

A map of the United States is shown in a dark teal color. A bright cyan spotlight illuminates the central region, which includes states like Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, Missouri, Arkansas, Louisiana, Texas, Oklahoma, Kansas, Nebraska, and Iowa. The text "REINVENTION IN MIDDLE AMERICA" is centered within this spotlighted area.

**REINVENTION IN  
MIDDLE AMERICA**

INNOVATION FROM THE INTERIOR





**If you are a very talented person, you have a choice.  
You either go to New York or you go to Silicon Valley.**

Peter Thiel, Entrepreneur, Venture Capitalist, Facebook board member



Every time we go to the coasts, we hear the same old reasons why the Midwest won't work for startups. I have yet to see anyone validate these claims with data. In fact, every piece of information we find confirms the contrary.

Chris Olsen, Drive Capital

Middle America. The American Interior. The Heartland. No matter what you call it, Middle America is the center of the country, but too often, it's described as if it's on the cultural margins and overlooked as a crucible or a testing ground for innovation.

Conventional wisdom suggests that to peer into the crystal ball of America's future, one should go to Silicon Valley to check out the latest start-up unicorns, or to New York or Los Angeles to scout emerging trends in fashion and food.

Middle America has become a synonym for "middle of the road" – bland, boring, and conservative. The top upvoted Urban Dictionary definitions of Middle America bear this out. "Middle America" is described as a term that is used in "almost always derogatory" ways, code for "provincial," "unsophisticated" and "vanilla."

In a survey, sparks & honey asked Americans what region of the country they identified with innovation. The greatest number (47% of respondents) selected the West Coast, 25% selected the Northeast, and only 10% chose the Midwest. When asked why they selected their chosen region, over 20% of total respondents cited Silicon Valley specifically.

"Silicon Valley and new technology companies like Microsoft and Google are all in the west" wrote one Seattle respondent, while a New Yorker wrote, "When I think of innovation I think of science. The south and midwest parts of America are notorious for science-denial, so they're right out [of the running]."

Marginalized language is used to describe Middle America, like "flyover country." When sparks & honey did a social listening analysis, sentiment around the term "Middle America" was overwhelmingly negative: -62%. Intriguingly, sentiment from both Middle America and the coasts often skewed negative.

This is because people in the region authored posts like "The #LiberalElite hates Middle America," and referring to the media, "They hate Middle America. Working people..." (two tweets detected in our social listening analysis). Our survey found similar results: only 16.4% of respondents believed people on the coasts viewed the middle of the country positively.

But Middle America is not a monolithic whole, and although Middle America is not stuck in the past, rhetoric around Middle America is.

In **Reinvention in Middle America**, we look at Middle America not through the lens of politics, ideology or outdated clichés but rather through the lens of innovation in its broadest sense. We'll examine key ways that cities from Cleveland to Nashville to Louisville are embracing innovation in manufacturing, city design, healthcare, sustainability efforts and clean energy, creatively solving problems that the entire country will eventually have to confront.

In **Manufacturing the Future**, we demonstrate that many of the old manufacturing towns are tackling the real challenges that the rise of automation in manufacturing is creating, and they're adapting in innovative, future-forward ways.

In **Dr. Robot Will See You Now**, we show how Middle Americans, particularly in rural areas, are experiencing the future of healthcare out of necessity, as telemedicine helps to solve the rural healthcare crisis through AI and diagnostic robots.

In **Renewable Energy, Renewable Jobs**, we're seeing Middle America charge forward on the transition to clean energy, which is providing more jobs, saving money, and invigorating their economies.

In **Small Cities, Big Ideas**, we look at how non-coastal cities are using more progressive and urbanist techniques to make their cities more liveable for work, life, and play.

So yes, portions of Middle America may have a lot of cornfields—but drone-farming is happening there. And although Nashville is still the seat of the Grand Ole Opry, it's also emerging as a major fashion and design hub.

Deep in the heart of Appalachia, a coal mining museum is powered by solar energy, and out-of-work coal miners are moving forward into the future and reinventing themselves as coders, energy efficiency auditors and energy contractors.

Necessity is the mother of invention, and in many ways, the future of America is already happening in Middle America. Challenges there – rural access to healthcare, automation-related job loss, and urban decline in the Rust Belt—are fueling creative solutions imbued with Middle American pragmatism and humility, along with values of community, collaboration, and concern for the impact of its actions.

There are lessons to be learned by taking a fresh look at reinvention and innovation in Middle America. The future depends on it.

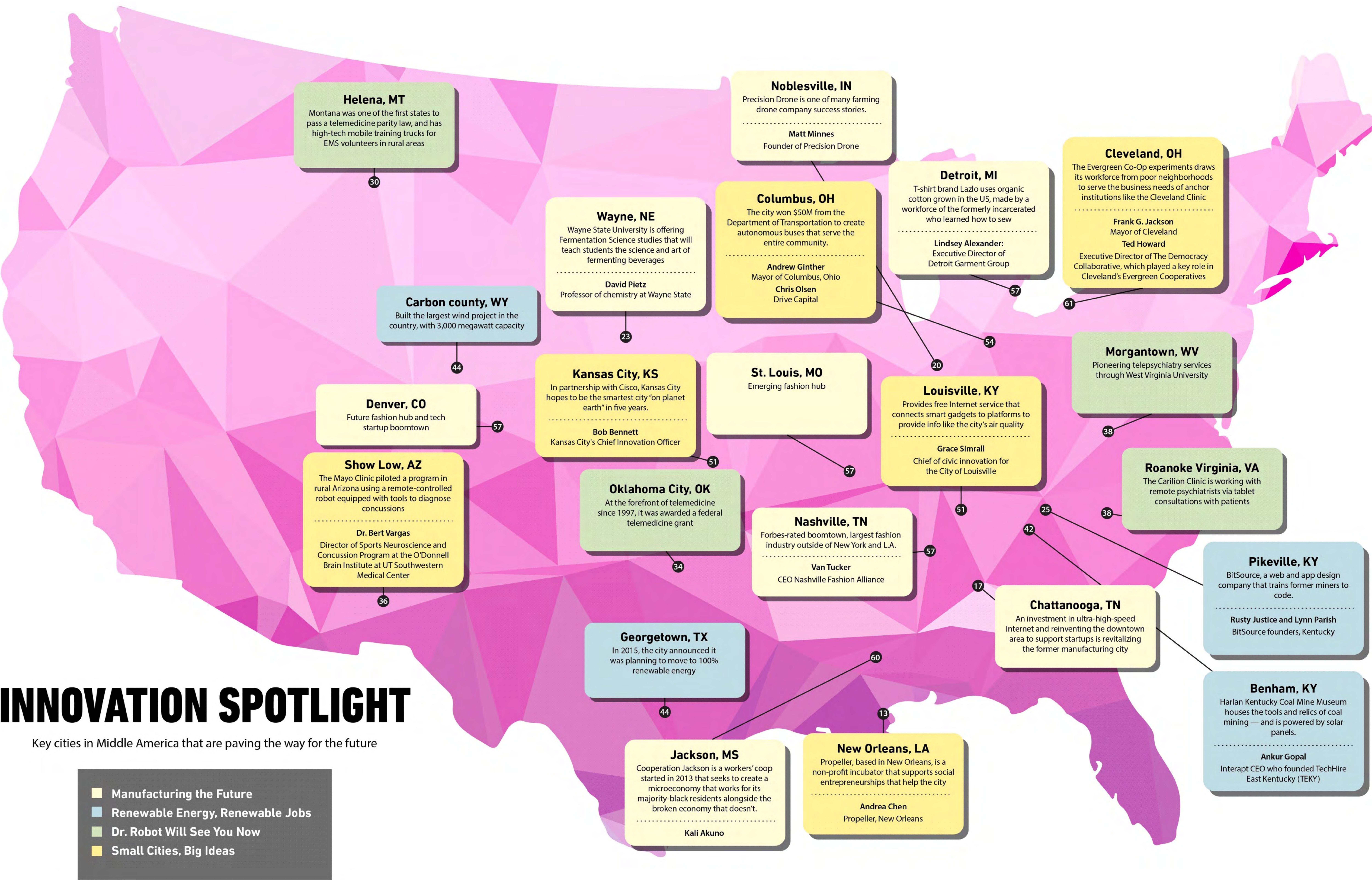
# **TABLE OF CONTENTS**

**MANUFACTURING THE FUTURE**<sub>8-27</sub>

**DR. ROBOT WILL SEE YOU NOW**<sub>28-40</sub>

**RENEWABLE ENERGY,  
RENEWABLE JOBS**<sub>41-46</sub>

**SMALL CITIES, BIG IDEAS**<sub>47-68</sub>



**Helena, MT**  
 Montana was one of the first states to pass a telemedicine parity law, and has high-tech mobile training trucks for EMS volunteers in rural areas

**Noblesville, IN**  
 Precision Drone is one of many farming drone company success stories.  
**Matt Minnes**  
 Founder of Precision Drone

**Cleveland, OH**  
 The Evergreen Co-Op experiments draws its workforce from poor neighborhoods to serve the business needs of anchor institutions like the Cleveland Clinic  
**Frank G. Jackson**  
 Mayor of Cleveland  
**Ted Howard**  
 Executive Director of The Democracy Collaborative, which played a key role in Cleveland's Evergreen Cooperatives

**Wayne, NE**  
 Wayne State University is offering Fermentation Science studies that will teach students the science and art of fermenting beverages  
**David Pietz**  
 Professor of chemistry at Wayne State

**Columbus, OH**  
 The city won \$50M from the Department of Transportation to create autonomous buses that serve the entire community.  
**Andrew Ginther**  
 Mayor of Columbus, Ohio  
**Chris Olsen**  
 Drive Capital

**Detroit, MI**  
 T-shirt brand Lazlo uses organic cotton grown in the US, made by a workforce of the formerly incarcerated who learned how to sew  
**Lindsey Alexander**  
 Executive Director of Detroit Garment Group

**Carbon county, WY**  
 Built the largest wind project in the country, with 3,000 megawatt capacity

**Denver, CO**  
 Future fashion hub and tech startup boomtown

**Kansas City, KS**  
 In partnership with Cisco, Kansas City hopes to be the smartest city "on planet earth" in five years.  
**Bob Bennett**  
 Kansas City's Chief Innovation Officer

**St. Louis, MO**  
 Emerging fashion hub

**Louisville, KY**  
 Provides free Internet service that connects smart gadgets to platforms to provide info like the city's air quality  
**Grace Simrall**  
 Chief of civic innovation for the City of Louisville

**Morgantown, WV**  
 Pioneering telepsychiatry services through West Virginia University

**Show Low, AZ**  
 The Mayo Clinic piloted a program in rural Arizona using a remote-controlled robot equipped with tools to diagnose concussions  
**Dr. Bert Vargas**  
 Director of Sports Neuroscience and Concussion Program at the O'Donnell Brain Institute at UT Southwestern Medical Center

**Oklahoma City, OK**  
 At the forefront of telemedicine since 1997, it was awarded a federal telemedicine grant

**Nashville, TN**  
 Forbes-rated boomtown, largest fashion industry outside of New York and L.A.  
**Van Tucker**  
 CEO Nashville Fashion Alliance

**Roanoke Virginia, VA**  
 The Carilion Clinic is working with remote psychiatrists via tablet consultations with patients

**Georgetown, TX**  
 In 2015, the city announced it was planning to move to 100% renewable energy

**Chattanooga, TN**  
 An investment in ultra-high-speed Internet and reinventing the downtown area to support startups is revitalizing the former manufacturing city

**Pikeville, KY**  
 BitSource, a web and app design company that trains former miners to code.  
**Rusty Justice and Lynn Parish**  
 BitSource founders, Kentucky

- Manufacturing the Future
- Renewable Energy, Renewable Jobs
- Dr. Robot Will See You Now
- Small Cities, Big Ideas

**Jackson, MS**  
 Cooperation Jackson is a workers' coop started in 2013 that seeks to create a microeconomy that works for its majority-black residents alongside the broken economy that doesn't.  
**Kali Akuno**

**New Orleans, LA**  
 Propeller, based in New Orleans, is a non-profit incubator that supports social entrepreneurs that help the city  
**Andrea Chen**  
 Propeller, New Orleans

**Benham, KY**  
 Harlan Kentucky Coal Mine Museum houses the tools and relics of coal mining — and is powered by solar panels.  
**Ankur Gopal**  
 Interapt CEO who founded TechHire East Kentucky (TEKY)

# INNOVATION SPOTLIGHT

Key cities in Middle America that are paving the way for the future



CHAPTER 1

# MANUFACTURING THE FUTURE







**Elected officials, investors like myself, and entrepreneurs are mobilizing in places like Detroit, Omaha, and Minneapolis to create opportunity and promote entrepreneurship. It's what I call the 'Rise of the Rest' and it's a trend I fully expect to accelerate in 2017.**

Steve Case, AOL co-founder

# MANUFACTURING THE FUTURE

Up until now, Silicon Valley – its entrepreneurs, its “fail fast, winner-take-all” ethos, and its unicorn companies – has been considered the model for innovation. The thinking was that if you wanted to build an innovative company, the talent, ecosystem and money were all on the east and west coasts.

The money has followed this bias: half of all venture capital in the US goes to just the San Francisco Bay Area and New York.

But what Ping Fu, entrepreneur, author, global 3D printing industry innovator and member of sparks & honey’s Advisory Board, calls an “ignorance and disregard of Middle America,” is beginning to dissipate. Silicon Valley for one, continues to be knocked off its pedestal, as news of business failures and a toxic culture that values profit at the expense of employees, (Uber being a prime example), contrast unfavorably to Middle American pragmatism, work ethic and community consciousness.

In his book, *The Third Wave: An Entrepreneur’s Vision of the Future*, author and AOL co-founder Steve Case argues that whereas Silicon Valley was part of the second wave, with innovation around software, services and apps, the “third wave” of innovation in Middle America will involve disrupting healthcare, education, food, agriculture, energy and transportation. He predicts that these “third wave” innovations will cause more investors and entrepreneurs to look to Middle America to create opportunity and promote entrepreneurship, a phenomenon he calls the “Rise of the Rest.”

Industrial innovations, like Cargill’s advances in farming equipment, directly impact our food supply, but they aren’t visible to the consumer directly in the way that a new app or VR headset from a Silicon Valley tech incubator are. These invisible innovations may not make the headline news, but they’re no less important.

These invisible innovations are a far cry from the kinds of well-publicized and well-funded startups we sometimes see coming out of Silicon Valley that could be described as solutions in search of a problem.

Take Juicero as an extreme, cartoonish example: the \$400, app-equipped juicer that was revealed by Bloomberg to squeeze its juice packets no better than a pair of hands, and ended up offering all its customers full refunds.

When Chris Olsen, formerly of the famed Silicon Valley venture capital firm Sequoia Capital, went to Columbus, Ohio, he was so impressed by what he saw that he left Silicon Valley and started a Midwest-focused fund, Drive Capital based there. One of the myths he had to dispel for investors was that Middle Americans' aversion to Silicon Valley's experimental, quick-pivot, "fail fast" credo, was a handicap. Instead, as Olsen wrote in an essay for Venture Beat, a Middle American ethos that says of new ventures – "This shit has to work" – is in fact its strength.

"I see it now as a highly effective filter that ensures only those who are committed get through," he continued. "The barriers to even starting a company are too high; no one is just dabbling around to see if something works. The macro numbers support what we've seen. According to the Kauffman Report, the five-year survival rate for startups is higher in Midwest states than in California...Six of the top 10 states for startup survival rate are in the Midwest, with California coming in at number 19."

We miss the big story, in other words, when we fetishize innovation in Silicon Valley. Here's a look at "the Rest" – the makers, doers and innovators in Middle America who are remaking skills, neighborhoods, spaces and technologies to do things differently.

**"In 5 years, the Midwest will  
have more startups than  
Silicon Valley."**

**Chris Olsen, Drive Capital**



**California is the eighth largest economy in the world.  
The Midwest is the fifth...yet, the Midwest receives just  
four percent of the annual venture dollars in America.**

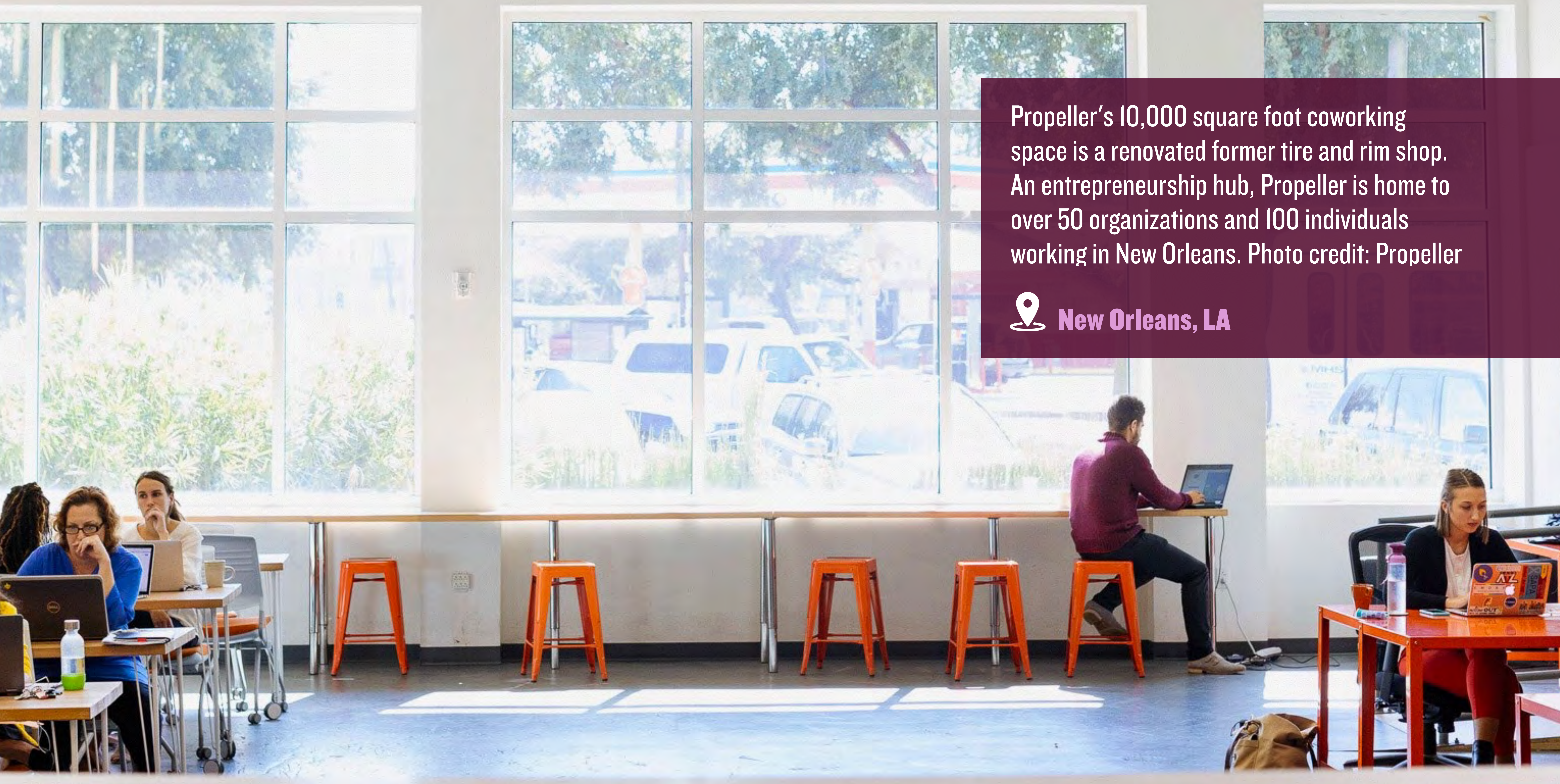
**Chris Olsen, Drive Capital**

**“WE’VE GRADUATED OVER 100 SOCIAL VENTURES FROM OUR PROGRAMS, AND...WE ARE STARTING TO SEE POSITIVE CHANGE.”**

**ANDREA CHEN, EXECUTIVE DIRECTOR AT PROPELLER**

Propeller’s 10,000 square foot coworking space is a renovated former tire and rim shop. An entrepreneurship hub, Propeller is home to over 50 organizations and 100 individuals working in New Orleans. Photo credit: Propeller

 **New Orleans, LA**



# PROPELLING NEW ORLEANS FORWARD

Started in 2009 by Andrea Chen, Propeller is a New Orleans-based non-profit incubator that saw the social problems that were exacerbated and made more visible after Hurricane Katrina – poverty, failing schools, health disparities between rich and poor, food insecurity and obesity – and found an opportunity to help launch social ventures to tackle them.

Although 60% of New Orleanians are minorities, only 27% of the city's firms are owned by minorities, and minority businesses receive less than 2% of receipts. Propeller hopes to level the playing field. Since 2011, over 131 ventures have launched through Propeller's accelerator programs, including a local food hub, a maternal health collective, an education design studio, and a wetland mitigation company.

Rather than entrepreneurship as a winner-take-all proposition, New Orleans' startups empowered by Propeller, help their local communities. Says Propeller's Catherine Gans, "The entrepreneurship community in New Orleans is a supportive network built on partnerships, collaboration, and resource-sharing. We work together to ensure our entrepreneurs have the resources they need to grow, and we see success stories as a collective win for our city."

# “WE SEE SUCCESS STORIES AS A COLLECTIVE WIN FOR OUR CITY.”

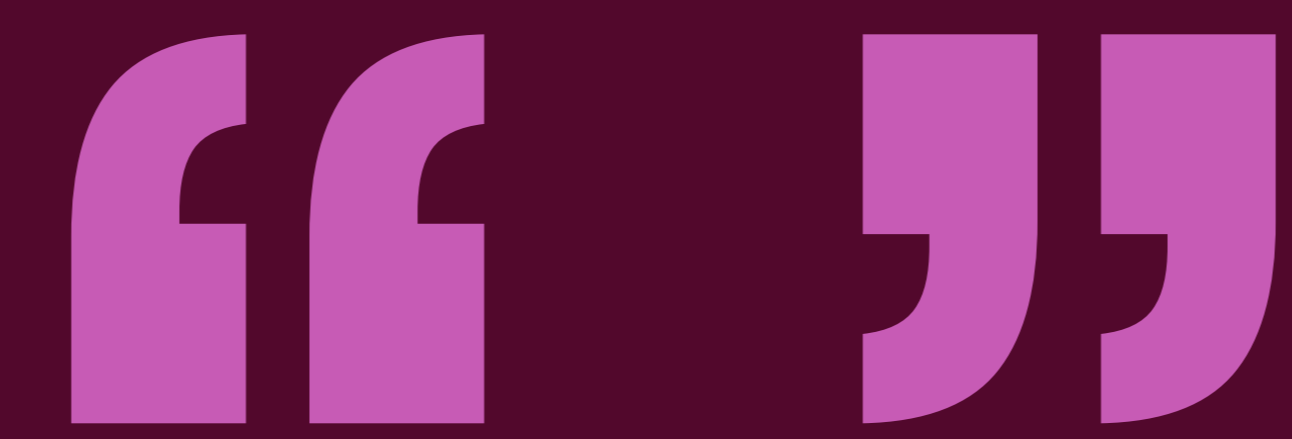
**CATHERINE GANS, MARKETING & DEVELOPMENT MANAGER AT PROPELLER**



Entrepreneur Trey Green at a meeting of Propeller's Startup Accelerator, a program designed to help social entrepreneurs launch their ideas.

Photo credit: Propeller

 **New Orleans, LA**



**With an entrepreneurship rate 64% higher than the national average, New Orleans is a startup city, and we see media outlets starting to pay attention during milestones like the 10th Anniversary of Hurricane Katrina and the annual New Orleans Entrepreneur Week.**

**Catherine Gans, Marketing & Development Manager at Propeller**



# DOWNTOWN, REINVENTED

## THE EDNEY INNOVATION CENTER

The Edney Innovation Center is located in the heart of the Chattanooga Innovation District.  
Photo Credit: [Kelly Lacy](#)

 Chattanooga, TN

# CHATTANOOGA: A FAST TRAIN TO THE FUTURE

Once upon a time, Chattanooga was known as an industrial manufacturing center, the type of manufacturing that eventually got off-shored. Today, it's reinventing itself as a city of makers and entrepreneurs.

The Chattanooga Library recently honored that industrial past in an exhibit called *Maker City: Rooted in Manufacturing*, which connects the city's past with its future. To bring that future to life, the library offers locals The 4th Floor, a "public laboratory" equipped with everything from 3D printers to Oculus Rift VR development kits.

Reinventing itself means reinventing its infrastructure, and Chattanooga is a prime example of the way that enabling innovation through infrastructure investment can create a future-forward ecosystem for business development outside of Silicon Valley.

In 2009, Chattanooga and EPB, the city-owned utility, installed a \$330 million fiber electric metering network that provides some of the fastest Internet speeds in the world.

This ultra-high-speed broadband network paved the way for Chattanooga to develop an innovation district that both attracts businesses like San Francisco's OpenTable, which opened an office there, as well as assists high-tech startups that originate there.

The innovation district houses The Edney Innovation Center, a 10-story building that provides space for public, private, and nonprofit tenants – including a nonprofit start-up incubator and a business developer for the technology sector and over a dozen tech entrepreneurs.

The Lamp Post Group helps foster entrepreneurship in two ways, as a VC to high-tech startups and as a real estate developer that helps reinvent historic properties.

This investment in Chattanooga's future in the form of fiber infrastructure has paid off. A study found that from 2011 to 2015, its value was estimated at \$1 billion above the cost to install it and generated 2,800 to 5,200 new jobs.



**I can't think of another place [Chattanooga, TN] that has made this kind of infrastructure investment to promote job growth and real estate development.**

**R. Byron Carlock Jr., the national real estate practice leader for PricewaterhouseCoopers**

# FARMING WITH DRONES

Innovation is happening not only in Middle American cities, but also in the cornfields and soybean fields of Middle America.

Although the majority of Americans seem to think that drones are primarily in the business of delivering things – like pizza and stunt marketing activations – the Association for Unmanned Vehicle Systems International predicts that farms will in fact have an 80% share of the commercial drone market globally.

Precision Drone, based in Noblesville, Indiana which sells drones for use by farmers trained to operate them and as well as operating them for a fee, is an example of a farming drone success story. Matt Minnes, who grew up around agriculture and double-majored in agribusiness and agricultural economics at the University of Illinois, founded the company in 2012 after realizing that walking hundreds of acres to monitor corn and soybean fields to spot problems wasn't exactly efficient.

He told Forbes that a lot of “farmer ingenuity” went into the creation of this farming drone, and its name is a nod to precision farming – a farm management concept based on observing, measuring and responding to field variability in crops. The objective: to produce greater yields and profits at less cost and environmental impact.

Minnes' Precision Drone is an example of specifically Middle American innovation as a solution to real-world problems that has uses outside of Middle America. The demand for these drones is only increasing. In the past four years, Minnes alone has operated drones for farmers over more than 400,000 acres, with dealers in 26 states, along with Canada and Mexico.

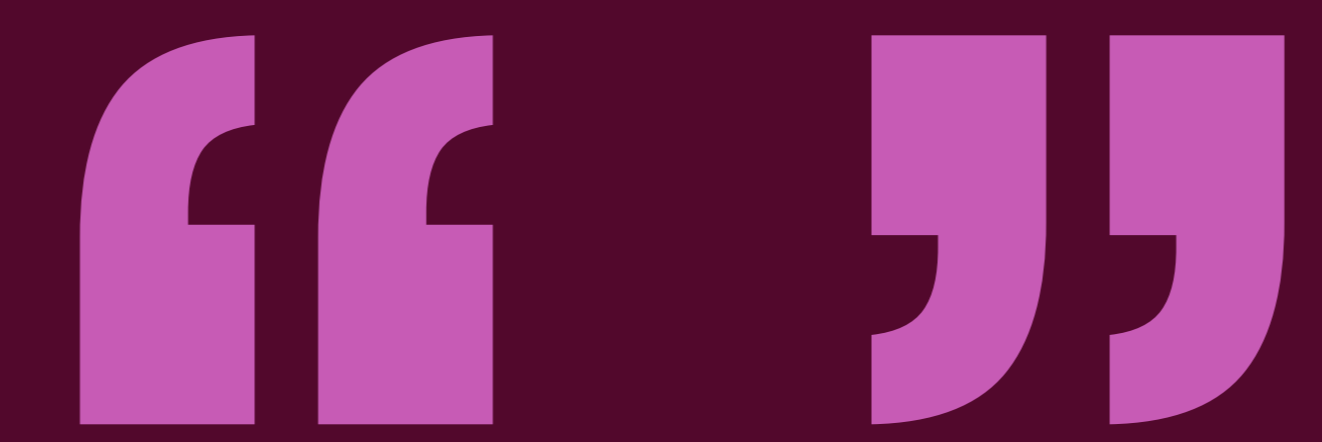
**“THERE’S A LOT OF FARMER INGENUITY.  
THAT GOES INTO PRECISION DRONE.”**

**MATT MINNES, FOUNDER PRECISION DRONE**



The Association for Unmanned Vehicle Systems International predicts that farms will eventually have an 80% share of the commercial drone market globally. Photo Credit: Shutterstock

 **Noblesville, IN**



**When you think of brands like John Deere or Caterpillar, you might think of a farmer in overalls with hay in his mouth. But these are tech companies now.**

**Jeremiah Owyang, founder of Crowd Companies and a member of sparks & honey's Advisory Board**

# BREWING UP INNOVATION IN WAYNE, NEBRASKA

Fermentation is the hot new trend in beverages, and Wayne State University in Wayne, Nebraska has decided it wants to be in the vanguard.

The college will begin offering Fermentation Science studies that will teach students the science and art of fermenting beverages through classes that include chemistry, biochemistry and organic chemistry.

“The program will include the principles of fermentation, microbiology, wine and beer production and analysis, and the sensory analysis of beer and wine,” David Pietz, Professor of Chemistry at Wayne State, said. And along with course studies, students will get hands-on internships at a brewery, winery, vineyard, distillery or processing facility.

**“We don’t brag about it,  
we just do it!”**

**Heather Thomas, Director of Brand Strategy and  
Advertising at Humana, Louisville, KY**



**You need to start a dialogue between the middle of  
America and the coasts.**

Ping Fu, entrepreneur, author, global 3D printing industry innovator  
and member of sparks & honey's Advisory Board



# “SILICON HOLLER”: COAL MINERS TURNED CODERS

When the going gets tough, the tough  
become....coders?

That’s what happened in Pikeville, Kentucky, which went from being part of the coal-generating regions that powered half of America’s electrical needs in 2004 to finding itself getting edged out by natural gas and fracking technology.

In 2011, Rusty Justice and his business partner, Lynn Parish, both of whom had worked in the coal industry for 40 years, decided they needed to figure out how to move on. They wanted something to replace their coal mining jobs but that paid comparably. They discovered coding during a workforce retraining expo in 2014 in Lexington, and a company idea was born: BitSource, a web and app design company that would train out-of-work miners to code.

Interapt CEO Ankur Gopal was inspired by BitSource to start TechHire East Kentucky (TEKY), and what those in Kentucky call “Silicon Holler” even inspired Google to reach out to attempt to replicate their model. Although lack of access to broadband definitely limits the area’s growth, it’s a start.

Justice told The Guardian that the government should help them out, but not for a handout. “We need to identify the doers and facilitate their ideas.”

CHAPTER 2

# DR. ROBOT WILL SEE YOU NOW



We've been told that eventually robots will be doing everything, from diagnosing our maladies to operating on us, yet it still feels like the distant future. But for growing numbers of rural Americans, telemedicine isn't the future, it's the new norm.

Rural communities are facing a healthcare crisis comprising a nexus of problems all of which reinforce one another – aging populations, the flight of younger people to cities, fewer healthcare providers, job loss, an increase in disability, an opioid addiction epidemic, and the closing of rural hospitals.

Although there's been a lot of talk about health insurance over the past few years, rural America shows us it's not the only barrier to healthcare. Your network doesn't matter much if there are no doctors to see you within 50 miles or hospitals you can reach in time for an emergency. Access, it turns out, isn't just about payments, it's also about proximity.

And rural America is on the forefront in embracing innovative solutions to providing access to people out of range of traditional care. If the patients can't go to the doctors and hospitals – thanks to telemedicine – the hospitals and doctors are coming to them.

Technologies such as point of care diagnostics, cloud computing, AI diagnostics, and mail order blood labs give people access who may have not had it before, according to Robin Farmanfarman, a thought leader in the future of healthcare, a member of sparks & honey's Advisory Board, and author of *The Patient as CEO: How Technology Empowers the Healthcare Consumer*.

"Suddenly, people who didn't have access to medical care can now have access to top Health Care Providers and clinical grade diagnostic devices, a lot of the time from their own home," says Farmanfarman. "The price of these services and devices is also dropping, making it free or low cost to the patient."



**Kaiser Permanente members annually have more than  
100 million encounters with company physicians, 52%  
of which are now virtual visits**

Kaiser Permanente CEO Bernard Tyson

# VIRTUAL DOCTOR

According to the National Rural Health Association, there are roughly 13 physicians in rural areas per 100,000 people, compared with 31 in urban areas. Not only are rural hospitals closing at an alarming rate, one in three remaining hospitals is at risk of closing down. But telemedicine, or the remote diagnosis and treatment of patients through telecommunications technology, is helping to bridge that gap between patient and access to care.

Middle America is already solving the problem of providing care to those who have least access to it through high-tech solutions. Montana, for example, was one of the first states to pass a telemedicine parity law, which gives providers reimbursements for telemedicine at the same level as in-person services, and telemedicine has been at play in Oklahoma City since 1997.

**“Across the US, rural hospitals have been closing at a rate of about one per month since 2010.”**

**National Rural Health Association**

# IN MONTANA, HIGH-TECH TRUCKS SIMULATE AN EMERGENCY ROOM SITUATION AND WILL HELP VOLUNTEERS SAVE LIVES

**SIMMNT**  
Simulation In Montana



April 24, 2017. Governor Steve Bullock hosted an event outside the Capitol in Helena to showcase three mobile high-tech simulation training trucks to bolster training opportunities for EMS, hospital staff in rural Montana. They were provided to the State of Montana through a \$4.6 million grant from the Leona M. and Harry B. Helmsley Charitable Trust. Photo Credit: [montana.gov](http://montana.gov)

 **Helena, MT**

# THIS IS ONLY A TEST: EMERGENCY SIMULATION TRUCKS IN MONTANA

Many emergency responders in rural Montana are volunteers, but the burden is on them to travel long distances at their expense and spend time away from their families to be trained. Thanks to a \$4.6M grant, a high-tech solution will come to them, helping to train them for the next three years. And it's all happening in the back of an ambulance.

The grant covers three high-tech trucks in which emergency room simulations are conducted. Each comes equipped with patient simulation mannequins – robots essentially – that talk, have a heartbeat, breathe and can react to medication and action by an emergency responder.

These mobile training opportunities could inspire more people to become emergency responders, address the shortage of such volunteers in Montana, and pave the way for other cities to use technology to bridge the gap between patient needs and access to emergency care.

# THIS AMBULANCE/EMERGENCY ROOM SIMULATION TRUCK WILL HELP SAVE LIVES IN RURAL MONTANA



A high-tech simulation training truck to bolster training opportunities for EMS, hospital staff in rural Montana. (Photo: [montana.gov](http://montana.gov)) Inside this truck is a simulation “manikin” that talks, breathes, has a heartbeat and responds to meds. It can live, die and be revived. Photo Credit: [montana.gov](http://montana.gov)

 **Helena, MT**





**Suddenly, people who didn't have access to medical care can now have access to top healthcare providers and clinical grade diagnostic devices, a lot of the time from their own home**

**Robin Farmanfarmanian, author of "The Patient as Ceo: How Technology Empowers the Healthcare Consumer" and a member of sparks & honey's Advisory Board**

# OKLAHOMA CITY: TELEMEDICINE SINCE 1997

In 1997, Oklahoma City was awarded a federal rural telemedicine grant from the Office for the Advancement of Telehealth to develop a speech teletherapy program accessible to students with disabilities in rural communities. Since then, more than 100,000 teletherapy visits have been made.


In 2007, it added TeleStroke emergent neurology consultations to rural emergency departments across Oklahoma, and in 2015, INTEGRIS began offering direct-to-consumer telehealth using technology provided by Carena, a vendor specializing in end-to-end virtual care platforms.

Organizations that participate in telemedicine see a return on investment in multiple forms, whether by reducing 30-day readmissions through the use of home-based telemedicine monitoring equipment, reducing travel expenses for doctors traveling across the state to provide care in rural areas, or for patients who might otherwise not be able to travel long distances for brief follow-up visits.

Virtual visits can also help reduce costs for treating certain conditions. The cost for onsite visits to treat Upper Respiratory Infections in 2016 for example, was \$383,702. But in 2017, treating patients virtually for the first three months cost only \$9,744.

# A REMOTE-CONTROLLED ROBOT CAN NOW HELP DIAGNOSE CONCUSSIONS WITH THE ACCURACY OF AN ON-SITE PHYSICIAN

Aug 30, 2013 in Tucson, AZ. A remote-controlled robot designed to help diagnose concussions sits on the sideline of season opener home game for a University of Arizona football game vs. Northern Arizona University. Research shows doctors can use these robots to assess potential head injuries with the same accuracy as on-site physicians. Photo Credit: Dr. Bert Vargas

 Tucson, AZ



# REMOTE CONTROLLED CONCUSSION DOCTOR

The conversation around concussions in sports has gone mainstream with the rise in news stories about NFL players who have permanent brain damage due to repeated head trauma.

But in rural communities where interest in sports is high, the idea that there can be a specialist to assess every high school football team for potential concussions is unrealistic. More than half of public high schools don't have trained specialists to spot such concussions, which increases the chances that a concussion could worsen with further injuries.

This is where mobile robots come in.

In 2012, the Mayo Clinic piloted a program in rural Arizona using a remote-controlled robot equipped with tools to diagnose concussions, stand on the sidelines of a football game, to measure things like cognition and balance.

Since then, Peter O'Donnell Jr. of Brain Institute and Mayo Clinic says the technology has advanced such that, by using a remote-controlled robot, a neurologist sitting hundreds of miles from the field can evaluate athletes for concussion with the same accuracy as on-site physicians.

"I see teleconcussion being applicable anywhere in the world," said Dr. Bert Vargas, the study's lead author, who directs the Sports Neuroscience and Concussion Program at the O'Donnell Brain Institute at UT Southwestern Medical Center, told Science Daily.



**I see teleconcussion being applicable  
anywhere in the world.**

**Dr. Bert Vargas, the study's lead author, who directs the Sports Neuroscience and Concussion Program at the O'Donnell Brain Institute at UT Southwestern Medical Center.**

# TREATING THE OPIOID CRISIS WITH TELEMEDICINE

Opioid addiction affects over 2 million people in the U.S.

While it's not just a rural problem, rural communities are some of the hardest hit due to a number of interwoven factors: lack of proximity to treatment facilities and providers, a high number of workers employed in manual labor jobs that can result in chronic pain, and in some cases, economic depression that leads to psychological depression and a feeling of hopelessness.

Tech-related solutions, however, are helping to connect addicts and the medical intervention that could save their lives, from telemedicine to apps that can support recovering addicts.

The U.S. Department of Agriculture has devoted \$1.4M to telemedicine pilot projects in Southwest Virginia, Tennessee and Kentucky to provide diagnosis, prescriptions for anti-withdrawal and addiction meds like buprenorphine (and Suboxone, which is buprenorphine with naxalone), as well as follow-up counseling.

Doctors from West Virginia University (WVU) wanted to know if telepsychiatry could take the place of in-person group sessions for people with opioid addictions. Their pilot study results suggest that the videoconferencing strategy could be a viable option for medication-assisted treatment (MAT) programs.

The Carilion Clinic in Roanoke, Virginia, for example, provides a remote psychiatrist who can consult with rural patients who use a tablet screen in the exam room.

And although at the moment, a face-to-face meeting is necessary to prescribe Suboxone to patients, a study has found that face-to-face counseling isn't always necessary, hence remote counseling is a good alternative for those without access or resources to meet with counselors.

CHAPTER 3

# RENEWABLE ENERGY RENEWABLE JOBS



Among the many myths that have taken hold about the divide between Middle America and the coastal states, a persistent one is that the latter are sophisticated enough to embrace clean energy and accept the findings of the scientific community that climate change is real; and in contrast, those in Middle America cling to fossil fuel energy like coal while denying climate change.

But a closer look at what's really happening on the ground shows a more nuanced reality, one that suggests that this rhetoric itself could be impeding progress by imbuing a whole region with attitudes it actually doesn't have en masse.

A recent Pew report shows, however, that a majority of Americans – 65%– would like to give priority to developing alternative energy resources. 42% of Midwestern homeowners have given thought to putting solar panels on their homes, compared to the 38% in the Northeast who have. In addition to a desire for renewable energy, people in regions like Kentucky who are losing jobs in the coal-mining industry are open to jobs of the future.

Having to actually face the challenges head-on, and with help from various sectors, they're rolling up their sleeves and leading the way in finding solutions that help the environment and create new jobs.





Reimagining ourselves not as a coal state, but as an energy state — including solar and wind — is critical if we are going to continue powering America. All we need is imagination (and a little encouragement and support) as millennial West Virginians lead the way into the future.

West Virginia solar entrepreneur Dan Conant

# SOLAR-POWERED PROGRESS

The name Appalachia has come to signify in many people's minds depressed economies and deprivation. Evidence exists to buttress this narrative: It's said that life expectancy in Bangladesh is higher than it is in Appalachia. In 2008, there were 14,000 jobs in coal mines – now there are fewer than 4,000, owing to mine automation, competition from natural gas, and environmental controls on dirty coal emissions.

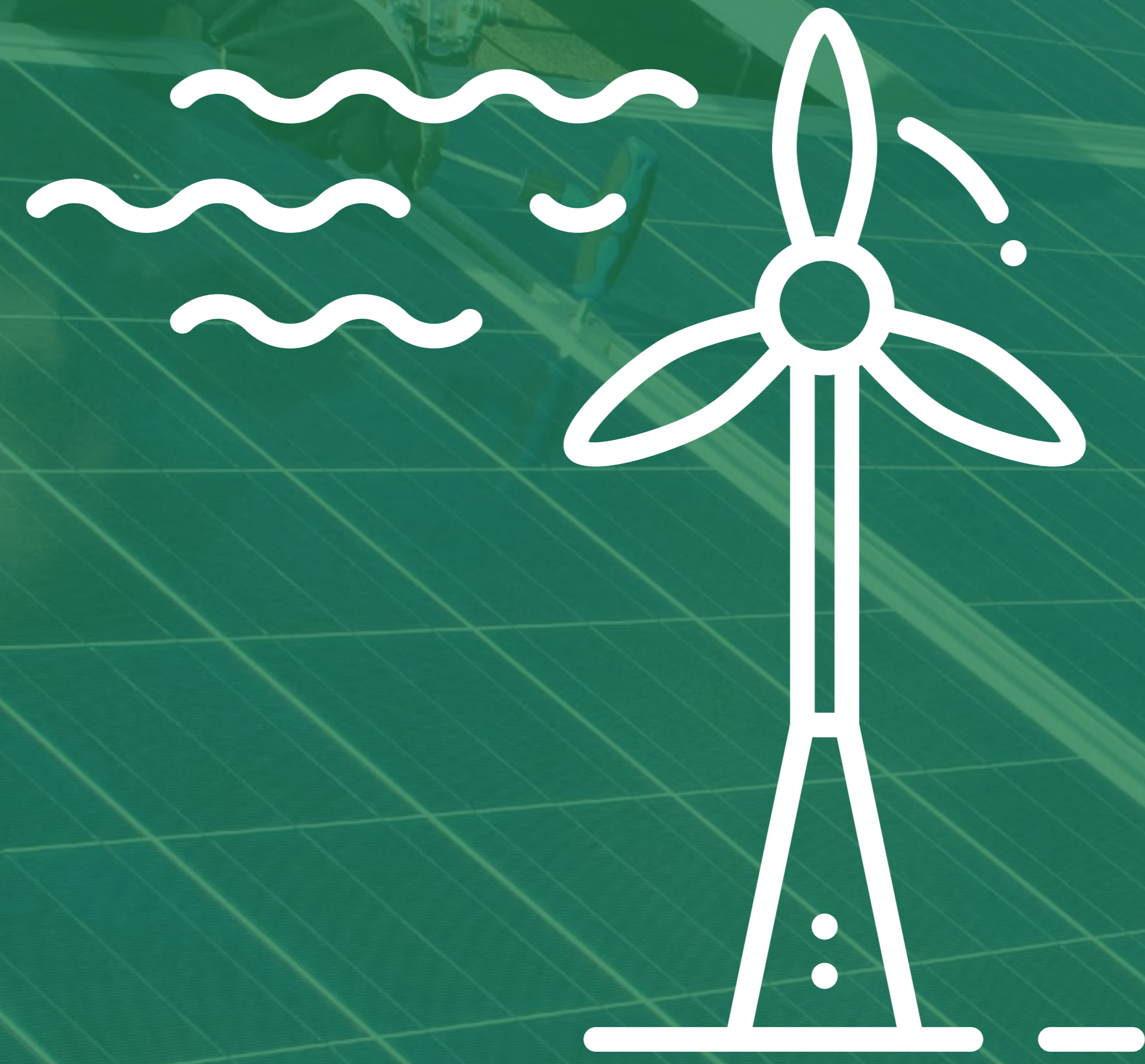
This hard reality nevertheless still has some politicians suggesting that there's a way back to coal as a prominent source of energy and jobs. Many people in Eastern Kentucky, however, know that looking forward is the only way out of the depression, and Appalachia has in fact become a site of reinvention.

There might not be a more powerful symbol of this capacity for reinvention than Harlan Kentucky Coal Mine Museum in Benham, Kentucky, which houses the tools and relics of coal mining – and is powered by solar panels. The reason? Economics.

Tre Sexton's company, Bluegrass Solar, was approached by the museum to install the solar panels. "It's like, 'This might be coal country, but I cannot afford \$600 a month.' And that's for a home," Sexton told The Courier Journal. "If it's a business, God be with them, (the bills are) in the thousands." As it turns out, the coal museum's electric bill is expected to save between \$8,000 and \$10,000 a year.

Reinventing themselves through renewable energy is not limited to the museum. An Eastern Kentucky coal mining company plans to create a solar farm on top of a former mountaintop strip mine, which will create jobs for out-of-work coal miners. And the Berkeley Energy Group and Environmental Defense Fund for Renewable Energy are exploring the first large-scale solar project in Appalachia, and it has developed 9,000 megawatts of renewable energy to bring jobs and clean energy to the region.

And states beyond Kentucky not usually perceived as supportive of green energy have warmed up to the idea: North Carolina, Arizona, Utah, Georgia and Texas now rank among the top ten states for solar electric capacity.



22,000

**9X** The wind industry has added jobs at 9X the rate of the overall economy

# GET WIND OF THIS: WIND POWER IN WYOMING, TEXAS, OKLAHOMA

While environmentalists focus on wind energy's effect of reducing greenhouse gas emissions, wind power is a reliable, cost-effective supply of renewable electricity. It creates twice the number of jobs compared to coal, and it's generating hundreds of jobs and millions of dollars in tax revenue.

Shifting to renewable energy, in other words, is not only a story about saving the planet or saving energy, it's also about saving money. Wind energy makes sense – dollars and cents.

It costs 6.8 cents per kilowatt-hour from coal-fired generation, while wind-supplied electricity is 4.7 cents. With that savings in mind, the Power Company of Wyoming Chokecherry and Sierra Madre Wind Energy Project built a 1,000 turbine wind farm located in Carbon County – the largest wind project in the country, with 3,000 megawatt capacity.

People in Georgetown, Texas, are on track to use wind and solar energy exclusively. It was announced in 2015 that Georgetown planned to move to 100% renewables. The bonus: municipality owned utilities and fixed-rate wind energy contracts aren't just environment-friendly – they're business-friendly, too.

Meanwhile, Texas, Iowa and Oklahoma have edged out California as the top states for installed wind generation capacity, and other states including Montana, Nebraska and Wyoming could also benefit from low-cost wind generation.

The wind industry has added jobs at 9 times the rate of the overall economy, providing 100,000 plus jobs in 2016. And the fastest growing occupation, according to the US Bureau of Labor Statistics, is turbine technician.

CHAPTER 4

# SMALL CITIES BIG IDEAS



The influential philosopher of cities Jane Jacobs, author of *The Death and Life of Great American Cities*, believed that the mark of a good city was that it was healthy and vibrant for everyone – not just the one percent.

Although there was an exodus from cities to the suburbs in the 1950s – 1970s, there’s a growing interest in innovative cities, not all, as some might expect, on the coasts, but deep in the heart of Middle America.

Smart, connected, clean and inclusive are all buzzwords we usually associate with coastal urban areas. But those kinds of innovations are happening in Middle America – and in ways that attempt to benefit everyone.

From Columbus, Ohio’s winning a smart city grant for their idea to provide driverless shuttles to all residents; to Minneapolis’s “fiscal equalization” policy that requires big stores to contribute almost half their commercial tax revenues to a region pool to be distributed to tax-poor communities, to Cleveland’s audacious Evergreen Co-Op experiment that draws its workforce from poor neighborhoods – the city and what it could be is being reinvented in Middle America.

**“People are moving to smaller more manageable cities where the cost of living is lower but the quality of life is high.”**

**Dr Laura Forlano, Assistant Professor of Design, Illinois Institute of Technology, Institute of Design and sparks & honey Advisory Board member**

**It's hard to get people to move to Minneapolis.  
And it's impossible to get them to leave.**

Local saying

# “MINNESOTA NICE”

“It’s really hard to get people to move to Minneapolis,” as the saying goes, “and it’s impossible to get them to leave.”

It’s not hard to see why. One of the cultural characteristics of friendliness attributed to Minnesotans – referred to as “Minnesota nice” – extends to its laws: Minneapolis has implemented policies that make the city affordable and liveable for everyone, no matter their income level.

Minneapolis/St. Paul pioneered the tax pooling law also known as “fiscal equalization.” Because of their commercial growth over the decades, companies like Target, United Health and General Mills in Minneapolis were required to contribute nearly half of their commercial tax revenues to tax poor communities. Their prosperity, in other words, benefits poor neighborhoods too.

In addition, Minneapolis strives to be a “no ghetto” zone thanks to a law dating back to 1976 that requires all local governments to plan for a fair share of affordable housing. The result? Affordable housing is distributed throughout the city and surrounding areas, rather than partitioned off into distant spaces.

In the past 60 years, 40 of Minneapolis’ companies have landed on the Fortune 500 list, and because it’s such a pleasant city to live in, it doesn’t suffer the “brain drain” other cities experience. This is a lesson all cities can learn: having a liveable city for all attracts and keeps great talent.





I doubt I could make the work I do in many other cities. Memphis is affordable. Having a large work studio here like mine isn't out of the question. I can exhibit my work in any number of ways here that other cities would prohibit or discourage for reasons involving space, money or attitude. Some interesting energy has blown into Memphis within the last few years. I'm inspired by the mood of the city.

Brian Pera, Filmmaker, Photographer, Author, Perfumer

**“MEMPHIS IS AFFORDABLE. HAVING A LARGE WORK STUDIO...ISN'T OUT OF THE QUESTION.”**

**BRIAN PERA, FILMMAKER, PHOTOGRAPHER, AUTHOR, PERFUMER**



Filmmaker, photographer and perfumer Brian Pera's work studio in Memphis, Tennessee. "I'm inspired by the mood of the city." Photo Credit: Brian Pera



**Memphis, TN**

# LOUISVILLE, KENTUCKY. A CITY OF THE FUTURE — HAPPENING NOW

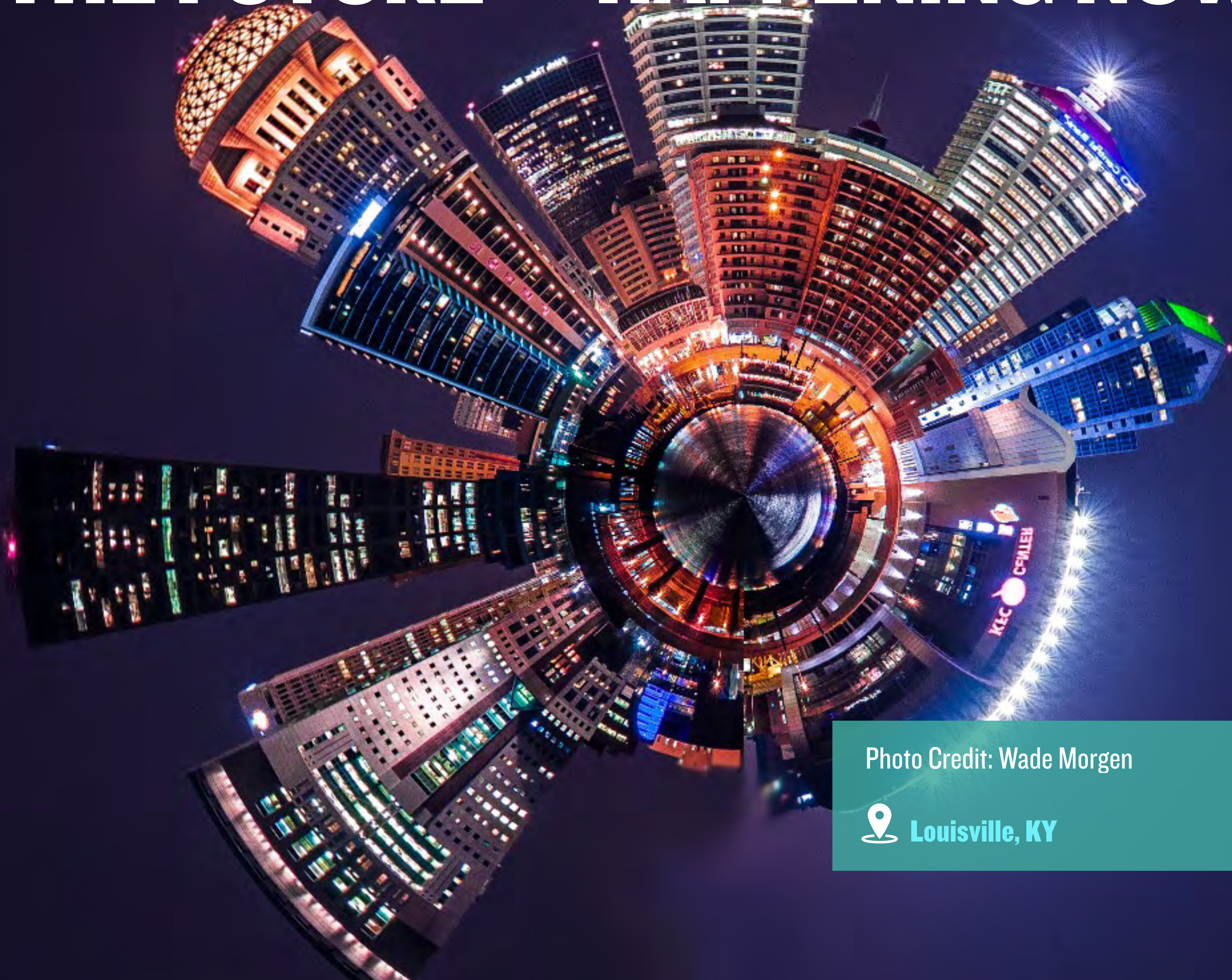


Photo Credit: Wade Morgen



Louisville, KY

# LOUISVILLE, KY AND KANSAS CITY, KS: SMART CITIES

Imagine if every time the air quality dipped below a certain level, a smart light bulb in your home alerted you by turning red. In Louisville, Kentucky, this is a reality.

The city's free Internet channel IFTTT (If This, Then That) lets users connect smart gadgets and platforms to data that will alert them to changes in air quality nine different ways, including through text, email, or even Slack.

"That's how Louisville will become more connected to the average citizen," Michael Schnuerle, the data officer for the city, told Digital Trends. Air quality was chosen as the first IFTTT service because the data is already available.

"The beauty of IFTTT is that now we can have it automated within their daily lives. You can easily set it up so that you get a notification," said Grace Simrall, Chief of Civic Innovation for the City of Louisville.

You could say that Kansas City, like Louisville, thinks big. Its goal is to become "the smartest city on planet earth" in five years. And it's on its way.

In partnership with Cisco, Kansas City has already implemented phase one of its ambitious plan: a \$100M streetcar that will span 2.2 miles downtown, affecting 20,000 of its residents. This area will include free public Wi-Fi, connected streetlights, parking sensors, and even 25 digital kiosks that will provide information about local restaurants and events, able to sync with a smartphone for updates.

The smart streetlights will automatically dim when there is less foot traffic in an area, and brighten when people show up. And connectivity isn't just making its citizens' lives easier, it's also helping the city to collect data that will help city planners and businesses to know where to focus their energies.

And what does Bob Bennett, Kansas City's Chief Innovation Officer, think about the city's progress toward its goal? He said confidently, "I think we're going to get there."



# 1 MIL

U.S. census records show that over 1 million people have moved out of the New York area since 2010. They're moving to the Rust Belt and cities like Denver, Houston, and Dallas-Fort Worth

# COLUMBUS, OHIO: MOBILE CITY, UPWARDLY MOBILE CITIZENS

Columbus, Ohio is redefining what the vision of a “smart” city is by emphasizing not only its shiny, high-tech offerings like self-driving cars and connected vehicles, but having the ethos that they should serve all members of the community, rich and poor.

It was this civic-mindedness that helped Columbus beat cities like San Francisco and Portland, Oregon in 2016 to win \$50M from the Department of Transportation to create a smart transportation system, along with an additional \$10M grant from Paul G. Allen’s Vulcan Inc. and another \$90M from private partners.

Columbus thought big, but not just for big-wigs: It imagined a city in which autonomous transit would help those in low-income neighborhoods. In its vision of transportation of the future, autonomous buses could connect local residents to high-traffic retail centers, making it easier for people to commute to their retail jobs. There would also be special lanes for autonomous vehicles, a city fleet of electric vehicles, and a connected bus that uses advanced Internet tech to enhance the ride.

The city envisions that its efforts will also save lives by providing rides to healthcare facilities for residents in need in neighborhoods like Linden, which has an infant mortality rate that is four times the national average.

Singularity University was impressed enough with the city that it's running its first startup accelerator outside of Silicon Valley to be launched in Columbus by supporting innovations to help the city run more efficiently.

"We're on the cusp of a transportation revolution," said Anthony Foxx, the Secretary of the Department of Transportation, as reported by CNN Money. "Columbus put forward an impressive holistic vision for how technology can help all its residents."



**Transportation is not just about roads, transit and ride-sharing.  
It's about how people access opportunity. And how they live.**

Columbus Mayor Andrew Ginther



# FLYOVER STATES... OR FLY FASHION HUBS?

When we think of fashion-forward cities, New York and L.A. come to mind. But fashion incubators are popping up in surprising places, including Denver, St. Louis, and Nashville, which Forbes has ranked as one of the next American boomtowns. And they're bringing certain regional values to the industry.

Nashville, more conventionally associated with country music and the Grand Ole Opry, also hosts the largest per capita concentration of independent fashion and design companies outside of New York and L.A, from Warby Parker, VF Corp, and brands including Nisolo (ethically sourced and produced shoes), and Ceri Hoover (bespoke leather jackets). Most of their clients are on the coasts.

The fashion industry in Nashville is bringing in \$5.9B and 16,200 jobs to the economy, according to the Nashville Fashion Alliance January 2017 report. A bonus of having a fashion brand in Middle America: Van Tucker of the Nashville Fashion Alliance told Fashionista that the collaborative spirit of the city in the fashion industry is informed from the music industry and the ethos of co-writing.

Still, it's not easy to get fashion incubators off the ground in areas where appetite is high, but resources are scant. Tucker describes an industry infrastructure – ranging from fiber development to trade support to supply services to distribution – that is primarily based in New York and L.A., but could benefit from being in middle America.

"There's this whole ecosystem of companies and individuals that are not brands or designers, and most of that ecosystem is in L.A. and New York," says Tucker. "It makes it very difficult if you're based outside to survive and thrive as an independent company."

Lindsey Alexander, Executive Director at Detroit Garment Group, which provides business education for Michigan's fashion community, suggests that what the industry would gain by coming to Middle America are the benefits of regional community values.

"My favorite thing about Detroit is that everybody is super-loyal; everybody wants to collaborate. I think having that kind of community here is very beneficial to us, but I think it could be an example to other types of areas, as well," said Alexander.

In Detroit, Lazlo T-Shirts symbolizes reinvention. They're creating their version of the iconic American white T-shirt that references America's industrial past. They're using organic Supima cotton grown in the US, and they're hiring men who were trained to sew in prison; paying them a living wage to sew the T-Shirts when they're released.



**My favorite thing about Detroit is that everybody is super-loyal; everybody wants to collaborate. I think having that kind of community here is very beneficial to us, but I think it could be an example to other types of areas, as well.**

Lindsey Alexander, Executive Director Detroit Garment Group (DGG)

# IF IT'S BROKE, FIX IT: COOPERATION JACKSON IN MISSISSIPPI

For Kali Akuno, Cooperation Jackson, which he started in Jackson, Mississippi in 2013, is the beginnings of an economy within an economy, and arose out of Akuno's civil rights activism and what he saw as an economic system that didn't serve its majority black residents.

Comprising an urban-farming collective (Freedom Farms) and the Chokwe Lumumba Center for Economic Democracy and Development (named after a former mayor Akuno campaigned for), which is a community center and small-business incubator, Cooperation Jackson has more plans. It's planning on creating a café, a catering service, and now has 25 plots of vacant lots, with plans on buying 50 more, to create sustainable housing for low-income residents.

Ultimately, Akuno wants to see co-ops all over the world transacting within what he told *The Nation* he calls a "sister network." If it's broke – do fix it, seems to be Akuno's philosophy: "It's really about a localization of the economy, about maximum control in the community's hands."



Cleveland wants to be where the world is going.  
Not where it is.

Frank G. Jackson, Mayor of Cleveland

# THE CLEVELAND MODEL: BENEFITTING WORKERS, THE COMMUNITY, AND THE BOTTOM LINE



“People, Planet, Profit”: The Cleveland Model’s Evergreen Collective comprises three worker-owned and operated businesses that partner with the city’s anchor institutions to benefit the community. Photo Credit: Juliana Sadock Savino



Cleveland, OH

# THE CLEVELAND MODEL

The idea that some people in coastal states have that Middle America has so little going for it that you fly over it (aka “flyover states”) can even be traced back to a time before planes. A famous quotation attributed to *Adventures of Huckleberry Finn* author Mark Twain says it all: “There are only three great cities in the US: New York, San Francisco, and New Orleans. Everywhere else is Cleveland.”

Although present-day Cleveland still faces challenges, including a poverty rate of more than 30%, more than half of its children living below the poverty line, and a population that’s half of what it was in 1950 – 450,000 – Twain, if he were alive, would have to revise his dismissive comment. Cleveland might soon become the place “everywhere else” aspires to.

Launched in 2009 during the recession, Cleveland’s Evergreen Cooperative comprises three worker-owned and community-benefitting businesses – The Cooperative Laundry, Evergreen Energy Solutions, and Green City Growers – co-ops that empower poor Cleveland residents by offering them both jobs and a path to ownership. The idea is that the workers will own 80% of each of the businesses as they buy into the co-op through payroll deductions. As the business makes money, so do the workers.

“Co-ops are successful all over the world; what is different in Cleveland is the involvement of anchor institutions,” says Ted Howard, Executive Director of The Democracy Collaborative, which played a key role in Cleveland’s Evergreen Cooperatives. He’s referring to the city’s world-class universities and hospitals that spend more than \$3B in products and services annually. “This is a laboratory for a new kind of economic development.”

The Cooperative Laundry is an industrial laundry that uses just 1/8 of a gallon from every 3 gallons of more traditional methods.

The Evergreen Energy Solution creates next-generation LED lighting systems, solar power and energy-efficient solutions including installing solar panels to outfitting offices to weatherizing properties for Cleveland-area businesses, institutions and residential properties.

Green City Growers is an industrial-scale greenhouse that provides pesticide-free produce to businesses, restaurants and universities including Case Western.

The world-class university and hospitals that serve as the co-op’s anchor institutions spend a collective \$3B to run themselves, and instead of outsourcing what they need, they are instead funnelling it back into the city by providing jobs. The Cleveland Model does this by creating businesses that can provide what these anchor institutions need.

Inspired by the Mondragon Cooperative Corporation in Spain –employing over 800,000 workers, “The Cleveland Model” is now inspiring other cities including Rochester, Milwaukee, Richmond and even Preston, England. Other cities want to get in on this experiment in economic development, green job creation and neighborhood stabilization.





**[The Cleveland model] opens up the imagination for the country  
on how to do things differently for our urban core.**

India Pierce Lee, the Cleveland Foundation

# CONCLUSION: MOVING FORWARD

A few theories seemed to solidify into received truths for some at the end of the contentious 2016 election: that there was trouble in Middle America, and that we could solve problems by looking to the past.

Although Middle America does have problems with automation-related job loss and off-shoring, an aging population, and adjusting to a changing energy climate, these troubles are coming to the rest of the country, too. And the whole country could benefit from seeing how Middle Americans are innovating and reinventing spaces, skills and strategies for the future.

Whether it's transforming coal-mining skills into computer coding savvy or harnessing an unemployed but motivated workforce to create sustainable products and services for a city's anchor institutions – Middle America is making the future happen on its own terms, and with its own values.

Although most Americans think of Silicon Valley as the site of innovation, Middle America can teach the coasts a thing or two. We don't need to replicate the "fail fast" ethos everywhere, nor does Valuation over Values need to rule. Silicon Valley doesn't have all the answers, as Uber and Facebook's current ethics woes show. Furthermore, innovation and reinvention aren't simply happening in technology, but also in education, production, and sustainability.

The region's challenges – rural access to healthcare, automation-related job loss, urban decline in the Rust Belt – are fueling creative solutions – solutions imbued with Middle American values of community, collaboration, and concern for the impact its actions have.

Although it's easy to politicize and divide America, innovation is not about moving left or moving right. Innovation is about moving forward.

# 8 Rules for Reinvention

## Key Takeaways from Middle America

1

Trendwatching and foresight practices need to look at the middle as much as the coasts.

2

Putting values over valuations can help you attract and maintain talent and customers for long-term success.

3

Backwoods does not mean backwards—your next market might be in the middle.

4

Progress isn't partisan, but maybe reinvention and innovation bring America together.

5

Smaller Midwestern cities can be test-markets for innovative products as well as proving grounds for new technologies.

6

Technology can democratize access to products and services of all kinds.

7

Efficiency is the currency of business. Better, cheaper energy means more money to spend on other goods.

8

Companies that support collective wellbeing can be a model for both innovation and future community.

# THE TEAM

TITLE: REINVENTION IN MIDDLE AMERICA  
SPARKS & HONEY REPORT

reports.sparksandhoney.com  
@sparksandhoney

**Anna Sofia Martin**  
Editorial Director

**Camilo La Cruz**  
Head of Content

**Terry Young**  
CEO & Founder

CREATIVE & EDITORIAL

**Barbara Herman**  
Senior Writer

**Eric Kwan Tai Lau**  
Associate Creative Director

**Purva Michaels**  
Senior Visual Designer

RESEARCH & CULTURAL  
INTELLIGENCE

**Emily Viola**  
VP, Cultural Strategy

**Anna Griggs**  
Cultural Strategist

**Annalie Killian**  
Director Human Networks

**Merlin U Ward**  
Director of Cultural Systems

AGENCY & CONSULTANCY

**Paul Butler**  
Chief Operation Officer

**Sharon Foo**  
Client Partner

**Tim Ettus**  
Managing Director, West  
Coast

**Tom Baran**  
Director, Business  
Development

ADVISORY BOARD MEMBERS

**Ping Fu**  
Entrepreneur and Board Director

**Jeremiah Owyang**  
Founder & CEO  
CrowdCompanies

**Dr Laura Forlano**  
Asst Professor of Design, Illinois  
Institute of Technology

**Robin Farmanfarmaian**  
Medical Futurist, Investor,  
Author, Speaker

**Stefaan Verhulst**  
Chief Research & Development  
Officer, GOVLAB

# METHODOLOGY

For this report, sparks & honey conducted primary research using our proprietary Cultural Intelligence system. Methodologies included social listening, combing through thousands of cultural signals, and interviewing experts in the fields of technology, urbanism, healthcare, government and collaborative economies including thought leaders from our Advisory Board and additional POIs. We surveyed 1056 adults (18+) from across the United States to understand their perspectives about innovation in the U.S.

# SOURCES

Chicago Tribune, Billionaire Peter Thiel to Chicago: 'Very talented' folks head to coasts  
Consortium News, Coal Miners' Futures in Renewable Energy  
Courier Journal, Coal company plans huge solar farm on strip mine  
Courier Journal, Kentucky Coal Museum shifts to solar power  
CNN Money, Columbus wins \$50 million DoT Smart Cities Challenge  
Digital Trends, Know How Clean the Air is By Turning on a Philips Hue Smart Lightbulb  
Ecowatch, 25 Cities Now Committed to 100% Renewables  
Robin Farmanfarmaian, author of The Patient as CEO: How Technology Empowers the Healthcare Consumer sparks & honey Advisory Board member, interview  
Fashionista, Why Regional Fashion Incubators Outside of New York and LA Matter  
Forbes, Drones For Farmers Makes Midwest Startup A Flying Success  
Laura Forlano, Assistant Professor of Design, Illinois Institute of Technology, Institute of Design and sparks & honey Advisory Board member, interview  
Fortune, You Can Now Squeeze a Refund Out of Juicero's Bag-Pressing Machine  
Ping Fu, entrepreneur, author, global 3D printing industry innovator and sparks & honey Advisory Board member, interview  
Catherine Gans, Propeller, New Orleans, LA, interview  
The Guardian, Hillbillies who code: the former miners out to put Kentucky on the tech map  
Helena Independent Record, Emergency simulation trucks could help address rural responder shortage  
Jane Jacobs, The Death and Life of Great American Cities  
Journal Sentinel, In Cleveland, co-op model finds hope in employers rooted in the city  
Knowledge@Wharton, Is Despair Killing the White Working Class? Ask Angus Deaton  
Kpax.com, Telehealth trend continues to grow across rural America  
Marketplace, The next big tech hub might surprise us all  
Med City News, How to measure ROI of telemedicine: An Oklahoma health system shares some insights  
Modern Healthcare, Kaiser Permanente chief says members are flocking to virtual visits  
Mother Jones, Why Is Trump Ignoring These Good Heartland Jobs?  
The Nation, Meet the Radical Workers' Cooperative Growing in the Heart of the Deep South  
New York Times, Chattanooga's Innovation District Beckons Young Entrepreneurs  
The Patient as CEO: How Technology Empowers the Healthcare Consumer, Robin Farmanfarmaian  
New York Post, People are fleeing New York at an alarming rate  
Omaha.com, Higher Education Notes: Wayne State adds fermentation science major  
Jerimiah Owyang, founder of Crowd Companies and sparks & honey Advisory Board member, interview  
Brian Pera, Memphis, Tennessee photographer, filmmaker, author, perfumer, interview  
Pew Research Center, Two-thirds of Americans give priority to developing alternative energy over fossil fuels  
The Renewal Project, Why venture capitalists will start to eye places like Omaha and Minneapolis  
Rise of the Rest, Propeller: Supporting Social Ventures and Inclusive Entrepreneurship in New Orleans  
Science Daily, 'Doctor' robot could help solve sports-concussion dilemma in rural America  
Tech Republic, Columbus, Ohio: What's next for the DoT Smart City Challenge winner  
Tech Republic, Inside Kansas City's goal to become 'the smartest city on planet earth'  
The Baffler, Ungovernable: A Conversation With Kali Akuno  
The Third Wave: An Entrepreneur's Vision of the Future, Steve Case  
Heather Thomas, Director of Brand Strategy and Advertising at Humana, Louisville, KY, interview  
Urban Dictionary, 'Middle America'  
Venture Beat, In 5 years, the Midwest will have more startups than Silicon Valley  
Vox, A Kentucky coal museum is installing solar panels on its roof  
Washington Post, Opioid crisis in rural areas may be tackled by telemedicine  
Wired, The Next Big Blue-Collar Job is Coding





**No parts of this publication may be reproduced, copied, distributed or transmitted in any form without the permission of sparks & honey.**

**© 2017 sparks & honey, LLC.  
All rights reserved.**

