



Community as Canvas

**The power of culture
in the emergence of
Intelligent Communities**

**Annual Theme of the 2014
Intelligent Community Awards**



Intelligent Community Forum
www.intelligentcommunity.org

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Foreword

Communities draw inspiration and strength from their historical roots: everything they do, everything they become, is an expression of their origins.

Communities, however, are not monoliths; they are conglomerations of many unique heritage groups. Strong communities engage their interest groups and departments, maintaining a system of respectful cross-pollination that produces a better whole; groups find inspiration within themselves and within each other. It is this interaction that allows communities to achieve, innovate, and evolve.

Povernoodle is a cloud-based platform designed to engage and empower communities, their interest groups, and support organizations. Participants in



Povernoodle sessions submit ideas, comments, votes, and ratings anonymously so contributions are made without fear and decisions are made without bias. The best ideas emerge quickly – literally within minutes – and without conflict. Action plans are drafted with equal speed. Issue complexity and community diversity help rather than hinder Povernoodle's guided process. Yet decision-making needn't be rushed: contributions can be made from anywhere and at any time to respect people's lifestyles, thinking styles and schedules.

At Povernoodle, we have seen the power of culture to transform communities, to overcome barriers and create a better future in collaboration with others. We are proud to provide a 21st Century solution that helps culture fulfill its most productive role in progress.



Deb Krizmanich
Founder and CEO
Povernoodle

What is an Intelligent Community?

Intelligent Communities are cities and regions that use information and communications technologies (ICT) to build prosperous economies, solve social problems and enrich their cultures in the 21st Century. Many people are familiar with the concept of the Smart City, which turns to technology for solutions to problems from traffic congestion to leakage from water mains, public safety to parking tickets. The Intelligent Community is the next evolutionary step. Intelligent Communities turn to technology not just to save money or make things work better: they create high-quality employment, increase citizen participation and make themselves great places to live, work, start a business and prosper across generations.

Each year, the Forum presents an awards program for Intelligent Communities. The program salutes their achievements in building those inclusive, prosperous economies on a foundation of ICT. In the process, it gathers data for ICF's research programs, which the Forum shares with other communities around the world.

The Awards are divided into three phases, and the analysis becomes more detailed and rigorous at each successive stage.

Smart21. In the first phase, ICF develops nominations for candidates from its own research and information submitted by cities and regions. Describing the community's background, challenges, strategies, programs and results, they are reviewed and scored by a team of academic Analysts, who select the 21 highest-scoring communities.

Top7. In the next phase, the Smart21 complete the far more detailed Top7 questionnaire. These questionnaires are analyzed and scored by an independent research firm, and the seven highest-scoring candidates are named as the Top7 Intelligent Communities.

Intelligent Community of the Year. In the final stage of the process, ICF co-founders visit each of the Top7 and write reports, which are reviewed along with the nomination data by an international jury. The jury ranks the Top7, and ICF combines the jury scoring with that of the independent research firm in the previous step to select the Intelligent Community of the Year.

Annual Theme

ICF selects a theme each year to supplement the Intelligent Community Indicators on which the selection of the Smart21, Top7 and Intelligent Community of the Year is based. Weighted into the assessment, the theme allows nominees to highlight their achievements and uncovers new success strategies of significance to community developers. Past themes have included sustainability, leadership, education, healthcare, innovation and employment, each the basis for solid progress by communities honored in the Awards program.

Community as Canvas

In the 2013-2014 Awards cycle, ICF will focus on the power of **culture** to help or hinder the transformation of towns, cities and regions into Intelligent Communities.

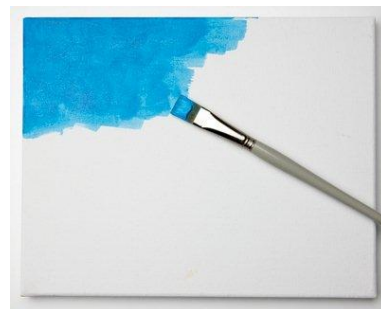
Where humans are, there is culture. Culture gives us a sense of identity and belonging. It also creates intellectual property that can have substantial economic value. It is the foundation for all progress and also sets limits to how much progress we can make.

The 2013-2014 Awards will examine three specific aspects of culture in the Intelligent Community – in local art and craftwork, as heritage, and as attitude – and how they can be tapped to energize communities and contribute to their success. ■

Why Culture Matters

“Culture” is one of those words, recognized by all, which defies easy explanation. Say the word in one situation, and it is about the visual arts, performing arts and traditional crafts. In a country, region or city, this word refers to the accumulation of history, language and shared experience that shapes every individual and institution it contains, creating opportunities and setting limits to change. Mention it in a business context and you are talking about established ways of doing things, the shared identity of the group and the proper role of individuals in that group.

Culture is all of these things – which is why it matters so much. Where humans are, there is culture. We are as dependent on it as we are on the air we breathe. History is full of examples of cultural destruction, in which external forces – from conquest and enslavement to economic boom – have overwhelmed local culture, economy and traditions. The results are almost uniformly bad: a kind of slow-motion strangulation of an entire people through alienation, addiction, violence, the breakdown of family life and the creation of multi-generational poverty.



Culture is also the foundation for all progress. No less an innovator than Sir Isaac Newton wrote that, if he had seen a bit further into the universe than the rest of us, it was “by standing on the shoulders of giants.” With those words he paid tribute to the learning he had gained from others and a lifetime of support and encouragement for his own development – to the culture that made possible his achievements.

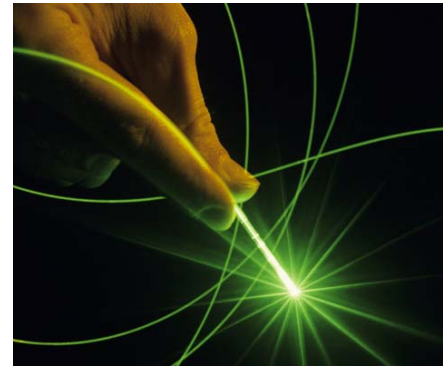
When we seek to chart a new course, as Intelligent Communities do, culture matters most of all. The culture of the community – nested within its nation and region, and of the organizations that make it up – forms the launch pad for every program and project. It provides a wide range of intangible assets that Intelligent Community champions put to use. It helps determine how readily new ideas are accepted. It can supply the words that persuasively explain a vision of the future and build support for it, and the narrative that helps people understand where they belong in a changing world.

Or it can cause everything those champions attempt to blow up in their faces. Understanding the cultural drivers of the community and the means to turn them in the right direction is essential to the success of the Intelligent Community process. This white paper looks at the key issues of culture in the Intelligent Community and offers recommendations and examples of success based on the energizing force of culture. ■

Culture at the Speed of Light

Before the commercialization of the steam locomotive, news traveled no faster than the average speed of a horse, two to five miles per hour over long distances. By 1870, trains were averaging between 14 and 33 miles per hour¹ – but Samuel Morse’s telegraph, commercialized by Western Union in 1851 and spreading worldwide by the end of the century, could already distribute information at nearly the speed of light wherever the telegraph line ran.²

Thus began the world we know today, with local cultures infiltrated by news of things far away that are happening right this minute. Fast forward through decades of invention – the telephone, the radio, television, computers, computer networks and that network of networks, the Internet – and we arrive at a time when the underlying rate of change in just about everything is truly amazing, and its impact on culture is profound.



You are probably familiar with the wonder-tales of growth in computing power. The best known is Moore’s Law, proposed by Gordon Moore, one of Intel’s founders. Moore noticed that his company was able to double the number of transistors on a silicon chip every 18 months and his observation became a way to talk about the rate of change in information technology.

If the bare bones of Moore’s Law do not convey much to your imagination, consider that the smartphone in your pocket is more than 100 times faster and 12,000 times cheaper than the Cray supercomputer of the 1970s. Or consider the less-famous Nielsen’s Law, named for another IT innovator, Jacob Nielsen. He stated that the network connection speeds for high-end home users increase 50% every year, doubling every 21 months.³ That’s slower than Moore’s Law, but it is still impressive. In 2010, the movie rental company Netflix paid about 5 cents US to stream a movie over the Internet. If they had tried to do the same thing 10 years earlier, it would have cost them \$270 per movie.⁴

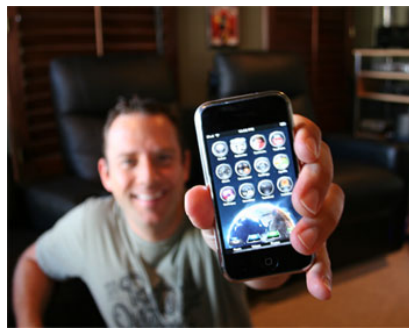
Taken together, Moore’s and Nielsen’s Laws create a potential for change almost too vast to comprehend. Computing power and speed grow at a fantastic pace. Storage for the input and output of all that computing gets cheaper almost as fast. And bandwidth – the means by which computers talk to each other – gets cheaper and more abundant

just a little more slowly than storage. That combination of factors is powerful enough by itself, but it is not the whole story. Far from it.

For past couple of decades, we have been using computing, storage and bandwidth – also known as information and communications technology (ICT) – to do just about everything faster, cheaper and better. Designing, manufacturing, managing, transporting, marketing, constructing, communicating, buying, selling, governing, entertaining, educating, worshiping, donating, servicing – you name it. So we are busy making the established processes of our lives and livelihoods faster, cheaper and better, and we are doing it using a resource that is, itself, getting faster, cheaper and better at the fastest rate in the history of the world.

Liking the Change, Hating the Change

We *like* our abundance of digital gadgets and online services. We prefer ATMs to standing in line at the bank. We like checking in for flights online and going straight to the gate with our carry-on luggage. And we really like those mobile computers that still go by the quaint old name “phone.” In its first two years, Apple’s iPhone became the fastest-growing consumer product in history, and its breakthroughs in design and ease-of-use spawned a completely new category of devices.



But it is all happening so fast. Overnight, it seems, we are all dancing to the tune of Moore’s and Nielsen’s Laws.

The pace of a human life, however, is not very different than it was a hundred years ago. It still takes nine months to bring children into the world, twenty years to raise them, and another five to ten years for their youthful and theoretical understanding of the world to mature into something more useful to themselves and others. During that time, machine intelligence – with its impact on business, science, art, entertainment, communications, transportation, education and government – will double *seventeen to twenty* times.⁵

This disconnection between the pace of change driven by technology, and the pace of change our minds and our cultures are capable of absorbing, is one of our biggest political challenges, whether we live in North America or Europe, the Asia-Pacific, Middle East or Africa. While we would like to think that major questions of policy, regulation and justice are decided based on fact, we know that our leaders, like ourselves, reach decisions based on a mix of information and instinct. The faster the rate of change in the surrounding environment, the more instinct – based on an accumulation of life experience – is likely to miss the mark and information be misinterpreted as a result. Instinct inevitably looks backward for guidance in understanding what comes

next. It is said that, when nations go to war, they start by fighting the last one, because that is what their leaders understand.

Community Impact

What is true on the national level is doubly true at the level of the town, city or region, where we live our lives. Technology-driven change is shifting the basis of local culture faster than many communities can understand and adapt.

In a song that became his signature, Frank Sinatra sang of New York City that “if I can make it there, I can make it anywhere.” The statement rings true because of the fierce competition in America’s cultural capital, where local artists, performers and craftspeople face competition from talent flooding the city from around the world. In our connected age, what is true of New York is increasingly true of cities big and small around the world. Local arts and entertainment competes with the latest digital stream or download. Local crafts compete with craft offerings from around the planet, available with the mouse-click or finger-flick. Yet local talent also has access to an international audience that sometimes goes wild over content originally meant for local consumption. A comic in Seoul puts a music video online in which he dances like someone riding a pony and, overnight, “Gangnam Style” becomes part of the cultural context of communities on the far side of the planet.

Cultures shape economies and economic change molds cultures. We would like to think that culture rises above money, that it is an enduring thing which tells us our place in the universe. In practice, however, we all need to eat. We all need to clothe ourselves and find shelter. These needs, changing little over the millennia, mean that economic change drives changes in that common understanding of the world that we call culture, whether expressed through arts, or attitudes or shared history and values.

Local retailers face national, even global competition, as multinational retailers use ICT to control worldwide operations and source merchandise using unprecedented buying power to slash their costs. The customers who might buy from those local retailers, meanwhile, can find better deals with less hassle on their Web browser or mobile phone. Each individual decision shapes the pattern of the local economy and the local culture with it. A place once proud of its unique local businesses can be overrun by franchises of national or international brands, or can choose to nurture home-grown businesses and resist global homogenization.



The Three Roles of Culture in Intelligent Communities

For all of the turmoil it creates, the ICT revolution has tremendous upside as well. It is visible in the stories above, from a “Gangnam Style” video that gave the world new insight into South Korea, to aspirations for freedom and dignity lit in human hearts through online connections in the Arab Spring.

The broadband economy of the 21st Century – when ICT is doing so much to eliminate distance as a barrier – offers communities everywhere something never seen before. The opportunity is to plug into the world at low cost regardless of location. To affordably import the world’s learning and cultural diversity to enrich the lives of young and old, and to give local culture new life in a global community.

This revolution demands of communities the ability to adapt at high speed, and also rewards those able and willing to make the adaptation. Resistance may be futile – as the robot-human hybrids called the Borg on *Star Trek: Next Generation* like to say – but consciously using ICT to benefit the place you live is not. One key to success is understanding how culture can provide a platform for positive change, as well as the barriers that culture raises, and how they can best be overcome.

In the community examples studied by ICF, we see three vital aspects of culture, each contributing something unique and each having the potential to be a springboard to progress if properly engaged.

Culture as art and craftwork

The most visible manifestations of culture can contribute in surprising ways to a community’s progress.

Culture as heritage

Heritage is the gift of our past to the present and the future. It offers points of reference to guide our way and a story that explains our place in a complex world.

Culture as attitude

The shared experiences that make up heritage also give rise to shared attitudes that can accelerate or stand in the way of progress.

In the following pages, we look deeper into each of these aspects and show how Intelligent Communities have put them to work. ■

Culture as Art & Craftwork

In 1964, American director Arthur Penn released a movie called *The Train*. It starred Burt Lancaster as, of all things, a French Resistance fighter in the final days of the Nazi occupation of Paris. Starring opposite him was the great English actor Paul Scofield as a Nazi officer obsessed with art. Based on a true story, *The Train* tells of the Nazi effort to pack up all of the great artworks of Paris's museums and ship them to Berlin before their army was forced to retreat.

This film is rich with irony, for the Resistance leader played by Lancaster sees no value in the artwork he has been ordered to keep in French hands. A train engineer by



trade, he has never set foot in the museums being looted by the occupiers. If the goal is to keep French patrimony out of German hands, he proposes a simple answer: attach plastic explosive to all the railroad cars in the dead of night and blow them up. His plan is overruled, however, and Resistance fighters and hostages alike pay a terrible price in blood to finally stop the train.

Spilled across the ground beside the derailed train amid the dead lay wooden crates, bearing the names of Monet, Renoir, Pizarro and Picasso.

In *The Train*, great art is ultimately priced higher than human life. It is an extreme view, yet it is entirely believable that such a thing should happen. For those exposed to them, the arts become a symbol of all that lifts us above our animal needs to eat and drink, to sleep, to shelter ourselves and breed. They feed that part of us that does not live by calories alone. To know the visual arts, fine crafts, music, dance, film and literature and to then be deprived of them is to experience a genuine hunger that can be filled in no other way.

The Value of Art and Craftwork

The emotional power of art and craftwork can have tremendous value to cities and regions seeking to change their destiny. That value translates in many practical ways: in direct economic value, in changing citizen perceptions, and in revitalizing the image of the community in ways that retain and attract economic actors.

Direct Economic Value

In 1946, the small city of Stratford in Ontario, Canada was facing a disruptive change in its economy – and not for the first time. Founded on the Avon River in 1832 as a

saw mill and grist mill, Stratford (a Top7 Intelligent Community, 2011-13) became a locomotive maintenance facility in the 1870s and developed a furniture-making cluster in the first half of the 20th Century that was responsible for one-sixth of all Canadian production. But as the second of the World Wars came to an end, the furniture business was in decline and some new growth engine was clearly needed.

That was when a local journalist named Tom Patterson went to City Council with an idea. Stratford had beautiful parkland running along the Avon River and he thought the city should start a summer Shakespeare Festival there. Patterson volunteered to go to New York City and try to convince a director and actors to help found it. He asked for \$100 to pay for his trip. As far-fetched as the idea sounded, the Council deliberated and then gave him \$125. New York, after all, was an expensive place to visit.

It took more than one trip and a fair amount of faith on the part of Mr. Patterson and the Council. But the Stratford Shakespeare Festival opened in the park under a tent in the summer of 1953 with a production of Richard III directed by theater legend Tyrone Guthrie and starring Alec Guinness. It was so successful that, within a few years, the city commissioned a permanent theatre building to house it. When the project ran out of money, the general contractor, Oliver Gaffney, offered to finish the building at his own expense in return for a promissory note. His act of faith paid off. Today, his daughter, Anita Gaffney, is the Administrative Director of a Festival that has become the community's largest employer. With 1,000 staff during the summer season, it generates C\$135 million in local economic activity and C\$70 million in tax revenue.

It would be hard to find a clearer example of the direct contribution that arts and crafts can make to a municipal or regional economy, but stories are thick on the ground. The small city of Bristol, Virginia, USA (Top7 2009) lays claim to being the birthplace of country music and each year, a Bristol nonprofit hosts the Rhythm & Roots Reunion, a 3-day festival of Americana music that drew 45,000 visitors in 2010 to this city of 17,000 people.⁶ The Virginia for the Arts Foundation estimated the economic impact in 2008 at \$1.1 million and tallied local taxes and fees generated at \$43,000.⁷

Every year, the European Union designates cities as Cultural Capitals, from Stockholm to Genoa, Athens to Glasgow, Cracow to Porto. During their reigning year, the cities create a special program of events that engages citizens, businesses, institutions and government, as well as strengthening cultural cooperation and dialogue between European countries. The Netherlands is one of two nations targeted to host a Cultural Capital in 2018 and Tillburg University undertook a study for the government of Eindhoven, a Dutch technology hub that was ICF's 2011 Intelligent Community of the Year, to determine whether the economic return would be worth the investment of time and money. The study



**EUROPEAN CAPITAL
OF CULTURE**

showed that the overall economic impact is twice the program investment. Past Cultural Capitals invested an average of €38 million, while the total economic impact was more than €70 million from visitor spending. Front-runners, such as Liverpool, managed to gain €1 billion in total economic impact from a €200 million public and private investment.⁸

Changing Citizen Perceptions

Taichung City, the 2013 Intelligent Community of the Year, is known in Taiwan as the Mechanical Kingdom for the 1,500 precision manufacturing businesses that form the backbone of its economy. It is a city of 2.7 million that is home to 17 industrial parks and a thriving port, which generated nearly 73,000 net new jobs over the most recent three-year period. But late in the 20th Century, Taichung began a serious drive to become recognized for the quality of arts and culture. It founded the Da Dun Fine Arts Competition, which has since attracted 12,500 artists from around the world and drawn headliners including Luciano Pavarotti, Jose Carreras, Yo-Yo Ma and Lady Gaga. In 2009, residents took part in an average of 35 arts and cultural events per person, up from just 4 events per person in 2001. In that same year, true to its Mechanical Kingdom roots, the city opened the Taichung Cultural & Creative Industries Park, which seeks to build creative industries on the foundation of local culture. Today, this industrial city is considered the most “retiree-friendly” on the island in large part because of its rich cultural offerings.



Communities promote fine arts and traditional crafts not only for economic impact but to change how their citizens, businesses and institutions think and feel about the place. It is probably impossible to measure the impact except in terms of the intangible spirit that powers all progress. Communities find that investing in artistic culture is one way to ignite the attitude that the Roman poet Virgil expressed in the words, “They can because they think they can.” Through arts and culture, communities offer a tangible sign to people that the place they live has value hidden under the skin.

The city of Chattanooga, Tennessee, USA (a 2011 Top7 community) rose from the American Civil War to become a thriving industrial city, home to the Coca Cola bottling industry, insurance companies and foundries casting metal parts. But the deindustrialization that began in the 1970s slowly laid waste to the local economy. During the entire decade of the Nineties, the city gained not one new major employer. Trying to right the ship, the city organized and funded a massive effort to revitalize the urban core. In the 1990s, Chattanooga constructed the Tennessee Aquarium, the

world's largest freshwater aquarium when it opened, and a children's Creative Discovery Museum. It redeveloped the waterfront, built riverside parks and an 11-mile river walk to reconnect the city to the Tennessee River. A local philanthropist, the Lyndhurst Foundation, launched a program called CreateHere. Its goal is to sustain and grow Chattanooga's arts and artisan community by training arts in basic business planning, marketing and other skills essential to economic survival.

As a result of these many efforts, culture and tourism are now important parts of the local economy. According to a 2007 Brookings Institution study, Chattanooga was the only US city of more than 100,000 people to lose more than 10 percent of its population in the 1980s and reverse that trend in the 1990s. The US Census Bureau estimates that, between 2000 and 2006, Chattanooga's population continued to rebound, growing another 8 percent to 168,000.

In Hamilton County, of which Chattanooga is the center, employment directly related to tourism – leisure, hospitality, accommodations and food services – grew more than 26 percent between 1990 and 2004, driven by the downtown revitalization and its emphasis on arts and culture.⁹



Attracting and Retaining Economic Actors

Art and craftwork, particularly of the digital variety, are also a cultural amenity that attracts what Richard Florida has famously called the Creative Class. Whether this contributes to overall economic growth remains an open question; Professor Florida's critics note that the trickle-down effects of attracting a lot of geeky, creative types to your community are limited.¹⁰ But a community intent on creating or growing business sectors that require significant creative input can improve its chances by making sure that "cultural infrastructure" is in place to meet the demands of entrepreneurs and employees.

Eindhoven, which analyzed the economic value of being a Cultural Capital, is a city in southern Holland at the center of a region of the same name, home to 720,000 people. Both the city and the region are known for high-tech manufacturing, from automotive systems and solar power to the machines that make 85% of the world's silicon chips. The region's success depends on its ability to educate, attract and retain highly skilled workers. This is particularly true in a country dominated by the financial and services center of Amsterdam to the north.

So, in addition to conventional economic development programs, Eindhoven hosts an annual 12-day festival called STRP, which attracts 225,000 visitors, and features

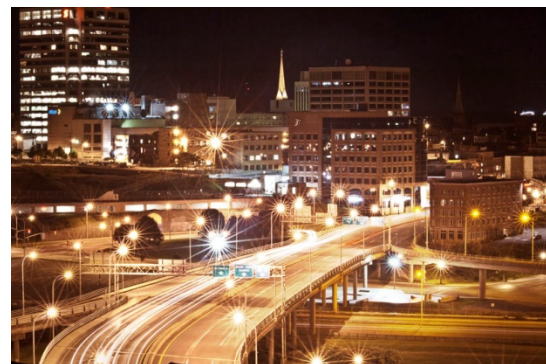
music, film, live performances, interactive art and robotics. Another festival, called GLOW, celebrates Eindhoven's history as the birthplace of Phillips and its lighting division. For 10 days, the city center becomes an open-air museum of design in light, projected on buildings and sidewalks, much of it interactive, for the delight of 65,000 visitors.

The Tokyo suburb of Mitaka is home to research and data centers for top Japanese companies and government agencies, as well as more than 60 educational institutions and a successful precision manufacturing cluster. But this 2005 Intelligent Community of the Year also made a substantial investment in a fine arts museum with a difference. The Ghibli Museum celebrates a local industry, the production of “anime” cartoons, which have gained worldwide popularity and the majority of which originate in Mitaka. The brainchild of award-winning Japanese animation director Hayao Miyazaki, the museum includes a theater showing film excerpts, a whimsical children's play zone, a rooftop garden, and exhibits related to his movies. Throughout opening hours, the museum is jammed with young people, parents and foreign visitors drawn to the global epicenter of anime.



Saint John (a 2012 Top7) is a small city of 68,000 on the coast of the Canadian province of New Brunswick. It has had a hardscrabble history in recent years. Loss of competitiveness in manufacturing saw industrial employment fall 26% in less than 15 years. It has fought its way back with the help of anchor institutions including a university and a major regional oil distribution company, and the energy of entrepreneurs and local venture investors. But the community has also focused on offering an attractive home for the creative talent needed to drive business starts and growth.

A campaign called Live Life Uptown has been successful in promoting the cool lifestyle of Uptown Saint John. More than 1,400 registered members use it for recommendations on where to eat, what to do and who to meet. It is citizen-led, much like another organization called Fusion, which formed in 2004 to be a catalyst for attracting and retaining young professionals. Its social mixers, called Parties with a Purpose, attract both young professionals and senior business and political leaders, and ties them to city's thriving art scene.



Providing the cool backdrop for Fusion is Saint John's active arts sector. The city is home to the largest concentration of commercial galleries in Atlantic Canada. Gallery owners have, for the past decade, hosted thrice-yearly Gallery Hops, free events that invite people to tour the galleries, enjoy wine and canapés and hopefully purchase some art. That small local celebration inspired local arts supporters to partner with the city in a successful application for designation as a Cultural Capital of Canada in 2010, which was the city's 225th anniversary. The same year, Uptown Saint John hosted its first Live Life Awards, celebrating the best of Uptown businesses and in 2011 it helped launch the Saltys, a celebration of Saint John's digital culture with awards going to the city's best blogger, tweeter and online presence.

Changing the Face of the City

The City of New York has articulated an economic development strategy that exploits – in every sense of the word – the unique power of the arts and artists to transform a place. The city is a very expensive place to live and few artists have sufficient income to afford it. In a repeating pattern, the city's ever-changing population of painters, sculptors, actors, musicians, writers and dancers seeks out derelict neighborhoods, from former meat-packing districts to zones in the shadow of major bridges. They move into unfinished floors and turn them into graphics studios, rehearsal space, recording studios and living quarters. They bring their hip sensibility and attract hip music, cheap-but-trendy retailers and low-rent eateries.

After a while, creative people with more economic means notice and the bravest among them start moving into the neighborhood. Building owners notice as well and begin refurbishing apartments suitable for this more upscale clientele. A better class of shops begins to open and more new residents flock in, attracted by the still Bohemian culture to be found there. Eventually, rising rents and the loss of the original ambience of the neighborhoods drive out the artists who created the neighborhood, and they begin again the search for a down-at-heels location they can afford.

Most cities of sufficient size see similar trends. We have always appreciated the power of arts and crafts to give pleasure, to create insight or transform our perceptions. Community leaders now appreciate their power to do much more: to shape the way the community sees itself and contribute directly to its prosperity. ■

Culture as Heritage

In 1916, automotive and industrial pioneer Henry Ford told the *Chicago Tribune*, “History is more or less bunk. It's tradition. We don't want tradition. We want to live in the present, and the only history that is worth a tinker's damn is the history that we make today.”



A reasonable statement from one of the greatest innovators of the 20th Century – and doubtless the same idea has coursed through the brain of innovators from Bill Gates and Hideo Honda to the small group of French doctors who created Médecins Sans Frontières (Doctors Without Borders).

But in fact, history and tradition are not bunk. They are heritage: the collection of shared experience that helps a people, whether of a nation or a small town, understand who they are.

Heritage is the gift of our past to the present and the future. It can be an unwelcome gift, as when tradition dictates that neither education nor opportunity should be wasted on women or that people of a different skin color, tribe or religious faith should be treated as less than human. It can also be a source of strength. Religious minorities – from Jews to Shia Muslims to Jains – have survived hundreds of years of persecution by keeping their distinct heritage alive and vital.

Heritage is the accumulation of years of varying experiences, conditioned responses to challenges, as well as serendipitous occurrences and even whimsical choices by monarchs or other self-engaged leaders. Heritage is the story of our collective past as a community. It can become the engine powering our future or the brakes slowing the engine to a grinding halt. Though we may be navigating uncharted waters during a crisis, heritage gives us points of reference to guide us.

The Power of Heritage

Long before English sailors took to the Atlantic, the people of Sweden, Finland and Norway were voyaging vast distances to explore, trade and raid for profit. They called themselves Vikings, ones who traveled, and they left evidence of their journeys from the Mediterranean Sea to Britain to North America. What drove them to it?

“We are a small country,” explains Mayor Matti Pennanen of Oulu, Finland (a 2012-13 Top7). “Our markets are small. The only way we can be successful is to be part of global markets.” The Viking heritage is at work today in such Intelligent Communities

as Oulu and Stockholm. Instead of longships, the weapons of choice today are the Oulu Innovation Alliance, consisting of five innovation centers – from the Center for Internet Excellence to the Center of Expertise in the Water Industry – working to build Oulu's economic strength. Today's Vikings are the 180 companies in Oulu's life sciences cluster, which turn over €300m per year on such technologies as the world's first consumer heart rate monitor, miniature electrodes for neuroscience and cardiac muscle research, and consumer genetic tests. They are Elektrobit, founded in Oulu in 1985, which now employs 1,600 people in seven countries, developing wireless technologies and advanced embedded electronics for the automotive industry.

In Stockholm (the 2009 Intelligent Community of the Year), the Vikings are the 31,000 people working for 1,400 companies in Kista Science City, of which 90 percent are export companies delivering products, services and expertise to the world. In Kista and across Stockholm, the clean-tech industry consists of 2,700 companies with annual export growth of 16%.



In Italy, there is a centuries-old heritage of high-quality craftsmanship in textiles, leather and accessories, lodged in small factories and workshops scattered across the country's 20 regions. "Fashion is about the way we compose ourselves every day," said Miuccia Prada, head of one of Italy's most important fashion houses, to *The New York Times* in May 2013. This accounts for Italy's high profile in global fashion, which far outstrips the country's political or economic influence.

The first-time visitor to Suwon, South Korea (2010 Intelligent Community of the Year) is often taken first to an archery range for a demonstration. Why? Koreans are proud of their millennia-old tradition of archery. They win more gold medals in Olympic archery than any other nation and, in the last Olympic Games, Korean coaches led the men's winners of the gold, silver and bronze medals. Archery is a sport of concentration, diligence and most of all precision. Look at the industries in which South Korea plays a leading role, from automotive to electronics, and they tend to be ones where concentration, diligence and precision are rewarded.

Under Mayor Yong Seo Kim, Suwon set out a decade ago to create an economy that would be less dependent on South Korea's giant *chaebol* – including Suwon-based Samsung Electronics – and more open to small-to-midsize enterprises specializing in IT, medical devices and specialty chemicals and metals. The city invested in multiple industrial parks and incubators, which now house hundreds of SMEs. Two-thirds of all Suwon companies now specialize in one of its targeted industries and firms with 50 or fewer employees make up 94% of all employers in the city. Concentration, diligence

and precision went into the city's economic development strategy, which focused on creating companies excelling in the same qualities.

The Myths We Tell Ourselves

Heritage is also a myth we tell ourselves. Like all myths, sometimes the story makes sense, and sometimes it is happenstance set in stone by time.

During the 2012 Walter Wriston Lecture at the Manhattan Institute, playwright David Mamet told an audience of New York's most prominent civic and business leaders that knowing about a community's cultural heritage was essential to understanding its politics, economics and future. Yet, he quickly pointed out, "Culture grows in mysterious ways and its growth has nothing to do with reason."

It is not hard to understand why London is the home of Lloyds, the leading marine insurer, or that Inmarsat, the maritime satellite communications organization, is headquartered there. As an island nation, England took to the sea early in its history, and its long experience at sea was one of the foundations of Britain's Victorian-era empire. The Royal Navy's commitment to "rule the waves" protected the nation's trade and made Britain the foremost seagoing nation of the 19th and early 20th Centuries.

It is less obvious, however, why many Japanese schoolchildren today wear a uniform like ones worn by Prussian military school cadets in the 19th Century. When Japan underwent the Meiji Restoration and began a rapid catch-up with the West, it sent educators to Europe to learn about the latest practices. They were mightily impressed by the discipline and learning of cadets in Prussian military academies, and brought back with them the design for the uniforms as a symbol of all that Japanese schools might achieve. As a people who value heritage highly, the Japanese have stuck with the design for more than a century.



In the Netherlands, they are currently celebrating 400 years of their remarkable canal infrastructure. What does that have to do with the success of the Eindhoven Region, the technology hub in the south? More than you might think. The Dutch have a history of collaboration driven in part by the need of farmers to work together to get water out of their fields. If you want to drain land to farm it, the only way to get rid of the water is to work with all the neighbors between you and the nearest river or canal. The Dutch call a patch of land reclaimed from the sea a *polder*, and the spirit of close collaboration is known as the polder model. The success of Eindhoven is built on open

innovation in the now-famous “triple helix” strategy that unites business, government and institutions in driving progress.

That is not the only story used to explain the polder model, but it is the best one. Exact truth does not matter. Heritage, as myth, consists of stories about ourselves that explain who we are, regardless of whether or not they make sense, and how much they reflect actual historic events. The champions of the Intelligent Community find ways to use these myths of heritage to promote progress.

The founding of the Stratford Shakespeare Festival (see page 10) makes a great story. But its real significance lies in the power of myth. It is difficult to visit the city and not hear the story. It is told and retold in pubs and bars, public meetings and speeches by elected officials. It is the subject of books and videos. It is part of every economic development presentation by the city to companies seeking a new home.

The story is powerful because it tells the people of Stratford who they are: people who respond to challenges with imagination and energy, who are unafraid to take risks, who are committed to success and always ready to pull together to achieve it. And it tells the same story to everyone who comes in contact with the place – that Stratford is one of the special places on the earth.

The City of Riverside, California, 60 miles east of Los Angeles, was the richest nation in America on a per-capita basis at the beginning of the 20th Century. Its wealth was based on citrus. A gift of two Brazilian navel orange trees to a local resident in 1974 thrived in Southern California’s climate and grew into an industry just in time for the development of advanced irrigation and refrigerated railroad cars. Citrus wealth gave birth in 1907 to the University of California Citrus Experiment Station, which is now called the University of California, Riverside, as well as a legacy of elegant architecture from the Metropolitan Museum to the Mission Inn.

But King Citrus could not reign forever. The Sixties and Seventies brought vast improvements in global transportation that transformed agriculture into a multinational business in which Riverside (the 2012 Intelligent Community of the Year) struggled to compete. Other uses were found for Riverside’s abundance of cheap land, principally warehousing and logistics, but none of them yielded the prosperity of Riverside’s citrus heritage. Yet all around the city, California was prospering on a new “crop” called technology: hardware, software, gaming, aerospace, the early generations of mobile communications, alternative energy and much more. In 2004, then Mayor Ron Loveridge and John Tillquist, Dean of Economic Development at Riverside Community College, convened a High Technology Taskforce to see if



something could be done about getting Riverside its rightful share of that prosperity. The Taskforce included government and university leaders as well as CEOs from Riverside's small number of research-oriented tech companies. It spurred creation of a second group, the Riverside Technology CEO Forum, which became a place for business leaders to discuss their mutual concerns and formulate plans for action. Together, the groups solicited feedback from business, community groups, city department heads and university leaders. They produced a roadmap focused on promoting technology businesses and creating the information infrastructure they needed, fostering entrepreneurship in higher education, improving the skills of the population and demanding that city government set an example of tech-based innovation for others to follow.

Many different strands of opportunity, personality and politics wove together to produce this roadmap, which laid the foundation for a wholesale change in Riverside's fortunes. But Riverside's heritage of success in citrus surely played a part. The memory of prosperity, especially when built on entrepreneurship and hard work, can be a powerful motivator. The knowledge that it has been done before and can be done again can make the difference between pushing through resistance and letting obstacles overwhelm us.

Putting Heritage to Work

Every successful politician knows how to use heritage to build and maintain support among constituents. The new program that reinforces our pride in a shared past gets a much warmer welcome than the new program that upends that heritage. Salutes to our noble ancestors receive automatic applause while critiques of their mistakes are usually met with stony silence. But context is everything.

Few words from a political leader have had greater local impact than when Toomas Hendrik Ilves, Estonian Ambassador to the US, began talking in 1995 about the need to connect Estonia's schools to the Internet. Estonia had gained its independence in 1991, after half a century of domination by the Soviet Union, and its economy, infrastructure and educational system were in shambles. Ambassador Ilves' comments sparked a commitment from national government to equip all schools with PCs and Internet connections before the turn of the century. It was called "Tiger Leap," a reference to the amazing economic success of the Asian Tiger nations. And it became obvious that Estonians wanted what the Tigers had. Suddenly, Tiger Leaps were everywhere: e-banking, online editions of newspapers, NGO-funded programs, plans for new businesses. By 2006, Estonia had been admitted to the European Union, *The New York Times* was calling it "a sort of Silicon Valley on the Baltic Sea" and Ambassador Ilves had become President Ilves. Estonia's capital city of Tallinn, a repeat Top7 Community, reaped great rewards from this unprecedented burst of government and entrepreneurial activity, magnified and accelerated by its own strategy and programs.

How was this kind of transformation possible in only a decade? Smart policy was a key component. Estonia's government passed laws opening its banking, telecom and other critical sectors to foreign investment and full competition. The government and NGOs poured funds into expanding Internet access and creating world-class e-government and e-commerce applications, which sparked a wave of university spin-outs. But none of these things can truly account for what happened in Tallinn, where one-third of Estonians live, or across the rest of the nation.

Heritage helps complete the picture. Estonia had known not just fifty years of domination by the brutal Soviet regime. For over 600 years, the Baltic seaport of Tallinn has attracted the unwanted attention of outsiders. The Danes were the first to conquer it, followed by the Germans and the Swedes. After a war for independence that Estonia won in 1920, the country enjoyed a generation of freedom before being annexed by Russia, falling to invasion from Nazi Germany, and being occupied once again by the victorious Soviet Army at the end of the Second World War. When Estonia gained its second independence in 1991, it was a nation largely accustomed to having its fate determined by others.



The Tiger Leap, in all of its forms, can be seen largely as a reaction to that heritage. Estonia finally had its freedom, and Estonians were in no mood to waste the gift. So when good timing in world markets made Estonia look like an investment destination with high potential, the people of Tallinn and other cities seized the opportunity with both hands. For their heritage had taught them something else: that openness to the world has benefits. Unlike places that have turned inward after foreign domination, Estonia welcomed Swedish, Finnish and other companies to invest, and Tallinn's current economic development strategy calls for a deepening of international ties across all of its business sectors. ■

Culture as Attitude

Weird! Yes, Austin is *weird*, and proud of it as well! Ask any Texan and they will tell you that – and the ones who seem proudest of it are the people of Austin themselves.

Art and craftwork are the visible signs of culture. Heritage is the living embodiment of the community's history, translated into traditions, identity and common understanding. But there is one more vital aspect of culture that needs to be taken into account by anyone embarking on an effort to harness culture for promoting progress.

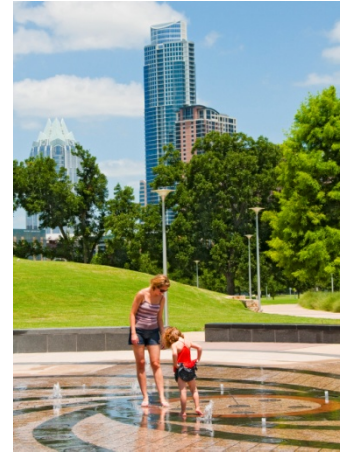
History does more than create tradition and identity. It equips the people living today in the city or region with a set of attitudes. Those attitudes shape how they respond to situations, from exciting opportunity to community crisis.

One attitude is common to humanity across the globe. Nobody welcomes change. We are hard-wired as a species to resist change and to value most what appears to last longest. This is a never-ending problem for Intelligent Communities, because change is their mission. The attitudes of a community can either nurture resistance to change or cultivate acceptance, and those who seek to promote change must understand the attitudes embedded in the population by its heritage.

If the history of a place is one of repeated failure, people tend to view the present with resignation and the future with fear. Rather than embracing the unknown, they cling to the known regardless of how unrewarding it may be. Self-confidence and faith are at a minimum and cynics abound, because they have so often been proven right.

If a place has known decades of easy success – if the world has beaten a pathway to its door throughout living memory – then a genuine crisis may lead to paralysis in the face of challenge. The longer we are successful, the more we forget the hard-fought days when that success was forged, and fewer tools we have to pick up the fight again. The paralysis may have a completely different cause than a history of failure, but the outcome is not so different. Confusion. Resistance. Inaction.

It is often the places that have seen it all, cycles of financial success and economic decline, which are left with the best attitude: resilience. Memories of past success are an emotional support in the hard times, and the self-satisfaction bred in good times is leavened by remembrance of past striving.



In Intelligent Communities with resilient attitudes about change, we see the community develop collaborative leadership that sets new goals and changes course when necessary in order to survive or prosper and thrive. A resilient attitude is a major competitive advantage in the broadband economy of a century where change is expected to be the only constant.

Today's Attitudes Create Tomorrow

Cleveland, Ohio was one of the great success stories of the Industrial Age. A key link in a transport system of rivers, canals and railroads, Cleveland (a 2006 Top7) was home to steel companies and the place where Standard Oil founder John D. Rockefeller made his fortune. Its last boom years, however, came just after the Second World War, and the second half of the 20th Century brought industrial decline, rising unemployment and racial unrest, culminating in 1978 when Cleveland became the first US city to default on its creditors since the Great Depression. At the end of the century, Cleveland had one of the highest poverty rates among large American cities, with almost one-third of adults and 47% of children living at or below the poverty line.

But in the new century, a group of institutions formed a nonprofit called OneCommunity to deploy a community-based broadband network in the metropolitan area and to build a new knowledge economy on its foundation. The brainchild of Lev Gonick, CIO at Case Western Reserve University, the network was switched on in 2003 and gained a dozen institutional subscribers ranging from the city and the regional MetroHealth System to the Cleveland Institute of Art and the Cleveland Orchestra. Applications running on the network include high-definition videoconferencing connecting Cleveland Clinic doctors to city schools for the delivery of healthcare, and programs from the Cleveland Museum of Art delivered to branch libraries. In 2005, Intel named the greater Cleveland area as one of three Worldwide Digital Communities.



In most places, such projects get off the ground with the strong support of local government. Not so in Cleveland. While the city is a partner in OneCommunity, neither the Mayor nor Council became visibly engaged in its work. When asked about the city's future, residents can still sound bleak. It will be the same as it always was: the rich will prosper and the rest will be left behind. It is not hard to see embedded attitude, based on a history of failure, keeping the city from fully leveraging the great work of the innovators in its midst.

The rural city of Bristol (a 2009 Top7) – home to the Rhythm & Roots Reunion – is located in the southwest corner of Virginia, a region known for coal-mining, tobacco-

growing and their traditional companions: poverty, poor education and lack of opportunity for bright young minds. The city's per-capita income in 2007 was only \$20,000 compared with the Virginia average of more than \$41,000. But that dismal number was due for change, thanks to a decision by the city's municipal electric utility to become a fiber communications carrier in 2001. Bristol was forced to fight years of legal battles with its incumbent telephone and cable TV providers but by 2008 had captured more than 62% of the available residential and business markets and, according to a study it commissioned, saved customers nearly US\$10 million over incumbent operators' rates.

From that controversial beginning, the utility went on to build networks into neighboring counties, and this infrastructure attracted a backup data center for the Commonwealth of Virginia. Since the network extension was completed in 2007, hundreds of businesses in the four-county service area have become customers and two



new industrial parks have sprung up. Media reports indicate that business growth resulting from the broadband build-out created 1,220 jobs in seven coal-producing counties worth \$37 million in annual payroll, and attracted \$50 million in new private investment. The new jobs entering the area paid about two-thirds more than the normal weekly wage.

It is an inspiring story – but it has a hidden side that reveals much about the power of attitude. Bristol has an unusual geographic claim to fame. The Virginia border runs right down its main street. To the north lies Bristol, Virginia, while to the south of the line is Bristol, Tennessee. Two sister cities, as closely connected as it is possible to be – yet Bristol's Tennessee twin did not participate in the network project, did not take the financial or regulatory risks, and did not gain the rewards. Despite the remarkable things taking place to the north and similar per-capita income, the leaders of Bristol, Tennessee appeared to consider the status quo sufficient for its needs.

Oulu, Finland (a Top7 Community in 2012-13) has seen industries come and go over the past 200 years, including boom and bust in tar and wood products in the age of sale, leather goods, fishing and heavy equipment manufacturing. When heavy industry went into steep decline, the Nokia Research Center and small-to-midsize enterprises (SMEs) became Oulu's biggest employers. Then in the new century, what city leaders called “the Nokia threat” materialized as mobile communications shifted from voice to data, forcing the company to reorganize and costing thousands of jobs. But long experience with industrial cycles has bred resilience into local attitudes. Long before

Nokia's travails, the city had founded the Oulu Technology Park and Technopolis to incubate more SMEs.

The University of Oulu is Finland's second largest, with six faculties and 16,000 students, yet is only one of several high-quality institutions. To strengthen their economic impact, Oulu has partnered with the University in the formation of multiple R&D organizations, where business and researchers collaborate to advance technology and test it in real-world situations.

Since the start of the financial crisis in 2007, Oulu has managed to create 18,000 jobs in high technology. That gain is due to the city's can-do attitude and a devotion to making the community successful. Oulu's people love their city, want to stay no matter what the circumstances and grow their families and businesses there. They are among the most innovative cities in the world and know it. Attitude? Yes, and highly innovative, collaborative and entrepreneurial, too. They are even training 8 year old entrepreneurs to compete in their schools.



Attitude Adjustment

Attitudes are sticky. Attitude determines in large part the lessons we take away from a situation, and those lessons tend to reinforce the attitude we have. When we feel hopeless, we are alert to evidence that hopelessness is justified; when we expect tomorrow to be better than today, we see small signs of progress everywhere. This essential human dynamic makes it hard to change deeply embedded attitudes.

Yet they can and do change, whether quickly or slowly. In 2009, the bankruptcy of Chrysler and General Motors drove Windsor, Ontario, Canada over the brink. Its economy had evolved into an extension of Detroit, center of the US car industry, and the near-collapse of that industry caused over 7,000 jobs to disappear and the percentage of the workforce employed in manufacturing to fall from 30 percent to 20 percent. That year, Windsor's 15 percent unemployment rate was the highest in Canada.

But by 2011, when Windsor and its surrounding county of Essex were among the Top7, an amazing amount of new development was in the works. The University of Windsor was in the midst of a hundred-million-dollar expansion, a community college had opened a new school of journalism, and researchers were partnering with entrepreneurs to turn automotive technologies into applications for new industries. A massive new bridge – a joint project of the US and Canada – was under



construction across the national border, and Windsor's Mayor was promoting a scheme to make his city the security checkpoint for all cargo crossing that border.

Such rapid change was made possible in Windsor and Essex County by strong leadership with a persuasive vision of the future. In Windsor, the leaders were Mayor Eddie Franklin and University of Windsor President Alan Wildeman. In Essex County, it was a group of small-town mayors led by Warden Tom Bain. They worked to assuage fears, promote ideas and coordinate the many moving pieces.

Leadership of the same kind is visible today in Taichung's Mayor Jason Hu, Eindhoven Mayor Rob van Gijzel and Stratford Mayor Dan Mathieson. Each continues to drive transformation within their communities as well as outside. Mayor van Gijzel, the current chairman of the Intelligent Community Forum Foundation, speaks globally on Intelligent Communities and promotes the open innovation ecosystem of Eindhoven as an Intelligent Community model. Mayor Mathieson believes that his city can be a model for small cities around the world, and his can-do attitude has led numerous cities around Canada to ask, "if they can do that in Stratford, why can't we?" These leaders, along with Mayor Hu, have a vision, are able to communicate it and promote the Intelligent Community brand wherever they go, locally and globally. These leaders provide a degree of passion that is not easy to forget. They breathe the attitude of being part of an intelligent community and this rubs off on everyone they meet.

Making Weirdness Work

Remember Austin, the city that prides itself on being *weird*?

Austin in many ways is a branch office of Silicon Valley plunked down on the Texas Plains. Home to a public-private semiconductor consortium called SEMATECH and the University of Texas at Austin, it is politically and socially liberal in one of America's most conservative states. Its IBM research center created Watson to challenge human chess-players. Austin is also famous for its evolution of Twitter and its unique Whole Foods concept marketplace. It attracts artists and musicians from across the US to its annual South by Southwest festival, supported by 225,000 students from throughout the region.

In calling itself weird, Austin is doing what all children do when they achieve adolescence: finding ways to define itself in opposition to its parent. "Weird" might as well translate as "Not Texan like the rest." That differentiation is of high value, just as it is for adolescents. It reassures Austin that its attitudes, the product of an economy built on knowledge, make sense. It creates a point of pride and a rallying vision that unites the people on whose creativity and innovation the future of Austin continually



depends. By promising to always “keep Austin weird,” the city offers a commitment to talent around the world that living in Austin does not require them to adopt the values of the state in which it is located.

A study published in the *Pacific Standard*, by Heine, Norenzayan and Henrich identified “WEIRD” as “Western, Educated, Industrialized, Rich and Democratic.”¹¹ The study looked at culture-forming attitudes, which influence the way communities make decisions about themselves and their future. Based on that definition, Austin is indeed *weird*, and the weirdness that is Austin is something we all – whether Western, Eastern Northern or Southern – might aspire to become. ■

Community as Canvas

In the 21st Century, the wellbeing of cities and regions is inseparable from information and communications technologies. They are the new infrastructure of economic activity, overlaying and supercharging the kinds of infrastructure that we are more familiar with, just as digital applications have overlaid and supercharged the day-to-day lives of most citizens of the industrialized world, and increasingly of developing nations as well.

But underneath this digital layer flows the river of human culture, unchanged in its essential operation for millennia. Humanity will continue to respond to change as it has always responded, will embrace what seems good and fear what it does not yet understand. Yet that same culture is at the heart of what ICF calls *advocacy*: the process of education and persuasion by which a city's people become its most potent drivers of progress.

In this white paper, we have sought to open up the aspects of culture as it affects cities and regions, and to share examples from Intelligent Communities that take culture into account as a creative force, an economic driver and a potential roadblock. This will inform the work of cities and regions that are applying for the next round of Intelligent Community Awards. It is our hope that it will do much more: that it will help communities large and small, in developed and developing nations, to understand how their past can inform their future, how the commonplace contributions of artists and craftspeople can benefit the whole, and how to help constituents stop standing in the way of their own futures.



There is no standard roadmap for this effort. There is only experimentation, informed by the successes and failures of others, and by the passions and insights of local leaders. As American artist Robert Rauschenberg told *The New York Times* in 1974, "Screwing things up is a virtue. Being correct is never the point. Being right can stop all the momentum of a very interesting idea."¹²

The Authors



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	Holst Centre	Team Waterloo
	Hunton & Williams	University of Windsor Centre for Smart Community Innovation
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NOTES

- ¹ *Travelers Official Railway Guide*, National Railway Publication Company, June 1870.
- ² Electrical Telegraph, Wikipedia, June 10, 2013 (http://en.wikipedia.org/wiki/Electrical_telegraph)
- ³ "Jakob Nielsen," Wikipedia (http://en.wikipedia.org/wiki/Nielsen%27s_Law#Contributions).
- ⁴ "Bandwidth Pricing Trends: Costs to Stream a Movie Today, Five Centers: In 1998, \$270" by Dan Rayburn, *Streaming Media*, January 6, 2010.
- ⁵ "Why Workers are Losing the War Against Machines" by Erik Brynjolfsson and Andrew McAfee, *The Atlantic*, October 2011.
- ⁶ "Rhythms & Roots Reunion," Wikipedia, http://en.wikipedia.org/wiki/Bristol_Rhythm_%26_Roots_Reunion
- ⁷ *Bristol Rhythms & Roots Reunion: Building Communities*, VFTA/VFTA Foundation, Virginia Commission for the Arts, 2009.
- ⁸ "The Opportunities and Potential Impact of the European Cultural Capital 2008 for Eindhoven/Brabant" by Greg Richards, Department of Leisure Studies, Tillburg University, www.academia.edu.
- ⁹ *Chattanooga, Tennessee: A Restoring Prosperity Case Study* by David Eichenthal and Tracy Windeknecht, Metropolitan Policy Program, The Brookings Institution, September 2008.
- ¹⁰ "Richard Florida Concedes the Limits of the Creative Class" by Joel Kotkin, *The Daily Beast*, March 20, 2013.
- ¹¹ "We Aren't the World," by Ethan Watters, *The Pacific Standard*, February 25, 2013.
- ¹² "Robert Rauschenberg, American Artist, Dies at 82" by Michael Kimmelman, *The New York Times*, May 14, 2008.