA aspires to award at least 40% of funds to rural areas ([RISI, 2021](#)). Build to Scale is one of several grant opportunities that rural communities can access to pursue regional innovation, but the 1:1 match requirement to apply can prove to be a barrier. Rural organizations have to navigate the ins and outs of local funders, regional agencies, and private donors as well, often having far more limited staff capacity and access to resources than their urban peers based on sheer numbers.

It is also essential to recognize the difference between tech-based economic development and developing digital economy ecosystems.

Tech-Based Economic Development

When we talk about tech-based economic development, we are referring to how a community's economy evolves to center on technology and innovation. Tech-based economic development incorporates a broad range of enterprises, from converting traditional manufacturing to highly automated manufacturing of the same product, to research initiatives on new materials, to the assembly of technology equipment, to app development by entrepreneurs. Tech-based economic development can involve strategies like recruiting large tech companies to locate a data center in a community, and can require preparation like building a perimeter road at an industrial park, gaining access to water for cleaning manufactured parts, and obtaining available land for construction.

Developing Digital Economy Ecosystems

When we talk about developing digital economy ecosystems, we are referring to how organizations in a community work to align around the common goal of increasing tech employment, and as a byproduct, promote greater economic inclusion in rural communities. An ecosystem involves more open collaboration between many different startups, companies, and entrepreneurs, as opposed to having companies operating in silos. This can be supported by building coworking spaces, creating a coalition of tech-focused investors and support organizations, or holding an accelerator program for local entrepreneurs. The ecosystem, when functioning properly, creates a cycle of regenerative benefits for investment, training, collaboration, mentorship, and growth.



Not all tech-based economic development involves developing digital economy ecosystems. But developing digital economy ecosystems is one approach to tech-based economic development — one that involves a more inclusive form of capitalism and is part of what it takes to establish a collaborative culture that supports technological innovation. Workers on an assembly line at a computer chip manufacturer may be contributing to the tech-based economy; yet assembly-line workers who use coding skills learned from a local boot camp to develop a new robotic system to do their repetitive work are a part of the digital economy.

These workers may go on to turn their innovation into a growing startup that trains and employs more line workers, launch a hackathon to identify weaknesses in its software, and subsequently spur new innovations and activity in the community. In short, these workers are part of creating that cycle of local ownership of production, learning, and growth in an age of automation.

Ruston and Newport are just two communities of many across the United States that exemplify how institutions of higher education can play into the development of digital economy ecosystems and the evolution of tech-based economic development in rural communities.



(Tech Depot in Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)

The Rural Innovation Initiative

The Rural Innovation Initiative (RII) is a digital economy ecosystem development program that supports rural communities that are seeking to implement strategies for creating digital jobs and fostering more home-grown tech startups. Powered by [Rural Innovation Strategies, Inc. \(RISI\)](#) and its sister organization, the [Center on Rural Innovation \(CORI\)](#), RII was launched in 2018 through a cooperative agreement between RISI and the EDA. It stemmed from the understanding that while many rural communities had the assets and potential needed to grow tech-based economies, they often struggled to access — or even be aware of — the funding that could help make that a reality.



COMMUNITY CONTEXT

Community Selection

Unlike the communities featured in RISI's previous four case studies, neither Ruston nor Newport have been a part of the Rural Innovation Initiative (RII), [Rural Innovation Strategies, Inc.](#)'s (RISI) tech-based economic development program that supports rural communities creating digital economy strategies that support technology-centric jobs and foster more home-grown tech startups. While the perspectives of RII communities provide deeply valuable insight, it is also essential to understand those of rural places that have not had prior engagement with RISI.

To identify potential case study subjects, RISI conducted an analysis of all communities that have received EDA funding to support a tech-based economic development project since 2014, and identified which communities were classified as between 4 and 9 on the [USDA's Rural-Urban Continuum Codes](#), meaning that they had a population of approximately 20,000 or less and were outside of an urban area. Both Newport and Ruston fell into this category, classified as 6 and 4, respectively. In addition, RISI looked for communities that were home to higher education institutions: Newport is home to Arkansas State University–Newport, a local community college, and Ruston is home to Louisiana Tech University, a four-year public university, as well as a campus of Louisiana Delta Community College, and a neighbor to Grambling State University, one of the nation's largest historically Black colleges. Furthermore, while Ruston began receiving a multitude of EDA grants to support tech-based economic development starting in the early 2000s, Newport is newer to the process, and received its first EDA grant in 2020. Both of these perspectives offer value to local rural economic development leaders in rural places across the country, as they show the point of view of communities at different points of the process.

This case study is part of a larger series intended to illustrate the array of possible ways that digital economy ecosystems can be constructed in rural America. Although the focus offers a comparison between two small, rural cities, the lessons learned in Ruston and Newport on the value of higher education institutions are applicable to rural communities across the country.



(Ruston State Bank in Ruston, Louisiana; courtesy Rural Innovation Strategies, Inc.)



Understanding Newport, Arkansas

Newport, Arkansas is a city of about 8,000 in northeast Arkansas, located about an hour-and-a-half drive between both Little Rock, Arkansas, and Memphis, Tennessee. Newport serves as the county seat in Jackson County, and historically, Newport's economy was primarily driven by agriculture centered on the production of cotton, rice, and soybeans. Starting in the 1970s, the area saw heavy investment into manufacturing in a variety of industries, including steel and aluminum. By the early 2000s, three major manufacturers closed their doors in Newport – American Lantern Company, [Brown-Jordan Inc.](#), and Capital Wire – leading to a loss of thousands of jobs. Since 2005, the city has worked to diversify and introduce more jobs into its economy, including those in retail and tourism. Today, Newport's major manufacturers include [Riceland Foods](#) in rice, [Gränges](#) in aluminum production, [Arkansas Steel Associates](#) in railroad ties, and [Shearer's Snacks](#) in food processing.

As a community, Newport places a strong emphasis on local economic development: Since 2005, the city has had a ½-cent sales tax for economic development on all transactions in the city, which was implemented through popular vote. "Because of our history, we are very much aware of (what can happen when) putting all your eggs in one basket economically, so the more diverse our economic development system is, the better off we are to weather challenges," said Jon Chadwell, the Director of Economic Development for the Newport Economic Development Commission (NEDC). According to economic development officials, residents of the town describe Arkansas State University-Newport (ASUN) as one of the town's greatest assets.

Demographically, Newport is 69.1% white, 20.4% Black, 9.4% two or more races, 2.9% Latinx, 0.3% Indigenous, and 0.1% Asian ([ACS, 2019](#)). The city has a median household income of \$30,398, as compared to the state median of \$48,952. Twenty-seven percent of Newport residents fall below the poverty line, as compared to 16.2% of people across Arkansas ([U.S. Census Bureau, 2021](#)). Only 69.3% of Newport households have a broadband subscription, and in the Comprehensive Economic Development Strategy (CEDS) for the White River Planning and Development District – the Economic Development District in which Newport lies – improving broadband access was identified as one of the top action items to be completed between 2020 and 2024 ([ACS, 2019](#); [WRPDD CEDS, 2020](#)). Furthermore, Newport has one designated Opportunity Zone within the city limits, and the only one within Jackson County – a designation created in 2017 that refers to "economically-distressed communities where new investments, under certain conditions, may be eligible for preferential tax treatment" ([IRS, 2020](#); [OpportunityDb 2021](#)).



(Blue Bridge in Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)





(Railroad Park in Ruston, Louisiana; courtesy Rural Innovation Strategies, Inc.)

Understanding Ruston, Louisiana

Located about four hours south of Newport in northern Louisiana, Ruston is a city of about 22,100, and also serves as the county seat in Lincoln Parish. In its early days, Ruston was a major railroad town, located at the junction of the Vicksburg, Shreveport, and Pacific Railroads of Northern Louisiana, at a time when its economy centered on the cotton industry. In the 1940s, it became the largest center for the U.S.' World War II Prisoners of War program ([Gelpi, 2009](#)); and in the 1950s, Interstate 20 (I-20) was constructed through the corner of Ruston. Today, it is located close to the U.S. Air Force Global Strike Command, and subsequently, a notable portion of tech developments coming out of Ruston are related to the defense industry. The largest employer in the city is Louisiana Tech University, followed by the Lincoln Parish school district, Grambling State University, North Louisiana Medical Center, and Genesis Energy ([NLEP, 2020](#)).

The racial demographics of Ruston residents are 47.9% Black, 46.5% white, 2.8% Asian, 2.2% Latinx, 1.6% two or more races, and 0.2% Indigenous. The median household income is \$29,128, as compared to \$51,073 statewide; and 41.6% of residents fall below the poverty line, as compared to 19% across Louisiana overall ([U.S. Census Bureau, 2021](#)). Furthermore, there are two designated Opportunity Zones within Ruston city limits ([OpportunityDb, 2021](#)). While 87% of Ruston households have broadband subscriptions access, only 74.6% of households in Lincoln Parish do. Ruston accounts for about 47% of the Parish's population, therefore inflating the statistics on county-wide internet access and showing how much of the surrounding county is considered to be underserved. A 2019 report commissioned by the City of Ruston found that there was a lack of cohesion between downtown Ruston and the I-20 corridor, as well as a lack of jobs for talented new graduates from the local universities. The focus on enabling graduates to stay and work in the area has become a priority – for example, in July 2021, the City of Ruston created a program to offer \$10,000 to 25 households who move within a 3-mile radius of Ruston, with the qualification that applicants needed to be alumni of either Louisiana Tech or Grambling State, are working remotely, and were over 100 miles away from Ruston before ([LeBoeuf, 2021](#)). As one stakeholder highlighted, "Without the school, there is no Ruston."



THE LOCAL DIGITAL ECONOMY ECOSYSTEM

In both Ruston and Newport, educational institutions lie at the center of the digital economy ecosystem: Louisiana Tech University in Ruston, and Arkansas State University-Newport (ASUN) in Newport. Louisiana Tech has about 10,000 students, whereas ASUN has a total enrollment of about 2,200 students ([U.S. News, 2021](#); [U.S. News 2021](#)). Both institutions play central roles in the ways that partnerships, physical infrastructure, and workforce development evolve and expand in these rural cities.

How have Ruston and Newport engaged with the EDA?

Although both Ruston and Newport have received EDA grants over the years, they have very different relationships. Ruston has been building out its digital economy ecosystem since it began receiving EDA grants in 2003, while Newport received its first EDA grant for this type of development in 2020:

RUSTON, LOUISIANA

2003, 2007, and 2010:

Recipient of [University Center](#) grants

2008:

Recipient of grant to fund the master plan for its Enterprise Campus

2009:

Recipient of [Economic Adjustment Assistance](#) grant to support the infrastructure for its Enterprise Campus

2011:

Recipient of [i6 Green Challenge](#) grant to create the master plan for LA_i6 Proof of Concept Center for green technology innovations

2012:

Recipient of [Jobs and Innovation Accelerator Challenge](#) to build its first business accelerator program

2014:

Recipient of [Regional Innovation Strategies \(RIS\)](#) [i6 grant](#) to establish its first makerspace and prototyping program

2017:

Recipient of [Seed Fund Support Grant](#) to organize and activate regional capital to support local entrepreneurs

2020:

Recipient of Economic Adjustment Assistance grant to support the [Smart Cities Innovation Testbed](#)

2021:

Recipient of Build to Scale grant for the [Louisiana Tech Innovation Ecosystem Hub](#)

NEWPORT, ARKANSAS

2020:

Recipient of [CARES Act Recovery Assistance](#) to construct its IT training center (Tech Depot)





(Rock N' Roll Highway 67 Mural in Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)

NEWPORT'S DIGITAL ECONOMY ECOSYSTEM

At the center of Newport's tech-based economic development lies the Tech Depot, an information technology (IT) training center funded through a 2020 EDA CARES Act Recovery Assistance grant. The Tech Depot, which officially opened its doors in September 2020 and started its first sessions of classes in fall 2021, is physically located in the city's old train station. It offers tech-centric training classes, facilitates apprenticeship programs with local industry partners, and helps individuals to network with local employers. Although Newport Economic Development Commission (NEDC) serves as the official applicant on the grant, the project is a three-way collaboration between ASUN, NEDC, and the Arkansas Center for Data Science (ACDS). In this partnership, NEDC provides the physical space, ACDS offers support with the apprenticeship and employment matchmaking, and ASUN provides the educational content delivery structured around what businesses need.

Educational Partner: Arkansas State University–Newport (ASUN)

On the ASUN side, Jeff Bookout, Vice Chancellor for Economic and Workforce Development, serves as the key leader in the Tech Depot project. ASUN is a comprehensive community college, meaning rather than just preparing students to attend four-year universities, its goal is to provide broader pathways for success – which for some means direct transition into the workforce. Because of this mission, ASUN offers both credit and non-credit bearing course opportunities. This model enables people in the broader Newport community to come to the college to take one class, to gain one particular skill, as opposed to committing to a full course load that would lead to a degree.

In the first iteration of courses at Tech Depot in fall 2021, an ASUN instructor teaches the courses at the Tech Depot space in downtown Newport. These courses include a CompTIA A+ Certification course, two levels of Excel classes, Programmable Logic Control (PLC), a Data Analyst course, and Leadership for New Managers. At this point, there are around four to five students in each course, all of whom are currently employed. In addition, those who are in the apprenticeship go through an IT Generalist course to gain a wider variety of IT skills, which, due in part to COVID, only had two students in its first session, but local leaders hope will grow in coming iterations. The students who are enrolled are primarily professionals from other local industries – for example, those in the IT Generalist



course are current staff members at [Sebastian Technologies](#), and a group of administrative staff and health professionals from [Unity Health](#) enrolled in one of Tech Depot’s Microsoft Excel courses (although the training was cancelled due to COVID). “If you were to ask people in the community what the biggest assets of Newport are, they’d probably say it is tied between ASU-Newport and the people,” said Julie Allen, the Executive Director of the Newport Area Chamber of Commerce.

Employment Relations Partner: Arkansas Center for Data Science (ACDS)

The Arkansas Center for Data Science (ACDS) is a Little Rock-based organization that works across the entire state of Arkansas to grow the IT talent pipeline in the state. ACDS works primarily with cities, but it wanted to prove that its model of training and apprenticeships would work in a rural place like Newport – too many smart people were leaving the area to get a job, and some were supporting IT occupations remotely. The Tech Depot project would help create capacity building within Newport. In the project, ACDS plays the role of matchmaker, working directly with industry partners – such as [Hytrol](#) and [Sebastian Technologies](#) – to get to know the needs of companies. In essence, ACDS serves as a supplemental staffing strategy, where it finds the right candidates, gets them in the right training curriculum, and gets them hired. When it comes to the apprenticeship program, ACDS helps people get matched up with industry partners earlier in that process. “Sometimes it takes employers a few visits before they realize, ‘Oh, you’re going to take my employee, train them for 12 weeks, and then they’re going to have the skills I need,” said Bill Yoder, Director of ACDS. “From the candidate’s side, this model works really well for somebody who can’t afford to go to college, wants to find their way, or needs a career change.”

Infrastructure Partner: Newport Economic Development Commission (NEDC)

The third partner in the Tech Depot project is the Newport Economic Development Commission (NEDC), under the leadership of Jon Chadwell, Director of Economic Development. Chadwell and his team have worked over the last decade on the revitalization of Newport’s downtown area. Now, when it comes to the Tech Depot, NEDC continues to serve as the provider of infrastructure. The Tech Depot is currently housed in Newport’s old train station, but the NEDC team is breaking ground on an entirely new building in a vacant lot next to NEDC’s office to hold all the Tech Depot classes and a future coworking space. This new site is located behind an area that has been used as an outdoor wifi area for students and community members to use during COVID. “We’re looking at this as a regional hub – we want to prove that a rural community can find its niche and be part of the engine that grows a region,” Chadwell said.



(Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)



RUSTON'S DIGITAL ECONOMY ECOSYSTEM

In Ruston, there is one key institution – not three, as is the case in Newport – that serves as the driver of tech-based economic development in the area: Louisiana Tech University. Louisiana Tech partners closely with the City of Ruston, and collaborates with neighboring Grambling State University and the local campus of Louisiana Delta Community College to enable students to benefit from the resources across the three campuses. But when it comes to programming and funding for tech-based economic development, Louisiana Tech is where the motivation lies.

The Central Driver: Louisiana Tech University

At Louisiana Tech, the tech-based economic development work is centered on its Innovation Enterprise, which consists of a set of initiatives and programs that include entrepreneurship programs, business technical assistance, technology transfer, and community engagement. The Enterprise is physically embodied throughout a series of buildings on its campus. Under the leadership of Director Kathy Wyatt, it houses the student business accelerator and coordinates a series of pitch competitions, including TOP DOG New Venture Championship and Won in One Idea Pitch Competition. For the last 15 years, the main Innovation Enterprise building (known as Tech Pointe), which is located on the Louisiana Tech campus between the business school and the engineering building, has offered office space to younger companies and emerging entrepreneurs to offer them the resources and connections as they grow.

A key piece of the puzzle is the Enterprise Campus, which in essence serves as Louisiana Tech's own internal research park. It houses about 15 more mature companies, as well as a business accelerator. These companies – like Lumen Technologies and Fenway Group – have the capacity to interact and create synergistic opportunities with the university in a way that newer, younger, and smaller companies that are a part of the Innovation Enterprise's business accelerator are unable to do at their current stage of development. The companies in the Enterprise Campus focus on a wide variety of tech-related applications, and regularly hire interns and employees from Louisiana Tech and Ruston more broadly. Because so much of Ruston's digital economy ecosystem is concentrated within the Louisiana Tech campus, students and professors are just as active in the ecosystem as external businesses and other university staff. "It's never about real estate, it always has to be about relationships and connections and networks, and how you help people gain access to information and resources that can help them become better business operators," Wyatt said.



(Ruston, Louisiana;
Courtesy Rural Innovation Strategies, Inc.)



The Key Internal Players: Tech-Based Economic Development Leaders at Louisiana Tech

In addition to all of the entrepreneurs and businesses that exist within the Louisiana Tech ecosystem, there are several key figures who are facilitating the funding, program implementation, and capacity of the internal institutions working on tech-based economic development:

- Davy Norris, Chief Research and Innovation Officer at Louisiana Tech: Norris has taken the lead on all of the grant writing for the tech-based economic development work since it began over a decade ago. One of the earliest projects took place around 2003, when Norris helped to launch a relationship with the EDA to establish their University Center program, with the goal of establishing an outreach arm of the university that did economic development outreach in the region. He has taken the lead on subsequent EDA grants ever since.
- Kathy Wyatt, Enterprise Center Director: Wyatt came to Louisiana Tech 18 years ago, around the same time that the initial economic development work was kicking off under Norris. Wyatt views her role as providing information, resources, and assistance to emerging businesses, existing ventures, and entrepreneurs that are seeking to build out ideas in innovative and creative ways. Although a significant portion of ideas brought to the Enterprise are tech-centric, the definition of technology can be broader: "In a rural area, you may not have the opportunity to be quite as specific and laser-focused with what your definition of technology might be," she said.
- Debbie Inman, Director of Center for Entrepreneurship and Information Technology: While Norris and Wyatt play a leading role in supporting outreach, businesses, and entrepreneurs, Inman takes on the role of leading the portion of the ecosystem that relates to students: She is tasked with leading the entire entrepreneurial ecosystem on campus, from directing student idea pitches and the TOP DOG New Venture Championship, to advising students, to supporting the intellectual property infrastructure. Inman, Wyatt, and Norris have been central leaders in Louisiana Tech's entrepreneurial ecosystem since the beginning, and having a central figure to specifically focus on activities related to students has been an essential piece of the puzzle.
- Tommy Perkins, Tenant Services and Facilities Coordinator at Tech Pointe: Perkins has only been at Louisiana Tech for the last four years, but has taken on a central role in coordinating and supporting all of the different businesses that lie within the physical buildings that house the Innovation Enterprise. He helps in the recruitment of businesses, ensures that businesses have the space and tools they need, and to get students involved in entrepreneurial projects from across disciplines.



HOW HIGHER EDUCATION INSTITUTIONS FACILITATE TECH-BASED ECONOMIC DEVELOPMENT IN RURAL PLACES

In the community and economic development world, universities and community colleges are often referred to “anchor institutions,” meaning that they offer notable infrastructure, support, and resources to the community in which they are located (Ehlenz, 2017). They have fixed investments — like physical buildings and facilities — employ a significant number of people, and offer economic assets to the community (Maurrasse, 2001). In Ruston and Newport, Louisiana Tech University and Arkansas State University-Newport fit this role to differing degrees and play particular roles in their respective communities when it comes to economic development, specifically tech-centric development. Universities and community colleges attract different types of resources and different types of students, but in the cases of both Ruston and Newport, there are three types of resources that these higher education institutions offer when it comes to tech-based economic development: partnership, physical and social infrastructure, and a burgeoning talent pipeline.



(Julie Allen, Newport Economic Development Commission in Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)

RESOURCE 1: PARTNERSHIP

By their nature, higher education institutions are deeply embedded in strategic partnerships. But different communities, and different types of schools, have different stakeholders with whom they need to interact. Universities and community colleges are key partners in a city or region because they are able to offer social capital, monetary capital, and human capital in the form of a building out a talent pipeline that has deep knowledge of technical skills, tools, and programs.

Take the case of Newport, where, as a community college, ASUN is the leading education institution in the area. Because of its role as a comprehensive community college, its central focus is on providing students with different pathways to success — whether it is entering the workforce right out of high school, supporting adults who seek career changes, or offering new skill sets to those who are already in industry. When it comes to the digital economy, this pathway model is essential, and is realized through partnerships with industry to provide relevant curriculum amidst changing technology and with local K-12 school districts to



enable younger students to delve into tech skills at an earlier age. While ASUN is designed to support Newport and northeast Arkansas more broadly, opting to partner with the Arkansas Center for Data Science is key: ACDS is able to be a broker with their own partner industries and organizations across the state to bring in even more knowledge about the types of skills that students need. “When we get requests from industry saying they need more support on a certain skill, whether it is technical or in leadership, we’re trying to work with them to develop support for their employees, and for our students as well,” said Jeff Bookout, Vice Chancellor for Economic and Workforce Development at ASUN.

Similarly, Ruston takes a regional approach to its tech-based economic development partnerships. But since Louisiana Tech is such an economic power in the area, it has more resources to do so than Newport does. When Louisiana Tech first started its digital economy work back in the early 2010s, it was doing so as an experiment. “When we started out, we were just connecting communities and community organizations to the university around economic development,” said Davy Norris, Louisiana Tech’s Chief Innovation Officer. “But it evolved into real work with startups, and with businesses that are mature but trying to pivot.” The Innovation Enterprise brings in partners with the explicit goal of supporting their student entrepreneurs. They bring in investors, local businesses, and entrepreneurs to judge student pitch competitions throughout the year, and they only choose to bring in business partners to the Enterprise Campus that have a goal of supporting tech development in Ruston. “We are quite intentional about focusing on rural areas [like Ruston] which are definitely not as frequently included in technology optimization opportunities,” said Kathy Wyatt, the Director of the Enterprise Center.

RESOURCE 2: PHYSICAL INFRASTRUCTURE

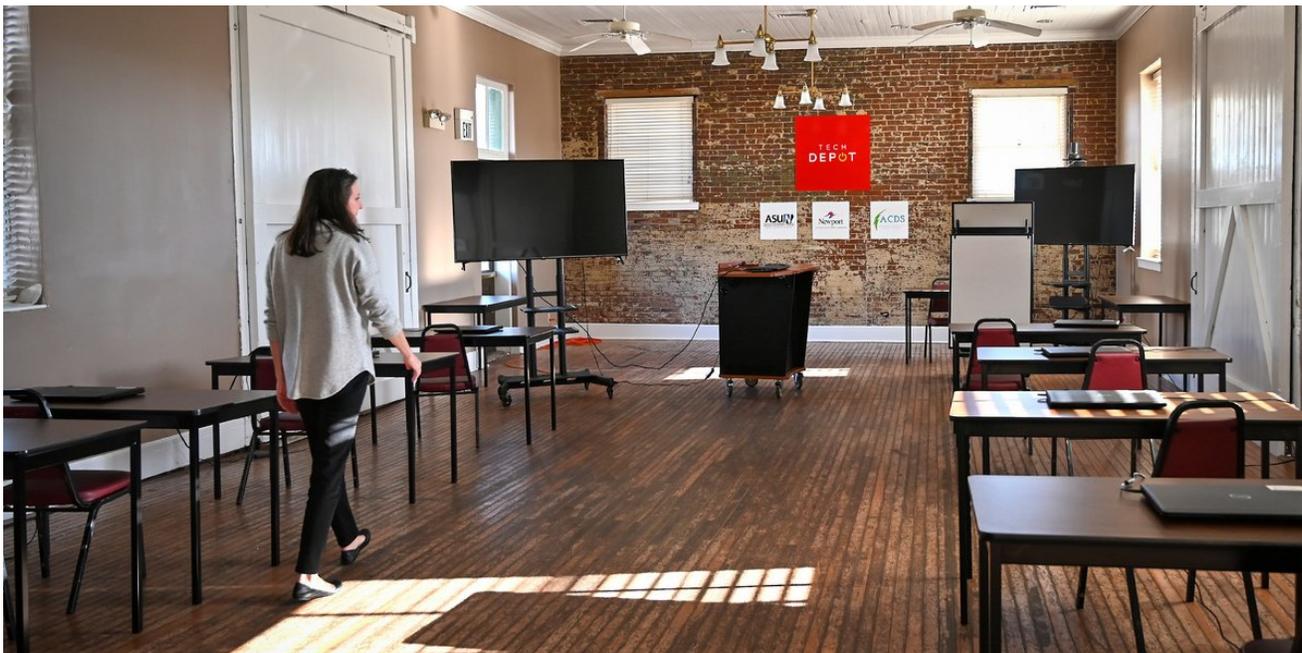
Another resource that higher education institutions offer in rural communities is a physical footprint: having available space, facilities, and a real presence within the community. Even though a significant amount of tech-based economic development can happen online, physical gathering locations as well as on-site technology and tools play a major role.



(Tech Depot in Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)



computer labs, programmable logic controllers, and virtual reality headsets to support students in their coursework and training. But as a part of its collaboration with NEDC and ACDS, the idea of establishing Tech Depot in a downtown location was to allow tech education to be more connected to the commerce area, which is why NEDC made it possible to use the old train depot. An entirely new 15,000-square-foot building is under construction in the empty lot next to NEDC's downtown office, which would serve as a community space to hold the tech classes and access to computers, as well as a coworking space — an endeavor that is funded by a 2020 EDA grant. "We have been trying to revitalize the old downtown to be more livable, particularly through the work of NEDC and the Newport Chamber of Commerce on projects like an open air amphitheatre, restaurants, and movies in the park," Chadwell said. "Now we are putting Tech Depot right here in the historic part of town so that it is more centrally located for businesses, and as a way of having our town's history meet the future."



(Tech Depot in Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)

As mentioned, Ruston has the advantage of Louisiana Tech's Innovation Enterprise, which houses more than a dozen local businesses — most in a building known as Tech Pointe. In addition to hosting the businesses, Tech Pointe is also home to the school's student business accelerator, a prototyping center, and a makerspace, all of which are accessible to both students and the businesses located there. "It's not a coincidence that Tech Pointe is located on campus, right between the engineering and business buildings," said Tommy Perkins, Tenant Services and Facilities Coordinator at Tech Pointe. "We want it to be a physical space where students from across disciplines can work on their ideas, and where professors can walk across the road and work on implementing their projects." Louisiana Tech is in the process of constructing another new facility to grow the physical footprint of the Innovation Enterprise, which is expected to be completed in 2023.

Newport, on the other hand, has a less walkable downtown-to-university area in comparison to Ruston, and leverages physical infrastructure in a different way. ASUN is situated about 8 miles from the downtown, on the campus of a former military airbase (the old runways are actually used for truck driving certification courses). On its campus, it has classrooms to hold training, as well as computer



labs, programmable logic controllers, and virtual reality headsets to support students in their coursework and training. But as a part of its collaboration with NEDC and ACDS, the idea of establishing Tech Depot in a downtown location was to allow tech education to be more connected to the commerce area, which is why NEDC made it possible to use the old train depot. An entirely new 15,000-square-foot building is under construction in the empty lot next to NEDC's downtown office, which would serve as a community space to hold the tech classes and access to computers, as well as a coworking space — an endeavor that is funded by a 2020 EDA grant. "We have been trying to revitalize the old downtown to be more livable, particularly through the work of NEDC and the Newport Chamber of Commerce on projects like an open air amphitheatre, restaurants, and movies in the park," Chadwell said. "Now we are putting Tech Depot right here in the historic part of town so that it is more centrally located for businesses, and as a way of having our town's history meet the future."

RESOURCE 3: A TALENT PIPELINE

It is important to acknowledge that Ruston is notably further along in its tech-based economic development than Newport, but their different stages in the process exemplify the benefits that can come from supporting a local, rural talent pipeline in tech-based industries. Community colleges and four-year universities also serve different purposes in this process.

In Newport, ASUN sees its role as getting people into some sort of career pipeline — in this case, into careers associated with technologies — which it does by working with community members, parents, and industry partners to identify technical skill sets to get more people the quality jobs that allow them to stay in their small communities. "If you ever wondered why the average age of community college students is much higher than traditional four-year universities, it is because we get people from various points in their lives coming to us — people who want to change careers, people who want more credentials, students who are in high school, students who are out of high school," said Johnny Moore, Chancellor of ASUN. This is where Tech Depot's training programs come into play. For example, Hytrol, a conveyor company in the Newport area,



(Arkansas State University-Newport in Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)

is one company that plans to put its employees through Tech Depot training and apprenticeship programs, which are instructed by ASUN staff. "Hytrol depends on ASU-Newport to provide a pipeline of skilled employees, specifically welders, lower level technicians, and people who would start out on the production floor, and we also have laser operators and CNC operators who we typically like to come from the technical centers," said Christy





(Ruston, Louisiana; courtesy Rural Innovation Strategies, Inc.)

Valentine, Manager of Academic Partnerships at Hytrol. “We rely heavily on employees who come from the rural Northeast Arkansas area.” In addition, the IGNITE Academy, a career and technical assistance program that brings high school students to the ASUN campus daily to do hands-on coursework in technical skills such as computer networking.

Ruston’s talent pipeline development is much more centralized within its Enterprise Campus, as opposed to companies in the broader Ruston community. It explicitly uses its Enterprise Campus as a way to support student- and faculty-related tech enterprises, specifically offering spaces to businesses that want to work with the university, but more importantly, those that want to work with students. Some businesses hire a significant number of student employees and interns, while others were created and founded by students in university pitch competitions. One example of a business that seeks to build the capacity of students is Fenway Group, an organization that offers IT services, and it has a mission of supporting younger generations of technologists. To do so, it hires students as associate employees – and not interns – to work for clients in Ruston as well as across the country. These students come from across academic disciplines, and are hired for a 24-month program during their junior year in which they are able to earn certificates for the tech skills that are most relevant to their career aspirations. “We look at folks who are interested in working for customers that are outside the area, and also those who want to stay close to home and match them accordingly. And so when folks come out of the program they’re being directly hired by our clients on a permanent basis,” Martin Santora, founder of Fenway Group, explained. Another company, BetaFlix, creates virtual training manuals for clients in the welding, health, and defense industries. BetaFlix was an idea that was created by a student, and then invested in by a Ruston entrepreneur at a student pitch competition. In 2016, Jim Davison, the President of the company, was born and raised in Ruston, and was invited to attend one of the student pitch competitions. There, he met Dr. Sreenivasa Sanakam, who was a Ph.D. student at the time and pitching the idea for BetaFlix. Davison, a businessman and also a pilot, was impressed by the idea, and in 2015, they officially launched the company together. The infrastructure that Louisiana Tech has established – from business pitch competitions to bringing companies on campus at Tech Pointe – show how education institutions can play a central role in connecting students with local businesses and fostering the creation of tech-centric endeavors.





(Mark Hanan; Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)

COMMUNITY PROGRESS AND BENEFICIARIES

While Ruston and Newport are both rural communities working on expanding their tech-based economic development, the two cities are coming from quite different perspectives: Ruston is a community of over 20,000 with a significant four-year university, and Newport is a town of over 8,000 with a community college that is partnering with other local organizations to amplify its options for its community. In both spaces, there are individuals who are benefiting and taking advantage of the ecosystem institutions being constructed — some through an entrepreneurial lens, and some through an educational perspective. Below are the stories of two of those people.



(Mark Hanan; Newport, Arkansas; courtesy Rural Innovation Strategies, Inc.)

MARK HANAN

Mark Hanan is an Instructor of Computer Networking at ASUN who teaches the IT Generalist and A+ Certification courses at Tech Depot, and also instructs high school students who attend ASUN as part of the IGNITE Academy, which enables high school students to earn workforce credentials in fields like computer networking technology, PC repair, and server administration. Hanan was born and raised about 50 miles north of Newport in Black Rock, Arkansas, a town of about 825 residents. Initially, Hanan did not work in tech — he was a carpenter. But this work was seasonal, and in 2001, a friend helped him get a full-time job in IT. This began his path in an IT career, which would lead him to return to school to get his associate degree, working in corporate IT in the call center industry, getting his bachelor's degree in applied sciences, and eventually getting hired to teach the technical education courses at ASUN. "In a rural area, because we have so many families that are active in agriculture or manufacturing, trying to recruit those students and get them to understand just how valuable computer networking really is can be a challenge," Hanan said. "It's my role to convey what really is behind the scenes of a computer and just how valuable it can be to know how to do that work."





(Alicia Kiremire; Ruston, Louisiana; courtesy Rural Innovation Strategies, Inc.)



(Tech Pointe, Louisiana Tech University in Ruston, Louisiana courtesy Rural Innovation Strategies, Inc.)

ALICIA KIREMIRE

Alicia Kiremire is a longtime resident of Ruston, a Louisiana Tech alumni, and now the founder of FlowStream Management, a grant consulting company that Kiremire runs out of a bright office in her home. Kiremire studied engineering when she was a student at the university, and she went on to pursue a master's in educational administration. Following her graduate degree, she spent time working as an advisor for engineering students at Louisiana Tech, and also had a stint at a local engineering firm. Her experiences in these different types of work environments made her realize both what she did and didn't want: She knew she wanted to be in Ruston and she wanted flexibility. She knew she had a skillset in grant writing and thought she could build something bigger out of it. In November 2014, she decided to enter the Won in One business pitch competition at Louisiana Tech, where participants offer a one minute pitch of an entrepreneurial idea – and she won. Feeling motivated, Kiremire decided to apply for Louisiana Tech's business accelerator program run by Kathy Wyatt at the Enterprise Center. A few years down the line, she started her official LLC, and in 2017 she started working on FlowStream full-time. "Probably twice a year, I'll email Kathy Wyatt [at the Enterprise Center] and ask a question, and she always replies. It's just helpful to know that I'm not alone in this, and that there are people who can provide me with insight, input, and connect me to other people," Kiremire said.



CONCLUSION

Offering a comparison between Ruston, Louisiana, and Newport, Arkansas — two rural communities in the American south — shows just how different two experiences of tech-based economic development can be. In a larger rural community with a powerful four-year university like Ruston, greater physical infrastructure and social support to foster a tech talent pipeline are more deeply ingrained within a dominant institution. In a smaller community like Newport that is newer to tech-based economic development, much of the work focuses on creating that physical infrastructure, creating interest in tech, and building partnerships across local institutions, with a local community college lying at the center of the puzzle. Different rural communities may see themselves in Ruston, while others may see themselves in Newport. The hope of this case study — in combination with the other four in this series — is that rural economic development leaders can identify common strengths and challenges, and reference them to bolster their own experiences of tech-based economic development.

THE RURAL ECONOMIC DEVELOPMENT TOOLKIT: LEVERAGING HIGHER EDUCATION INSTITUTIONS

Ruston and Newport are at varying stages of building out their digital economy ecosystems, but in both cases institutions of higher education play central roles. Based on these realities, CORI and RISI created a checklist of suggestions and questions for rural community leaders. This checklist is one in a series of five, and it is recommended to be used alongside the others. It can be used as a tool to support those considering applying for a Build to Scale grant or other funding opportunities, and is ideally used several months before the Notice of Funding Opportunity (NOFO) is released:

1. Understand the educational institutions in your area:

- What are the higher education institutions that exist in your town or city? What about in your region?
- With what types of entities do the higher educations have partnerships:
 - With what local government offices/organizations?
 - With what industries/local businesses?
 - With what non-profit organizations?
- Are there already digital economy ecosystems that exist within any of these institutions?
- Who are the key points of contact?

2. Identify the types of educational opportunities that exist in your area:

- What types of formal tech-centric training is available for:
 - Unemployed adults?
 - Adults who are looking for a career shift?
 - College students?
 - High school students?

3. Identify the types of educational opportunities that exist in your area:

- What are the dominant industries?
- What types of relationships exist between higher education institutions and industries?
- What are the employment needs of these industries?
- What types of training and education programs exist to address these needs?



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