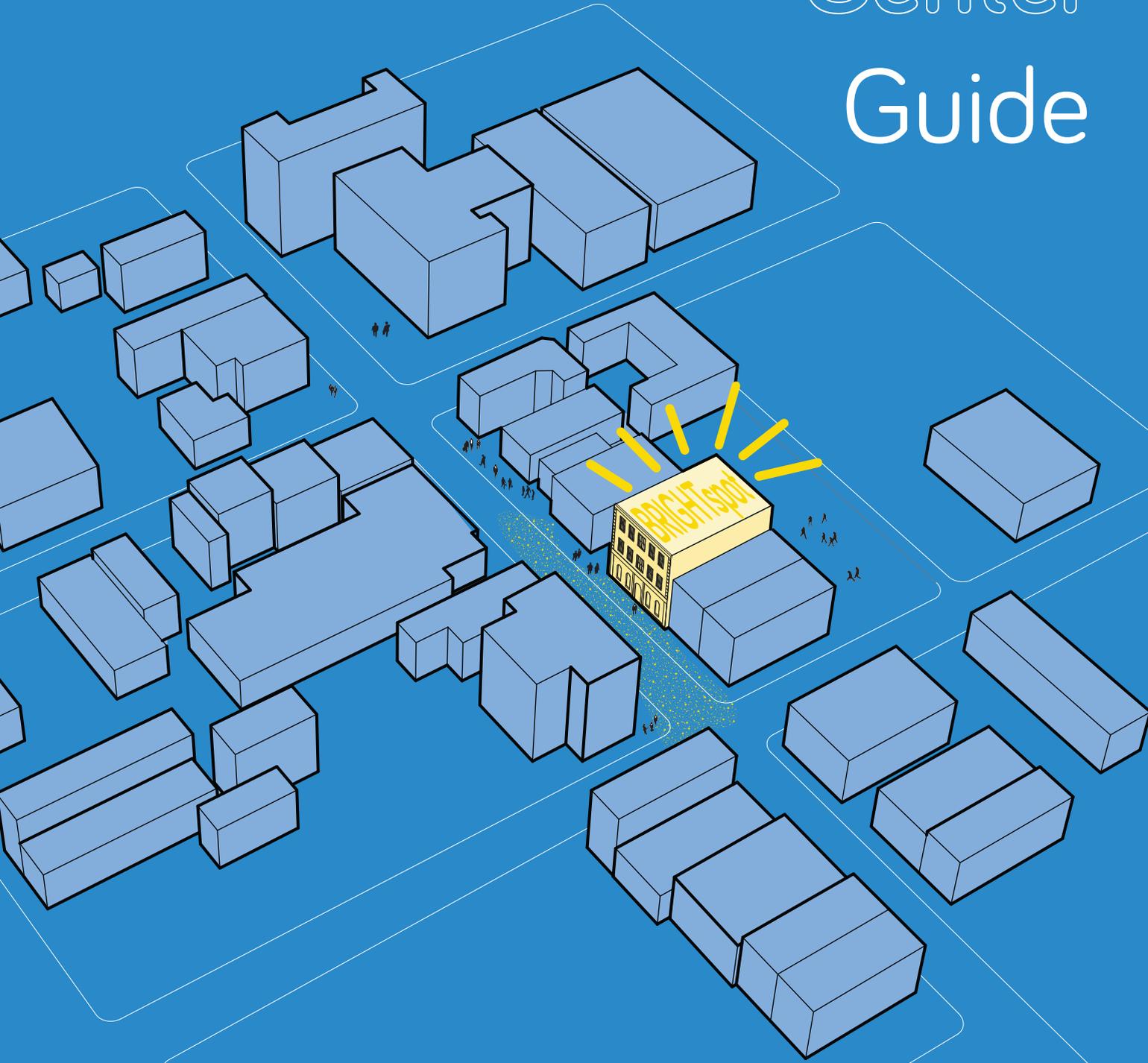


the  
**BRIGHTspot**

Center  
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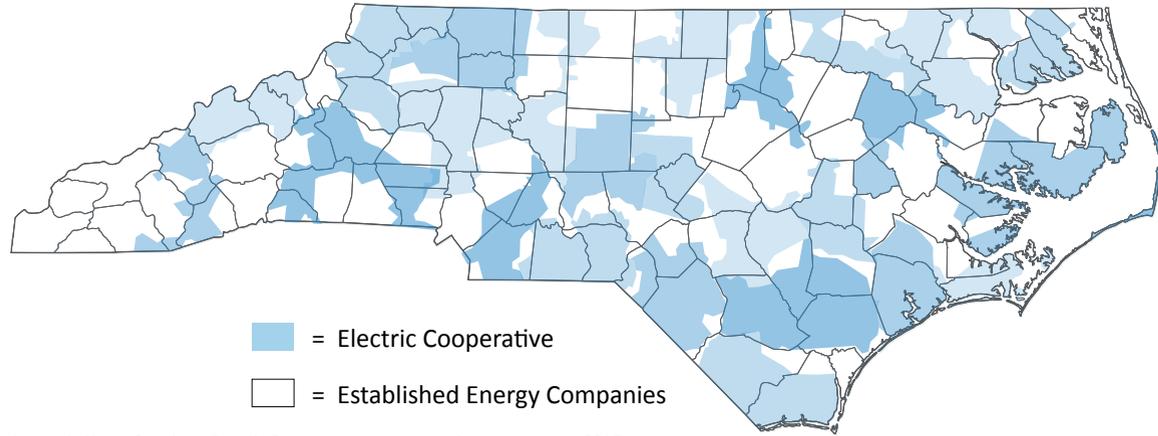


Image 1: North Carolina's Electric Cooperatives, www.carolinacountry.com, 2017



Image 2: Operating Areas of Telephone Companies, North Carolina State Archives, 1970

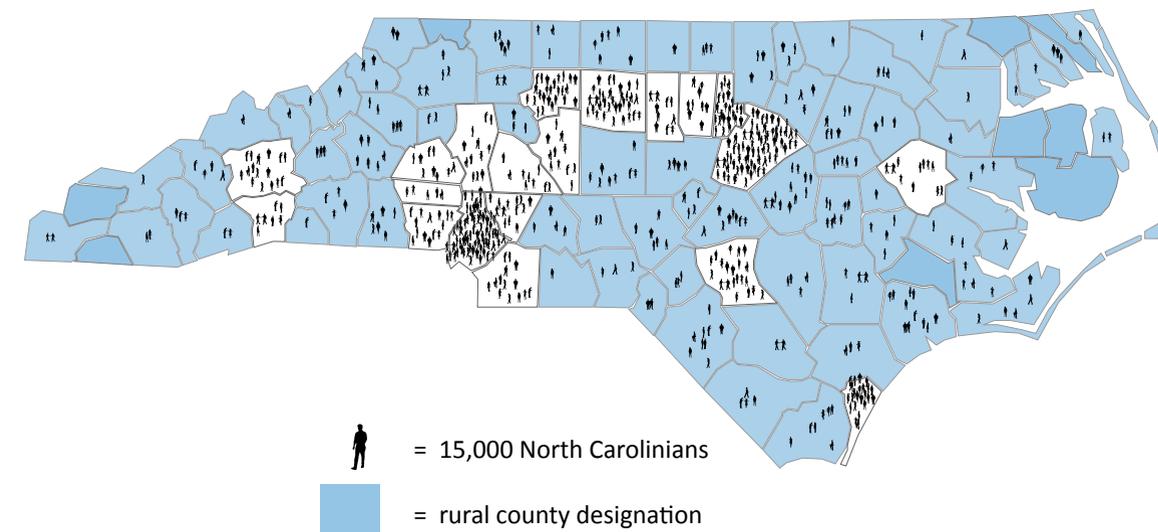


Image 3: "North Carolina Counties", Statistics from The Rural Center, 2014

## Executive Summary

Economic development has always been dependent on connecting to a market where people with something to sell can interact with people who want to buy it. Being able to connect to the market is crucial.

This fundamental aspect of economic development has long been the problem in the **high-cost, low-density, low-income areas** of North Carolina. It costs too much to connect these areas, so they are last to be connected.

The colored areas shown in Image 1 illustrate the current service areas of the 26 Electric Membership Cooperatives. These Co-Ops were formed in the 1930's because no large company would serve these rural areas. They were started to meet a substantial, though fiscally difficult, need that was going unserved by the large electric companies.

Image 2 shows the service territories for phone companies almost 50 years later. The white space is where Southern Bell offered service. The green areas are the **high-cost, low-density, low-income areas** it did not serve and where independent cooperatives sprung up to address the need. Once again, a solution had to be found outside of the large service companies in order to ensure all people were provided the current technology.

Today the key infrastructure is Gigabit-speed Internet service. The white space in Image 3 shows the urban and suburban centers of North Carolina. Not surprisingly, these generally align with the areas where large companies plan to provide Gigabit-speed Internet service. There are no stated plans to offer the FCC standard Internet service speeds (25 Mbps down/3 Mbps up) in the blue, rural counties.

*A BRIGHTspot Center is a way to connect people in high-cost, low-density, low income areas to the extraordinary opportunities of the network economy.*

It is a way to begin to change the game, making the **community** a platform in for entrepreneurs and innovation. Building a BRIGHTspot Center will not automatically connect everyone in every location. However, it will change the game by creating the critical mass in at least one location so that people can begin to **"discover, engage and create"** these opportunities for themselves.

The lesson of the last 200 years – and in each of the four Industrial Revolutions – is clear: **if you do not have the technology to connect to the market, and therefore to compete in it, you will be left behind.** Building a BRIGHTspot Center is the best and fastest ways to help people in rural and low-income areas get connected to the extraordinary opportunities in a network economy.

This Guide helps **local leaders understand the problem** so that they can get started on a BRIGHTspot Center as part of the solution for economic growth.

# Table of Contents

This Guide explains how a BRIGHTspot Center can be the **platform** of growth for a community in the network economy. It offers an analysis of the problems that low-income and rural areas face. It also explains the urgency for connecting communities in this network economy.

Every Industrial Revolution has been driven by the dual forces of **Connectivity** and **Automation**.

Since the days of the railroad, automation enabled production “at scale” in a way that improved efficiency and drove down costs. Additional income and profitability trickled down to workers and spread into the community.

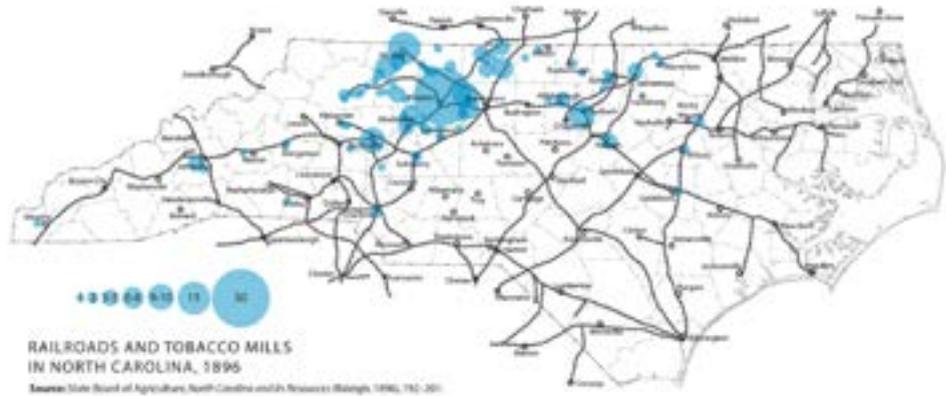
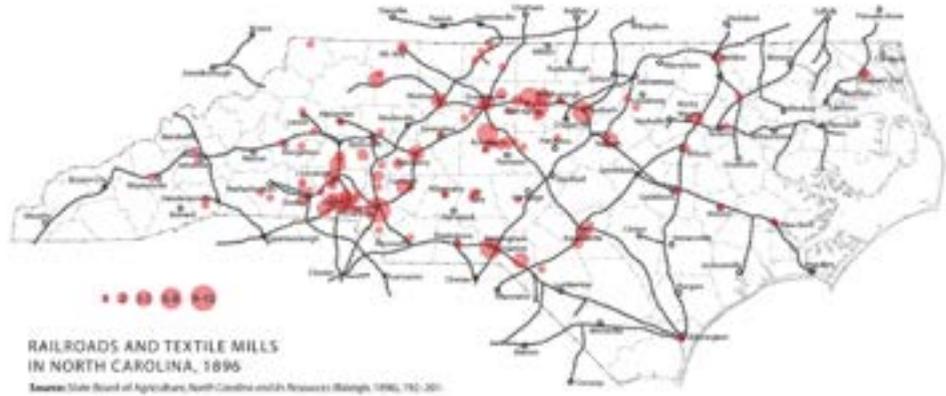
With the additional production came the need to **connect to new markets** outside the local area. Communities sprang up following the lines of connectivity. Any place a community could be connected, it could grow and prosper.

The forces of Connectivity and Automation are even stronger today. But they are no longer tethered to **physical** things like they were in the days of railroads and large “bricks and mortar” locations. Gigabit-speed data connections and computing power “in the Cloud” eliminate the physical boundaries of communities.

No longer does an individual or a business need a large physical infrastructure to succeed.

*But they do have to be connected.*

This Guide offers the **opportunity** to get started.



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## The Focus is People

Business centers in today's economy do not look like they did in the 1900s when **electricity** was rapidly changing the way business was done, or a few decades later when the **telephone** forever changed the meaning of connectivity. The speed of the **internet**, combined with cloud-based computing, connects people directly to products, services, businesses, and jobs without the constraints of physical space. The same economic forces that made it important to connect towns to electricity or telephone service, now make it imperative for people to connect to this new market.

The value of being connected to these network-enabled markets is readily apparent in large cities like San Francisco and New York, as well as smaller cities such as Austin and Raleigh. These places are ripe with opportunities for innovation because they are able to provide all the needs of a growing business community: physical space, connectivity, and a density of people who interact in a vibrant community.

These have always been the formula for economic success: low costs, high density, and high discretionary income. Large companies have historically ignored rural areas because they exhibit the opposite: **high cost, low density, and low income**. This is why people in rural areas have had to build the infrastructure to connect to markets at every stage of the evolving economy.

The BRIGHTspot Center is a local node that enables its community to participate in a larger network. It is the launching point for people in rural areas that want to connect with the products, services, and opportunities of the new economy. It functions as a local **platform** where people can actively participate in this new network-enabled market. It is also a **physical place** where people can see new things, understand opportunities, and take action in a way that would not otherwise be possible in their town.

*It is not simply a place for demonstration and information, it is a place for doing and participating.*

Any town can build a trendy space - one with stylish materials, casual seating, and a graphic sign boasting "Innovation Center". A BRIGHTspot Center provides all that, but its benefit comes primarily from how it **functions**. In a new economy where **people are the key element**, it is human interaction and innovation that produces value. This is the BRIGHTspot Center's formula for economic growth: connecting pioneering and energetic people in the local area to the products, services, and opportunities that lie outside its rural location.

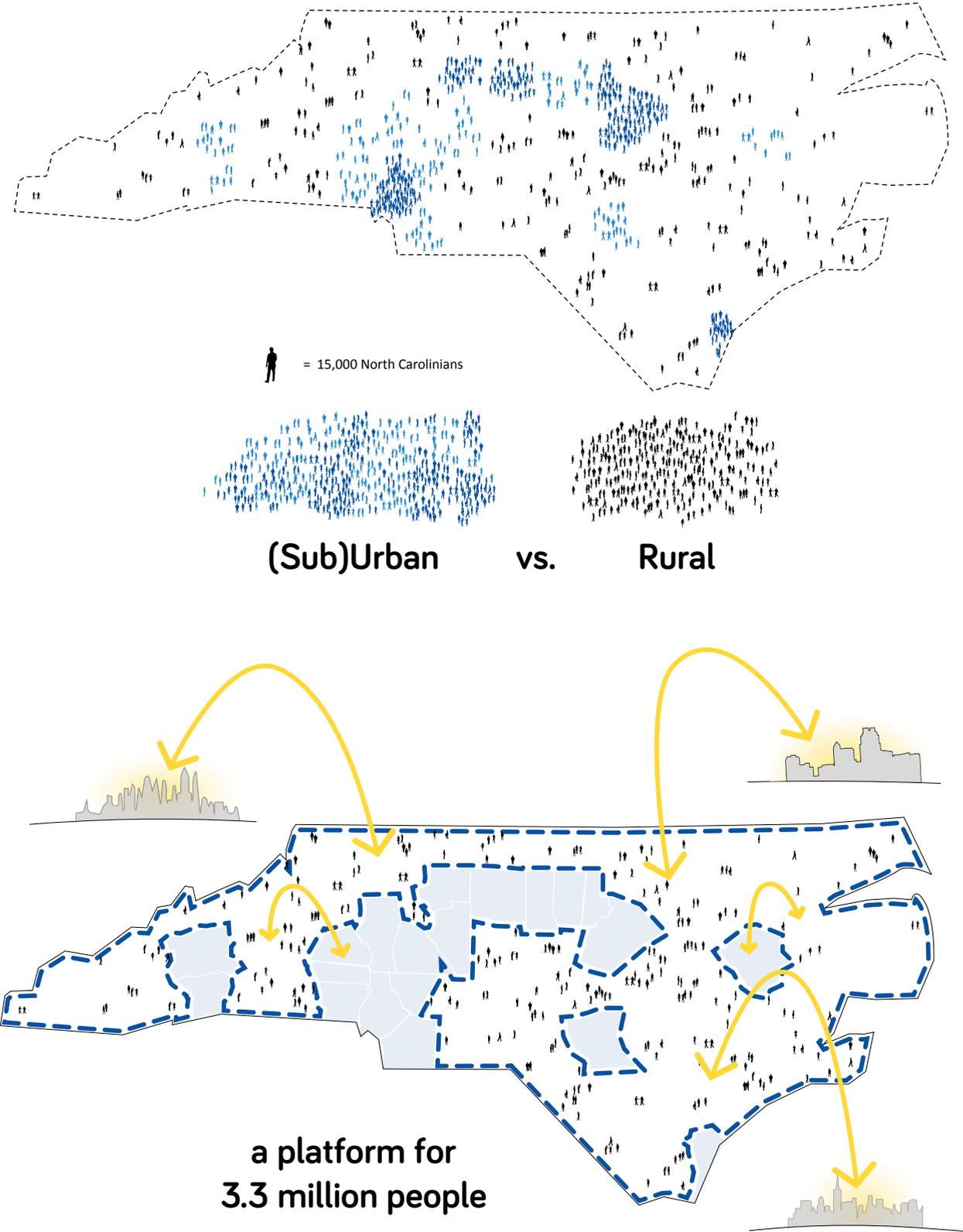
# A Platform for People

Every market is made up of valuable transactions and exchanges. The *Consumer* and the *Producer* create the two “sides” of the market. In the new network-enabled markets, the BRIGHTspot Center is the place where these **two sides come together**. It is the platform local people use to connect to larger growth and opportunities that are available outside of the town. It is also the physical place for the human engagement and interaction that builds a vibrant local community of innovation.

Today’s fastest growing markets are characterized and fueled by simultaneous advances in technology and rapid cycles of innovation. This is what creates the energy that attracts talent and investment, which starts the next cycle of growth. For people who do not live or work in these places, it is almost impossible to keep up, get engaged, or participate in these cycles of growth. It is hard to benefit from a market in which you are not physically located.

While these barriers are real, they are no longer just physical. They can be overcome anywhere that people have access to cloud-based network tools and platforms. This is the lesson of success for entrepreneurs who are connecting to markets in London, Boulder, Beijing, and Sydney. By providing a **local platform** for this connection, the BRIGHTspot Center eliminates the need for a local entrepreneur to have to travel some distance, or move to a different town, just to participate in the market. The BRIGHTspot Center acts as the platform that makes global opportunities available locally.

Equally important is the critical mass of activity that lets entrepreneurs interact with one another. The act of being together in one **physical place** creates the potential for new relationships and new conversations among people with different interests and levels of expertise. It is this human interaction that elevates and empowers the current community. It is the interaction of people that produces value. Because of how it is designed and functions, the BRIGHTspot Center provides the platform, the human interaction, and re-establishes relevancy within the changing global market.

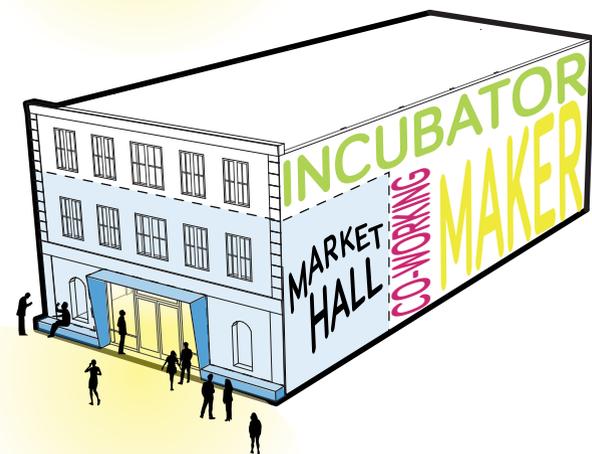


# A Place for People

The success of a BRIGHTspot Center rests in creating a *place* where human interaction, ingenuity, and innovation can thrive. The goal is to create a community of people that engage with one another on many topics in ways they previously weren't able.

In order for this to happen, the place needs to be designed to draw people in, allow them to **DISCOVER** available opportunities, give them the assistance and tools to further **ENGAGE** in those opportunities, and finally, establish for them a physical place where they can **CREATE** solutions, business, and other opportunities.





## The People’s “Market Hall”

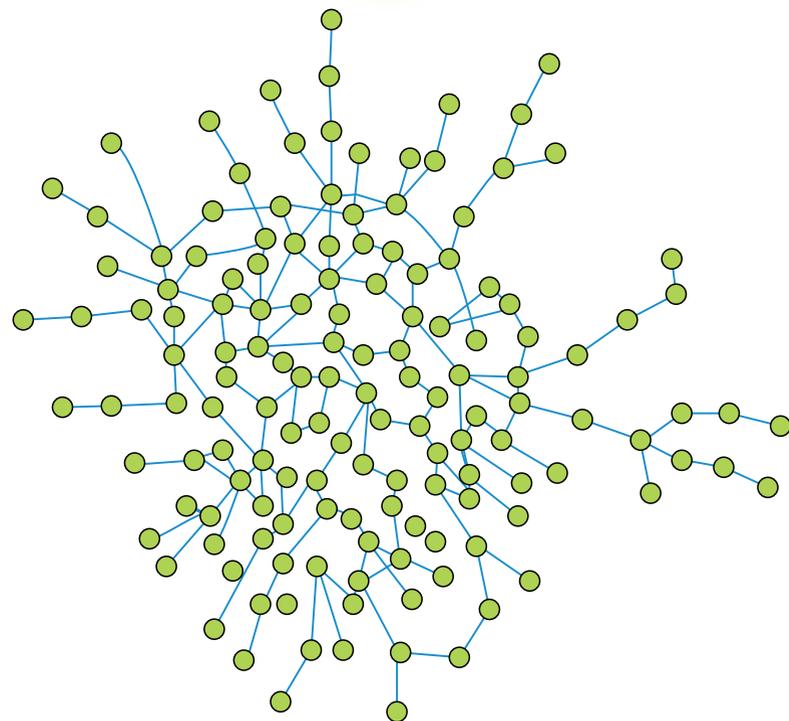
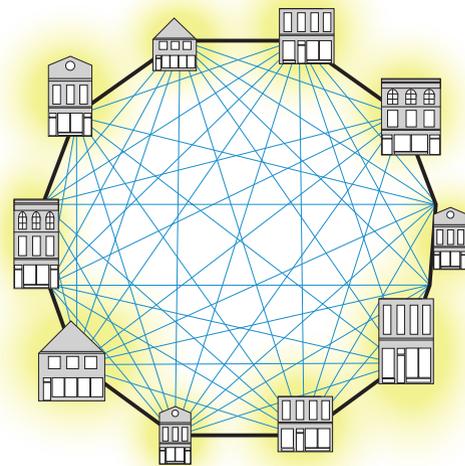
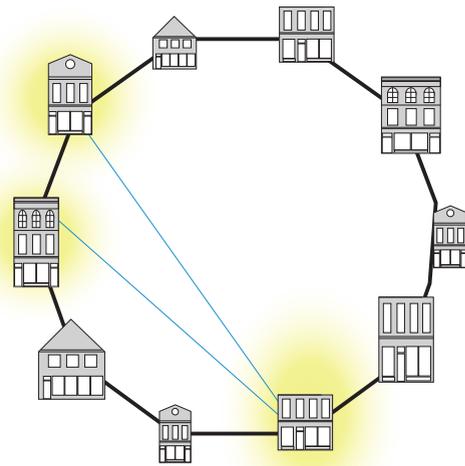
The two main functions of every BRIGHTspot Center are the same. First it acts as a **physical place** for human interaction, innovation, and engagement. Second, it provides a **platform** for connectivity, both locally and in larger markets.

The Market Hall is a place where these two objectives are achieved. The Market Hall is full of public activity and will be at the front of every BRIGHTspot Center. It is the heart of the place. It will be the generator of community connectivity and allow a physical space for community interaction and individual growth.

The Market Hall is the highly visible, highly accessible place where people can come in off the street to touch and feel the future. In a people-centered economic model, it is where the people **DISCOVER** what is possible and learn how that might benefit them. It is where they **ENGAGE** with others to figure out how to connect the dots in the way that will bring the most benefit to them, and are given the ability to **CREATE** solutions via opportunities they otherwise would not have had. The Market Hall is the new economic driver in the community and is the heart of each BRIGHTspot Center. Such an enticing and active place is critical in rural areas.

While the Market Hall will always serve as a space that energizes the life of the community, gives opportunities to the individual, and becomes a destination that begins to revive the town, other aspects of BRIGHTspot Centers will be different based on the need of its community. Each BRIGHTspot Center will be designed to fit its **local context** and serve its **local demographic**. Each will accommodate different programs to meet the local needs. Some BRIGHTspot Centers will contain incubators, growing local businesses. Some will need enlarged co-working spaces or a central cafe to increase local productivity and enable community discussion. Still others might have a maker space or tool co-op for local tradesmen and women. These income-generating programs will be included based on the needs of the community and also help the BRIGHTspot Center to succeed financially.

It is the Market Hall that is the **consistent component** throughout all unique BRIGHTspot Centers. It is the skeleton on which other elements are added, acting as the **node** in the larger network of economic development. Just like the domestic hearth and a public forum, the Market Hall is the heart and genesis of the connected community.



## Nodes to Networks

In 2012 Facebook acquired Instagram for \$1 Billion. At the time Instagram only had 13 employees. In early 2014 Facebook acquired WhatsApp for \$19 Billion. At the time the company had only 50 employees. The value of these companies was not based on the number of employees. It was based on the **platforms** that each had built and the **network effects** they these platforms created. In the network economy, value expands as people and things are connected.

*The BRIGHTspot Center connects people in the network economy. This is the new math of economic development.*

The term “Network Effect” is used to describe growing economies of scale. It illustrates the way a network’s value increases as more people join or use it.

When the structure of the network enables an individual to be both a consumer and a producer, it is called a “two-sided” market. As the number of consumers grows on this dual-edged platform, it pulls in more producers, which broadens it yet again and pulls in more consumers. Even more exciting, when more than one kind of service can be offered by the same platform, it becomes an “multi-sided” platform that grows exponentially in many directions.

The economic power of a platform comes from the way users cause its value to grow. Local leaders no longer have to recruit developers or find the next industry to set up shop outside their town limits. If they succeed in establishing the platform, the exponential growth will come from the network effect.

The BRIGHTspot center allows each town to grow economically in ways that previous business models could not. It allows each community to get the benefits a large network has to offer by simply becoming a **Node** on the larger network, anchored in the physical place already being called “home”.

The BRIGHTspot Center is the physical place that connects to a network beyond its walls, and transforms the **community** into a Platform for economic development.

## Why here? Why now?

Leaders in every generation stand on the shoulders of those who came before them, but must still grapple with current forces and dynamics. This has never been more true than it is for today's leaders. While it has been less than 100 years since many rural locations in North Carolina received the electricity and factory automation to allow them to participate in the Second Industrial Revolution, their leaders must address the move to the network economy occurring now in the Fourth Industrial Revolution.

In the network economy each connected individual can be both a **consumer** or **producer** of products and services. This opens the opportunity to create entirely new interactions that produce value, whether in a new business, or as the result of a new job.

*A BRIGHTspot Center can serve as a first point of connection for people to experience the opportunities made possible in the network economy.*

It is the place where people can discover the possibilities of the **network economy**. In the Market Hall they can engage with new products and services, whether currently available locally or through the network. As an engine creating demand for CoWorking spaces, or MakerSpaces, or Incubators and Accelerators, the BRIGHTspot Center helps transform the community into a platform for economic development and growth.

As described in the next sections, development of a BRIGHTspot Center complements traditional economic development efforts by harnessing the energy of **individual entrepreneurs** and **innovators** who can immediately pursue network-based products, services, businesses, and jobs.



Lumbee River Electric Membership Corporation, 1935

*May 1935 - President Franklin D. Roosevelt created the Rural Electrification Administration (REA) for the purpose of making long-term, low-interest loans to electric utilities for construction of power facilities in rural areas.*

*Big cities in America had already enjoyed the benefits of electricity for several decades. The rural towns, however, were still in the dark. In 1940, all that changed when the electric cooperative that would become Lumbee River EMC brought power to the farms, homes and communities across Southeastern North Carolina. This electrified the existing economy.*

## Case Study: Fayetteville

In 1942, Sears opened a location in the small downtown of Fayetteville, North Carolina. The building was near the train station and physically attached to the luxurious Prince Charles Hotel. Consumers from all over the state could literally walk next door from the train station at the center of town, check in to the Prince Charles Hotel, and walk through hotel straight into the Sears store to purchase their goods. When they finished with their shopping, their packages would be loaded on the train for them and they would return home after a peaceful sleep in the city's finest accommodations. The Sears and Prince Charles Hotel provided the goods and services for markets outside of Fayetteville and the train was the infrastructure that allowed the local economy to benefit from the connectivity with larger markets.

By 1975, the store had been relocated, leaving an ever-widening hole in the former economic model. By 2015 the store had been ***gone for longer that it had been in operation***. City and County leaders hoped that an "Innovation Center" could fill the hole that this innovative business model from the early 1900s had created.

At the end of 2015, leaders in Fayetteville were intent on developing an "Innovation Center" in downtown Fayetteville to replace the Cornerstone facilities that had historically connected people to the Sears store. They had hoped that this idea would act as an economic engine in downtown Fayetteville. However, an Innovation Center as a stand-alone entity is not enough to change the local market. Had the Sears store stood alone it would have generated some local business, but it would not have had the same impact on the downtown development. It was the network that the Sears, the Prince Charles Hotel, and the train created by acting together that stimulated the market in the way it did. These three network components - the ***goods***, the ***services***, and the ***infrastructure for connectivity*** - together impacted the early growth of Fayetteville. It is this network that brought others physically from larger markets to Fayetteville and acted as the economic engine.

It is wise and beneficial for City and County leaders to look to history for examples of economic growth, but they must understand fully the reasons that models succeeded in the past. A simple name change ("Department Store" to "Innovation Center") is not enough to trigger growth. While an Innovation Center is a great place to start, an Innovation Center that is not fundamentally a part of a larger network will not succeed in generating the type of economic growth that planners seek. It is not enough to simply replicate what has been done in the past; true progress will only come by enhancement of previous models.



Downtown Sears (est. 1945) & the Prince Charles Hotel (est. 1923), Fayetteville, North Carolina

# Why change economic strategy now?

If this is such an obvious answer, why hasn't it been done before?

How do you connect the local economy to **larger opportunities**?

But wait, why do something different than we have in the **past**?



# Cornerstone Economy

Every city and county has dedicated programs focused on economic development. What is so **different** about a BRIGHTspot Center that could warrant any change in these efforts? The answer lies in the analysis of how the forces of automation and connectivity originally shaped rural towns and now threaten their continued existence.

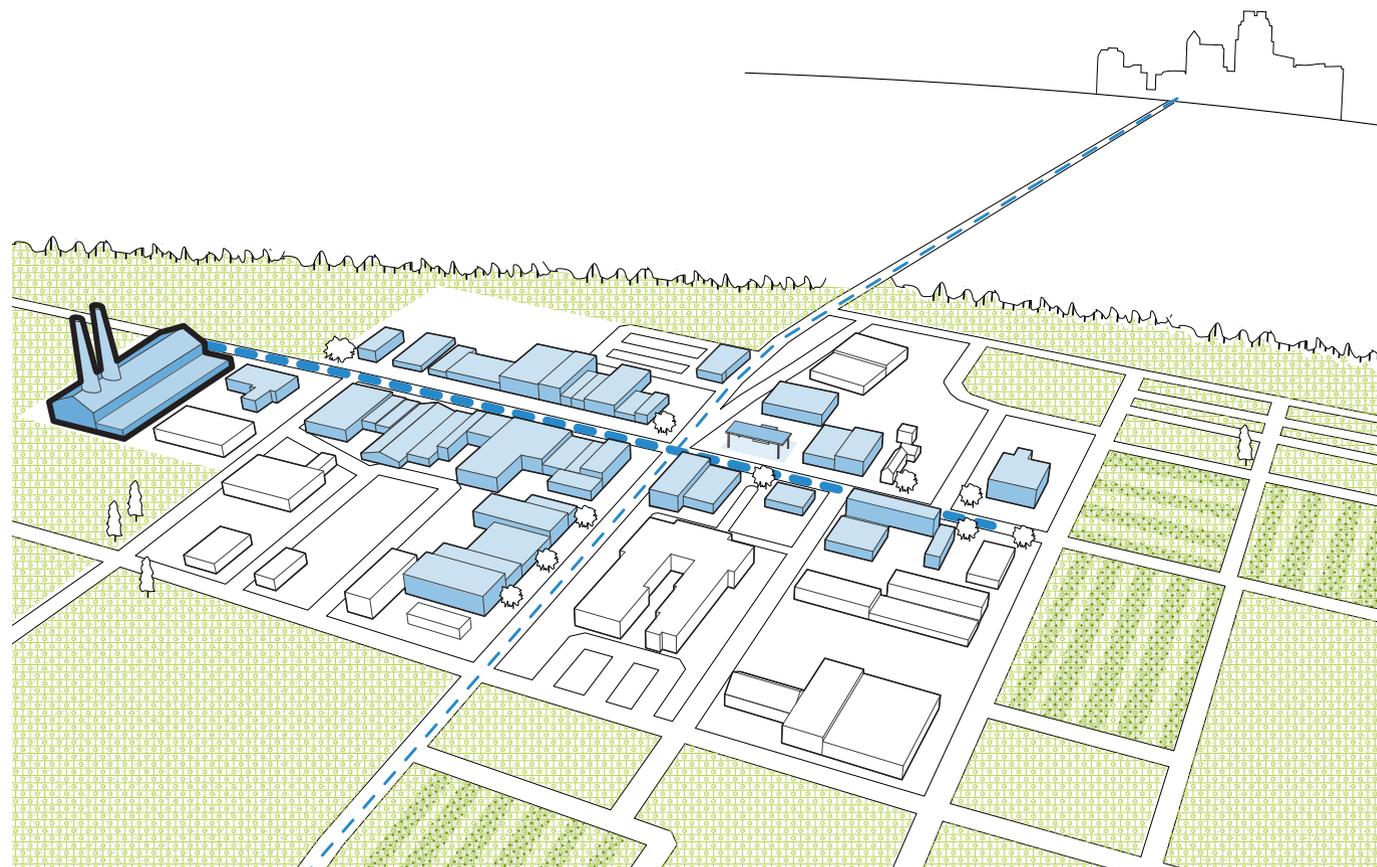
With the introduction of electricity came automation that fueled the age of **mass production**. The establishment of a textile factory, furniture plant, or tobacco mill became the **cornerstone** for many rural towns in the south. The factory or mill provided jobs for local inhabitants and their proximity established a small town that the local industry supported.

*The Cornerstone business supported the growth of Main Street.*

Modern transportation allowed the goods produced in the Cornerstone operation to export goods to other markets, in essence **importing money** from buyers in other markets and supporting the local economy. This model remained largely unchanged until the 1950's when the expansion of the automobile market meant that people could now travel to and from places as easily and inexpensively as the goods they produced. As the postwar economy grew, so did local incomes.

It was perfectly reasonable to begin a job in a local factory and expect to enjoy a reasonably stable middle-class lifestyle. In the early days of the Baby Boom, life in small town America flourished. Expanding **automation** and **connectivity** through the highway and telephone systems meant more modern conveniences for individuals and families.

However, this stability would be relatively short-lived.



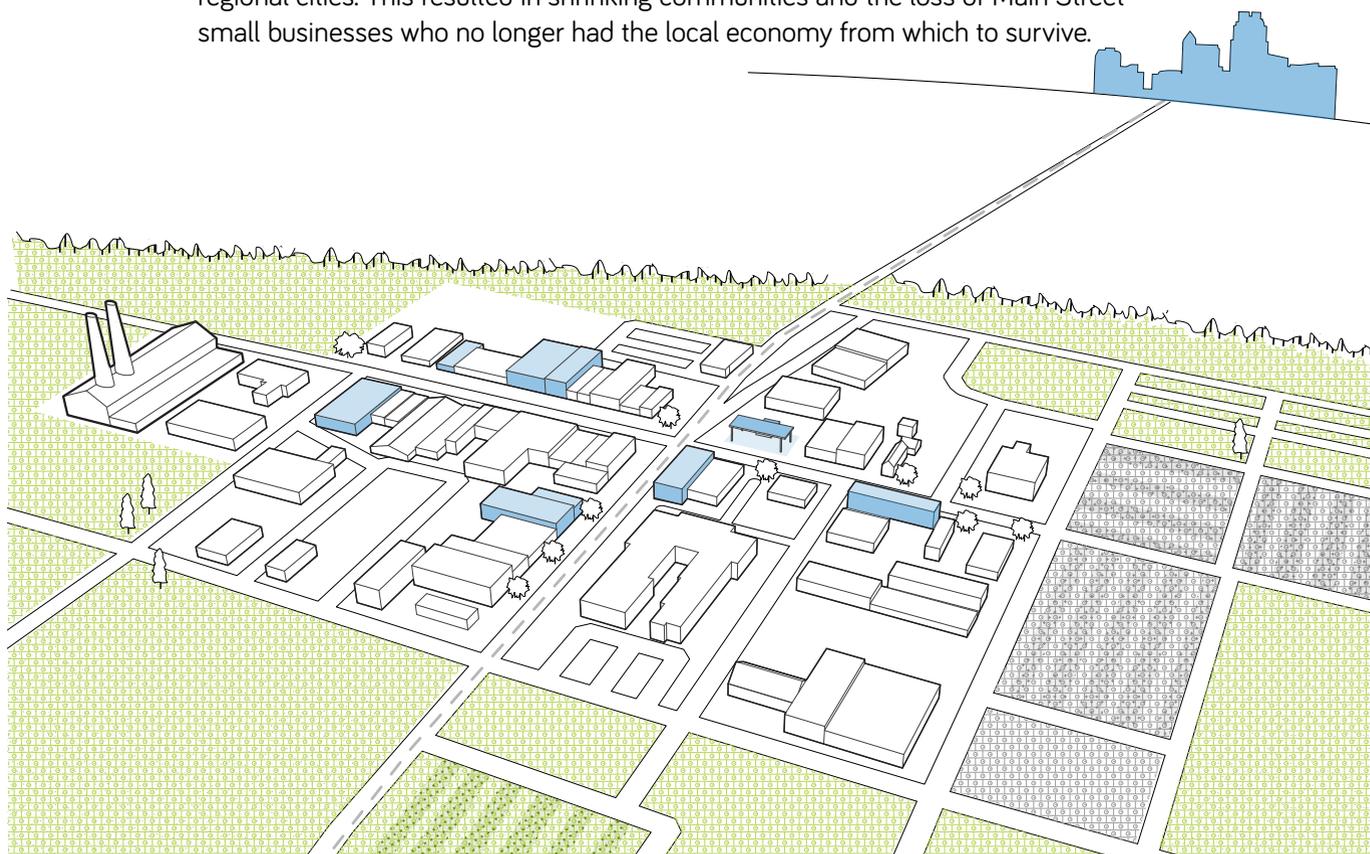
## The Hollowed-Out Economy

Advances in telecommunications and early development of computer technology fueled by the Space Race in the 1960's began to slowly erode the stable market models of small towns. This was the beginning of the Information Technology ("IT") Revolution and it meant that factories and production facilities could now operate with greater scale economies.

The result was the slow, but steady, "hollowing-out" of small towns as the race for reduced costs through larger economies of scale accelerated. Since it was now possible to manage even larger production facilities, and to move goods even greater distances quickly, companies began to consolidate their manufacturing operations and closing their medium-sized plants and factories that once acted as the stabilizing force in the local economy.

*The local economy moved from Main Street to distant locations.*

As it also became increasingly easy to communicate with people in distant markets, companies began to consolidate their people in larger locations, usually in selected regional cities. This resulted in shrinking communities and the loss of Main Street small businesses who no longer had the local economy from which to survive.



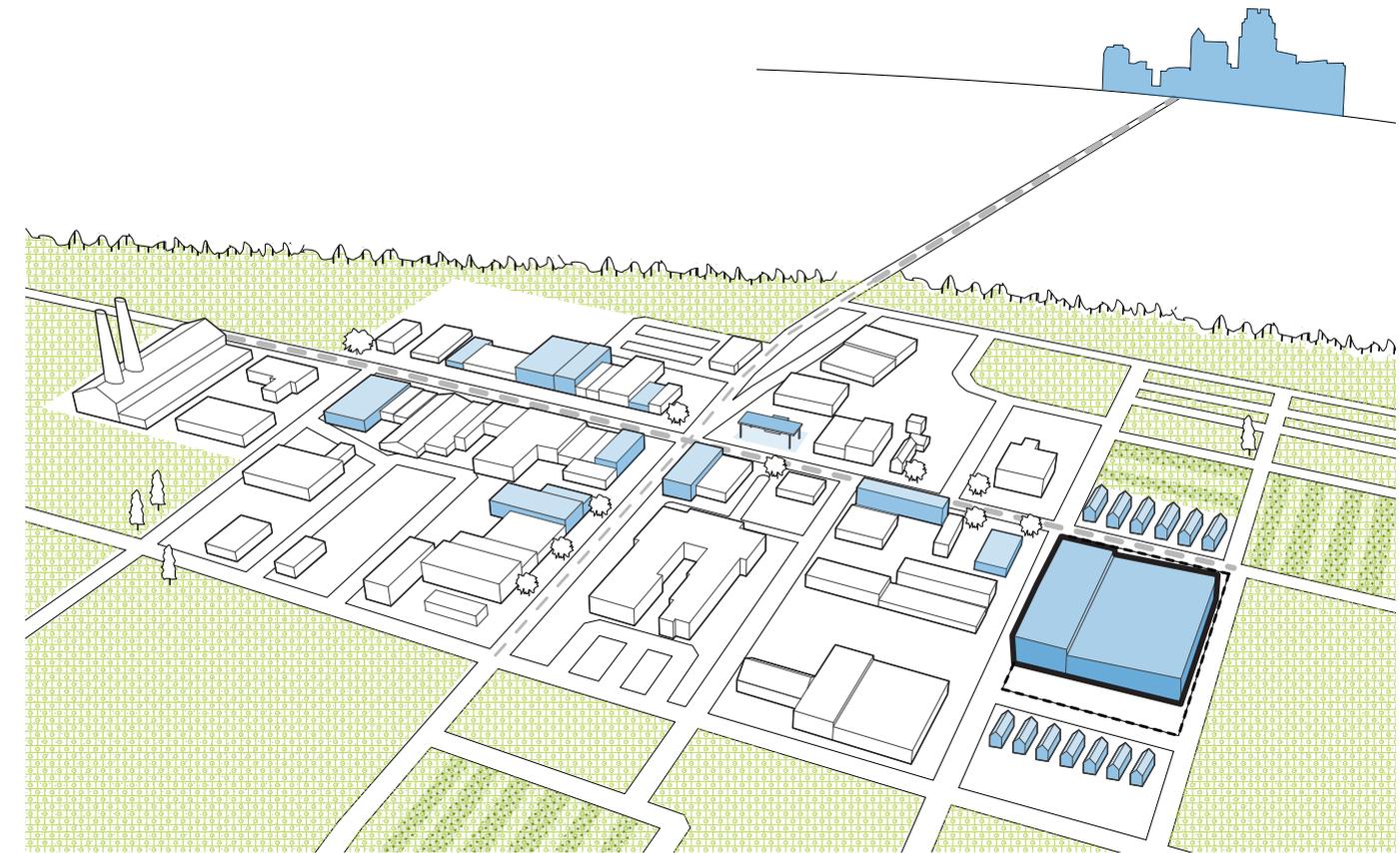
## The Big Box Economy

The same economies of scale that led to the centralization of production also led to changes in retail economics. With it came the advent of the "Big Box" stores, like Walmart, Target, and the others that distribute goods at large scales across America. For small towns, this amplifies the problem.

*Big Box stores are not a replacement for an economic Cornerstone.*

Big Box stores, like Big Box manufacturers, are merely low-cost locations on the company's global sales and distribution network. They do not import money for the local economy in the same way that Cornerstone businesses once did. Instead, they **export money** from small towns, replacing middle-class Cornerstone jobs with minimum wage positions.

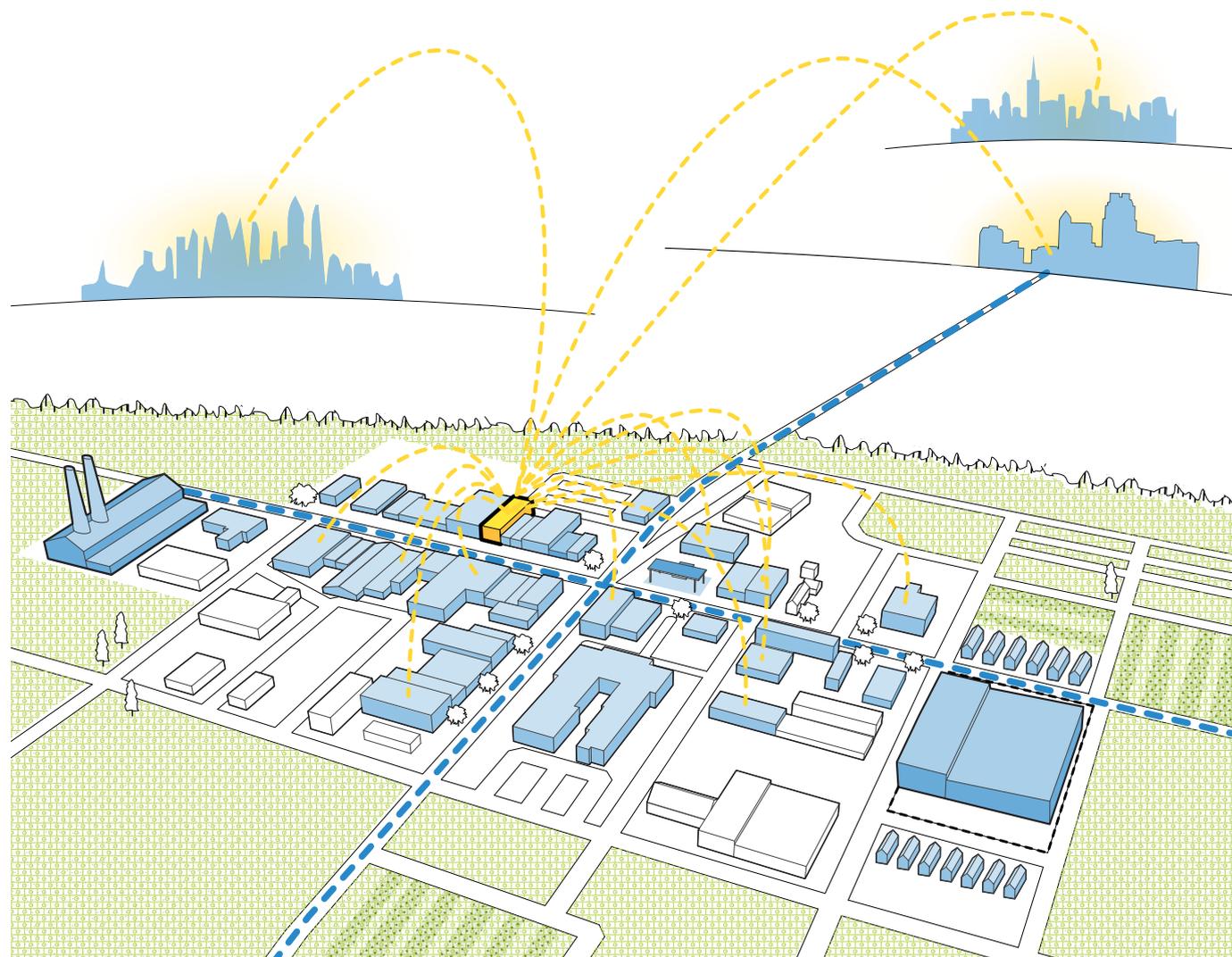
The rapid penetration of Internet commerce only expands the problem as broadband-connected, Cloud-based, technologies transform every product and service in the network economy. **Efforts to attract Big Box jobs will neither replace the Cornerstone or create a platform for growth.**



# Disrupting Innovation

The BRIGHTspot Center works because it takes the components that led to success in low-cost, high-density markets and reimagines them to work in the **low density, high-cost** markets that large companies choose not to serve. In modern economics this is called Disruptive Innovation.

What most people do not understand is that not all innovation is disruptive. “Disruptive Innovation” describes a situation when an outsider or entrepreneur enters a market that is **unserved by the incumbents**. It occurs when a new business model, or new approach, is used to serve people or markets that the incumbents have decided not to serve because it does not fit the established profit and loss models of the large, established markets.

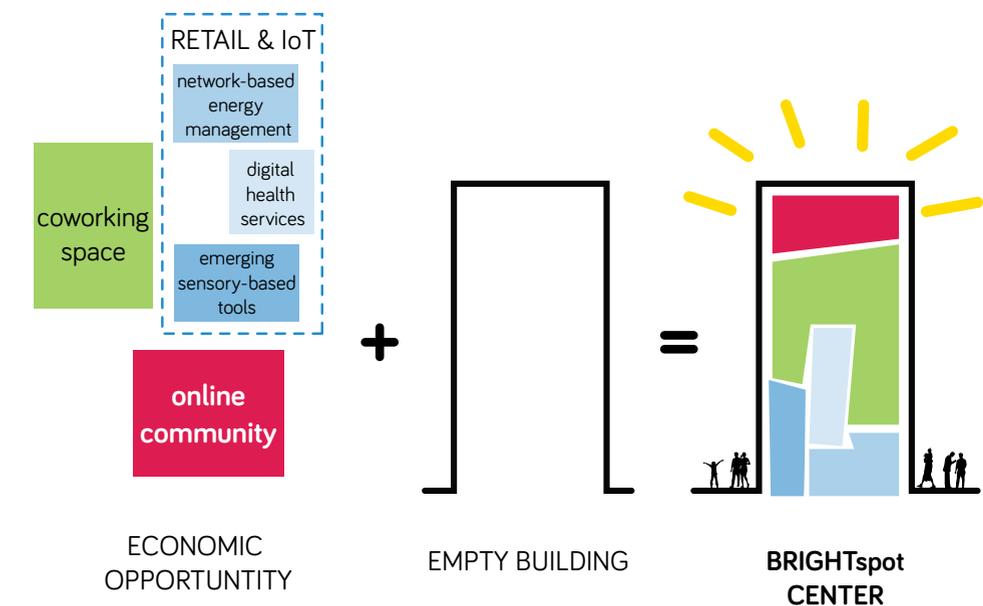


*Disruptive Innovation begins with the decision to find a successful way to serve people and markets that others choose NOT to serve.*

Building rich communities in existing rural areas does not require a magical product or approach, but it does require finding new ways to **successfully serve markets that others have chosen to leave behind**. This is a proven model. It is what led to the creation of Electric Membership Co-Ops in the 1930's and Telephone Membership Co-Ops in the 1950's.

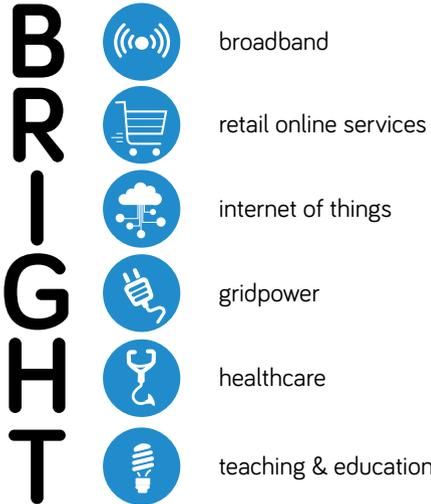
The BRIGHTspot Center uses the same approach to find ways to make small communities an active and productive “node” in the larger network economy. It does this by intentionally **building demand** for network enabled products and services while simultaneously **using that demand** as the basis for building the infrastructure to expand the market for those services. In the language of network economics this is called a “virtuous cycle” of growth.

The BRIGHTspot Center becomes the retail outlet where digital health services, network-based energy management services, and emerging sensor-based tools connected by the Internet of Things can be discovered by local users. Building on this emerging demand, it offers a **CoWorking model** that allows entrepreneurs and innovators work in the same innovative community models successful in larger markets. It is also the place where the tools of successful online communities are tailored for use in smaller markets.



# Case Study: Fayetteville

In early 2016 leaders in Fayetteville embraced a plan to create the first BRIGHTspot Center, as part of a larger statewide network for entrepreneurs and innovation. The acronym **BRIGHT** stands for six key markets in the network economy: Broadband; Retail online services, Internet of Things; GridPower; Healthcare and Training & education.



In July 2016 the North Carolina legislature provided a grant to Fayetteville to develop a **regional small business incubator** as part of a larger effort to make North Carolina a leader in network economy jobs.

In 2017, the **BRIGHT Futures Act** was introduced to clarify the power cities and counties have to pursue critical capital improvement projects through Public Private Partnerships (P3). This would make it clear that, in addition to having the power to build a BRIGHTspot Center, the Public Private Partnership would be allowed to build broadband facilities to support the network economy.

In a relatively short period of time, all the pieces were primed and prepped to establish an innovative economic model that could generate growth and not only meet the needs of those in Fayetteville, but would set the stage for the development of a larger economic network across North Carolina. Unfortunately, despite public and private efforts, plans had stagnated by the fall of 2017, for a variety of reasons.

Attempting something new is hard. Figuring out how to serve markets others have deemed non-profitable is hard. However, network economics in larger markets grow at an exponential rate. There is an urgency that must be met before the gaps between urban and rural are further increased and the solution is harder to reach.



Proposed Innovation Center aims to bring high-tech, high-paying jobs to Fayetteville, *The Fayetteville Observer*, August 2016

# Connecting to Growth

The value of a network comes from the **connections between the nodes** and the strength they have together. Similarly, enhanced economic growth comes from connecting the dots of existing opportunities that are not yet maximized. These “dots” of opportunities are inherent throughout many organizations, professions, and public programs, but the key is figuring out how to connect them in a way that is relevant and beneficial to the rural user.

At the BRIGHTspot Center people can begin to connect to new products and services. They can connect to new jobs. They can begin to think of ways to create new businesses, based on the network components that are already available. They can begin to see how to connect the dots.

***In North Carolina there are ample existing dots to connect.***

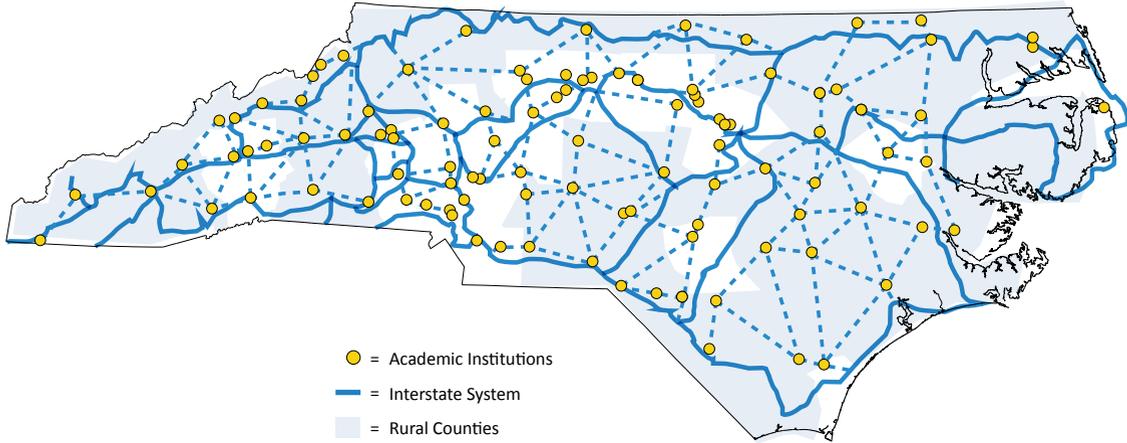
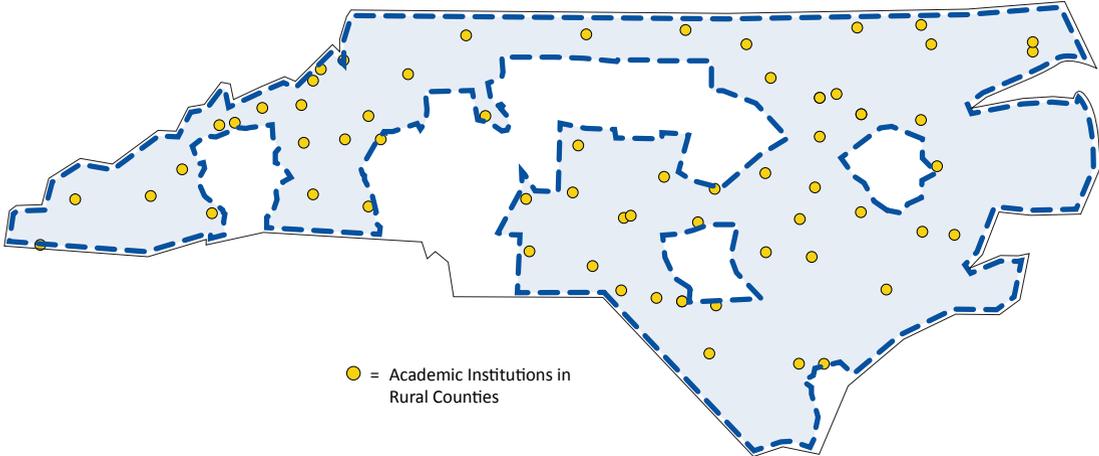
For instance, there is a 2,600 mile fiber network that runs through 82 of the 100 counties in the State. Built with federal funds, this network stands ready to support connectivity to local markets ... if there was demand for it.

Hundreds of millions of federal dollars also helped create an education cloud and digital learning infrastructure that is now being further developed as part of the state’s Digital Learning Plan. Though innovative, the lack of adequate broadband in the typical rural family home creates a “Homework Gap” that keeps the program from reaching its full potential. The program exists but the potential users can’t connect to it...

The NC TeleHealth Network includes over 100 locations across the state, matching a similar number of community college locations that make facilities available “within 30 miles or 30 minutes” of virtually everyone. These dots are ripe for connecting and, by being connected, could maximize their existing benefit exponentially.

The BRIGHTspot location is the place where these dots can begin to be connected, creating a true platform for economic development. Establishing a BRIGHTspot Center makes the local community a **node** in the larger **network** economy. It is the modern equivalent to a Cornerstone business in the sense that it is part of a new platform for growth.

*The focus of the BRIGHTspot Center is to connect the dots for people.*



## Connectivity Potential of Existing Dots

# Why is this going to work?

How do I know this is what people really need?



# Can This Happen Here?

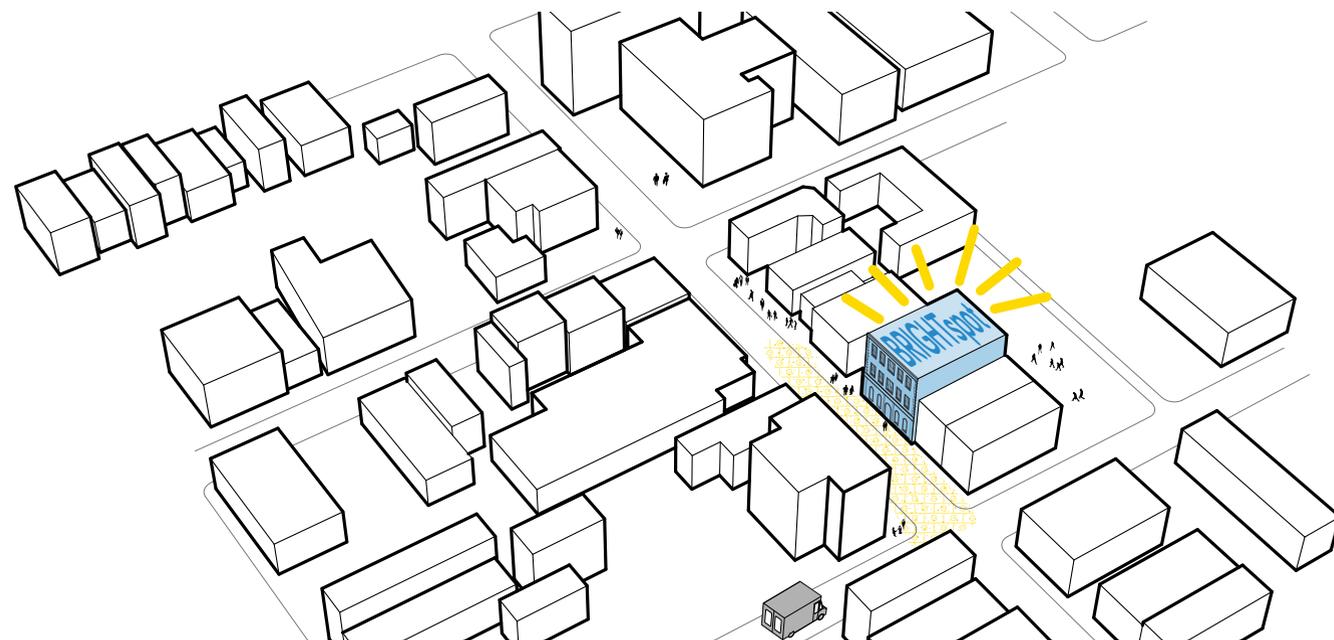
After years of seeing people and business leave rural areas, what would make someone believe that a community of entrepreneurs and innovators could develop and flourish? In some ways, this is the ultimate question.

However, the more relevant question is why someone would choose traffic congestion, exuberant home prices, and over-crowded schools if they could make a similar income and enjoy a high-quality life in an area a short distance away?

While there is clearly still a trend for people to migrate to large cities, there is an equally strong trend for entrepreneurs and innovators to establish themselves in areas with a greater quality of life, provided that they can be connected to the large markets that provide growth and opportunity.

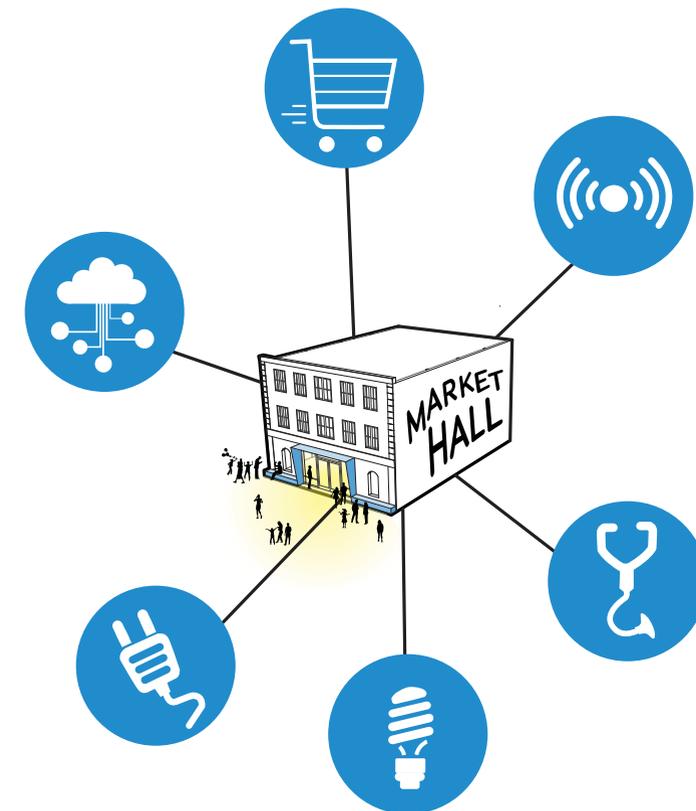
*A BRIGHTspot Center enables people to compete with the same scale as those in large markets, while enjoying the quality of life in small markets.*

The core infrastructure in North Carolina is sufficient to support network economies if local leaders focus on connecting the dots necessary to support network products, services, businesses and jobs. Statutory tools favoring Public Private Partnerships are available to local leaders, as are public and private investment ready to support such efforts. In fact, the Public Private model has been favored at the Federal level since late 2014.



But, it will take **leaders** unafraid to use these new programs and to embrace these network technologies. It will take **leaders** willing to look for ways to serve the unserved and willing to look at disruptive innovation rather than simply continuing with programs established in a different era.

Initiating a project to develop a BRIGHTspot Center is a good first step to creating a road map for economic success in the network economy. The BRIGHTspot model is premised on connecting people to resources and programs that are developing network products and services in key areas like digital health, energy management, or the Internet of Things. Each project begins by looking directly at what it will take to connect people to success.



# Regional Asset Mapping

Every town or location exists because it was once connected to the economy in a viable and sustainable way. Even when faced with years of erosion, virtually every location in North Carolina is tied into a strong infrastructure of with access to **education, healthcare, and technology.**

*The trick is to connect the dots, not try to re-invent or restrain them.*

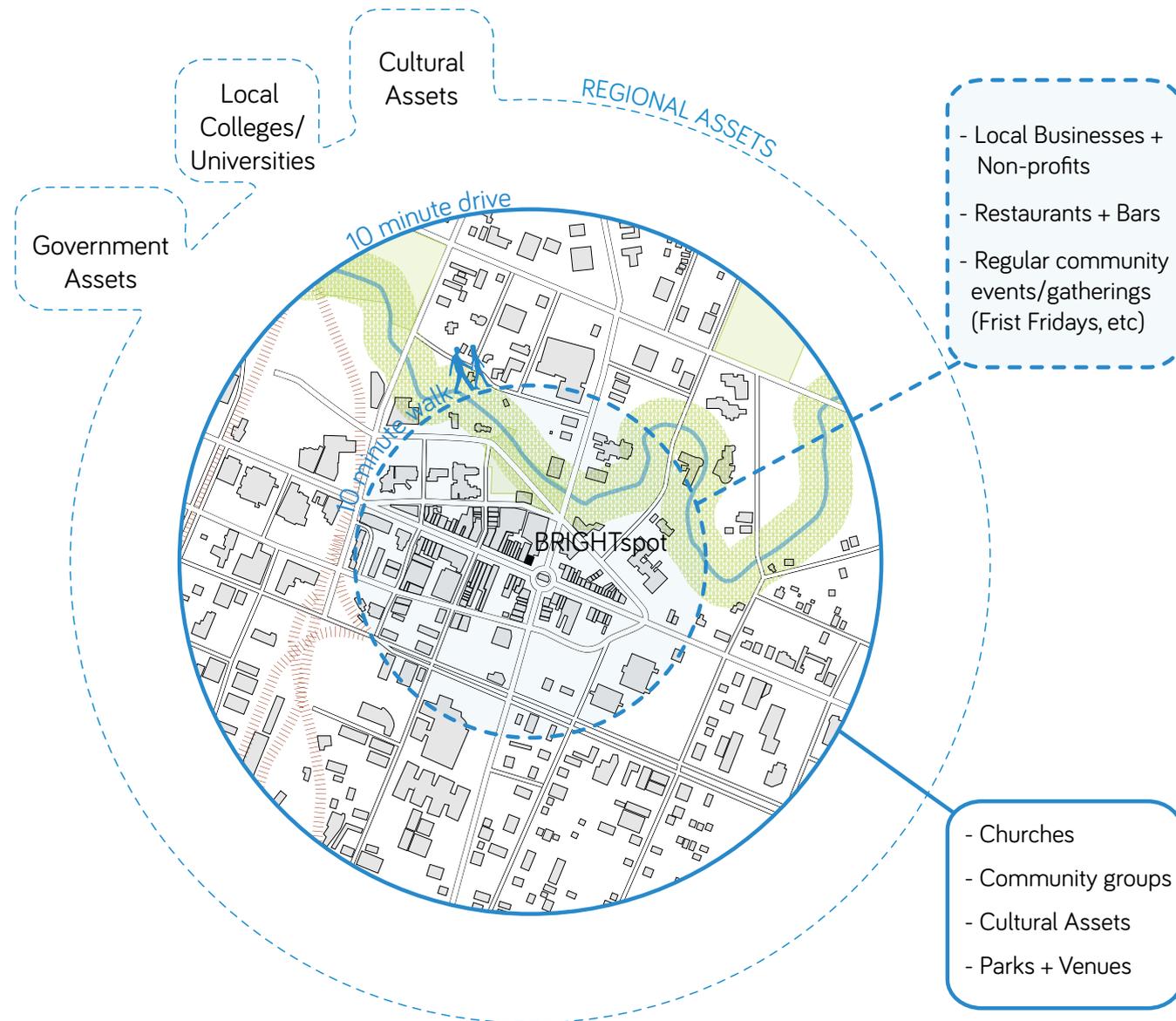
Initiating a plan to build a BRIGHTspot Center begins with a classic asset mapping exercise to understand what **tools, resources, and assets** are available in the local market. Virtually every community in North Carolina has a strong starting point in its local school system – since 100% of North Carolina’s K-12 schools are connected to broadband fiber network. Thanks to previous investments, every town is within 30 minutes or 30 miles of a community college or connected NC TeleHealth Network facility. These are foundational resources in connecting people.

Churches, local organizations, and commercial enterprises share in the objective of connecting people to opportunities that will result in a higher quality of life. The BRIGHTspot Center can act as the place and platform that can enhance that pre-existing critical mass of energy and activity. But ... leaders have to know what is available and what is being done around the local town, the local community, the nearby cities in order to join in and enhance the progress.

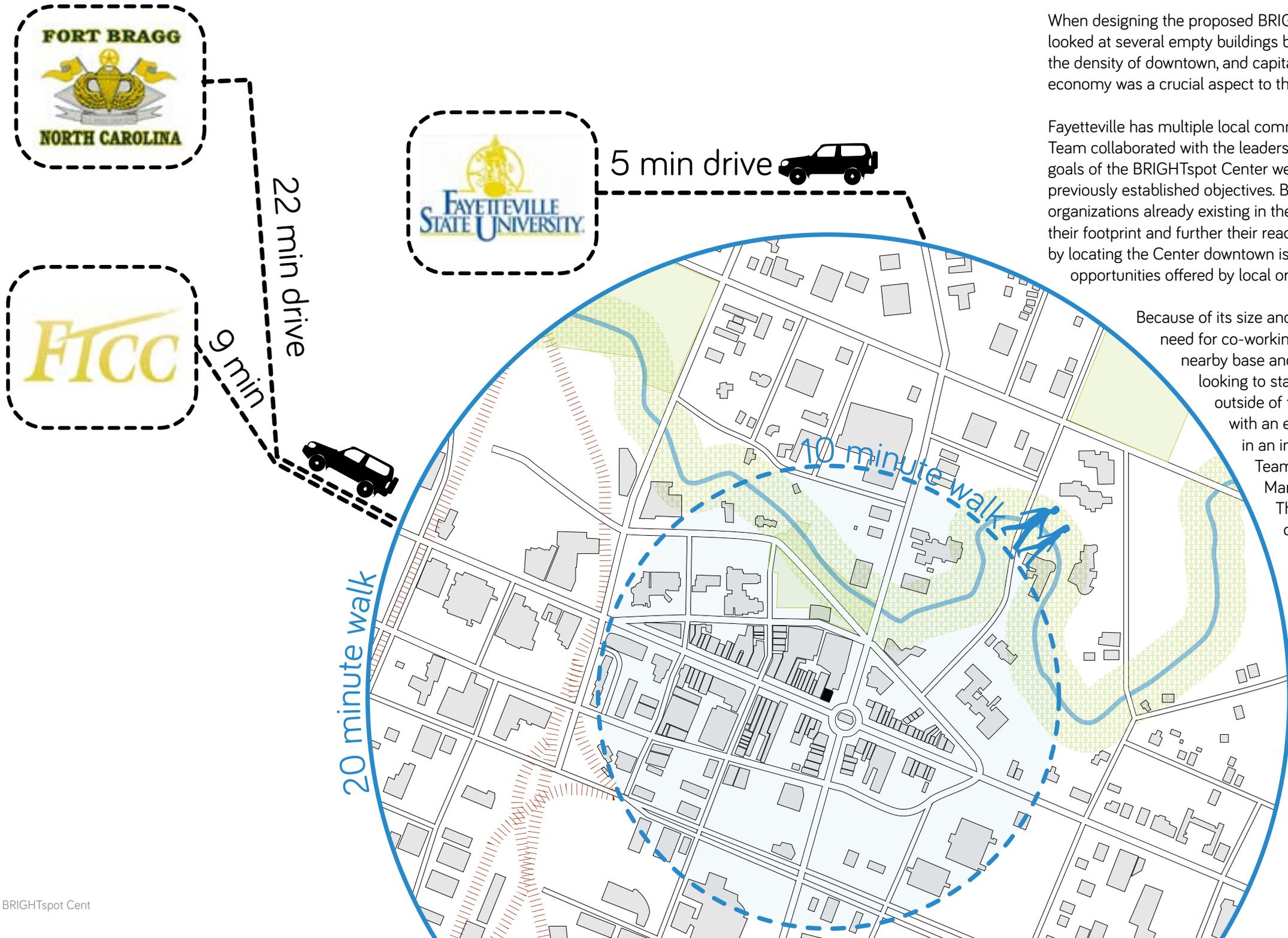
Regional and local asset mapping are crucial to the selection of **site and program** of each BRIGHTspot Center. Understanding the existing opportunity “dots”, strategizing how to connect them in ways that benefit the local demographic, and finally making them available in methods that the local citizens will use, are all paramount to the success of the BRIGHTspot Center.

While each location is different, the probability of success increases dramatically when the model of the Market Hall is utilized to gather the products and services that will be most compelling to those in that local community. When people first **discover** and **engage** with the future by interacting with network products and services that are relevant to them, the excitement is transformative. The thoughtful placement of the BRIGHTspot Center – within the 10-minute walking radius of the center of town – adds to the critical mass of activity and makes the progress and innovation visible and accessible to all.

Examples of asset mapping tools are located in the Appendix and provide a general road map for this key first step towards creating a BRIGHTspot Center.



# Case Study: Fayetteville



When designing the proposed BRIGHTspot Center for Fayetteville, the team looked at several empty buildings before making its recommendation. Adding to the density of downtown, and capitalizing on the growing awareness of the local economy was a crucial aspect to the success of the BRIGHTspot Center.

Fayetteville has multiple local community colleges and universities. The BRIGHTspot Team collaborated with the leaders of each of these institutions to ensure that the goals of the BRIGHTspot Center were in alignment with, and in fact enhancing, those previously established objectives. By opening the conversation with programs and organizations already existing in the area, the BRIGHTspot Center could enlarge their footprint and further their reach. The 10-minute walking radius established by locating the Center downtown is increased by connecting to the programs and opportunities offered by local organizations.

Because of its size and proximity to Fort Bragg, Fayetteville also has the need for co-working space. The Army locates its members on the nearby base and there is a growing number of Army spouses looking to start a business or be able to work remotely at jobs outside of the Fayetteville area. The BRIGHTspot Team met with an established co-working organization that started in an impressive grass roots fashion. The BRIGHTspot Team recommended partnering by co-locating the Market Hall at the base of the co-working building. This regional asset can take advantage of those coming in to use the Market Hall while the BRIGHTspot Center benefits from the daily users of the co-working offices above.

The collaboration with local organizations enlarges the footprint of all involved and creates an innovation corridor that goes well beyond what any one entity could accomplish on its own. This is a wonderful example of understanding and benefiting from the local assets. Rather than trying to re-invent the wheel, the BRIGHTspot Center located downtown can enhance the existing local efforts, add another location for local community college courses, hold events that amplify the existing Main Street social fabric, and in general, be a greater Node on the existing local Network.

## Serving the Unserved

Harvard Professor Clayton M. Christensen has created a virtual industry around his theory of Disruptive Innovation. In numerous books, he has applied his theory to various industries, including higher education and healthcare. The catchiness of the title – as is so often the case – has often led to its misunderstanding and misapplication.

Yet, in every one of his books, he is careful to make the point that when the incumbent chooses NOT to serve a market or a population of customers, they are completely justified in doing so.

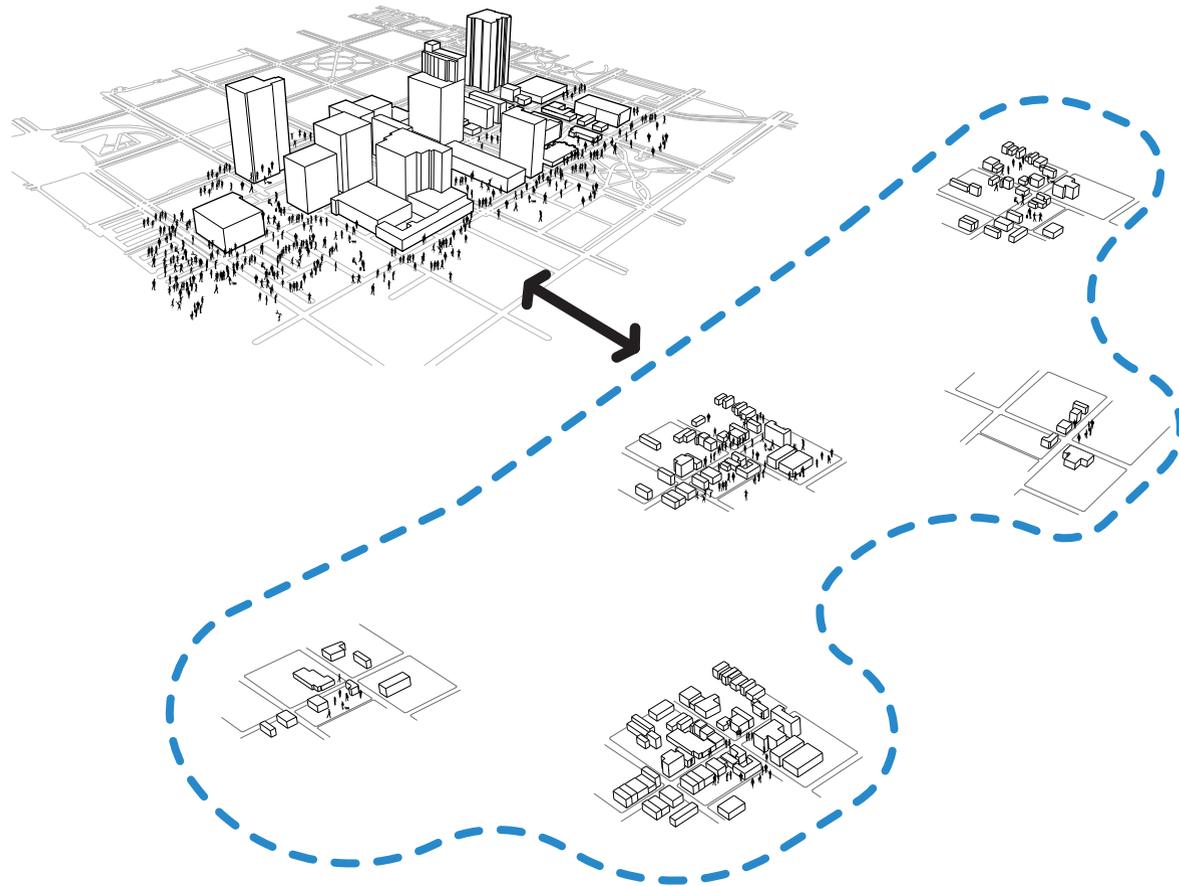
*For the incumbent, deciding NOT to serve a market is acceptable, based on the old business models. They know what they are doing.*

For those living in rural areas, however, this just means that there is little chance of having the incumbent large companies make a different decision. There is little chance that they will voluntarily come up with a business model for serving the rural areas on an **equal basis**.

In fact, as this Guide was going to print, the incumbents were actively lobbying the new FCC Chairman to **lower** the standard definition of Broadband from “25 Mbps down /3 Mbps up” so that existing levels of cellular service could be deemed adequate. Yet, the same companies today market speeds of 1 Gigabit per second in urban areas – a speed **100 times faster** than what they would offer rural users.

The point is that there are many, many reasons to NOT help people in rural areas connect to the opportunities made possible in larger markets. This has always been the case. This is why the various maps look the way that they do after more than a century of change in the economy.

The BRIGHTspot Center was designed based on the **new economics** of the networked world. It was designed to be the first point of connection and platform that CAN support entrepreneurs in rural areas. The assets are available. The question is whether leaders have the **willpower** to move.



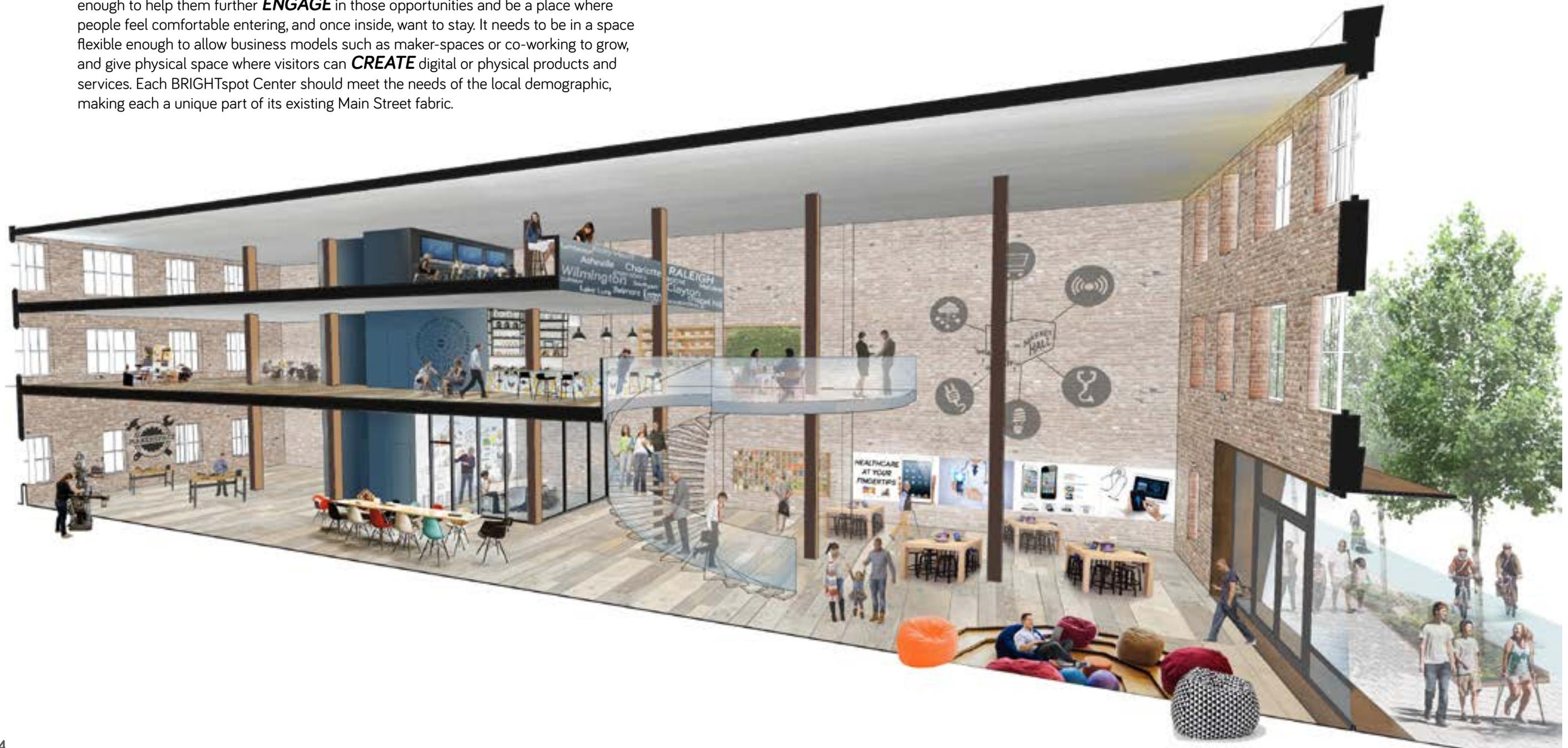
Ok, I get it.  
Now how do we  
build it?



How do I make sure  
this thing is done  
*right?*

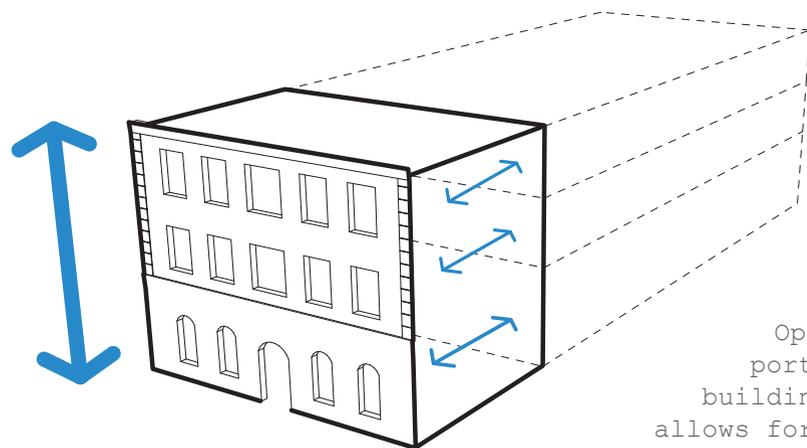
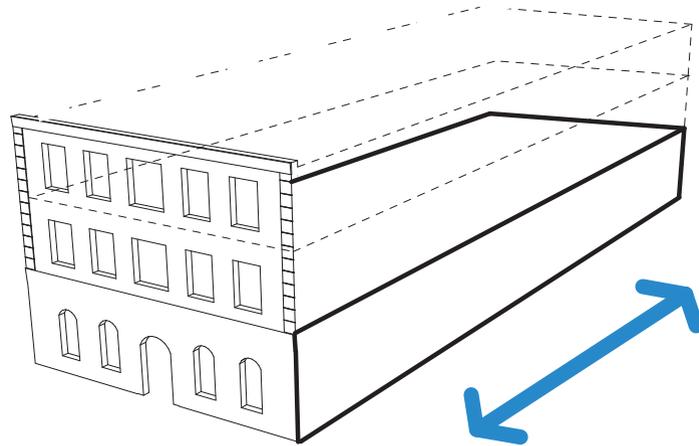
# A Platform to Empower the People

The success of a BRIGHTspot Center rests in creating a place where human interaction, ingenuity, and innovation can thrive. Each BRIGHTspot Center needs to have an active Market Hall visible from the street. This will encourage passers-by to come inside and allow them to **DISCOVER** available opportunities. It needs to be inviting and accessible enough to help them further **ENGAGE** in those opportunities and be a place where people feel comfortable entering, and once inside, want to stay. It needs to be in a space flexible enough to allow business models such as maker-spaces or co-working to grow, and give physical space where visitors can **CREATE** digital or physical products and services. Each BRIGHTspot Center should meet the needs of the local demographic, making each a unique part of its existing Main Street fabric.



## HORIZONTAL LIMITATION

Looking at each floor of the building level by level, there is a missed opportunity for interaction. Single level development only allows for single level street interaction



## VERTICAL CONNECTION

Opening the first portion of the building vertically allows for a more grand interaction with the street, as well as vertical interaction with each subsequent floor. The first vertical third of the building should act as the Brightspot HUB.

## Community Connection

The interior of this building should serve as the local **gathering space** of the newly connected community. It should be designed and renovated to inspire awe and innovation, physically representing what the new network is capable of achieving.

In order to do this, the renovation of the interior should be thought of as a comprehensive design. Every effort should be made to create connections to the community outside the walls of the building as well as connections between those programs occupying the interior.

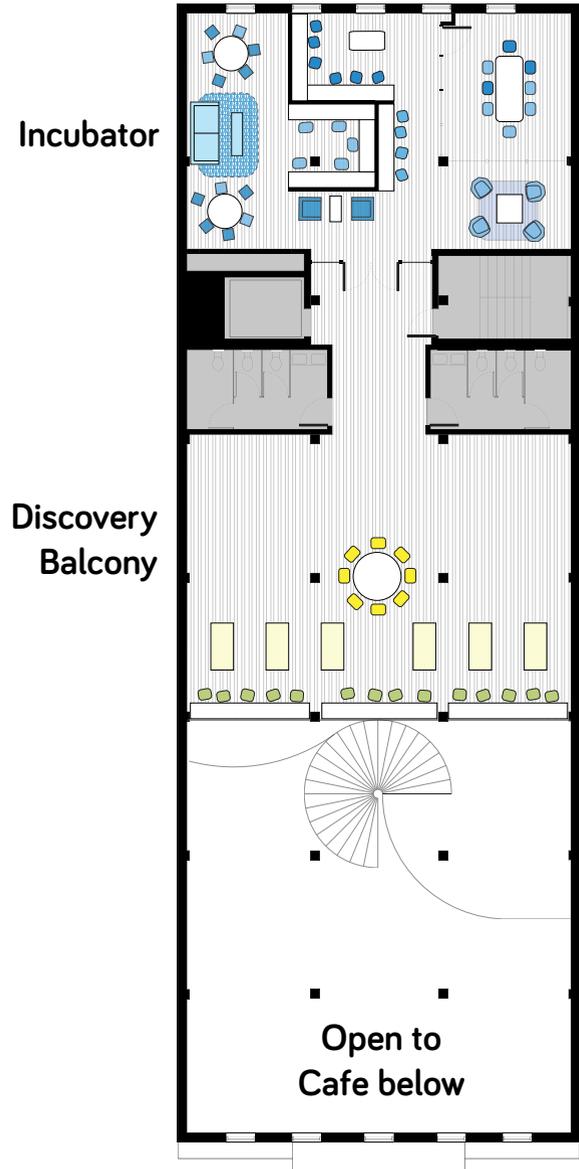
Using the building illustrated to the left as an example, rather than assigning a horizontal floor of the renovated building to the Market Hall and upper floors to community programs and uses, the Market Hall should be the first third of the building on all levels. This vertical slice establishes a grand gathering space at the front of the building, gives freedom to how the program interacts with the street, and connects each floor to a large atrium. In one move, the Market Hall is established as **a space unlike any other in the town**, and is instantly connected to any portion of the building that is built out initially or in the future.

A vertical connection also opens the opportunity for a large stair. This stair will act as the stage for **casual collisions** between different trades and subject experts. It will visually bridge activities happening on alternating floors and will physically represent that there is “more” happening beyond what one can see from the entry.

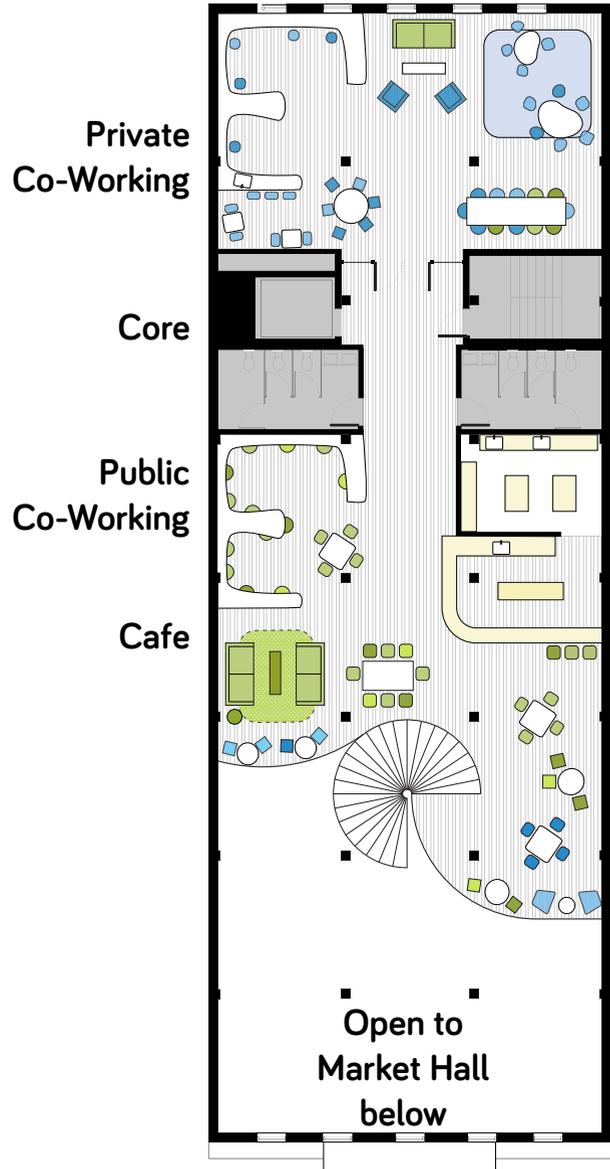
*Community Connection must happen at the physical and programmatic levels.*

A visible and physical connection must be made between the building and its interior occupants or exterior neighbors. The building must also provide ways for the community to connect with one another or with other communities on the network. The creation of community programs, classes, activities, or even just open space for community gatherings must be seen as a priority. The Market Hall will succeed by reinforcing programmatic goals with physical innovation.

# Overlapping Program

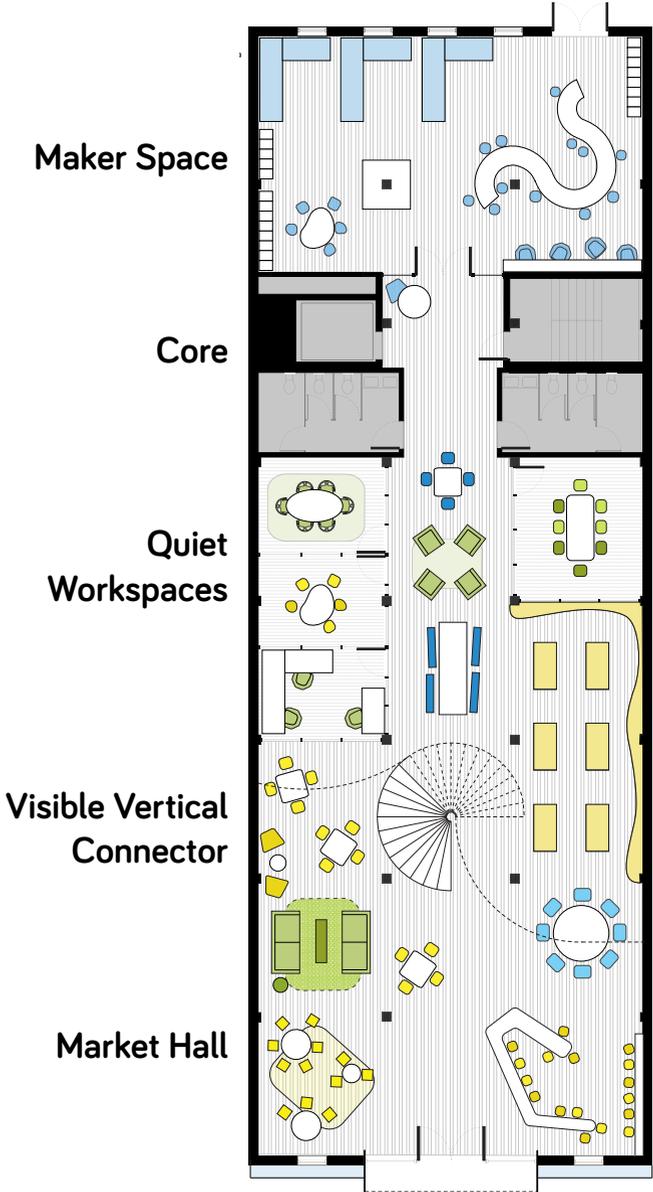


THIRD FLOOR

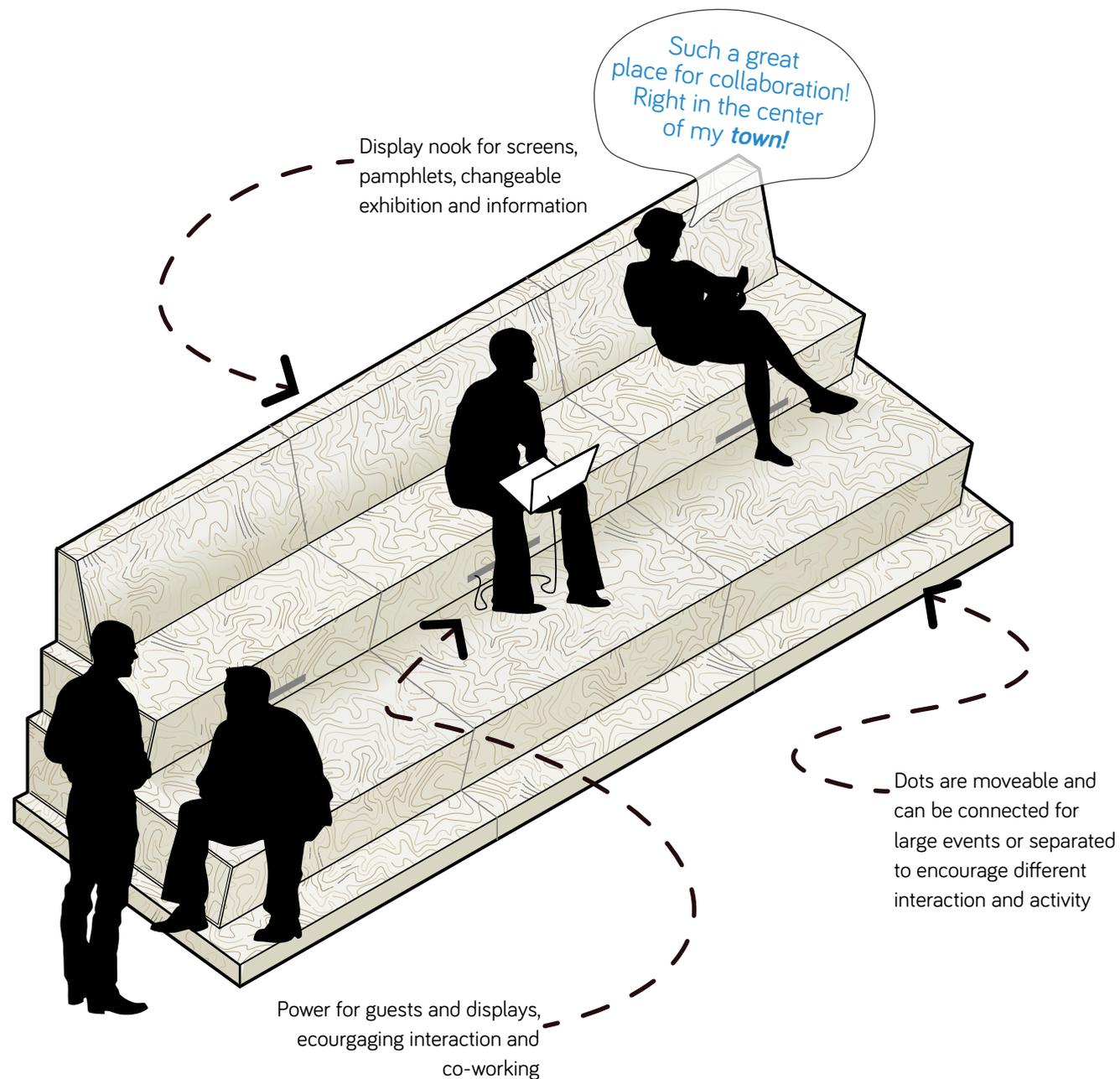


SECOND FLOOR

“Water Cooler” benefits of a workspace are well established. Innovation and production often occur in places when impromptu conversations happen between people with different skills and interests. The layout of the BRIGHTspot Center should promote this type of spontaneous interaction. Areas that allow the chance to **DISCOVER** new opportunities should be directly off the street, visible to the passer-by. Spaces that allow the visitor to **ENGAGE** should be sprinkled throughout the building and come in all sizes and noise levels. All program areas that offer the chance to **CREATE** should be connected to the Market Hall entry and public zone so that those walking through to other areas can see what is being made and come into contact with opportunities for themselves. Every effort should be taken to ensure that people interact with the permanent staff, the technology, and most importantly, their fellow community members.



FIRST FLOOR



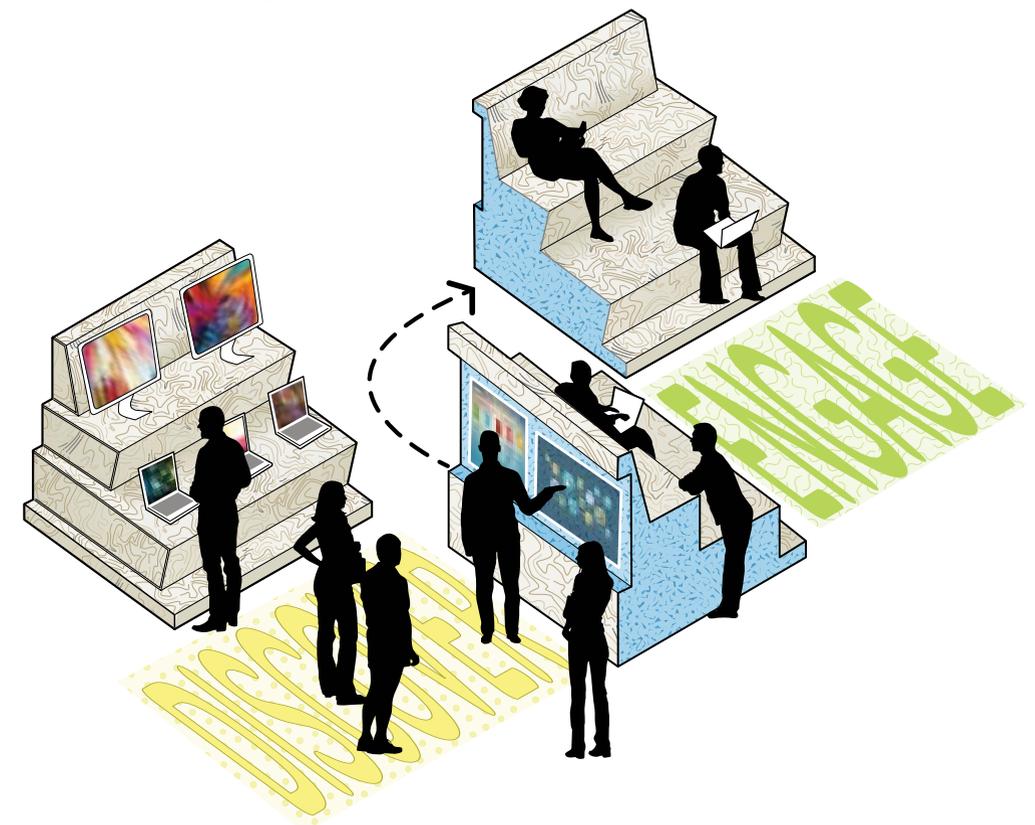
## Case Study: Fayetteville “Dots”

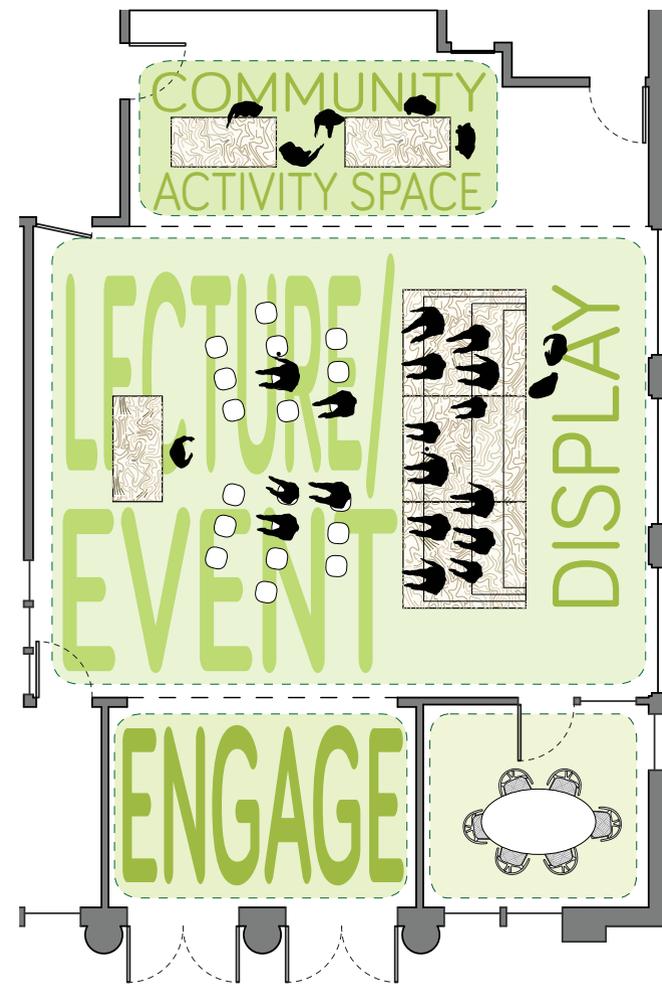
All BRIGHTspot Centers focus on three goals: allowing people to **Discover** opportunities, giving them ways to **Engage** with big markets, and allowing the ability to **Create**, innovate, and establish new opportunities.

The main place where these three actions occur is in the Market Hall, the community hub of idea exchange at the front of any BRIGHTspot Center. It is in the Market Hall that the new “Cornerstone Economy” comes to life.

When designing the Market Hall in Fayetteville, the budget and space constraints were very tight. Therefore, rather than spending resources on the physical building, capital was put towards generating spatial layouts that created the human interaction that is so crucial to the success of the BSC.

The concept was for furniture-scaled “Dots” to be built and placed in the Market Hall. Visitors are able to sit on, plug into, and interact with each of the pieces and with each other. Similar to the Market Hall itself, each dot can stand alone and achieve its own program, but when the dots are connected, it creates a new opportunities for larger program or events.





## Case Study: Connecting the Dots

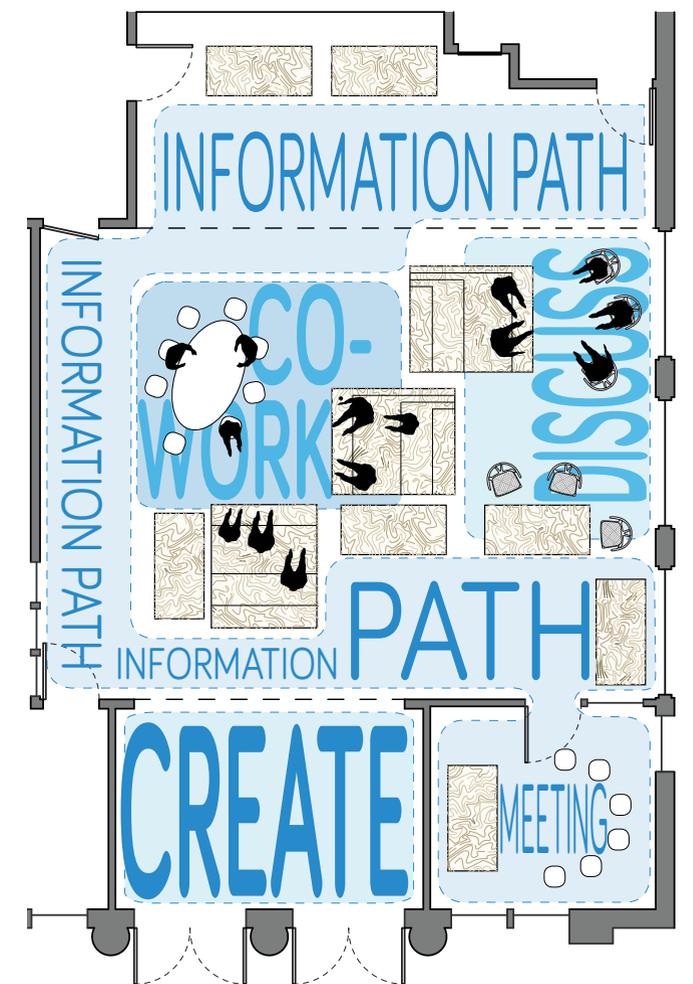
By creating moveable, furniture-scaled “Dots”, the Fayetteville Market Hall is able to change according to the programmatic needs that day or week.

The Dots can be separated and used as **information display**, enticing passers-by to come in off the street and get information about connectivity, while at the same time offering cozy nooks to stop and work.

The Dots can be placed together to create a gathering space for **lectures**, community events, or local college courses.

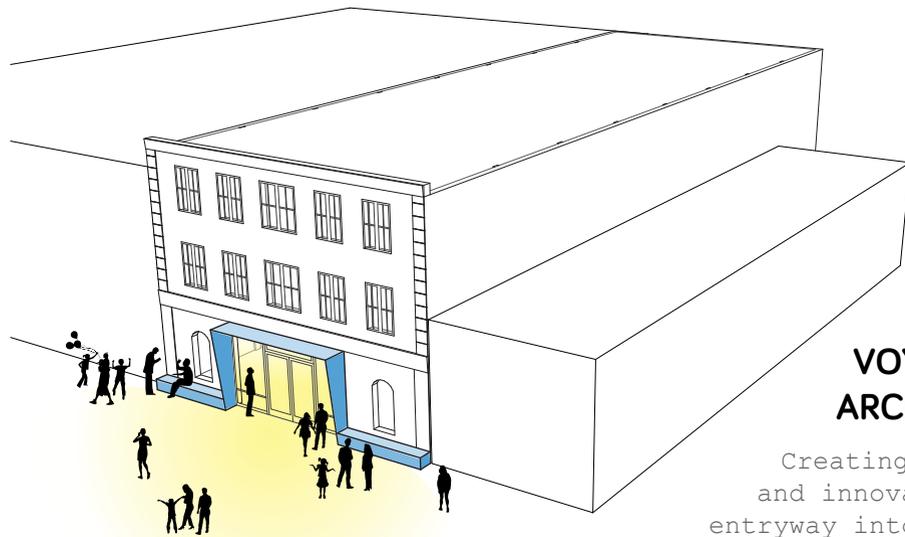
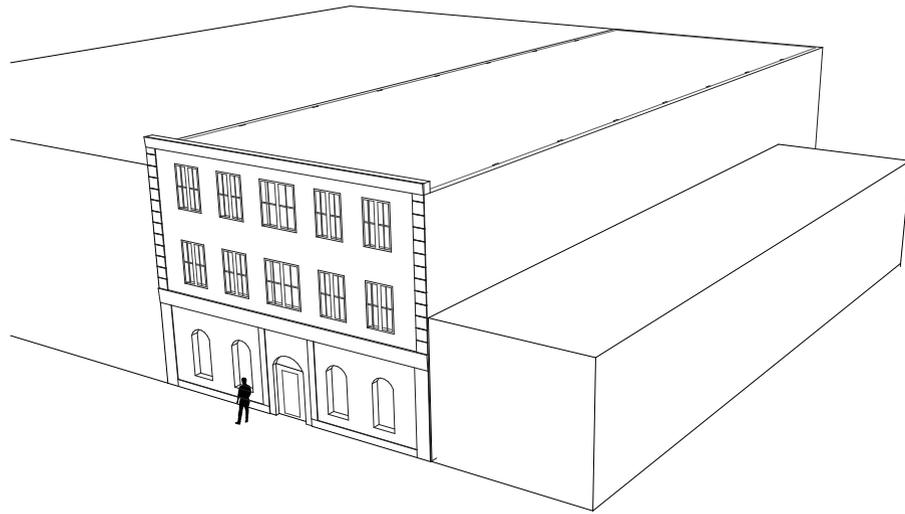
The Dots can also be arranged in a series of small **nooks** and rooms, allow for more intimate discussions, controlled co-working spaces, and break out groups during an event.

The flexibility of furniture and space creation is crucial to the functionality of the Market Hall. **Interior adaptability** encourages local people to activate the space, inventing even further possibilities for interaction!



## EXISTING PEEK-HOLES

Small openings into the building only allow for limited street presence as well as interest-building from local passers-by



### VOYEUR ARCHITECTURE

Creating a new and innovative entryway into the BRIGHTspot not only allows the community to see inside, but also establishes an identity to the Market Hall, one that welcomes and is noticed.

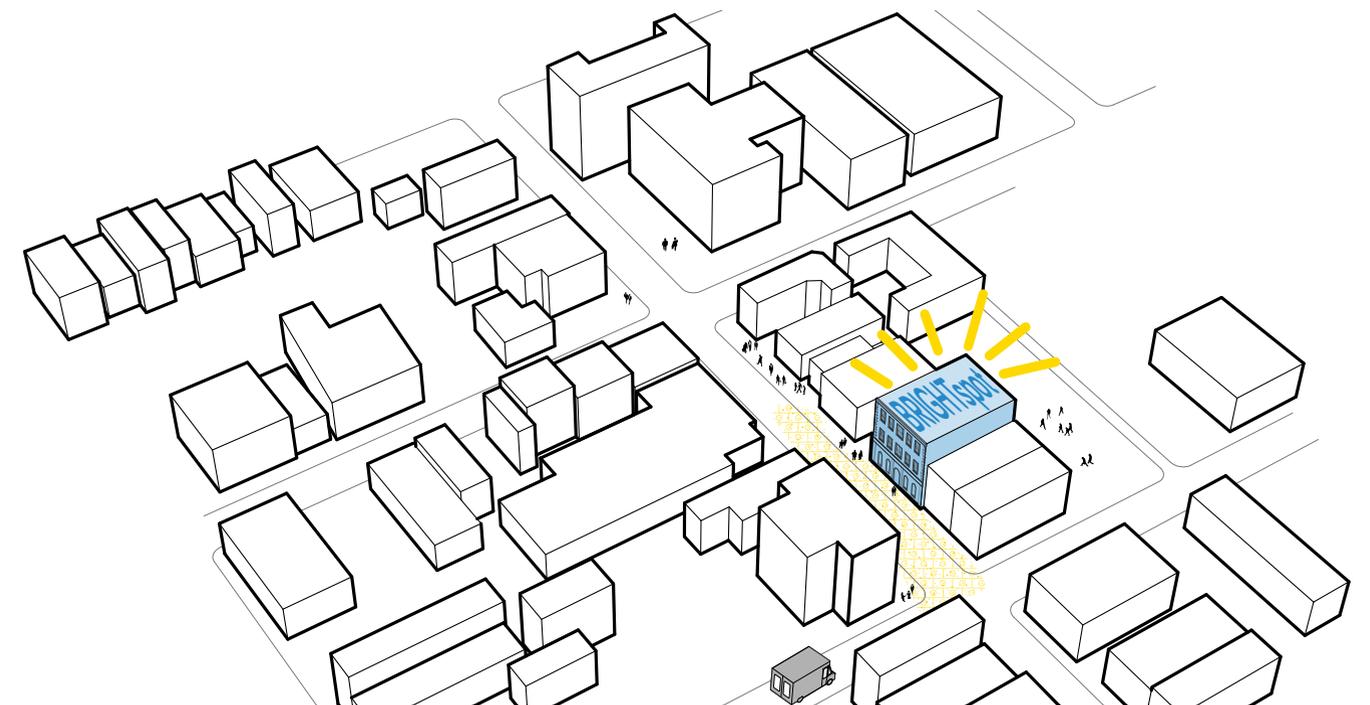
## Getting People to the Platform

So now that it is understood how the Market Hall and the overall BRIGHTspot Center functions, how do local town members know where it is and come to use it?

Many small towns used to have a thriving Main Street. With only one or two intersections in the downtown area, Main Street acted as the intersection of social activity and commerce. The BRIGHTspot Center's Market Hall will be that hub of activity and therefore should be located in the center of the town, both as a representation of Main Street's rebirth, but also so it is physically accessible to all in the town.

The BRIGHTspot Center should be nestled into Main Street, giving it not only a visible presence to the passers-by in cars or on foot, but also as a signal of rebirth and a generator of activity back in the downtown. Transformation of Main Street can start with these two existing assets: an inexpensive historic building, coveted (and costly!) in any dense urban center but highly available in rural areas, and a local population that is already established and invested in their hometown.

This exterior, visible connection is important both to create curiosity and wonder, but also to allow people to feel welcome to walk in at any time to discover what is inside. With a large entry and connection to the community, activity and growth will flow inside out as well as outside in.

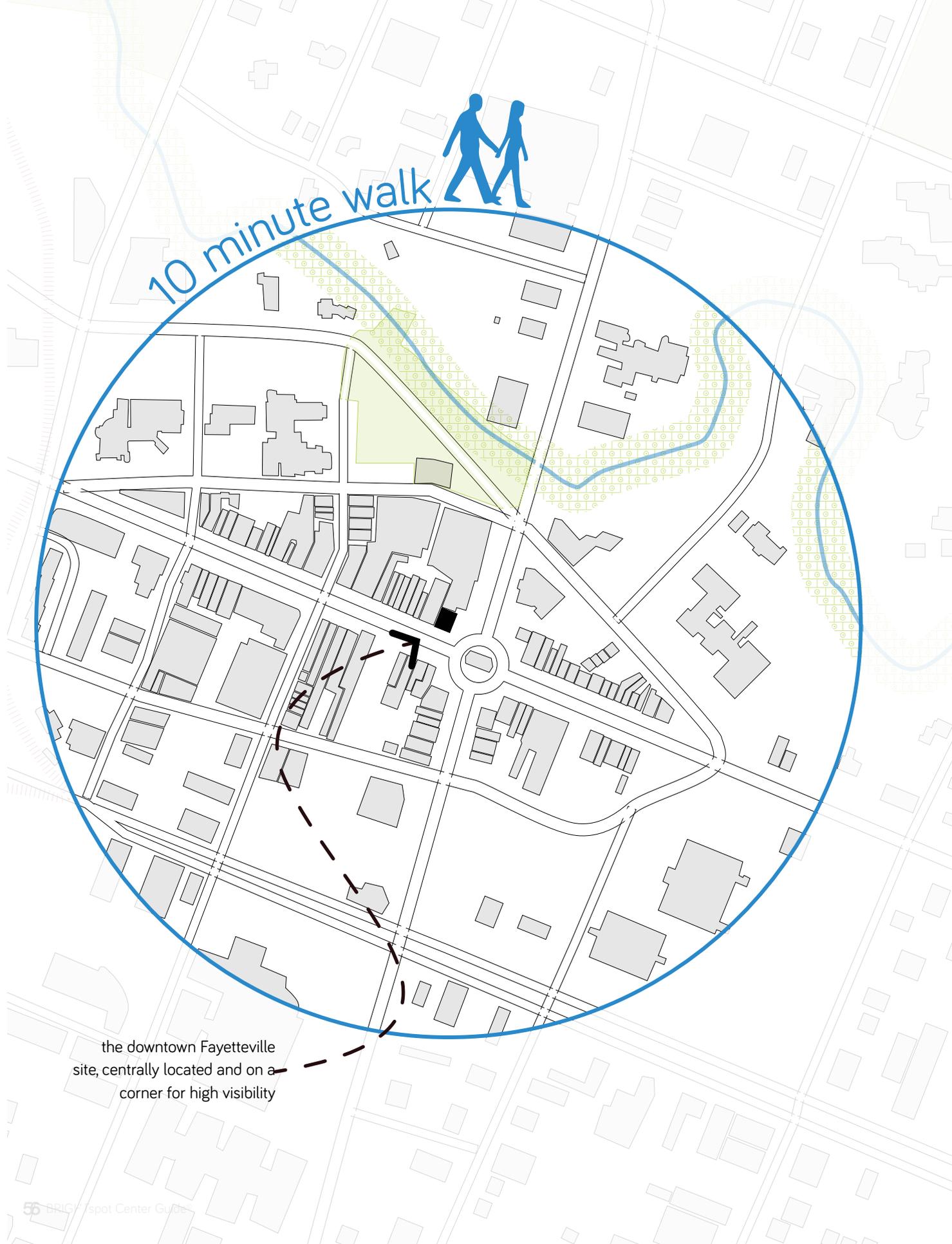


## 10 Minute Walking Radius

When Main Street was alive and active in any rural county in America, it bustled with local businesses, service shops, and family-owned restaurants. The Cornerstone economic driver, often a mill or factory, was located just outside the town while Main Street was the center of the town's social life. The mill or factory and the businesses on Main Street were a small local **economic ecosystem**, acting as a small symbiotic network: when one business succeeded, it helped the others in the area to succeed. Once the Cornerstone economic driver was closed, the other portions of that local network also started to fail.

The BRIGHTspot Center wants to replace that Cornerstone economic driver by acting as the platform for new opportunities, however, unlike the original mill or factory, this economic driver has a small footprint and should be placed directly downtown.

Since the Center is for the use of the people living in the town, it must be placed in a location that is easily accessible and highly visible. Walkability is one of the main factors in identifying the right building for the BRIGHTspot Center. A **10-minute walking radius** should be identified and must include potential shops, restaurants, and service businesses. The success of the Market Hall will enhance the success of those local business, and in turn, will re-make Main Street into the thriving hub it once was.



the downtown Fayetteville site, centrally located and on a corner for high visibility



Revolutionary Coworking, established in 2016 in the Self Help Credit Union Building, formally First National Bank of Fayetteville

## Case Study: Fayetteville

After receiving the grant to pursue a BRIGHTspot Center, the BRIGHTspot Team began the search for an adequate site. Several empty buildings were considered, but the best fit was suggested to be the ground floor of the former First National Bank of Fayetteville, whose upper levels are currently being used by a newly established CoWorking organization.

This building is situated on a highly visible corner on Hay Street, the “Main Street” running through downtown Fayetteville. Hay Street has begun to thrive in recent years, boasting new restaurants and shops, building a few museums and cultural institutions, and establishing itself as a destination for social and sporting events. All of this activity was centered around Hay Street, so it was important that the BRIGHTspot Center be placed in the middle of that **energy**.

The available space opened directly onto the street and sat on a corner, making it distinctly visible from up and down Hay Street. The high ceilings and large windows of the space added character and light not present in other available options. The BRIGHTspot Team recommended that the Market Hall be sited in this building without hesitation, and quickly began to design space and programs that could be allow it to actively participate in Fayetteville’s First Fridays and join and magnify the already established community and objectives of the CoWorking organization.

The **walkability, visibility, and collaboration** with local innovative organizations are all key ingredients to the success of the BRIGHTspot Center and allow the Market Hall to grow and be effective right at the very outset.

## Case Study: Lessons Learned

It has been almost two years since the idea of a BRIGHTspot Center was first raised with leaders in Fayetteville. Many positive things have happened since that time, and many lessons have been learned.

Early lessons such as the importance of the Discover, Engage, Create journey to be felt immediately upon entering the Market Hall were easy to grasp. Economic ideas about how to build demand and the importance of a critical mass were well understood by the local team, and they agreed on the importance of integrating those key strategies early and thoroughly in the design conception.

Other lessons, like the critical importance of including a broad base of community leaders, were never fully appreciated until later in the process. Mobilizing a comprehensive core of people and encouraging them to pursue a goal for the first time requires a level of focus and commitment that unfortunately are constantly at war with traditional demands.

*The difficulty of serving markets that others have chosen not to serve cannot be underestimated, or overstated. It is the main lesson.*

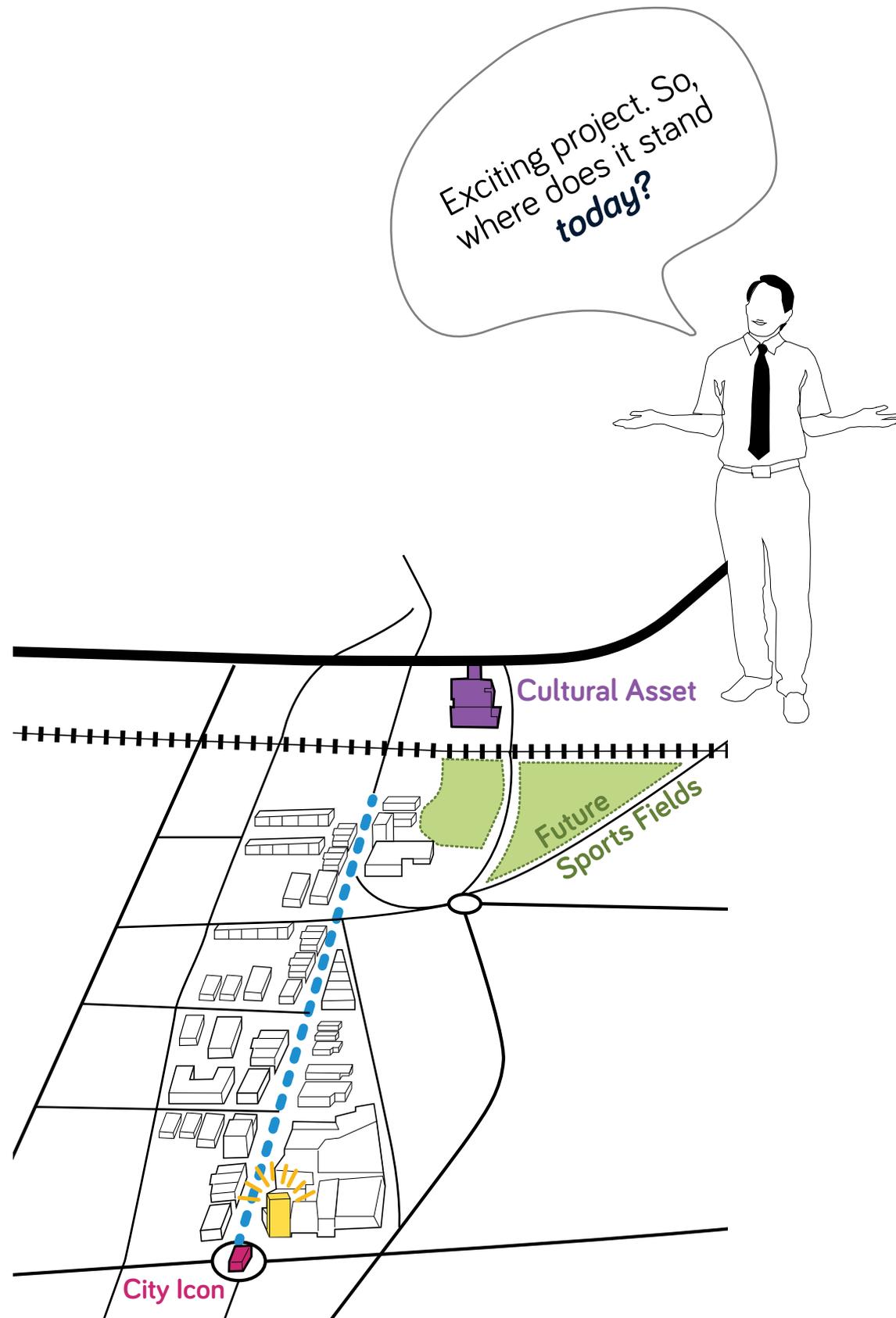
The BRIGHTspot Center in Fayetteville is not yet operational, although that is not to say that the plans to proceed will not be pursued. A lot happened in Fayetteville in the last year, and there are exciting plans on the horizon.

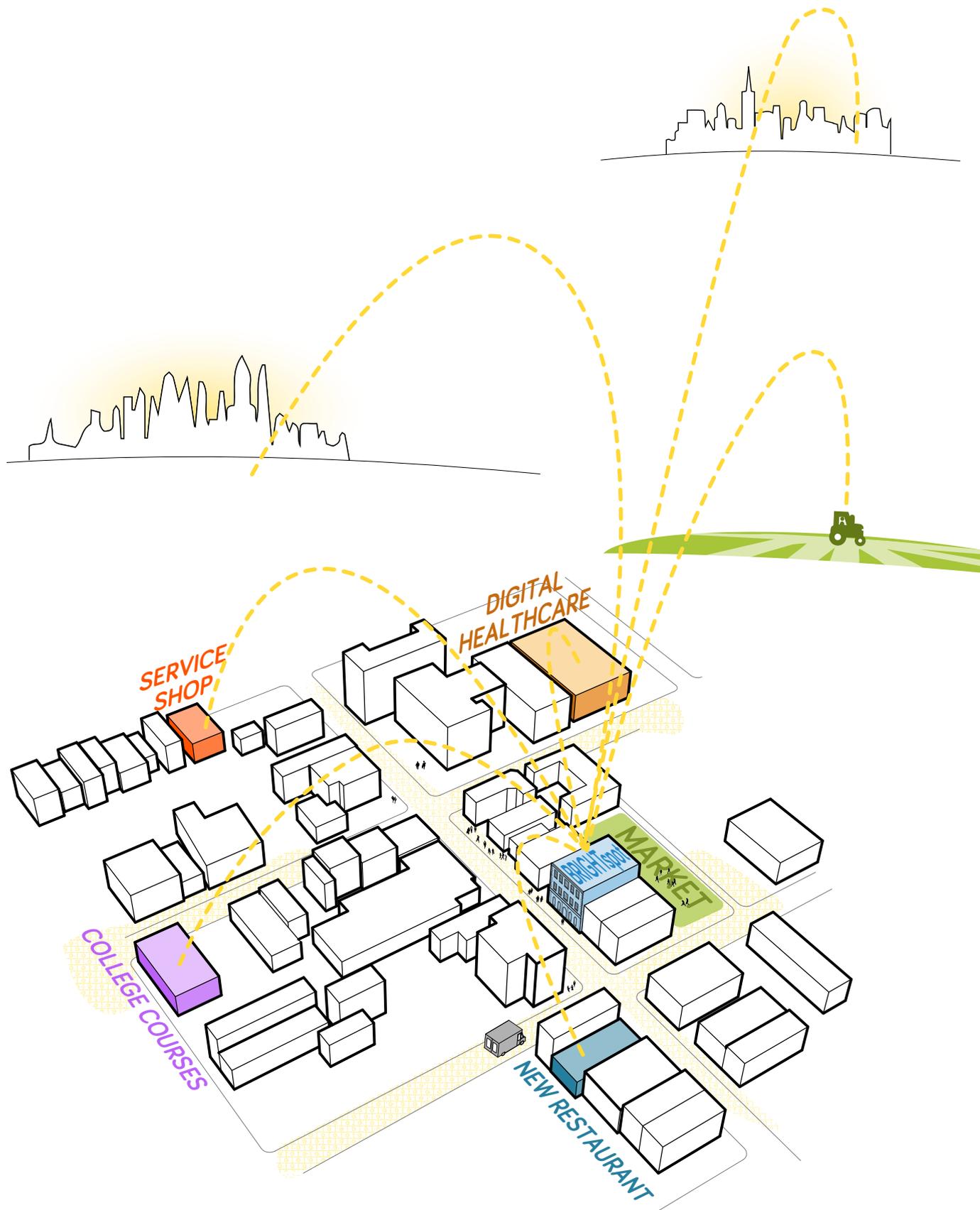
Since receiving its grant from the state, leaders saw the seemingly obligatory changes in personnel at the state and local level, as a new Governor was elected and new management put in place in the grantee organization. Hurricane Matthew had a devastating effect on the region in late 2016, and on many plans and schedules. The BRIGHT Futures Act passed the House, but was left stranded in the Senate as the legislative session came to an abrupt halt.

The proposed partnership with Revolutionary CoWorking is still available, as are the opportunities to partner with Fayetteville Tech and others. The final chapter for the proposed BRIGHTspot Center in Fayetteville has not yet been written.

***It is a difficult process to disrupt the current economic model.***

It is exciting when local leaders stand up to try and persevere through the many obstacles, even when they are inventing the path as they go.





## Call to Action : Cost of Opportunity

In economics, the opportunity cost, also known as the “alternative cost”, is generally measured as the loss of the potential gain from other alternatives when one option is chosen. It is represented by “what could have resulted” if a different policy, course of action, or strategy were chosen.

In public policy, opportunity cost is generally the **cost of doing nothing**.

In the context of technological development in North Carolina, the opportunity cost would have been the cost to rural areas if the Electric and Telephone Membership Co-Ops had never taken action to serve rural counties. The opportunity cost would be the value of those communities, those people, not ever having been given the ability to use electricity or telephone service. Thankfully they anticipated this opportunity cost and decided it was too high not to act.

Similarly, in the context of making the decision to pursue development of a BRIGHTspot Center, the opportunity cost is the cost to the people who will NOT be connected to the network economy. It is the cost of NOT having opportunities equivalent to people in cities where the network resources are available. It is the cost of products and services, and businesses and jobs that will NOT be available in rural areas.

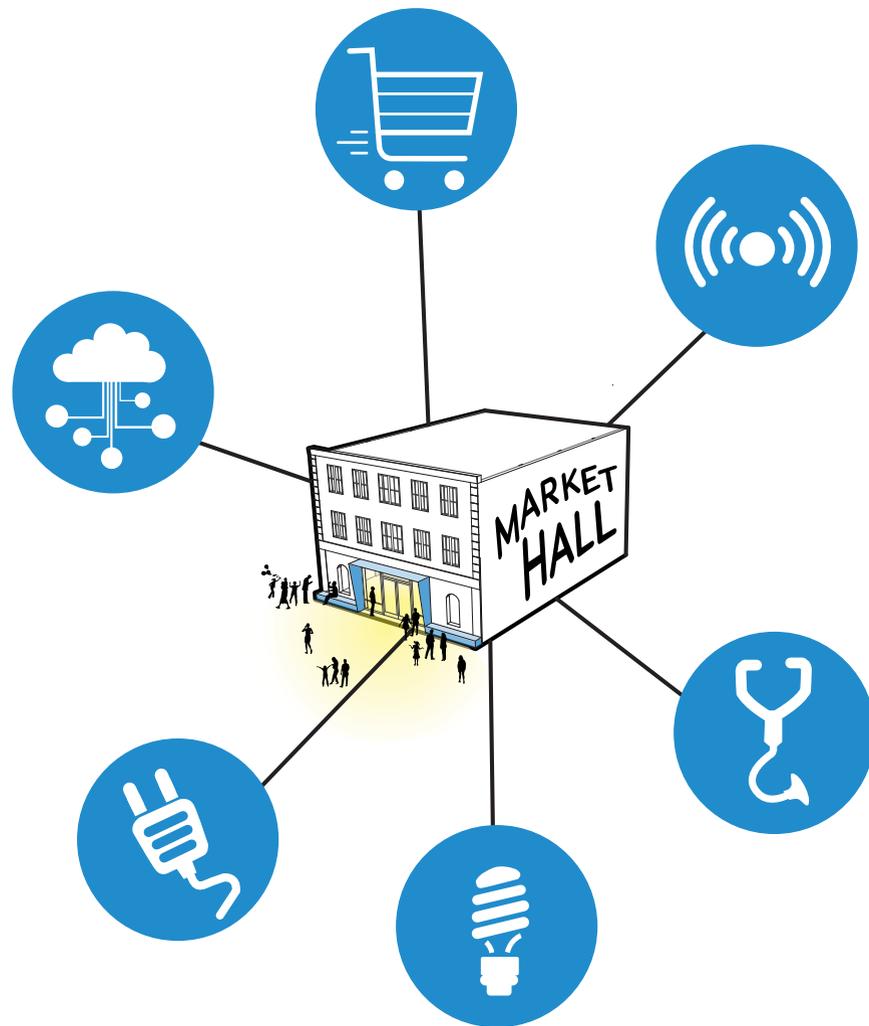
Pursuing the development of a BRIGHTspot Center is not without its own cost. It requires leadership and willingness to consider alternatives different than those of the past. It will take fortitude to pursue solutions other than those offered by incumbent service providers, the very same providers who repeatedly make the decision that the fiscal costs are too great to serve rural areas. The fiscal costs are real and the effort is hard; it is why this solution has never been implemented.

*But the opportunity cost is far greater than the cost of trying. And the return on being connected is infinitely greater than being left behind.*

The goal of this Guide is to sharpen the focus on the benefit of connecting people to the opportunities available in the network economy. It is to approach the same old problem of rural connectivity by looking at a new type of solution.

A new kind of solution that, just by adding one node at a time, grows an extraordinary **statewide network**.

# Appendix



## Table of Contents

The following pages provide additional detail, definition, and information on the components of the BRIGHTspot Network, as explained in the first release of the BRIGHTspot Network Guide, January 2017. Information included also discusses the implementation plan of how to the BRIGHTspot Network (BSN).

Each portion can be read alone or comprehensively as a whole to see the full picture of the potential benefit.

- 68 Components of the Plan
- 83 Identifying the Dots
- 85 Filling the Gaps
- 89 Asset Mapping

# Components of the Plan

The BRIGHTspot Network (BSN) is comprised of five key components:

## **BRIGHTspot Locations**

Physical anchors in each community where people can come to experience the products, services, and opportunities available in the Industry 4.0 world

## **BRIGHT Market Connections**

Shaped and developed by large market thought leaders in the BRIGHT markets, these connections streamline the ability for those in small markets to connect to the large market opportunities, while solidifying and accelerating early success in these markets

## **BRIGHTspot Platforms**

Internet Infrastructure and systems that make it easier for those in a small community to develop and leverage a BRIGHTspot Location or otherwise accelerate the development of Industry 4.0 opportunities in that community

## **BRIGHT Resources**

Assistance in developing and accessing financial resources (grants, commercial funding, financing, etc.) and operational resources (programmatic resources from BRIGHT markets) that is made easier for those participating in the BSN

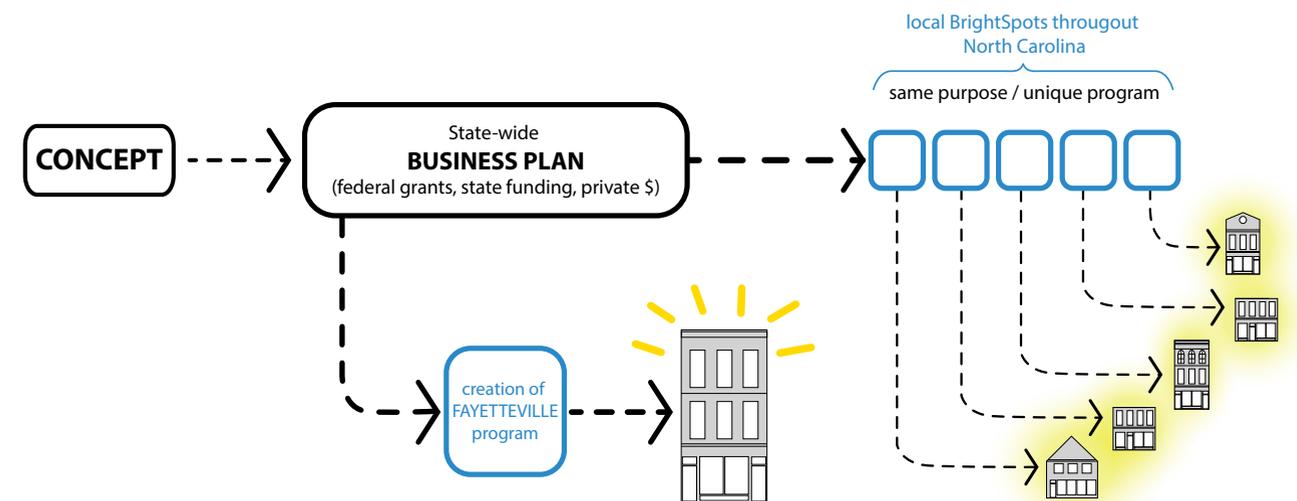
## **BSN Members**

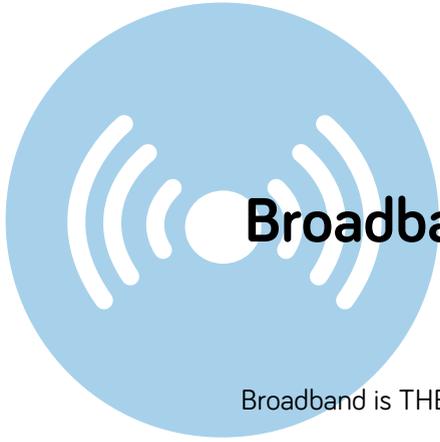
Individuals, enterprises, and others that participate in the BRIGHTspot Network

## *One Plan, many solutions*

The key to success for the BRIGHTspot Network is that it was designed to operate at scale. BRIGHT Market Advisory Teams comprised of leaders from each of the target market segments help define the opportunities and issues facing that market segment as a whole. Connecting the dots between existing resources at the Federal, State, University, Community College, and Healthcare anchor institution, and creating solutions to fill the gaps where gaps exist, allows BRIGHT Market leaders to develop plans for addressing the 3.3 million rural residents as a single market. Resources and platforms can be developed “at scale” to both reduce the cost of development and improve the return on each investment.

The result: One Plan, *locally implemented*





# Broadband Services

Broadband is THE key to digital connectivity.

Good options for broadband are largely missing in small markets. Incumbent carriers have chosen to leave these markets largely unserved. It is possibly because they fail to project as profitable in a market viewed only through the declining lens of video, voice, and data. In some cases, the problem may be their historical refusal to serve markets they see to suffer from the “Triple Play Problem” of high cost of construction, low density, and low income customers.

Luckily, this view is not shared universally by all service providers. This is particularly true of private partners in Public Private Partnerships, which are specifically allowed under North Carolina’s Public Private Partnership Law governing capital improvement projects for “infrastructure” and utilities (N.C.G.S. §143-128.1C). In 2016, the Legislature appropriated funds for two specific broadband projects under this Public Private Partnership model, and CDGB funds were designated to support others. In June 2016, the first State Broadband Plan identified Public Private Partnerships as the most viable alternative for developing broad-band services in unserved and under served areas.



## Market Players

Local leaders; Federal Agencies (NTIA; USDA); State Agencies (Broadband Infrastructure Office of the Department of Information Technology; Private Equity; Electric Membership Corporations; Telephone Membership Corporations; Private communications providers

## Issues + Opportunities

Public Private Partnership (“P3”) models for rural markets accelerated when Google became involved in a similar model in Huntsville, Alabama; New P3 initiatives expected in several North Carolina communities in 2017; More legislative confusion expected to “fix” service issue in Pinetops, NC after the FCC’s preemption Order was reversed by the Federal Court of Appeals; New funding for school WiFi and new, lower-cost wireless broadband technologies expand the opportunities for “non-Incumbent” providers

## Market Resources

Federal funding models and vehicles (USDA; NTIA; CDBG; and others); State innovation fund; Golden Leaf Foundation; P3 financing models

## Platforms

MCNC dark fiber assets; FCC E-Rate programs; North Carolina TeleHealth Network (NCTN)



# Retail Online Services

In a world where virtually every person, service, and device is connected in some way, everything is an online service. When BB&T creates thousands of IT jobs in Wilson, it is not because there is some gigantic bricks and mortar bank building in that town. It is because these people are designing, developing, operating, and maintaining a variety of online services for BB&T. When developers from the Advanced Self-Powered Systems of Integrated Sensors and Technologies (“ASSIST”) at NC State University design new wearable medical devices that will be deployed in a clinical trial in cooperation with a community health center in a rural area, they must also develop the online service that will tie it together.

Anchored by its earlier leadership in telecommunications and technology as a result of the establishment of the Research Triangle Park in the 1959, North Carolina has a robust ecosystem of designers, developers, and market leading companies that create a great market for retail online services. Equally important, is the leadership in some of the invisible segments that are critical to the future development of online services, such as Cloud Computing tools and platforms, Artificial Intelligence, or CyberSecurity.

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**Etsy**  
Store



## Market Players

Market leading companies such as IBM, Cisco, RedHat, and SAS; Federal Programs and Agencies including military support programs at Fort Bragg or medical facilities operated by the Veterans Administration; State Agencies (Department of Public Instruction (DPI); Department of Health and Human Services (DHHS); Private Equity; Universities; Community Colleges; “Code Academies”; and private enterprises

## Issues + Opportunities

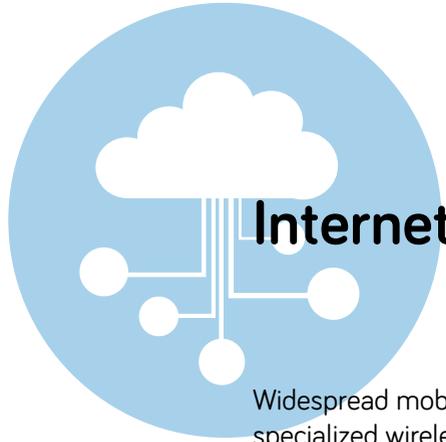
CyberSecurity, Artificial Intelligence, Cloud tools and platforms, Digital health, Mobile or App development, and even the emerging market for the Internet of Things (IoT) all represent large market segments. Equally large is the opportunity to help those in small markets use Retail online services to bring innovation and new designs to existing service models in local markets, at a regional level, or across the state.

## Resources

Grants and Programs from Federal and State agencies, as well as from private enterprise; Educational re-sources from STEAM programs in K-12, through Community Colleges; Universities; and Manpower Development programs; Private enterprise (CED and others)

## Platforms

Emerging thought leadership programs in each area and segment



# Internet of Things

Widespread mobile data networks (4G, LTE, and soon 5G) combined with specialized wireless communications protocols and low-powered sensors have combined to enable solutions that can virtually connect any machine or device to the Internet. This is referred to generally as the Internet of Things (IoT). This is a large and rapidly growing market.

The IoT market size is estimated to grow from \$157 billion in 2016 to \$661. billion in five years. This is an astounding compound annual growth rate (CAGR) of 33.3% from 2016 to 2021. The rapid expansion of the markets is accelerated by the great breadth and diversity of applications that market segments that are racing to integrate these technologies, including: Building and Home Automation, Smart Manufacturing, Smart Mobility And Transport, Connected Logistics, Connected Health, Smart Retail, Security and Emergencies, Smart Energy, Smart Environment. Internet of Things, in combination with cloud computing and big data, is creating lucrative opportunities for organizations.

In the last three years, individuals, groups, and market leading companies have come together to make a bid for having the Research Triangle Area viewed as the center of IoT activity and development. What began as a “MeetUp group” called the Raleigh Internet of Things group (“RIoT”), with 80 people in attendance, has now become a nationally recognized “brand” with more than 3,500 hundred regular attendees. They have recently held RIoT events in Orlando and Atlanta, and its leaders speak regularly at conferences and in the national media.



## Market Players

RIoT; Market leading companies like Cisco, IBM, RedHat, Samsung, SAS, and Verizon; Federal programs like the NSF ASSIST Center at NCSU; Universities; Community Colleges; and private enterprise.

## Issues + Opportunities

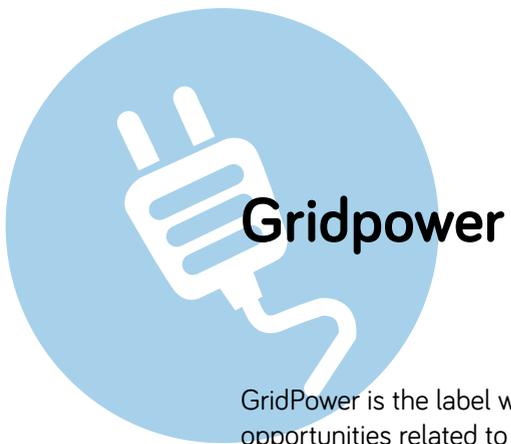
CyberSecurity leads the list of issues for the Internet of Things. Artificial Intelligence — consumerized most recently through the rapid adoption of Amazon’s “Alexa” platform, followed rapidly by Google and others — has made home automation a rapidly growing market. A similar acceleration in “wearables” began in 2015 when the Apple Watch brought new scale and interest to a market opened earlier by FitBit and others.

## Resources

RIoT members and sponsors; Federal programs (NSF and others); Private equity and enterprises

## Platforms

Many private industries are beginning to establish development platforms. RIoT Labs will open in Q1 2017



## Gridpower

GridPower is the label we use for a wide range of products, services, and opportunities related to the energy segment. These include alternatives for energy production (solar power, wind, etc.), to energy management (SmartGrids and MicroGrids), to energy applications (electric vehicles and home energy storage).

According to the U.S. Energy Information Administration (EIA), North Carolina was the fourth-largest producer of electricity generated from solar photovoltaics (PV) among the states in 2015, although almost all of the solar generation occurred at utility-scale facilities operated by independent power producers.

With 26 member-owned electric utilities serving the majority of the state's geographic footprint, and roughly 2 million people, local leaders can have a large impact in development the market for GridPower solutions. Duke Energy, headquartered in Charlotte, operates a Regulated Utilities business unit serves 7.4 million retail electric customers in six states in the Southeast and Midwest regions of the United States, representing a population of approximately 24 million people. But, Duke is also a global leader in energy solutions, building, developing and operating wind and solar renewable generation and energy transmission projects throughout the continental U.S. Its portfolio includes non-regulated renewable energy, electric transmission, natural gas infrastructure and energy storage businesses.



### Market Players

Duke Energy; the 26 member-owned electric cooperatives and the North Carolina Association of Electric Cooperatives (NCAEC); the association of public power providers, known as Electricities; USDA; NC Utilities Commission; NC GreenPower; NC Rural Electric Cooperative Association; TouchStone Energy; Members of the Research Triangle Cleantech Cluster (RTCC).

### Issues + Opportunities

Rapid growth in efficiency of PhotoVoltaic (PV) solar solutions and the opportunity to see solar power solutions integrated into “demand-side” energy management and solutions. Legal and regulatory issues are large and complex at both the Federal and State level. The potential for member-owned companies to participate in Public Private Partnerships to expand digital infrastructure in rural areas (such as fiber networks developed by Lumber River Electric Membership Corporation and Roanoke-Chowan Electric Membership Corporation) are significant.

### Resources

Federal funding models and vehicles (USDA; DOE); Universities; Community Colleges; State innovation fund; Golden Leaf Foundation; P3 financing models; Private equity and enterprises

### Platforms

Key industry players, such as ABB Inc., Cisco Systems, Duke Energy, Field2Base Inc., Itron, Piedmont Natural Gas, Power Analytics Corp., PowerSecure International, RTI International, SAS, Schneider Electric and Sensus are working together to develop platforms for this segment.



## Healthcare

Healthcare — and digital health — represents perhaps the largest opportunity for small markets. North Carolina has a large population of potential “customers” for digital health solutions in small markets and rural locations. This is partly due to the aging population in these locations. It is equally due, however, to the special health issues that face residents in these areas, especially problems with diabetes and heart disease.

A recent study by Harvard University estimated the 2007 economic impact of Diabetes in North Carolina to be \$7 billion. Equally alarming, it estimated that this negative impact would grow to \$17 billion by 2025 if current trends did not change. The 2007 cost translates to annual per patient cost of almost \$6,000.

The potential for digital health solutions to address this problem, and the benefits of taking advantage of this rapidly growing market segment, cannot be overstated. Seizing this opportunity would appear to be the most classic “dot connecting” exercise, bringing together those in the academic and private sector that are looking for opportunities to expand this market, with government leaders that have a need to see it addressed, and a large population of people that could benefit from the products, services, and jobs that this market represents



### *Market Players*

Universities; Community Colleges; Community Health systems; Public and Private medical facilities; Federal Agencies (CMS); State Agencies (DHHS; Rural Health; Public Health); North Carolina Telehealth Network and MCNC; Private equity and enterprises.

### *Issues + Opportunities*

There are many issues associated with the reimbursement for digital health services. The recent elections will most likely add more confusion than clarity. Because of its leadership in medicine and health, North Carolina and its unique “customer segments” in rural areas, there is a unique opportunity for this market

### *Resources*

Federal funding models and vehicles (CMS; Innovation Funds); Numerous foundations and grants

### *Platforms*

North Carolina TeleHealth Network (NCTN); Universities; Veterans Administration



# Training & Education

On paper North Carolina should be well-positioned to take advantage of advances in digital learning, training, education, and manpower development than can come from a digital infrastructure. The strength of North Carolina’s University system is well recognized. Its existing network of 58 named Community Colleges, with more than 120 locations overall, puts a location within “30 miles or 30 minutes” of every person in the state. North Carolina received \$400 million in “Race To The Top” funds, as part of the stimulus funding in the last decade. The state was one of the first to invest in broadband infrastructure and is a leader in taking advantage of federal “E-Rate” dollars, supplementing it with more than \$25 million per year as part of its School Connectivity Initiative. Finally, a 2013 law (House Bill 44, S.L. 2013-12) expressed a commitment to move to digital learning materials by 2017, the subject of its ongoing “Digital Learning Plan”.

Yet, there is a huge gap in execution. A huge opportunity for local leaders to **connect the dots** in new ways.

Today’s broadband connectivity to schools represent dead ends that do little to address what has recently been dubbed the “Homework Gap.” This is the gap in service that students face when they leave the school grounds and are unable to do their homework because they do not have sufficient broadband service at home. Similarly, training gaps exist because colleges and universities struggle to create certification programs to quickly provide key skills and experience to fill open jobs in BRIGHT Markets.

Local leaders can use the collaborative model for developing a BRIGHTspot Location, or for joining the BRIGHTspot Network provides an actionable framework for connecting these dots.



## Market Players

Department of Public Instruction (DPI); Local school board or LEA; Federal programs (E-Rate; Connect America Fund (CAF); Incumbent communications providers; Public Private Partnerships; Golden Leaf Foundation; State and local leaders; private equity and enterprises.

## Issues + Opportunities

This is a market that has more opportunities than issues. There is so much strength and experience from local schools to Community Colleges, Universities, and Manpower Development resources, such as NC Works. The challenge is connecting the dots across these many stakeholders. Yet, it is not an insurmountable challenge. An example of how successful collaborations can connect these dots is the Union Square Campus building recently opened in Greensboro.

## Resources

Federal, State, and Local education and manpower funding; E-Rate; School Connectivity Initiative; Public and Private grants and programs

## Platforms

MCNC; DPI education Cloud; NC Works; Federal, State, University and Community College “Small Business” resources and locations.

## Identifying the Dots

We live in a world of Big Data tools and solutions. Local leaders have access to a vast amount of data and information pulled from an ever-growing number of sources. For them, however, the issue is not the availability of data, it is about the insights that can inform local plans for economic development.

The question is how to **connect the dots**.

The BSN Team works with local leaders to better understand the “dots” and the “gaps” that must be addressed in the local innovation and economic development plans. We combine the best of the Big Data tools, with the asset inventory developed by InnovateNC, with the insights from BRIGHT Market leaders, to develop market specific connection plans.



## Filling the Gaps

Taken alone, the population of 3,507 students at Lenoir Community College looks very different than the population of 33,989 students at North Carolina State University. For local leaders, however, that is not the interesting question. The interesting question is how to connect the first student from Lenoir Community College to a BRIGHT Market Opportunity in Healthcare, or the Internet of Things. Similarly, the interesting question is how to connect an elderly patient in Pink Hill with a new digital health solution being developed by a Home Health Care entrepreneur in Pembroke. And having done that, connecting that opportunity with The Center for Advanced Self-Powered Systems of Integrated Sensors and Technologies (ASSIST) at NCSU that has been funded by the National Science Foundation.

The BSN Team helps local leaders develop plans that connect people to opportunities. This is all about helping the local Innovation Team understand the granular dots that can be connected and the large or small gaps that must be filled to nurture a new product or service or market opportunity. It is about enabling those in a local community to discover the benefits from Industry 4.0 products and services and business opportunities. It is about working with local businesses to develop these new products and services in a way that people in the local community begin to engage in new ways.

This is not about Big Data, it is about filling the real gaps that would keep people from Industry 4.0 benefits. The BRIGHTspot Location summary form on the next page — and the Asset Mapping survey in the Appendix — shows the kind of tools and resources that have been designed to make it easier for each local Innovation Team to gain the key insights needed to develop the right plans to spark real economic development.



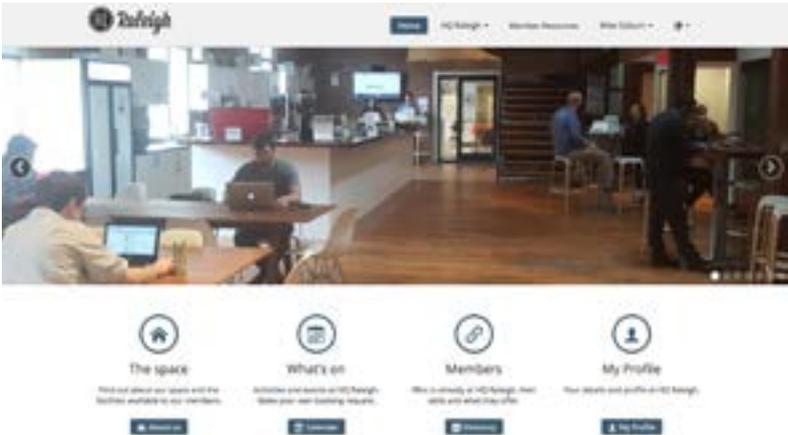
# BRIGHT Platforms

Small communities are not the same as large markets. Platforms relate to software and technology that assists in the development and management of the BRIGHTspot Network and Location.

There may be need for true broadband service (25 Mbs downstream and 3 Mbs upstream), but there is most likely no urgent demand for CoWorking spaces in most smaller communities. People may need some place where they can discover and engage with Industry 4.0 products and services, but it is not because there is a lack of available and low-cost real estate options. The issue in small communities is that the people who are busy bringing these kinds of options to market in places like San Francisco, or Austin, or Raleigh are not bringing them to small communities.

This is why we have developed the platforms, and models, and plans to bring BRIGHTspot Locations to small communities. BRIGHTspot locations in small markets will serve as a place where individuals can **Discover** new opportunities, **Engage** with new products and services, and ultimately **Create** businesses, jobs, and revenue to power a new local economy. And, even before a physical BRIGHTspot Location might be available, we are working on ways to bring the benefits of the BRIGHTspot Network to those in “virtual” locations, whether that be a dorm room or mobile device.

The BRIGHTspot Network has partnered with other CoWorking operators, and entrepreneur networks like HQ Community, to bring large market platforms and options to BRIGHTspot Locations. BRIGHTspot members will enjoy the same kind of online resources available in these large market locations. This means that a BRIGHTspot Member can not only participate in product, service, or market development efforts with colleagues in other locations, it means that the BRIGHTspot Member will also have “visitor” privileges when in those other locations.



# BRIGHT Resources

You are not alone.

The Industry 4.0 dynamics that challenge you are challenging to everyone. This is why the BSN Team is equally focused on collaborating across the network to develop resources for local leaders. There are many programs and foundations and socially-minded leaders that would like to see greater economic development in rural areas and small markets. It is impossible, however, for them to address each market one-at-a-time, or to reinvent the wheel each time they work with leaders in a new location.

This is why the BSN Team is working with these programs and organizations to develop plans for making much-needed resources available in more effective and efficient ways. Whether this includes developing new Public Private Partnership models and processes to accelerate multiple projects at once, or packaging several development projects together to make it easier to obtain a public or private grant, the BSN Team is actively working to make it easier for each local community to find the assistance they desire.



# Asset Mapping

Creating a successful BRIGHTspot Location — and sparking an Industry 4.0 local economy — is not as simple as renovating a building or connecting it with a gigabit pipe. Success means connecting people to opportunities that would otherwise not be available. To do this, local leaders must have a strong understanding of the people in their community, and what opportunities will be most valuable to them.

When local markets are left behind, the result is the destruction of key relationships that must be rebuilt in order to “reconnect” people, and communities, to new economic engines. This is why the BSN Team focuses so intently on **connecting the dots** between people and the opportunities that will provide them with the greatest benefit. This is the key to the **Discover, Engage, Create** model of economic development.

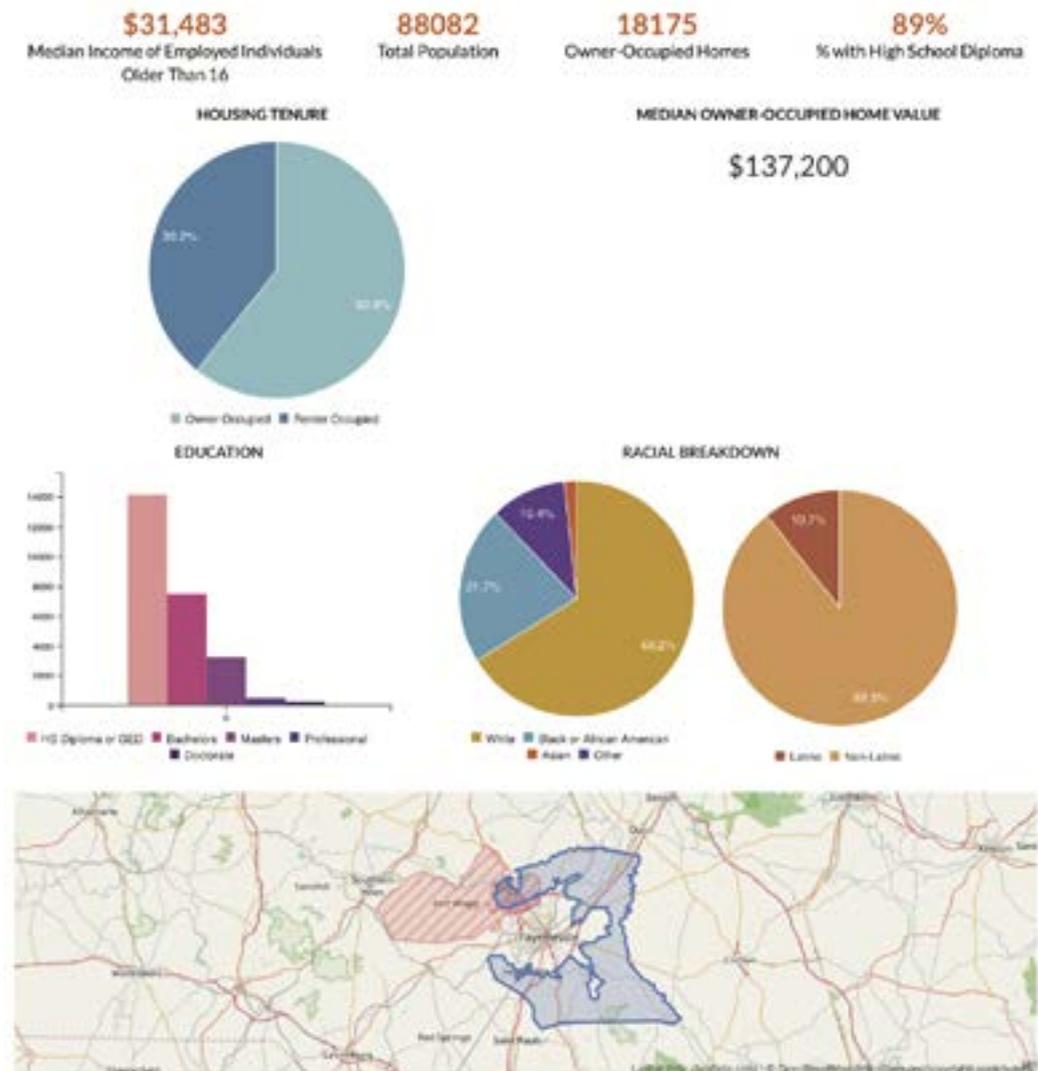
## Understanding the “dots” to be connected

The BSN Team has developed and adapted a set of tools, methods, and processes to assist local leaders in quickly evaluating how local assets can best be aligned to BRIGHT Market infrastructure and opportunities. It begins with a local “Innovation Team” comprised of business, academic, government, and non-government organization leaders that the BSN Team can help assemble. The next step is to work with the Innovation Team to use the BRIGHTspot tools and processes to evaluate the current situation based on the readily available data.

This information provides a baseline understanding. The most important insights come, however, from working with the Innovation Team to align the locally available assets and resources with the innovation and market models that represent the best practices and Industry 4.0 opportunities that have been developed across all the locations in the BRIGHTspot Network.

For example, if a team at a local community college works with one Innovation Team in a BRIGHTspot Community to develop a digital health trial or opportunity, that same opportunity can become available to other community colleges and BRIGHTspot communities. If market leader in CleanTech becomes interested in a new offering or opportunity in one market, the BSN helps to make it available to all. No longer does each local Innovation Team have to work alone to understand or develop these connections.

*This is the power of the BRIGHTspot Network.*



The above image is an example of data output by the BSN Team after asset mapping and surveying is done in

# Site Bio

site address:	type of property:
site dimensions:	question:
cost:	question:
tax information:	question:

- What systems and opportunities exist within the community that foster positive interactions?
- Are these systems publicly supported or commercial in nature?
- Physical/facilities?
- Ephemeral/society?



- What systems exist within the community to provide access to food?
- Are there grocery stores and other local food sources for the sale of produce nearby?
- Do people eat at home, or are there places where people gather around food?
- Other



- What is the material financial status of the community?
- What types of neighborhoods are in the community?
- What is the ratio of men employed? Of women?
- What are the income-generating systems in place nearby that provide work opportunities?



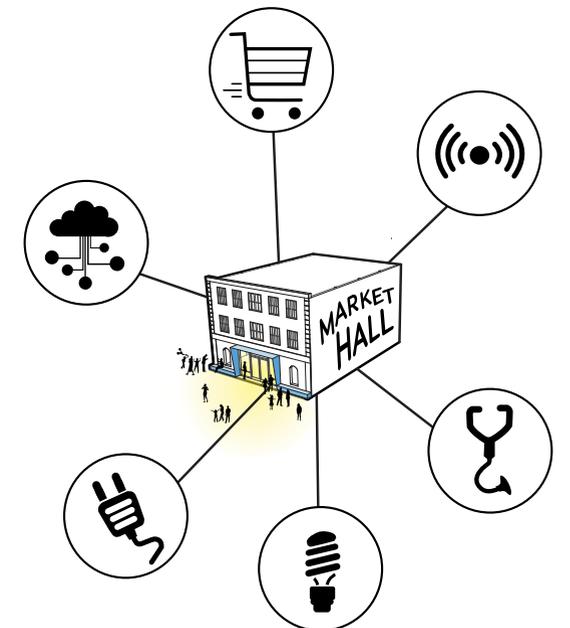
- Do people in this community primarily rent or own?
- Describe the types of housing available. Are these because of cultural preference or lack of option?
- Is there diversity in the cost and format of living arrangements?
- Does everyone in the community have a home?

- What is the access to health care in the community?
- What is the age of the community?
- What is the standard of health education in the community?
- Does the community promote health as events, for example, a community 5k?



	yes	no	other
* main source of transportation is the car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* available public transit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* highways nearby	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* arterial streets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* connector streets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* local roads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* parking availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* available water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* available sewer systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* local government established	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* fire station nearby	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* local police established	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* other, please list			

## Asset Diagram



## Innovation Asset Map

**Answers: What assets do we have to build an innovation economy?**

The Asset Map is a tool to help a community catalog the assets it has to build an innovation economy. The purpose of the Map is to help a community clearly articulate its vision and goals for innovation and to understand the resources available, or not, to help position the community for innovation-driven growth and development. It is intended to help communities jumpstart its innovation process not as a binding measurement tool.

Timing: The Asset Map will be administered once at the outset of InnovateNC and again towards the conclusion of the project.

Target Respondents: Innovation Council Members.

**As defined in the InnovateNC initiative, innovation is the creation and adoption of new products, services, processes, and business models to yield value (both economic and non-economic).**

**Process:** Each committee member will be asked to score the asset map. To ensure anonymity in scoring, we will not ask for individual names; instead we are seeking to collect perceptions of all individual council members involved. This exercise and the data are intended to spark discussions to inform the strategic planning process.

Compile and Score

1. The data committee will compile data/information for the asset map.
  - a. Many fields for responses have a list (e.g., 1-3). This is intended as a placeholder to offer ideas. Feel free to increase or decrease the list numbers as needed.
  - b. InnovateNC will pre-populate noted fields with data by January 31, 2016, and post-populate data after scoring has been completed.
2. The data committee will solicit feedback from the broader innovation council to ensure complete and accurate data.
3. Once the asset map is accurate and complete, each innovation council member will enter their individual ranks\* on quality and related comments for each relevant measure.
4. InnovateNC will analyze the data.
5. InnovateNC will make scores and comments available to the data committee for each measure. InnovateNC will share summary findings with the broader NC learning community.

\*Ranks can be entered after each section as outlined in this document, or in its entirety by clicking [here](#).

Discuss large differences in scores

6. The data committee will identify measures with major differences in scoring.
7. The data committee will work with the innovation council facilitator and co-chairs to facilitate a dialog about those measures. *The goal is not to come to consensus, but to raise concerns and/or offer opportunities for clarification to inform the strategic planning process.*

**1 BUILD**

<b>1.1 Vision and Goal</b>
<b>1.1.1 What is the community's overall vision for innovation?</b>
<b>1.1.2 What are the community's goals for achieving that vision?</b>
<b>1.1.3 What are the areas of intervention (focal points) to advance the community's innovation vision and goals?</b> For example, are there target industry sectors, neighborhoods, entrepreneurs, <sup>[1]</sup> students, community initiatives, etc. that serve as the target for implementing change? Please list and describe.
[1] For the purposes of this Asset Map, an "entrepreneur" refers to someone who starts a new innovative organization, i.e., one that that creates and/or adopts new products, services, processes, and business models to yield value (both economic and non-economic)."

<b>1.2 Key Community Assets</b>
<b>1.2.1. Physical Assets:</b> What are the major public and privately owned spaces designed and organized to stimulate new and higher levels of connectivity, collaboration, and innovation. Please list.
<b>a. Buildings</b>
1.
<b>b. Innovation districts/centers</b>
1.
<b>c. Parks/plazas</b>
1.
<b>d. Support organizations</b>
1. 2.
<b>e. Other</b>
<b>1.2.1b Physical Assets Final Score:</b>
<ul style="list-style-type: none"> <li>• InnovateNC to post-populate this cell with data</li> </ul>

[1] For the purposes of this Asset Map, "quality" refers to the usefulness or value that the asset—as whole—brings to the innovation ecosystem. For example, if an asset has high intrinsic value but is not accessible to relevant groups, it would receive a less-than-excellent quality ranking. When ranking the "quality" of an asset, take into consideration all the dimensions you feel are relevant (intrinsic value, accessibility, cost, flexibility, etc.) and then assign a summary ranking based on the asset's performance on all of those dimensions. Use the "Comment" field to elaborate, where needed.

**1.2.2. Talent Assets:** What are the key talent assets of the community that drive thought, organization, and action? Please list.

**a. K-12 schools**

1.

**b. Community colleges**

1.

**c. Universities**

1.

**d. Training/research centers**

1.

**e. Other**

1.

**1.2.2a Talent Assets:** On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each asset in its ability to advance the community's innovation agenda?

Click [here](#) to enter your score and share your comments.

**1.2.2b Talent Assets Final Score**

- InnovateNC to post-populate this cell with data

**1.2.3 Infrastructure Assets:** What are the key transportation and telecommunication networks in the community? Please list.

**a. Public transportation**

1.

**b. Airports**

1.

**c. Roads**

1.

**d. Rail**

1.

**e. Waterways**

1.

**f. Broadband access**

1.

**e. Cost of living**

- InnovateNC to pre-populate this cell with data

**1.2.3a Infrastructure Assets:** On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each asset in its ability to advance the community's innovation agenda?

Click [here](#) to enter your score and share your comments.

**1.2.3b Infrastructure Assets Final Score**

- InnovateNC to post-populate this cell with data

**1.2.4 Economic Assets:** What are the principle financial resources, industries, sectors, and clusters in the community? Please list.

**a. Financial capital (R&D/commercialization)**

1.

**b. Financial capital (early stage)**

1.

**c. Financial capital (mid stage)**

1.

**d. Financial capital (late stage)**

1.

**e. Top industries (4-digit NAICS)**

- InnovateNC to pre-populate this cell with data

**f. Top sectors (2-digit NAICS)**

<ul style="list-style-type: none"> <li>InnovateNC to pre-populate this cell with data</li> </ul>
<b>g. Top clusters (cluster analysis)</b>
<ul style="list-style-type: none"> <li>InnovateNC to pre-populate this cell with data</li> </ul>
<p><b>1.2.4a Economic Assets:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each asset in its ability to advance the community's innovation agenda?</p> <p>Click <a href="#">here</a> to enter your score and share your comments.</p>
<p><b>1.2.4b Economic Assets Final Score</b></p> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<p><b>1.2.5 Community Assets:</b> What community assets exist that help facilitate innovation and entrepreneurship? Please list.</p>
<b>a. Incubators</b>
1.
<b>b. Accelerators</b>
1.
<p><b>1.2.5a Community Assets:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each asset in its ability to advance the community's innovation agenda?</p> <p>Click <a href="#">here</a> to enter your score and share your comments.</p>
<p><b>1.2.5b Community Assets Final Score</b></p> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<p><b>1.2.6 Workforce Assets:</b> What is a general profile of the community workforce?</p>
<b>a. Average age</b>
<ul style="list-style-type: none"> <li>InnovateNC to pre-populate this cell with data</li> </ul>
<b>b. Level of educational attainment</b>
<ul style="list-style-type: none"> <li>InnovateNC to pre-populate this cell with data</li> </ul>
<b>c. Average educational attainment among in-migrants</b>

<ul style="list-style-type: none"> <li>InnovateNC to pre-populate this cell with data</li> </ul>
<b>d. Percent in Science &amp; Engineering occupations</b>
<ul style="list-style-type: none"> <li>InnovateNC to pre-populate this cell with data</li> </ul>
<p><b>1.2.6a Workforce Assets:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each asset in its ability to advance the community's innovation agenda?</p> <p>Click <a href="#">here</a> to enter your score and share your comments.</p>
<p><b>1.2.6b Workforce Assets Final Score</b></p> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<b>2 ENABLE</b>
<b>2.1 Networks, associations, or events that bring entrepreneurs and innovators together</b>
<p><b>2.1.1 Associations and Formal Networks:</b> What associations or formal networks exist to bring innovators and entrepreneurs together in the area?</p>
1.
<p><b>2.1.1a Associations and Formal Networks:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each association or network in its ability to advance the community's innovation agenda?</p> <p>Click <a href="#">here</a> to enter your score and share your comments.</p>
<p><b>2.1.1b Associations and Formal Networks Final Score</b></p> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<p><b>2.1.2 Events:</b> What events exist in the area that bring innovators and entrepreneurs together? Please list.</p>
1.
<p><b>2.1.2a Events:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each association or network in its ability to advance the community's innovation agenda?</p> <p>Click <a href="#">here</a> to enter your score and share your comments.</p>
<p><b>2.1.2b Events Final Score</b></p> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<b>3 MEASURE</b>
<b>3.1 Tracking Outcomes</b>
<b>3.1.1 Tracking Outcomes:</b> What organizations or people track outcomes related to innovation and entrepreneurship? Please list.
1.
<b>3.1.1a Tracking Outcomes:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each association or network in its ability to advance the community's innovation agenda?  Click <a href="#">here</a> to enter your score and share your comments.
<b>3.1.1b Tracking Outcomes Final Score</b> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<b>4 POLICY/ADVOCACY</b>
<b>4.1 Government</b>
<b>4.1.1 Government Assets:</b> Who are the major governmental players relevant to the community? Please list.
<b>a. Local</b>
1.
<b>b. Regional</b>
1.
<b>c. State</b>
1.
<b>d. Federal</b>
1.
<b>4.1.1a Government Assets:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each association or network in its ability to advance the community's innovation agenda?  Click <a href="#">here</a> to enter your score and share your comments.
<b>4.1.1b Government Assets Final Score</b> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<b>4.2.1 Community Policy Assets:</b> Who are the community organizations that are advocating for policy change for entrepreneurs and innovators? Please list.
1.
<b>4.2.1a Community Policy Assets:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each association or network in its ability to advance the community's innovation agenda?  Click <a href="#">here</a> to enter your score and share your comments.
<b>4.2.1b Community Policy Assets Final Score</b> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<b>5 SHARE</b>
<b>5.1 Media</b>
<b>5.1.1 Media:</b> Which media of print and digital publications, TV and radio outlets, and/or social media networks share the innovation or entrepreneurial story of your community? Please list.
1.
<b>5.1.1a Media:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how would you rank the quality of each association or network in its ability to advance the community's innovation agenda?  Click <a href="#">here</a> to enter your score and share your comments.
<b>5.1.1b Media Final Score</b> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>

<b>6 SUMMARY</b>
<b>6.1 Summary</b>
<b>6.1. Summary:</b> On a scale of 1 to 10, with 1 = very poor, 5 = average, and 10 = excellent, how well positioned is your community for innovative growth?  Click <a href="#">here</a> to enter your score and share your comments.
<b>6.1.1b Summary Final Score</b> <ul style="list-style-type: none"> <li>InnovateNC to post-populate this cell with data</li> </ul>
6.2 What assets are missing? Please list.

**Notes**

**Notes**

# Special Thanks

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This Guide explains how a BRIGHTspot Center can be the **platform** of growth for a community in this network economy. It offers an analysis of the problems that rural and low-income areas face. It also explains the urgency for connecting communities in this network economy.

Every Industrial Revolution has been driven by the dual forces of **Connectivity** and **Automation**.

Since the days of the railroad, automation enabled production “at scale” in a way that improved efficiency and drove down costs. Additional income and profitability trickled down to workers and spread into the community.

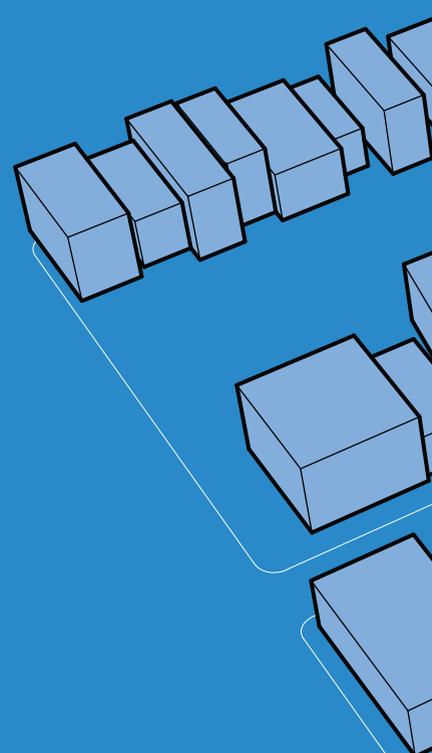
With the additional production came the need to **connect to new markets** outside the local area. Communities sprang up following the lines of connectivity. Any place a community could be connected, it could grow and prosper.

The forces of Connectivity and Automation are even stronger today. But they are no longer tethered to physical things like they were in the days of railroads and large “bricks and mortar” locations. Gigabit-speed data connections and computing power “in the Cloud” eliminate the physical boundaries of communities.

No longer does an individual or a business need a large physical infrastructure to succeed.

**But they do have to be connected.**

This Guide offers the opportunity to get started.



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