ALLIANCE FOR INNOVATION
TRANSFORMING LOCAL GOVERNMENT

#NBT

THE NEXT TWENTY YEARS IN LOCAL GOVERNMENT

ALLIANCE FOR INNOVATION
TRANSFORMING LOCAL GOVERNMENT

The Alliance for Innovation is inspiring innovation to advance communities. As the premier resource for emerging practices in local government, the Alliance is building cultures of innovation and connecting thought leaders in the profession with the help of our partners ICMA and ASU. We are accessible and valuable to all levels of an organization.

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I. ARE WE FUTURE READY?

#NBT

An Open Letter from the Alliance for Innovation

When the Alliance for Innovation completed its recent strategic plan, we committed to discovering the "next big things" facing local governments. We challenged ourselves to look beyond the horizon we could see, and imagine what our cities and counties might look like one generation from now. It was an audacious task, undertaken to ensure that our members and their successors—the most innovative city and county leaders on the planet—are well equipped to face the future, whatever it holds.

We chose a twenty-year time horizon.

Why? Twenty years is the average length of a generation.

Thinking twenty years into the future enables us to get out of our own way and imagine a future beyond ourselves when many of us will be retired, or handing the reins to our successors. Thinking of the kinds of communities our children and grandchildren will inherit - and the communities we have served and loved - often brings out the best in us: we want to imagine the greatest number of possibilities and when those possibilities impact those we love, we bring focus to the task.

But thinking twenty years into the future is also difficult. The human brain is hard-wired for pattern recognition. And patterns, by their nature, are based on events that have already happened. Because the brain is not geared for future thinking, we used a set of tools, Strategic Foresight, and a team of trained Futurists to guide this process.

The timing is terrific. Many experts and city professionals say that we are entering "the city century", an era when local government will definitively surpass regional, state, and national governments as the lead innovators in how we deal with change - from climate change to infrastructure financing, from mobility to education, urbanization, and beyond.

To identify the next big things, we worked with experienced and emerging professionals, a global panel of subject matter experts, and all the data available to us. As you'll learn, some of the next big things aren't "big" in a traditional sense; they're pernicious, quietly growing in strength over time. Others are surprising, and communities must choose whether to ignore, mitigate, or adapt.

Whether you're a member of the Alliance for Innovation or not, we expect that *The Next Big Things* will influence your local government conversation. But even more, we hope it will help your community get future-ready.

The future, after all, doesn't just happen to *us*. The future passes through us.

And the future starts now,

Karen Thoreson
President, Alliance for Innovation
September 23, 2015

II. FOUR FORCES AND FORTY-FOUR TRENDS

If we asked you, "What trends are impacting your community?" you could probably fill a large whiteboard. Twice.

To help organize and prioritize the trends impacting communities in the next twenty years, we use the Four Forces model developed by futurist Cecily Sommers. These four forces are agents of mega-change; if any of the four forces are undergoing drastic change or disruption in your community, it will likely mark a significant shift in how citizens act, engage, and respond to each other, and to their government.

In priority order, the Four Forces are:

1

Resources

The availability of resources is most closely tied to survival, so it is the most important force. Resources include the food, water, air, habitat, and other material nature offers. Especially important are the resources that enable energy production. Trends and resource drivers related to this force include: climate, ocean, space, energy, minerals, water, land, food, animals and forest.

2

Technology

Technology includes the tools and knowledge we use to extract and transform resources into new products and capacities that make our lives more comfortable and convenient, or to develop capabilities beyond our physical bodies that allow us to go places and discover new realities. Trends and drivers related to this force include: genetics, robotics, information, nanotechnology, health care, education, collaboration, virtual reality, games, telephony, manufacturing, infrastructure, and capital formation.

3

Demographics

Demographics is the "who" behind society's changes. People are producers. We produce through our physical and intellectual labor, so "who" is producing matters, e.g. does your community have enough working people to support your very young and very old; do you have the right ratio of women to men; is there enough social cohesion among groups to ensure the good of the community? Trends and resource drivers related to this force include: population growth, the developing world, industrialization, immigration, multiculturalism, multilingualism, nationalism, and conflict.

4

Governance

Distribution and management of society's assets—resources, technology and people—are administered through the *rule of law* and *the rule of markets. Of all the forces, governance is the most reactive, i.e. changes in resources, technology and people often run ahead of government's capability to deal with them.* Trends and drivers related to this force include: tribalism, market drivers, values, interests, beliefs, online communities, personalization, polarization, and identity politics.

*Communities can use the **Four Forces** model as a way to organize and prioritize the trends impacting them.*

For innovative city and county leaders, it's sobering to think that you can have the best-run local government (the fourth force), but if there is a serious resource shortage (the first force), an abrupt technology change (the second force), or a significant in-migration or out-migration of people (the third force) it won't matter; change will be forced upon you. Understanding the four forces and their order of importance is fundamental to building a future-ready community.

In the following pages, we outline these forty-four trends:

Resource Trends

1. Climate Change
2. Food Insecurity
3. Water Shortages & Access
4. Energy Grid Disruption (U.S.)
5. Mining
6. The "NORC" Shift

Technology Trends

7. Digital Citizens
8. Sharing Economy
9. Education Reform
10. Open Innovation
11. Behavioral Insights
12. Unmanning
13. Decentralized Manufacturing & 3-D Printing
14. Global, Digital Currency
15. Carless Communities
16. Infrastructure Overhaul
17. New Financial Partnerships
18. Microgrids
19. Off-Gridding
20. Electric Vehicles
21. Water Recycling
22. Desalinization
23. Nanotechnology
24. Tech-Enabled Health Care
25. Biomimicry

Demographic Trends

26. Tribalism & Identity Politics
27. Structural (Youth) Unemployment
28. Civil Rights Spring
29. Mass Migration
30. Middle Class Map
31. Elder Expense
32. Urbanization: Mega & Mid-Sized
33. Rural v. Urban
34. Smart Citizens
35. Nomadic Workforce
36. Hyper-Localization

Governance Trends

37. Declining Federal Government Effectiveness
38. Trust in Government
39. City-to-City Collaboration
40. VUCA Leadership
41. Citizen Engagement
42. Direct Democracy
43. Corporate and Special Interest Influence
44. Fiscal Uncertainty

Resource Trends

Author: Robin K. White, Ph.D.,
Senior Mediator and Program Director, Meridian Institute

I have had the distinct pleasure to work with thought leaders around the world on developing resilient communities – communities that, when hit with an unexpected and disruptive event, can bounce back even stronger.

But this takes work. And planning. As the Chinese proverb says, "The best time to plant a tree was twenty years ago. The second best time is now."

Being a resilient community means investing now, to be future-ready. Resilient communities honestly assess their vulnerabilities and their assets, and are willing to consider the worst case. This isn't headline-grabbing work. It won't make you popular. And it doesn't win elections. But when your community is rocked by disaster, this is the work that gives us a path forward, through the mess.

Your community has an incredible opportunity to start building its resilience. This document, The Next Big Things, lays out dozens of trends that may affect your community. Chief among them are the Resource Trends on the following pages. Your community's understanding of its resources is the most important factor impacting your resilience. Because when your community loses its flow of clean water or affordable energy, nothing else matters. People panic. If you're prepared, you have a way to handle it, to engage people and reroute their emotional energy toward a productive path.

A responsible resilience plan demands that your community understand its resource trends and limitations. Start here.

And if your community discovers that its resources are limited, constrained, or vulnerable, consider it a blessing. Time and again, I have seen communities face the facts squarely, and seen how creative and inspired their solutions can be. Finally, I strongly encourage you to have this discussion about resources and resilience within neighborhoods, at churches, and on the front lines. Top-driven responses to major disruptions often fall short; preparation by local residents is more effective because everyday residents are the ones who will have to live and work through any catastrophe or resource shortage.

I encourage you in your journey to take the long-term view on your resources, and be future-ready.

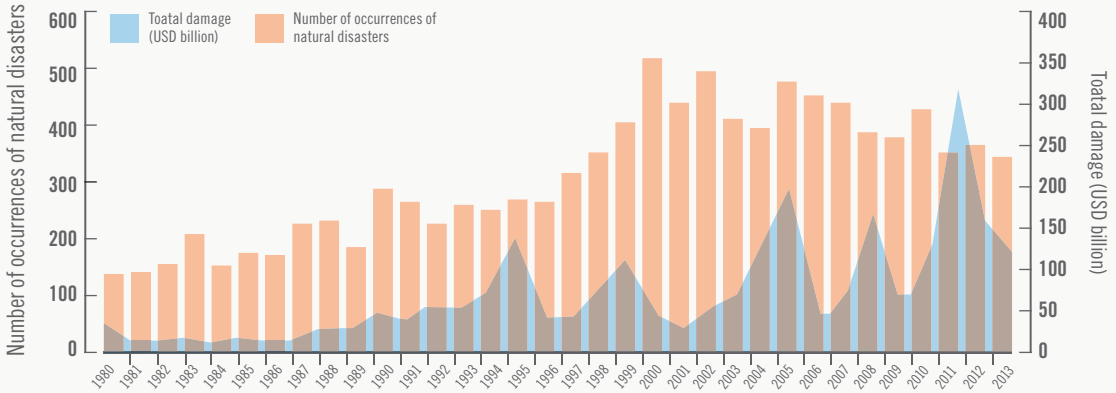
Which of these trends might be the "next big thing" in your community?

1

Climate Change

Over the next twenty years, climate change will be the most important resource issue facing local governments. Climate change affects our oceans, fresh water, arable land and food sources, and animals. Not only are climate-change events like rainstorms, hurricanes and tornadoes growing more intense, the cost of their damages is increasing over time:

Figure 1. Economic Consequences of Global Increase in Occurrence of Severe Weather Events



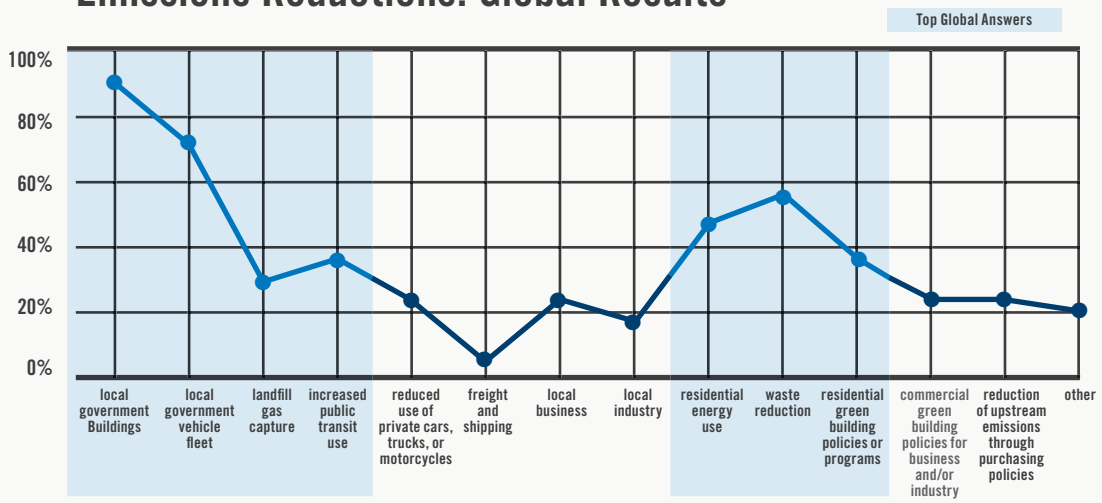
Source: The International Disaster Database, EM-DAT database

Cities and counties are responding. MIT's Alexander Aylett conducted a global survey of cities' responses to climate change and found that Canadian municipalities are international leaders, weaving climate-change plans into other local government department plans, long-range plans, and sustainable development plans. Globally, levels of integration vary by country and region. The United States however is the only country where cities report consistently low levels of integration across different local government plans.[1]

1 *Aylett, Alexander. 2014. Progress and Challenges in the Urban Governance of Climate Change: Results of a Global Survey. Cambridge, MA: MIT.*

Local governments use many tools to mitigate climate change through the reduction of greenhouse gases as Aylett's' research shows in Figure 2 below

Figure 2. Where Cities Have Made Measurable Emissions Reductions: Global Results



Source: Alexander Aylett, Progress and Challenges in the Urban Governance of Climate Change

The following issues are closely linked to climate change, but may impact communities at various levels of intensity:

2

Food Insecurity

As the planet gets hotter, droughts will drag on longer and with greater intensity. This will lead to decreases in food production, and increases in food prices.

For example, the United States is the lead producer of corn and soya beans, two of the most important primary crops in the world. In 2012 the U.S. Department of Agriculture declared over half of all counties "disaster areas" due to drought.[2] As corn and soy crops wilted in the heat, food prices increased. This led hungry and desperate people in 28 countries to riot. Links between climate change, food insecurity and political instability have been made in Syria,[3] North Korea, Iran and Somalia.[4] And as food like corn is being diverted to energy production, food prices may become more unstable. To offset these possible food price shocks and

2 *Michael Muskal, "As drought widens, 50.3% of U.S. counties declared disaster areas," Los Angeles Times, August 1, 2012*

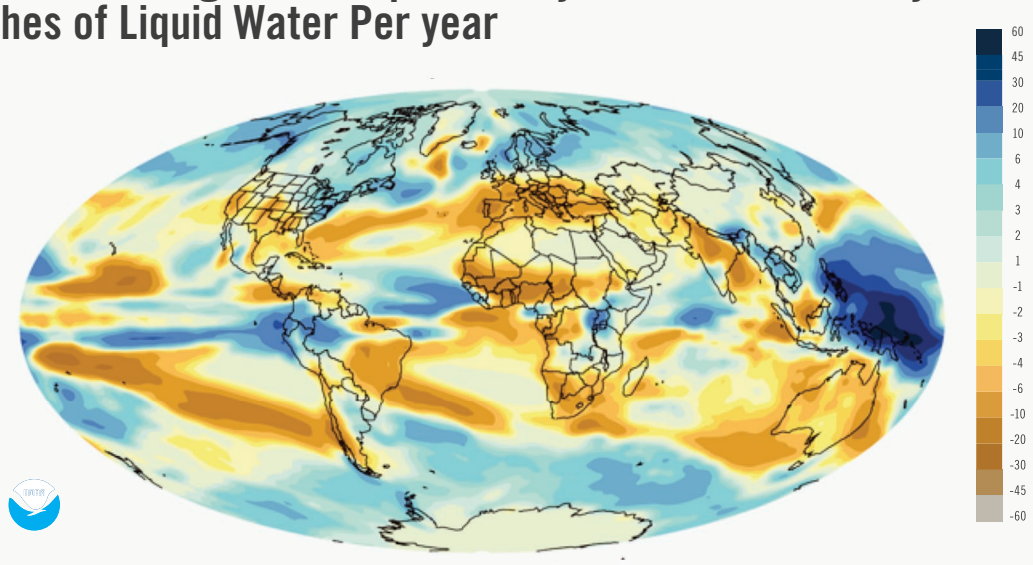
3 *Colin P. Kelley, Shahrzad Mogtadi, et. al., "Climate change in the Fertile Crescent and Implications of the recent Syrian Drought," Proceedings of the National Academy of Sciences, March 2, 2015*

4 *Johanna Nesseth Tuttle and Kristin Wedding, "Will Food Prices Drive Instability," Global Forecast 2012, Center for Strategic and International Studies*

instability, the G20 is forging agreements on smoother import and export practices (banning protectionism) in an effort to keep food prices relatively stable worldwide. In addition, the private sector is increasingly being called on to offer support for food security and agricultural investment around the world.

3 Water Shortages & Access

Figure 3. Change in Precipitation by End of 21st Century, Inches of Liquid Water Per year



AS PROJECTED BY NOAA/GFDL CM 2.1

The steady march of climate change is forging ahead and is having a huge impact on water availability. Droughts like the one we are facing now will become more common in the future, and likely even more severe, especially later in the century. It is climate change that is making drought the new normal, and we need to adjust our personal thinking, and our statewide and national water management accordingly.

– Jay Famiglietti, Senior Water Scientist, NASA Jet Propulsion Laboratories

By 2025, two-thirds of the world's population will be living in water-stressed conditions. By 2030, half of the world's population will live in "high water stress" areas. The following maps show the changes from 2010 to 2050 if we do nothing and anticipated population and economic growth proceeds as expected[5]:

Figure 4. Water Stress as a Percent of Total Renewable Water Withdrawn, 2010

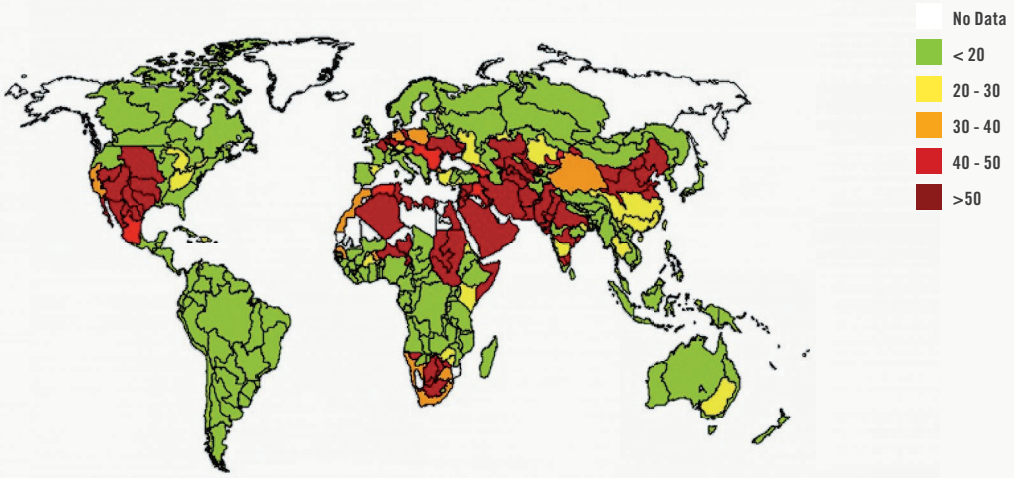
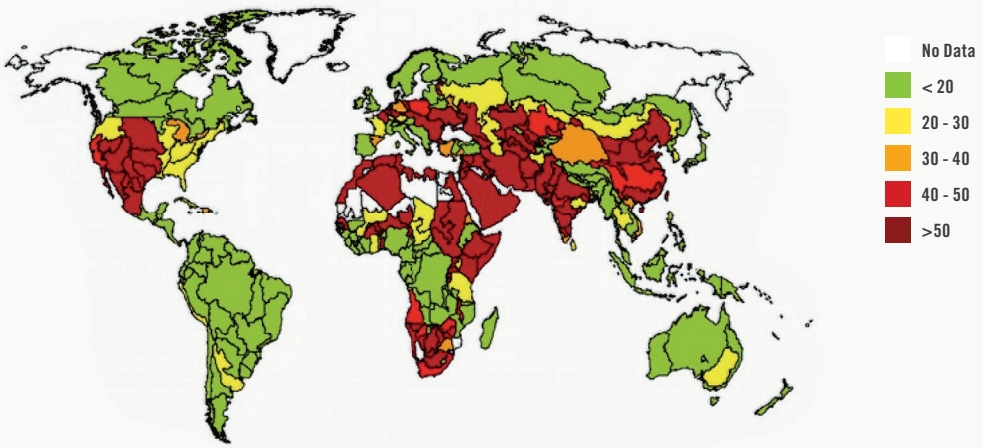


Figure 5. Water Stress by 2050 Under Business As Usual, Medium Growth Scenario



5 *"Sustaining growth via water productivity: 2030/2050 scenarios", Veolia Water and International Food Policy Research Institute. http://growingblue.com/wp-content/uploads/2011/05/IFPRI_VEOLIA_STUDY_2011.pdf. Accessed June 30, 2015*

4

Energy Grid Disruption (U.S.)

The United States' energy grid is the most complicated machine ever built by man.

We rely on it every day to charge our smart phones, power our refrigerators, operate our lights, and heat and cool our homes. But the grid's transformers and substations were not designed to be protected from physical attack. Many of them sit idly in rural areas, protected by little more than a chain-link fences and guarded by a camera. Just how vulnerable is the grid? In 2003, trees hit transmission lines and caused a cascade of blackouts affecting 50 million people in the Eastern U.S. and Canada for days.[6] And with increased storm intensity, it's possible that something like this will happen again, disrupting financial transactions, public safety, emergency medical response, access to food, and mobility.

In April 2013, Pacific Gas & Electric announced that its San Jose substation was attacked by people who cut communication cables and fired over 100 rifle bullets, knocking out 16 of 23 transformers. Although PG&E was able to route power to its customers from nearby utilities, it took 27 days to get the substation operational. Sixteen months later, the same substation was attacked again. This highlights the fragility of our grid, and its susceptibility to national or international terrorism.

Many communities, and the entire state of New York, are investigating local grid development to ensure more reliable energy sources. *(See trends 18, 19 and 20.)*

5

Mining

Two sources of mining will unlock greater energy resources in the next twenty years.

The first, hydraulic fracturing, commonly known as "fracking", is a technique used to access natural gas. In the U.S., the energy industry refers to natural gas as a "bridge fuel" that will help make the transition from coal to renewable energy. Fracking is creating jobs in the energy sector, and is also being studied for its impacts on water and air safety.

As the world's ice recedes and the sea floor becomes accessible, deep sea mining will uncover an estimated 10 billion tons of polymetallic nodules, which are used in everything from electronics to wind turbines and hybrid cars. As with fracking, environmental concerns including the loss of habitat, are expected.

6 Rebecca Smith, "Assault on California Power Station Raises Alarm on Potential for Terrorism," Wall Street Journal, February 5, 2014, http://www.wsj.com/articles/SB10001424052702304851104579359141941621778

7 Michael Lodge, "Deep Sea Mining: The New Resource Frontier." 2015. Outlook on the Global Agenda. World Economic Forum.

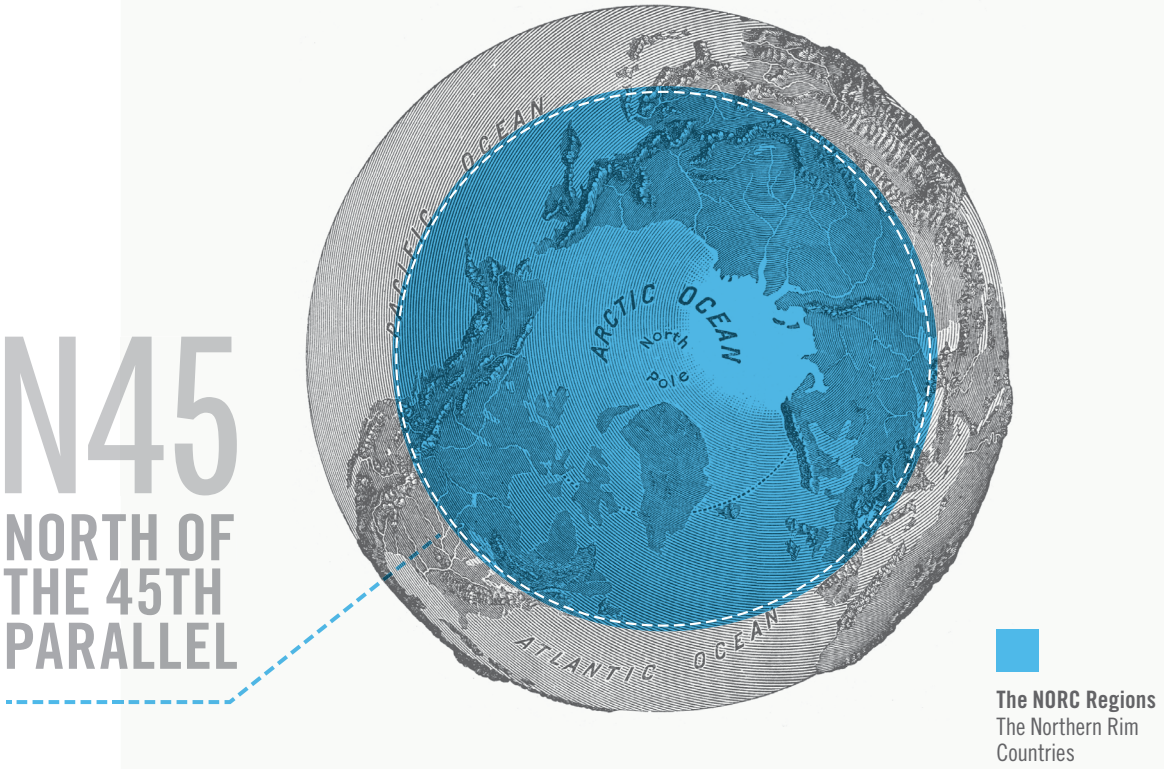
6

The "NORC" Shift

A hotter planet will negatively affect some communities while "positively" impacting others.

The "NORC", or Northern Rim countries, lay north of the 45th parallel and will be beneficiaries of climate change. The NORC regions include Canada, Denmark, Finland, Iceland, Norway, most of Russia, Sweden and the thirteen U.S. states that are contiguous with Canada: Alaska; Washington; Idaho; Montana; North Dakota; Minnesota; Michigan; Ohio; Pennsylvania; New York; Vermont; New Hampshire; and Maine. The NORC regions will experience longer growing seasons and produce more food. And they will also have less ice, which will enable easier shipping routes and access to fuel and nonfuel resources.[8] They may also be the recipients of massive in-migration from other, hotter and drier parts of the world.

FIGURE 6. MAP OF NORTHERN RIM COUNTRIES



8 Lawrence C. Smith. Four Forces Shaping Civilization's Northern Future. Plume, 2011.

Technology Trends

Author: Erik Johnston, Director, Center for Policy Informatics; Senior Sustainability Scientist, Julie Ann Wrigley Global Institute of Sustainability; and Associate Professor, School of Public Affairs, College of Public Service and Community Solutions, Arizona State University

How does governance evolve when nearly everyone now carries around a personal supercomputer? That smart phone you carry with you is an incredibly useful tool and it is transforming the relationship between publics and their communities. It has replaced your watch, your paper maps, your need to tune-into the local news for the weather, and more. And it has replaced a passive relationship with government with a dynamic one filled with new possibilities, obligations, and consequences.

At the city level, your smart phone, pooled with thousands of other "smart devices", is making your community smarter and more connected than ever.

Or at least, that's the promise.

Technology in the next twenty years will have a transformative effect on how citizens interact with their governments, what they expect from their governments, and what they can provide to their governments.

Why? Because for the first time, technology allows real-time, two-way engagement. Publics that stumble across graffiti or potholes or corrupt officials can report them on the spot (the public as sensors). Publics can also show up for a government-sponsored hackathons and turn open data into new insights and apps (the public as inventors). What's more, because of the "internet of things," the amount of data we're able to collect and analyze enables us to be more proactive and more effective in communicating to the public about things that really matter, like weather alerts or how to evacuate in case of a natural disaster (just in time governance customized to individual experiences).

Technology could be a great enabler, improving the relationship between government and citizens. And the quality of that transformation will depend on how local governments respond. Will they see technology and greater citizen engagement as a threat or an opportunity, as a tax on their resources or an investment?

As a cautionary tale, read the "Democracy 3.0 scenario" later in this document; failing to embrace technology for citizens' effective self-governance could create mutiny.

Governments will not be able to dictate *which* technologies are invented, or which go mainstream. Technology will always run ahead of government adoption. But, governments can control how they approach technology and what their goals are.

I suggest that smart, future-ready local governments will mindfully design systems and processes that give citizens clear pathways to interact with government, and will channel their engagement for a greater, social good.

IBM, Cisco, Google and others are in an arms race to apply technology to cities. When Larry Page announced Sidewalk Labs– Google's new venture to improve life in cities for everyone through the application of technology to solve urban problems– he said:

> *"By improving urban technology, it's possible to significantly improve the lives of billions of people around the world. With Sidewalk, we want to supercharge existing efforts in areas such as housing, energy, transportation and government to solve real problems that city-dwellers face every day."*

The future ready community recognizes these trends:

7

Digital Citizens

In the next 20 years, Millennials and the iGeneration (b. 2002-2022 est.) will define what it means to be a digital citizen. In their book ***Digital Citizenship***, authors Karen Mossberger, Caroline Tolbert and Ramona McNeal define digital citizens as "those who use the Internet regularly and effectively". To qualify as a digital citizen, a person generally must have extensive skills, knowledge, and access to the Internet through computers, mobile phones, and web-ready devices to interact with private and public organizations.

In a *Fast Company Magazine* interview, President Obama, father to two Millennials, commented on his hopes for digital citizenship:

> *"But it's no secret that many people feel alienated and distant from government. And I think the opportunities for us to think about how tech can empower citizens and make them feel ownership for their government is really important.*
>
> *Some of it is as simple as giving people quick, easy access to information about how taxpayer money is spent, or improving transparency, or being*

able to navigate a site easily. But eventually, what we should also be thinking about is, how can technology enhance the experience of democracy? How can we make it easier to vote? How can we make it easier for like-minded citizens to petition their government in a way that is meaningful?

I look at my daughters, who are, as every teenage kid is today, completely fluent in technology and social media. They might not go to a town hall meeting physically, the way their grandmother might have, and sit through a two-hour debate. Because they're just used to things moving faster. But we can imagine creating a corollary process for them that is consistent with how they interact generally. We can think of apps that promote engagement and the power of people. Their expectations are different, and how they build communities are different. They might be less geographically based."[9]

There is enormous potential for local governments to leverage technology and become more relevant to citizens. As Madeleine Albright recently noted:

> *"Citizens are talking to their governments using twenty-first century technology. Governments are responding on twentieth century technology, giving 21st century answers."* – *Madeleine Albright*

8

Sharing Economy

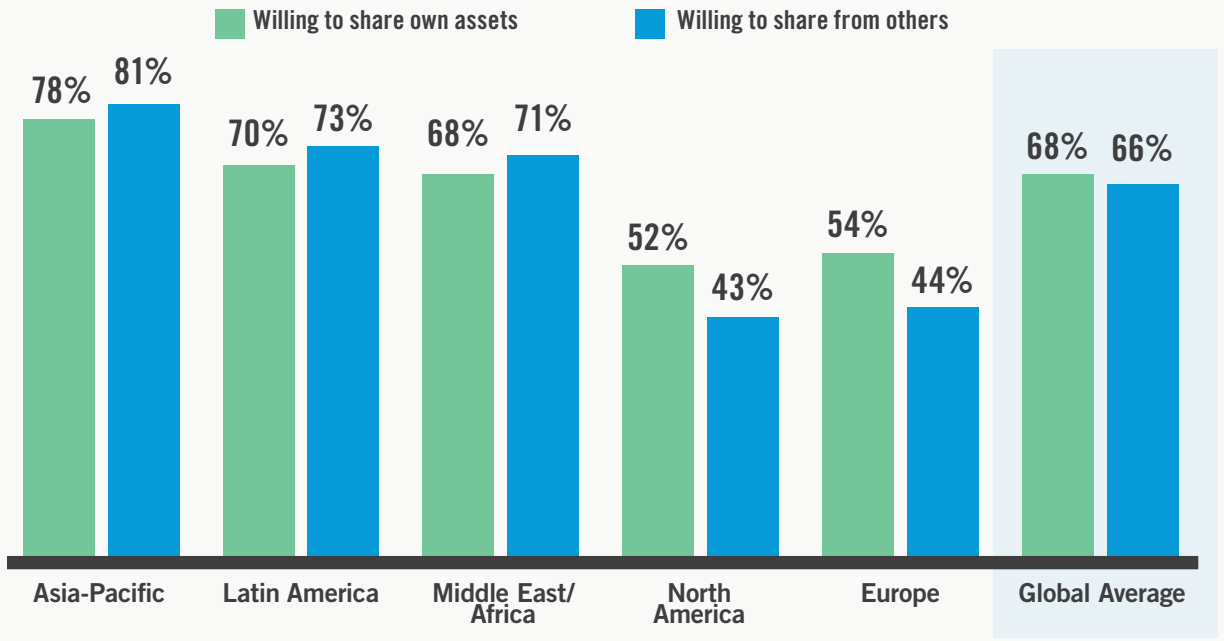
It's been called the sharing economy, the collaborative economy, collective consumption, or peer-to-peer (P2P) networks. Whatever you call it, it generally means eliminating the middleman to share resources, products, and services directly between users, usually via technology.

- Uber created technology that linked a surplus supply (drivers with cars) with unmet demand (travelers who need rides).
- AirBnB found a similar market opportunity: people who had extra rooms or homes (supply) were matched with people who needed a place to stay (demand).
- Crowdfunding matches excess capital (supply) with those who need financing (demand).

The sharing economy is here and growing as more online consumers are willing to participate in sharing communities as Figure 7 shows.

Local governments must figure out how or if to tax these services and how to manage user safety, equity, and keeping a level playing field for existing businesses, especially in light of growing fiscal uncertainty (Trend 44.)

Figure 7. The Rise of the Sharing Economy*



* based on an online survey among 30,000 consumers in 60 countries conducted in Q3 2013

Source: Nielsen and Statista

9

Education Reform

Any discussion about the future of society must include a question about the future of education. In the U.S. for example, student achievement has been slipping for over a decade compared to other countries. At the local level, there is growing evidence that America's public schools under-serve African-American and Latino students, who are growing in numbers. In Madison, Wisconsin— a city that's been named a "Best Place to Live" many times — Caucasian students have an 80% likelihood of graduating from high school; African American boys have a 40% chance. And although STEM (Science, Technology, Engineering and

Math) education has been an international educational focus since the 1990s, most countries have little to show for it. According to the US Department of Education, only sixteen percent of high school seniors are proficient in mathematics and interested in a STEM career.[11]

New models of teaching and learning will transform education, and technology will enable it, e.g. MOOCs (Massive Open Online Courses) can be customized and personalized to students across the learning continuum; rural and inner city schools will gain access to courses and resources previously unavailable including those from universities, museums and the world's great libraries; and flipped classrooms, in which students do online coursework at home and come to school for collaboration and discussion, will be used to transform the education experience.

But technology is not the cure. Educator and innovator Jordan Shapiro says:

> *We need a cultural shift in how we think about what it means to learn because we're shifting what you need to learn. Our society is changing in crazy, enormous ways now and in ways we don't fully understand. This is one of the things that drives me crazy about the whole ed conversation: Instead of us having a conversation about what kind of society do we want to see for the next generation and how do we educate kids for that outcome, we're assuming that we all agree on what they need to learn and then finding these utilitarian solutions to try to execute that.*[12]

10

Open Innovation

In October 2006, Reed Hastings of Netflix announced a $1M (USD) prize for anyone or any team that could develop an algorithm to improve the accuracy of movie predictions for its customers. The "Netflix Prize" would go to the first team that could improve predictions by at least ten percent. It was a three-year competition among data geeks, mathematicians, statisticians and software engineers. It attracted more than 40,000 teams from 186 countries. It was a roll of the dice for Hastings, who'd been wrestling for years to develop a better algorithm.

11 Science, Technology, Engineering and Math: Education for Global Leadership, http://www.ed.gov/stem

12 Westervelt, Eric. 2015. Interview with Jordan Shapiro. "The Future of Education: Truths, Lies, and Wishful Thinking." National Public Radio.

In the end, Hastings got his algorithm. But a bigger lesson was unfolding; the winning team didn't start as a team; they joined forces midway through the competition when they realized that their algorithms and teams were stronger together. In fact, the first time all the team members met was at the awards ceremony. As team manager Chris Volinksy explained, "You need to think outside the box, and the only way to do that is find someone else's box."

Apple, Toshiba, Texas Instruments, Philips, BASF, GlaxoSmithKline, Procter & Gamble, GE, the BBC, US AID, and Nokia have embraced open innovation, realizing the benefits of harnessing inventiveness from outside their corporate walls. Local governments are beginning to catch the wave.[13]

Alliance Board Member Kevin Desouza and co-author Akshay Bhagwatwar surveyed 38 communities and determined four "technology-enabled participatory platforms" that engage the public in solving community issues[14]:

- Citizen-centric, citizen-sourced data. Citizens offer data about themselves, and other citizens analyze the data and offer insights.
- Citizen-centric, government open data. In this model, the government provides data, e.g. crime details, and the public is invited to analyze and assess the data, and share insights with the community and/or the city.
- Government-centric, citizen-sourced data. At its broadest, the government is asking for ideas from citizens.
- Government-centric and citizen-developed solutions. The government provides data and solicits citizens for solutions or helpful applications.

New York and San Francisco have used contests to develop apps from open data.

11

Behavioral Insights

"The great majority of people in your local area pay their tax on time. Most people with a debt like yours have paid it by now."

13 "Open Innovation Success Stories," Idea Connection, http://www.ideaconnection.com/open-innovationsuccess/

14 Desouza, Kevin C. and Akshay Bhagwater. 2014. "Technology-Enabled Participatory Platforms for Civic Engagement: The Case of U.S. Cities." Journal of Urban Technology, 21.4, 25-50, DOI 10.1080/10630732.2014.954898.

These two sentences written on tax letters in Britain caused a 15% increase in ontime payments. The reason, according to Britain's Behavioral Insights Team, is that we're wired to behave as others do. Other behavioral insights show that things like how government forms are designed impact outcomes, e.g. Dan Ariely has shown that when organ donation is the default option, organ donation increases.[15]

In the next twenty years, behavioral insights, coupled with big data, will have a huge impact on local governments. Bloomberg Philanthropies is spearheading the What Works Cities initiative to apply behavioral economics to help 100 midsize U.S. cities deliver better services and become more transparent. Seattle, Boston, Louisville and San Francisco are already putting Bloomberg's behavioral insights to the test and reaping rewards.

12

Unmanning

We have entered the age of robots, artificial intelligence ("AI") and "smart cities".

At home, Roomba vacuums your floors. Siri or Google Voice responds to voice commands. Amazon is aggressively pursuing authority to deliver packages by drone.

At work, robots do precision manufacturing and medical surgeries. IBM's Watson can read all the medical journals ever printed in the time it takes you to drink your first cup of coffee.[16] At lunch, a Ziosk tablet sits on your table, enabling customers to order food and drinks at the touch of a button, no waiter needed.[17] And the Japanese government is investing millions to develop a $1,200 to $1,500 "home health aide" robot. The robots help patients remember their medications, assist in acts of daily living like using the bathroom and bathing, and provide assistance with physical therapy and socialization. The robots solve Japan's nursing and home health aide employment shortage and enables senior citizens to stay in their homes longer.

In northern cities, smart bridges deploy anti-icing agents automatically when sensors perceive the weather conditions for "black ice". Larger cities are experimenting with road sensors that measure traffic and adjust toll prices based on congestion. The more traffic, the higher the toll. In 2014, California issued the first drivers' licenses for autonomous vehicles.

15 Ariely, Dan, "Three Main Lessons of Psychology", http://danariely.com/2008/05/05/3-main-lessons-ofpsychology/accessed on July 12, 2015

16 Jon Gertner, "IBM's Watson is Learning Its Way to Saving Lives." Fast Company Magazine, November, 2012.

17 Jeff Macke, "Ziosk Could Put Waiters our of Work but not How You Think," Yahoo Finance, October 10, 2014.

These technologies make our lives easier. They also eliminate the need for human workers. Oxford researchers estimate that by 2035, nearly half of all occupations in America could be automated.[18]

This has several possible impacts.

- As robots and AI take over jobs that humans once did, there will be possible long-term, structural unemployment.
- Autonomous vehicles—which most experts agree will be on our roadways within a decade—are less accident prone and more rule-compliant than their human-driven counterparts. This could impact revenue local governments collect from car-related fees and violations.
- Robotics, AI and smart technology could supplant or transform many jobs currently conducted by local government employees. We already see machines replacing garbage handlers and security cameras replacing patrol personnel. Using Big Data, cities and counties could predict likely tax evaders. Property could be assessed using more indicators, resulting in more fair assessments. And routine requests for filings and forms could be handled online or via kiosks at municipal buildings.

13

Decentralized Manufacturing & 3-D Printing

Do you shop on the internet and have things delivered to your home? Or do you still shop "the old fashioned way," by going to the store?

Imagine being able to *print at home* what you want to buy. You could print a new doorknob or a part for an appliance. Wake Forest Baptist Medical Center's Institute for Regenerative Medicine is collaborating with others to 3-D print bones, skin, muscle tissue, cartilage, and kidneys.[19] The airline industry has 22,000 parts flying through the skies, printed on 3-D printers. At a commercial scale, 3-D printing enables manufacturers to quickly prototype new designs and build extremely agile production facilities.

How will 3-D printing and decentralized manufacturing impact your community's sales taxes, industrial parks, and employment?

18 Aviva Hope Rutkin, "Report Suggests Nearly Half of U.S. Jobs are Vulnerable to Computerization," MIT Technology Review, Sept. 12, 2013.

19 Elizabeth Royte, "What Lies Ahead for 3-D Printing?" Smithsonian. May 2013.

14

Global, Digital Currency

You've heard of bitcoin, right?

Bitcoin is a global, digital currency that has several highly desirable features:

- It moves from sender to receiver instantly
- It is hard to dupe the system due to its cryptography and open, public ledger (called the "blockchain")
- It is cheaper than traditional payment systems because it is exchanged free of a central authority (like a central bank) or middlemen

Whether bitcoin survives as the world's first digital currency or not, the blockchain and related technology has the potential to transform how assets are transferred and fees are collected. The state of Vermont, for example, is undertaking a study to determine if blockchaining could be used for its general ledger[20]. Banking[21] and the music industry[22] are also studying applications of the blockchain.

15

Carless Communities

Helsinki, Finland conducted research and found that the next generation "no longer considers cars as a distinctive social marker or object of emancipation."

As a result, they've set an ambitious goal: to eliminate private cars and create a public, on-demand mobility system by 2025. The system will operate through mobile apps, which will be used to book and pay for any multi-modal trip (bus, train, taxi, bicycle and car-sharing) within Helsinki in one click. While Helsinki's model may not work for all cities, the trend towards fewer next-geners buying cars is global, and future-ready cities will be prepared to mobilize citizens without private cars.

15

Infrastructure Overhaul

Every four years, the American Society for Civil Engineers grades America's infrastructure, In the 2013 Report Card, they looked at 16 infrastructure categories (see image) and gave an overall grade of D+. America's infrastructure is failing.

20 Brian Cohen, "Vermont Considering Blockchain Tech for State Records, Smart Contracts," CoinTelegraph, August 5, 2015: http://cointelegraph.com/news/115064/vermont-considering-blockchain-tech-for-state-records-smart-contracts, accessed August 30, 2015

21 Heath Terry, Ryan Nash and Jake Siewert, "The Future of Finance," Goldman Sachs podcast, June 3, 2015: http://www.goldmansachs.com/our-thinking/podcasts/episodes/7-30-2015-terry-nash.html, accessed August 30, 2015

22 Gideon Gottfriend, "How the Blockchain could disrupt the Music Industry," Billboard Magazine, August 5, 2015:

Figure 8. INFRASTRUCTURE GRADES

Test your infrastructure I.Q. with our new report card quiz

ENERGY	D+
PUBLIC PARKS & RECREATION	C-
SCHOOLS	D
TRANSIT	D
ROADS	D
RAIL	C+
PORTS	C
INLAND WATERWAYS	D-
BRIDGES	C+
AVIATION	D
WASTEWATER	D
SOLID WASTE	B-
LEVEES	D-
HAZARDOUS WASTE	D
DRINKING WATER	D
DAMS	D

A: EXCEPTIONAL B: GOOD C: MEDIOCRE D: POOR F: FAILING

Each category was evaluated on the basis of capacity, funding, future need, operation and maintenance, public safety, resillience, and innovation

Source: American Society for Civil Engineers, 2013

"The costs of underinvestment in infrastructure are massive. Drivers in the United States annually spend 5.5 billion hours in traffic resulting in costs of $120 billion in fuel and lost time. U.S. businesses pay $27 billion in additional freight costs because of the poor conditions of roads and other surface transportation infrastructure. The electric grid's low resilience leads to weather related outages that cost the U.S. economy between $18 billion and $33 billion each year, on average. Due to continuing deterioration of water systems throughout the United States, each year there are approximately 240,000 water main breaks resulting in property damage and expensive service interruptions and repairs.

"Despite the high costs imposed by insufficient or rundown infrastructure, outlays for both capital investment and operations and maintenance (measured as a percent of GDP) made by all levels of government in transportation and water infrastructure have declined sharply in recent decades. The decline became sharper in recent years, particularly in public spending on drinking and wastewater projects, which declined by 23 percent from 2006 to 2013."

"Expanding Our Nation's Infrastructure Through Innovative Financing," U.S. Department of Treasury, Sept. 2014

This is a global phenomenon.

McKinsey estimates that it will cost $57 trillion to build and maintain all the infrastructure needed worldwide through 2030. That is more than the total value of all of today's infrastructure. What's more, the price tags for new roads or bridges that are often pitched by legislators to the public include only the cost to build it, not the costs to maintain it. Ongoing Operations and Management (or "O&M") budgets can cost 50 to 67% of the original cost to build.

17

New Financial Partnerships

To fund the world's infrastructure—and to account for long lead times for planning and construction—new investors including insurers, pension funds, endowments and sovereign wealth funds that are entering the markets[23] while PPPs (Public Private Partnership) are aggregating a wider pool of global investors. For example, Denver's high speed rail included investors from Spain and China and Dallas light rail system is owned by Japanese investors.

This underscores other related trends and implications:

- Global investment no longer flows primarily from the north (developed countries) to the south. "South-South" investment is becoming the new norm, e.g. India invests in Africa.[24]
- Many municipalities and states are turning to PPP's and other complex funding mechanisms to build public infrastructure. Unfortunately, these deals, while appearing to avoid tax increases, often end up costing the public more by guaranteeing investor profits far exceeding the cost of traditional tax-exempt financing. Governments often lack the expertise to use these new financial partnerships wisely.
- Crowdfunding is being used to fund civic projects. Research shows that local government's embrace of this platform contributes to its success in serving the common good.[25]

23 "Infrastructure Financing: A Long and Widning Road." The Economist. May 22, 2014.

24 Dr. Denis Braun, Executive Director of UNITAID, interview with PSA and Devex, http://www.unitaid.eu/en/resources/press-centre/events/1184-trends-talk-innovative-finance-and-itspromise- for-global-health-2-april-2013

25 Davies, Rodrigo (2015), "Three Provocations for Civic Crowdfunding". Information, Communication and Society, 18 (3). Routledge. DOI: 10.1080/1369118X.2014.989878.

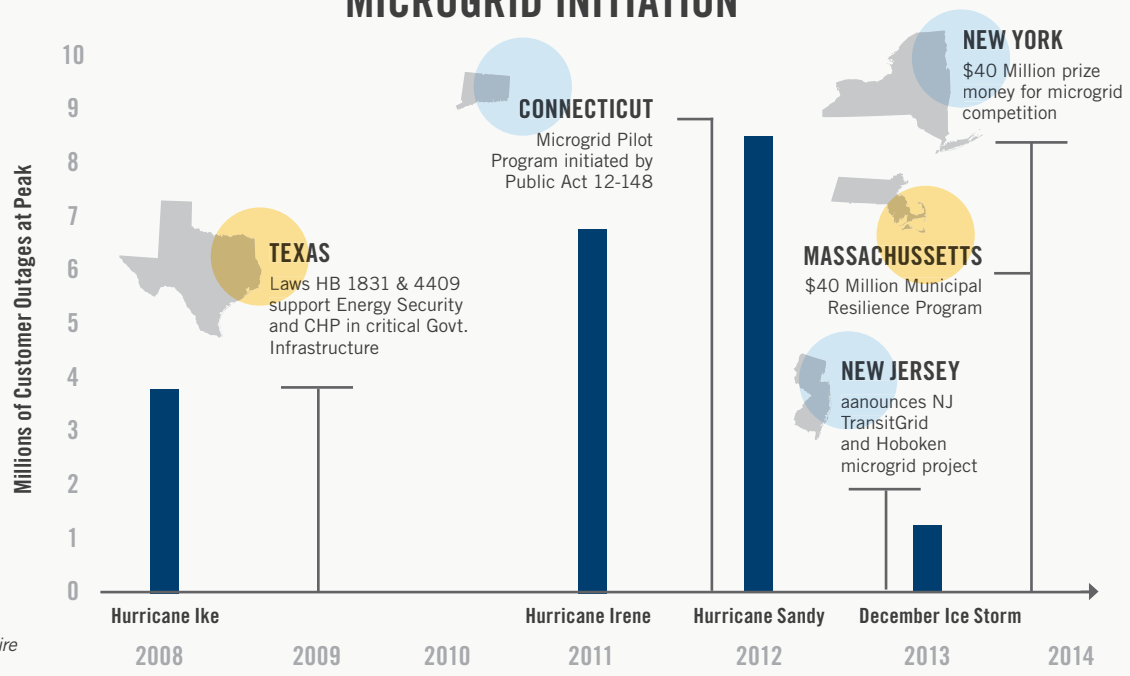
18

Microgrids

Microgrids are self-contained energy grids that ensure a community has a reliable electric supply when access to their normal supply is disrupted, which could be caused by extreme weather events, physical, and/or cyber attacks. Microgrids ensure that a community has a few buildings that will remain operational no matter what; this gives residents the opportunity to come in for a warm shower, a warm meal, and will allow them to charge their phones and computers. We will see more microgrids in our communities because of four factors:

1. State incentives[26]
2. Cheap electricity storage
3. The increased likelihood of super storms (see figure below)
4. The increased likelihood of a cyber attack.

FIGURE 9. TIMELINE OF NATURAL DISASTERS AND STATE MICROGRID INITIATION



Source: EnergyWire

26 Collin Sullivan, "NY Awards 83 Grants to Create Community Microgrids," EnergyWire, July 9, 2015

19

Off-Gridding

Local communities will generate more of their energy from renewable sources like wind and solar, or natural gas fuel cells. Local communities will also store more of their own electricity. In some locations, there will no longer be a shared electric grid. It is anticipated that for rural locations, it will be cheaper for the utility to install distributed generation (DG) with a storage device than to continue to maintain long distribution lines. Local municipalities will need to address how to ensure that low-income populations continue to have universal access to electricity — this may involve the municipalities subsidizing the installation of DG and storage in low-income households.

20

Electric Vehicles

In the near term, we will see more electric vehicles (EVs) in urban areas. In the long term, the entire transportation fleet may switch to electric. It is anticipated that residents will charge their EVs at home at night. Public stations will be used only used to "top off" the battery during the day. Businesses may install charging stations so that employees can charge for free during the day.

In addition, EVs will be used as energy storage, which can be called upon to assist the electricity grid when more supply is needed. To put this in perspective, an 85 kWh Tesla battery can store the equivalent of almost three days of power for the average U.S. household.[27]

The future role of the Electric Utility?

Due to distributed generation (DG) in many parts of the U.S., the role of community-owned or public utilities may significantly diminish. And when cost-effective energy storage is available, utilities' role will be minimized even further. It's possible that utility companies will try to buy or block cost-effective storage or on-site renewables to maintain viability.

27 Peter Kelly Detwiler, "The Future Promise and Challenge of Applying Used EV Batteries as a Grid Storage Resource," Forbes, Sept. 26, 2014.

21

Water Recycling

Due to higher temperatures and water insecurity, in 20-50 years we won't be using drinking water to flush our toilets. We'll be recycling our gray water for use in our gardens and toilets, and flushing only sewage to the local wastewater treatment plant. This will require a change in many state and local plumbing laws[28], challenge infrastructure retrofit, pricing dynamics, impact on revenues, changes to water treatment protocols, and re-use/disposal of sludge as a resource."

22

Desalinization

As states and countries look for fresh water, many look to the oceans where 96 percent of our water lies. Currently, about 150 countries rely on "desalinization" to meet their fresh water requirements.[29] Until recently, the Middle East and especially Saudi Arabia were the world's leading technologists (and users), but soon China will surpass the Middle East in the volume of fresh drinking water generated by desalinization. California's new Carlsbad Desalinization Plant is coming online in 2016 and is gaining a lot of attention. This attention, coupled with the demand for fresh water, will attract new investors and inventors which will eventually drive down the cost.

23

Nanotechnology

Nanotechnology is a broad term that covers many areas of science, research and technology. In its most basic form, it means working with things that are small—really small; things so tiny that they can't be seen with a standard microscope.

> *"Everything, when miniaturized to the sub-100-nanometer scale, has new properties, regardless of what it is," says Chad Mirkin, professor of chemistry at Northwestern University. This is what makes nanoparticles the materials of the future. They have strange chemical and physical properties compared to their larger-particle kin. The thing that matters about nanoparticles is their scale.*[30]

28 Grit Leipert, AC Martin and David Summers "First Graywater Recovery System Approved in the City of Los Angeles," GLUMAC.

29 Faisal Wali, "The future of desalination research in the Middle East," Nature Middle East, Nov. 26, 2014

30 Rebecca Boyle, "7 Amazing Ways Nanotechnolofy is Changing the World," Popular Science, November 14, 2012

Nanotech is used in everything from sunscreen to carpet stain resistors to medicine. Scientists working in the field estimate that it could have a transformative effect, not only on *what* is developed through nanotechnology— the new transformational products—but *how* we manufacture things. Atomically precise manufacturing, or "APM," could replace enormous, exhaust-belching factories with cleaner, smaller and more agile supply chains. Think of it as highly precise 3-D printing in a box.

24

Tech-Enabled Health Care

Health care is undergoing a transformation.
In the future …

Patients may not have to visit their doctor for routine medical exams; wearable health monitors can share patient data directly with their health care team, and telemedicine delivered by phone or video chat could replace patient exam rooms.

Big data, or "bioinformatics" as they're called in health care, will be used to discover more about diseases and effective treatments.

Patient health records can be shared between hospitals and emergency response teams, so that when the EMTs get to the patient (who may be unconscious), the EMTs know all the drugs the patient is taking, their health history, allergies, etc.

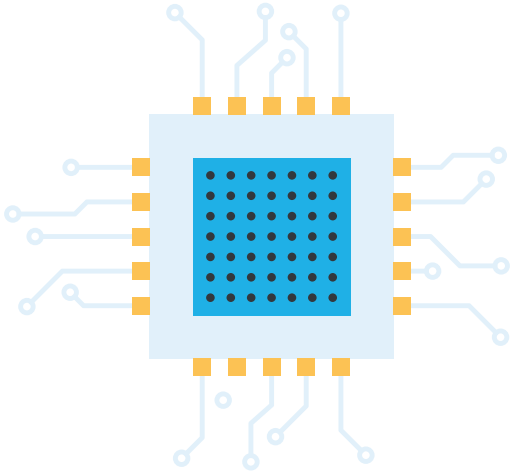
And as a countercurrent, doctors-in-training are being required to learn better bedside manner. Technology can do a lot to improve patient outcomes, but research also shows that caring personnel improve outcomes.[31]

31 John M. Kelley, Gordon Kraft-Todd, Lidia Schapira, Joe Kossowsky, Helen Riess, "The Influence of the Patient-Clinician Relationship on Healthcare Outcomes: A Systematic Review and Meta-Analysis of Randomized Controlled Trials," PLOS. April 9, 2014

25 Biomimicry

> *"I think the biggest innovations of the 21st century will be at the intersection of biology and technology. A new era is beginning."*
>
> *– Steve Jobs*

What can a pile of termites teach us about keeping our government buildings cool during the summer? Turns out, a lot. HVAC systems based on termite mounds are one example of biomimicry, the study of nature to solve human problems. The Eastgate Building in Harare, Zimbabwe was inspired by the natural design of termite mounds. The building has no conventional air conditioning, yet stays regulated year-round, using less than 10% of the energy of a conventional building its size. Local governments are also benefiting from the Lilly Impeller, which circulates municipal water tanks with minimal energy to prevent stagnation. Its design is based on the geometries repeatedly found in nature, which are known to reduce friction and drag.



Demographic Trends

By Jamie Verbrugge, City Manager, Bloomington, MN

Rapid demographic changes are occurring in our communities. The words "rapid" and "demographic change" do not typically occur together. Demographics are often a slow "drip-drip-drip" of change, akin to the story of the frog in the kettle: the water gets hotter and hotter and by the time the frog realizes it's cooking, it's too late to jump out. So it is with community demographics: the changes seem so gradual and then all of a sudden we look around and say, "Where did all these people come from?"

I had the great fortune to work in a community that was forced – yes, forced – to confront these issues head on. Most people don't think of Minnesota as undergoing transformation, but Brooklyn Park, Minnesota experienced some of the most rapid demographic change in the country during the two-decade period of 1990-2010. Today, Brooklyn Park is a majority non-white community with more than 20% of its residents being born in a country outside the United States.

The wonderful thing about Brooklyn Park's diversity is its diversity; a cultural panoply more than black and white. It is infused with the richness of the immigrant experience from West Africa, Southeast Asia and Central America. But that richness wasn't recognized, and certainly not harvested, until we made an intentional effort to do so; a commitment to an "intended future" based on core values that acknowledged every individual's equal and intrinsic value.

Prior to making that commitment, community leaders – elected and appointed – were often befuddled when "best practices" didn't seem to have lasting impact, if any impact at all. Why? More often than not, we were doing things "to" people and not "with" them.

Adjusting to new demographic realities involves relationships, collaboration, and consultation. And in my experience, local government leaders' highest purpose is to serve as the facilitator and connector, to bring "diverse" people together, to find the common core. It is that imperative that compels the *Next Big Things*.

What is the city but the people?

– William Shakespeare, Coriolanus

There are two massive demographic headwinds impacting our communities: our ***aging population*** and our ***diversifying population***. Trends related to these include:

26

Tribalism & Identity Politics

"Identity politics" are political arguments that focus on the interests and perspectives of specific groups. These groups can turn into movements or strong voting blocs.

Identity politics can deeply wound a community's sense of social cohesion; they can create an us-versus-them mentality that makes communities less resilient. On the other hand, when citizens feel that they belong, are heard, and represented within their communities, they're more likely to act in a way that values the commons.

As communities become more diverse, their resilience may be tested unless local governments work hard to make all citizens feel included and represented.

27

Structural (Youth) Unemployment

Due in part to the global talent pool (*Trend 35*) and the deep investments made worldwide to automate our factory floors and our lives (*See Trend 12, "Unmanning"*) we could be facing a 20-year period of structural unemployment.

Larry Summers writes in the 2015 Global Economic Outlook:

"If we look at the data on workers aged 25-54—the group we think of as the backbone of the workforce—the percentage of those who are not working has risen by a factor of more than three times over the course of my lifetime. If current trends continue it could well be that a generation from now a quarter of the middle-aged demographic will be out of work at any given moment."

28

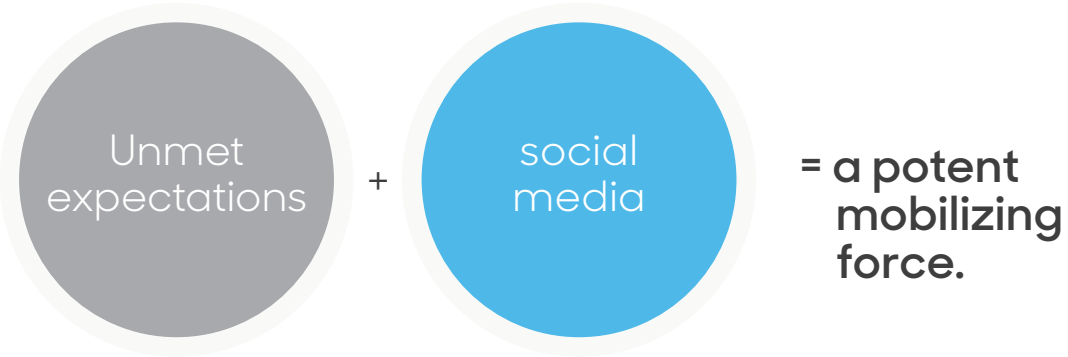
Civil Rights Spring

The Arab Spring. The Black Spring.

Paul Mason, Economics Editor for *The Guardian*, argues that at the heart of the social protests around the world is "the graduate without a future." This ties to Trend 27: Structural Youth Employment, and gets at something deeper.

In *Arab Spring Dreams*, authors Nasser Weddady and Sohrab Ahmari give voice to the next generation, the group that sparked the Arab Spring. Although the anthology includes many different viewpoints, the book's major theme is timeless and ties well to America's Black Spring: a young generation aching for a better future, a future where civil rights, women's rights, religious freedom and basic human dignity are upheld by their governments, who rule wisely and control police militarization.

Until that "better future" comes into view, expect youth-led revolts and uprisings like Occupy Wall Street or student protests like those in Quebec.



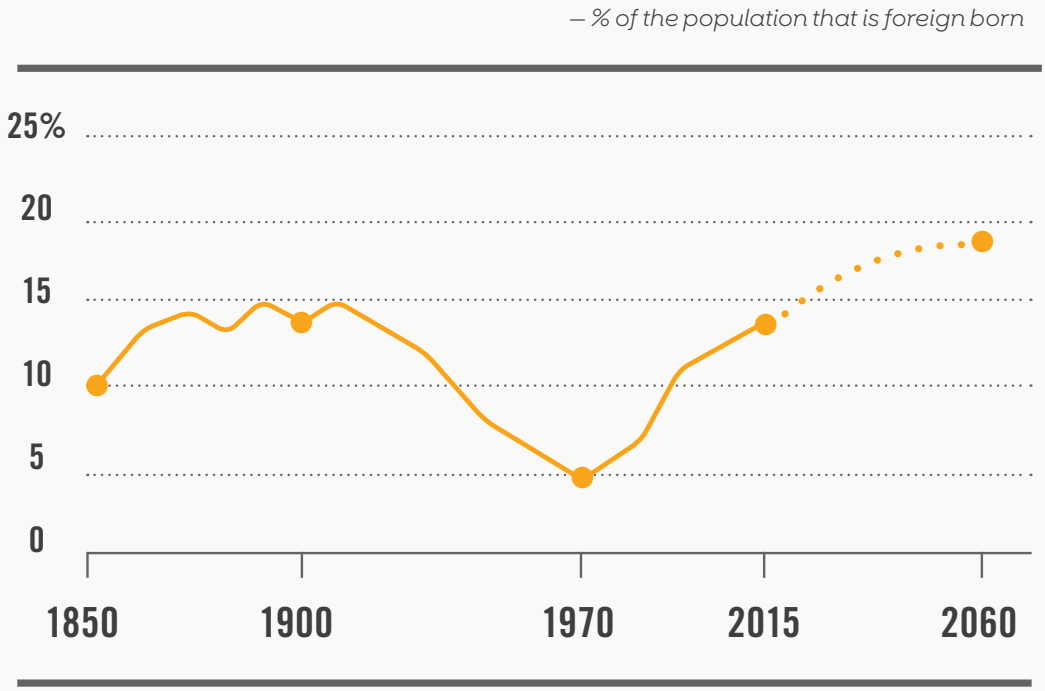
29

Mass Migration

Whether due to conflict, climate change, natural disasters, or the desire to earn more, migration will continue to create dynamic population shifts for many communities. This trend may impact property or income taxes, and the costs of providing services. Mass migration can have a destabilizing force on both the community that's losing citizens and the one gaining citizens. Handled well, in-migration can also strengthen and revitalize communities. A community's approach is critical.

In the United States by 2060 it's estimated that 18% of the population will be foreign-born as the chart shows.

Figure 10. Foreign-Born Share of U.S. Population



Note: 'Foreign-born' are those born outside the United States and U.S. territories

Source: U.S. Census Bureau, "Historical Census Statistics on the Foreign-Born Population of the United States: 1850-2000" and 2014 population projections

Source: Pew Research Center

30

Middle Class Map

The global map of the middle class will continue to change in the next 20 years, affecting local governments in direct and indirect ways.

Overall, North America and Europe's share of the middle class will decrease to 7% by 2030, while Asia-Pacific's share will drastically increase from 28% in 2009 to 66% in 2030.

Chart 1. Size of the Middle Class by Region

(millions of people and global share)

	2009		2020		2030	
North America	338	18%	333	10%	322	7%
Europe	664	36%	703	22%	680	14%
Central and South America	181	10%	251	8%	313	6%
Asia Pacific	525	28%	1,740	54%	3,228	66%
Sub-Saharan Africa	32	2%	57	2%	107	2%
Central and South America	105	6%	165	5%	234	5%
Asia Pacific	1,845	100%	3,249	100%	4,884	100%

Source: Brookings Institution

According to the Brookings Institution:

"... By 2015, for the first time in 300 hundred years, the number of Asian middle class consumers will equal the number in Europe and North America. By 2021, on present trends, there could be more than 2 billion Asians in middle class households. In China alone, there could be over 670 million middle class consumers, compared with only perhaps 150 million today." [32]

The local government impacts of the middle class have been well documented. Public health researchers Richard G. Wilkinson and Kate Pickett have demonstrated that a larger middle class and greater income equality is correlated to better health and social outcomes including lower rates of drug abuse, higher rates of education, lower rates of imprisonment, and greater social mobility.

32 Homi Kharas and Geoffrey Gertz, "The New Global Middle Class: A Cross-Over from West to East" from China's Emerging Middle Class: Beyond Economic Transformation" (Cheng Li, editor), Washington, DC: Brookings Institution Press, 2010

31

Elder Expense

Many countries are facing a "Baby Boomer bulge," when the share of citizens over age 65 begins to increase. This puts immediate and direct pressure on local governments, which are expected to pay pension benefits to retiring public employees. It also puts pressure on national and state budgets. In the U.S. for example, if there are no significant changes to entitlement spending (Social Security, Medicare and Medicaid), it will consume all of the federal budget by 2030.[33] This could create a serious financial hardship for communities, especially if they face decreasing revenues. (See trend 44 Fiscal Uncertainty).

But there's another issue at play: the retirement age. When social security was invented in the U.S., there were 14 employees supporting every retiree. Back then, people lived for a few years post-retirement, so the total amount of benefits paid was manageable. Fast forward to today when there are only two workers in the U.S. supporting every retiree...and retirees live longer. It adds up.

The expense of supporting a large, retired population could spell generational conflict, more dramatic changes to retirement ages, and/or restructuring of entitlements.

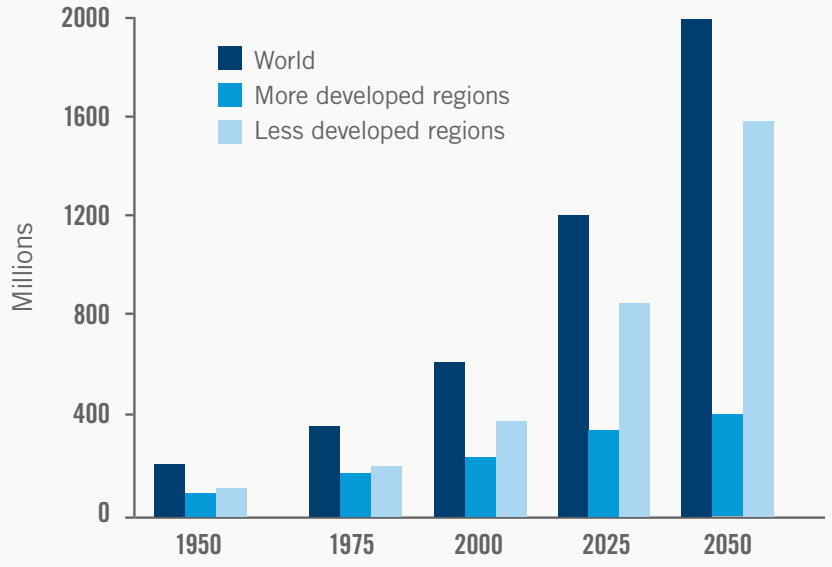


Figure 11: Source: United Nation, World Population Ageing 1950-2050

33 Sean Gorman, Will Entitlement Programs and Debt Consume U.S. Budget in 2025?" Politifact. April 23, 2012.

The Potential Support Ratio ("PSR") is the ratio of people aged 15-64 years old per one older person aged 65 years or over.

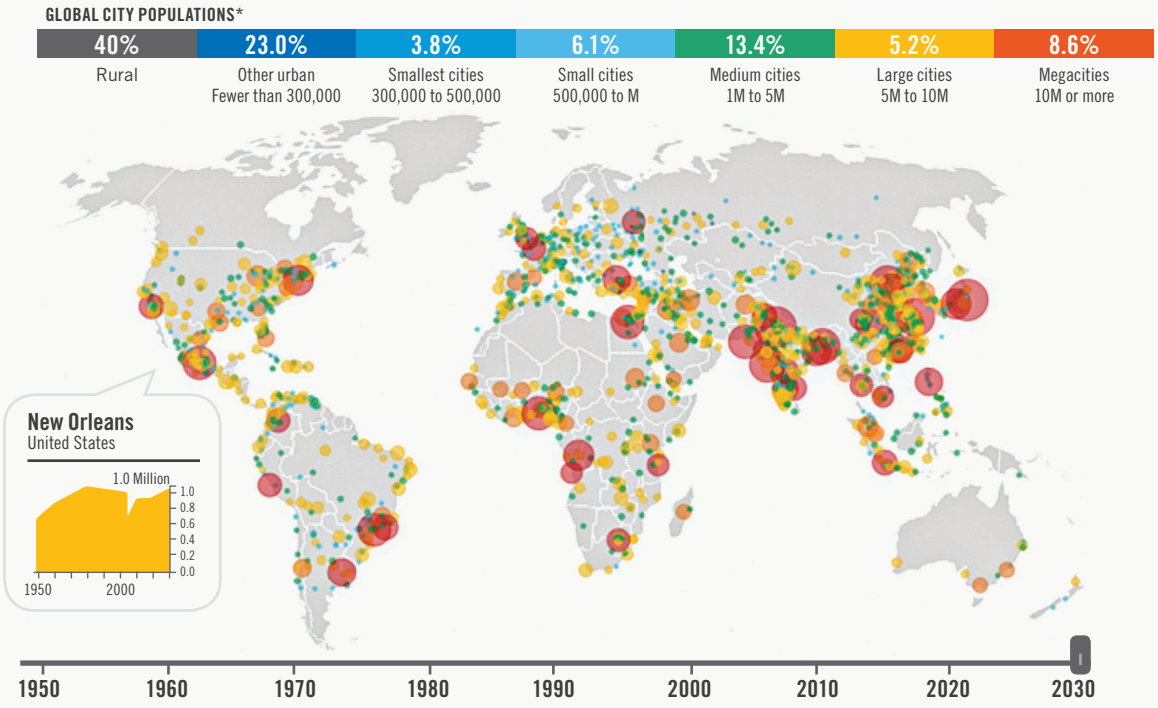
When Social Security was invented after the Great Depression, there were 14 workers supporting every retiree. The global PSR will fall from its current ratio of 9:1 (nine workers supporting one retiree) to 4:1 (four workers supporting one retiree) by 2050.

The ratio is worse in developed countries, and they will have less time to adjust.[34] Taken together, the increasing costs of supporting an elderly population and the decrease in the number of working-age people to support them may spell generational conflict or a restructuring of entitlements.

32

Urbanization: Mega & Mid-Sized

Figure 12. Growth in Urbanization



Source: The Economist

* Dataset comprises urban agglomerations with 300,000 inhabitants or more in 2014. Data are for countries existing in 2014, mapped on modern borders. Projections from 2014

34 Ibid

35 Daniel Runde, "Urbanization, Opportunity and Development," Center for Strategic and International Studies, January 6, 2015.

Rapid urbanization is at a crossroads; it will either result in greater economic prosperity or greater unrest.[35]
Areas to watch for the prosperity/unrest drama include the mega-cities (over 10 M people) primarily in Asia and India.

But urbanization's opportunities aren't limited to mega-cities. In developed countries, the rise of "medium cities," especially those between one and two million people, will outpace the growth of larger urban centers, both in population growth and economic impact. Already in the U.S., mid-sized cities account for more than 70% of GDP.[36]

This growth in mid-sized cities could cause greater fragmentation among already fragmented municipalities, at the same time as greater collaboration is needed to address environmental, transportation and economic development issues.

33

Rural v. Urban

As more people move to cities, a rural versus urban split may widen. As a response, politicians may adopt a "cities-are-the-enemy" approach to running for office and governing. Social scientist Katherine J. Cramer asks, "How do (rural) people perceive their economic interests and how do they connect these to policy and candidates?" After extensive research, Cramer found that there is a "rural consciousness."

She describes it in her book *Understanding the Politics of Resentment*:

> *"Many people in rural areas see themselves as rural people who live in a place that is routinely ignored by decision makers and the distribution of resources. In addition, they often see themselves as fundamentally different from urbanites in term of values and lifestyles. This results is an understanding of politics in which government (and public employees) are the product of anti-rural forces and therefore should be scaled back as much as possible."*

36 Mathieu Lefevre, "The Mighty Metropolis," The World Today, February & March 2015.

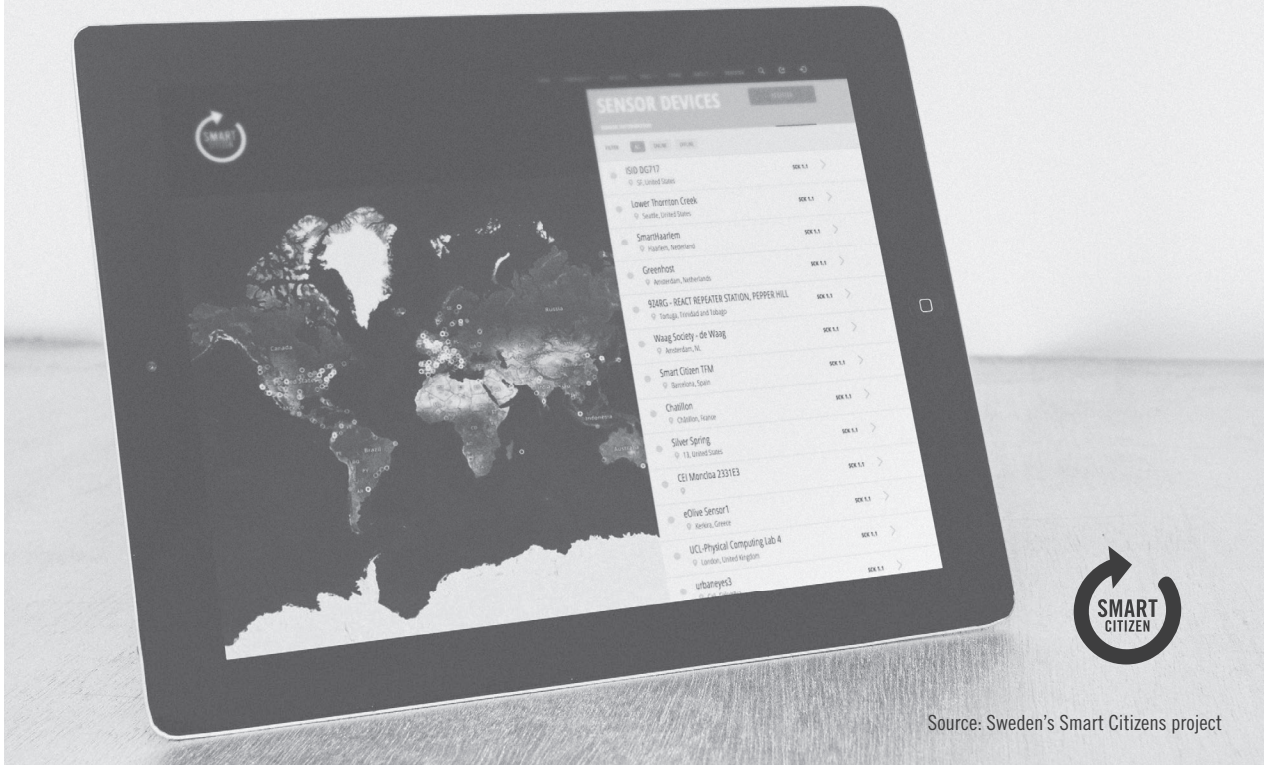
34

Smart Citizens

As this project hit the press, many people understood "Smart Cities" as technology- and sensor-driven, the *hardware* that enables a city to collect and use data. But the *software*—the people side of cities—is just as important. "Smart Citizens" — those who can engage with technology to make their daily lives more convenient or to make their cities better—are now a focus for many progressive communities.

For example, Sweden's "Smart Citizens" initiative puts citizens, technology and services together in a way that enables citizens to be more literate about city services, and more able to help solve problems. It's a proactive way to give citizens control of the "internet of things" in a way that makes cities and their experience of them more humane and interactive.

Figure 13. Map of Registered Devices



Source: Sweden's Smart Citizens project

The map above is a screen shot that shows the number and locations of sensors that citizens have self-registered as of the date of this report. By sharing their devices and locations, citizens are opting-in to be alerted to important Helsinki news, and even, in the case of emergency, be called upon to help.

35

Nomadic Workforce

Dubai's population includes only five percent naturalized citizens. The majority of its residents are expatriates from other countries. Dubai is working hard to become the kind of place that the world's smartest and most creative people want to live and work.

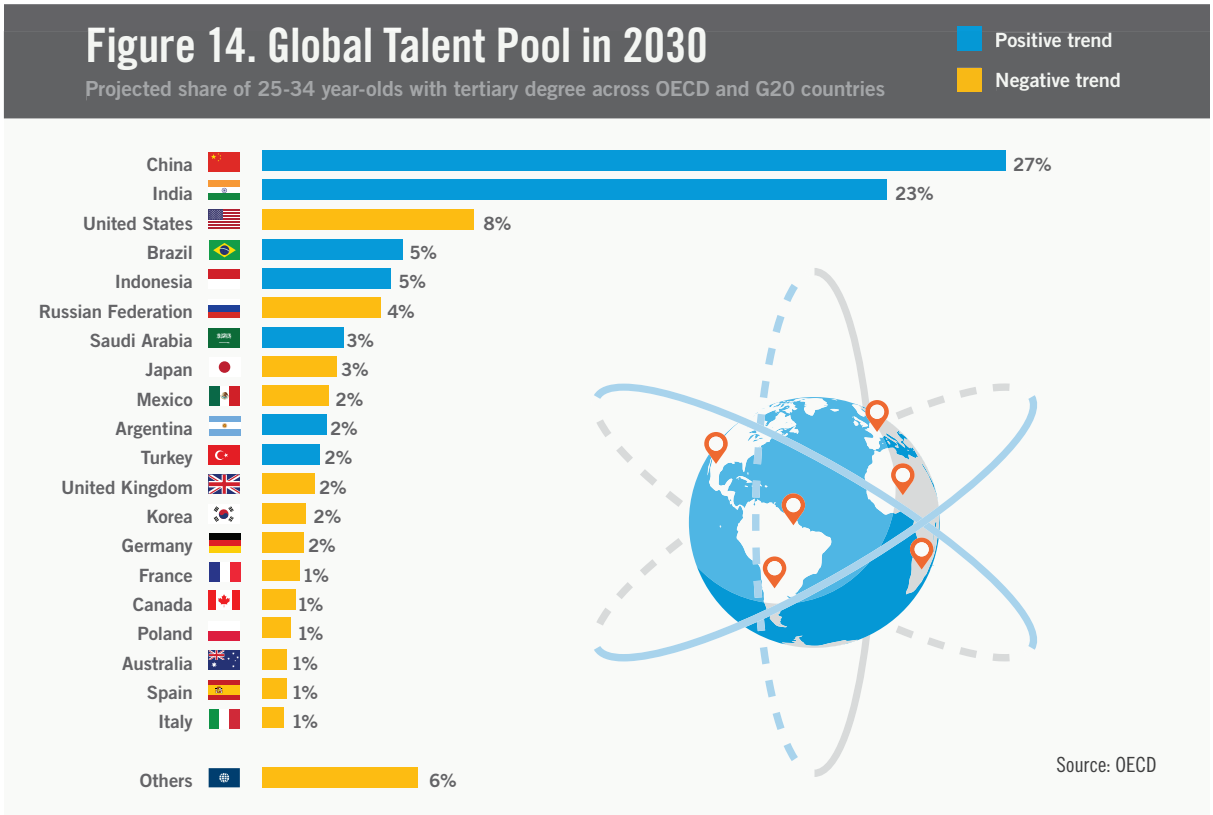


Figure 14. Global Talent Pool in 2030

Projected share of 25-34 year-olds with tertiary degree across OECD and G20 countries

As the global talent pool becomes more educated and jobs become more digital, some communities and countries are aggressively positioning themselves to attract this highly skilled, nomadic workforce.

This "attract talent, not companies" strategy will require communities to rethink ideas like "citizenship" and "economic development".

Communities and countries that want to attract and keep a nomadic workforce will recruit globally. China and India will produce half of the world's educated labor pool by 2030 as Figure 14 demonstrates.

Local governments face a unique iteration of the mobile, nomadic workforce:

Shorter employee tenure and greater turnover, especially among young talent who are unwilling to trade their entire careers for local governments' increasingly meager offerings. Becoming an "employer of choice" will be a challenge as city and county governments compete with nonprofits and the private sector.

36

Hyper-localization

As a response to globalization, some communities are going hyper-local, inventing their own local currencies[37], creating time banks[38], creating their own hyper-local media sites[39], and getting off the grid.

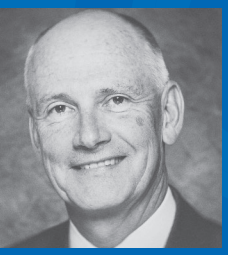
Some examples include Ithaca, New York, which created its own currency. Ithaca dollars can be exchanged locally and are accepted at many local retailers. And in Madison, Wisconsin, over 2,500 residents trade services without exchanging money through the Dane County Time Bank. Every hour invested helping someone else is an hour members can extract for a service or good they want.

37 People Powered Money, http://b.3cdn.net/nefoundation/0dba46d13aa81f0fe3_zhm62ipns.pdf

38 http://timebanks.org/what-is-timebanking

39 See the Columbia Journalism Review's list of communities' hyper-local sites: http://www.cjr.org/news_startups_guide/online-news-websites/coverage/hyperlocal-news.php.

Governance Trends



Robert J. O'Neill Jr., Executive Director, ICMA

The International City/County Management Association (ICMA) recently celebrated our 100th anniversary. Now, we look to the next 100 years and consider what role local government will play; what will be the big ideas that will transform our communities into even better places to live, work, and play?

In the future, one thing won't change. Good government will continue to operate nearly invisibly to citizens, tackling the work that citizens can't do for themselves. When residents enjoy their parks, turn on their taps, drive over paved roads, and set out their garbage or recycling, they're benefiting from local government that works.

But behind the scenes, a lot will change.

For starters, federal and state budgets continue to be cut. This means that services that were once provided elsewhere will fall to local governments to sort out. City managers and elected officials will need to deliberate: what is important for our community? What should local government do? Who must we partner with? How do we pay for the services provided?

And we will have to innovate to be successful.

During the recession, we saw local government outsource services and re-engineer others. In the next twenty years, we'll see local governments use more and more innovative approaches to address their communities' challenges. They'll work more collaboratively with other cities and counties, to further leverage economies of scale. You'll see more partnerships between government, nonprofits, and the private sector. Because as our challenges get more complex, we need more nuanced responses, beyond the traditional boundaries of local government.

To meet the challenges, local governments will attract a new generation of workers who are motivated to take a fresh, bold look at how local governments run. We need their kind of thinking, and we need to make room for them. But the fact is, the next generation won't be attracted by inflexible organizations and rigid structures. There is no such thing as job security in local government right now, and pay and benefits have been cut or frozen in many communities. So we'll need to attract and engage the next generation by emphasizing our original charter: to do meaningful work that enhances the lives of citizens. And if we can also arm them with great technology, cutting-edge initiatives and training, and professional development, all the better.

I believe good government is important. And I believe that the next twenty years will be a period for local government to shine. The public is with us; trust in local government is at nearly record highs. If we can maintain the public trust through ethical behavior, transparency, engagement, performance, and accountability while also working with new partners on new initiatives, we'll be able to look back from 2036 and say, "We tackled the *Next Big Things*."

37

Declining Federal Government Effectiveness

"The main political challenge of the next decade will be fixing government."

– John Micklewait and Adrian Wooldridge, The Fourth Revolution

The "layer cake" of government that most current city and county administrators grew up in—where the federal government has the money, states have the power, and cities have the problems—has been cut into pieces.

In the developed world, national governments have less money or are going broke, many states and provinces have become ideological battlegrounds, and cities…well, cities still have problems. (*But the local level also holds the greatest promise, See Trend 38: Trust in Government*).

Have federal governments and their international alliances overrun their effectiveness, i.e. will the EU hold together, do organizations like the G20 matter, will the partisanship that has Washington, D.C. in gridlock remain?

While national governments continue to work mightily to solve the world's most pressing problems, their relevance continues to decrease. National governments are "failing" in the eyes of their citizens, who see them as remote and removed. Or as one city manager explained,

"Nations don't have residents. Cities do."

Another indicator that federal governments are losing relevance compared to their local counterparts: international growth companies are abandoning country strategies and implementing city strategies instead.

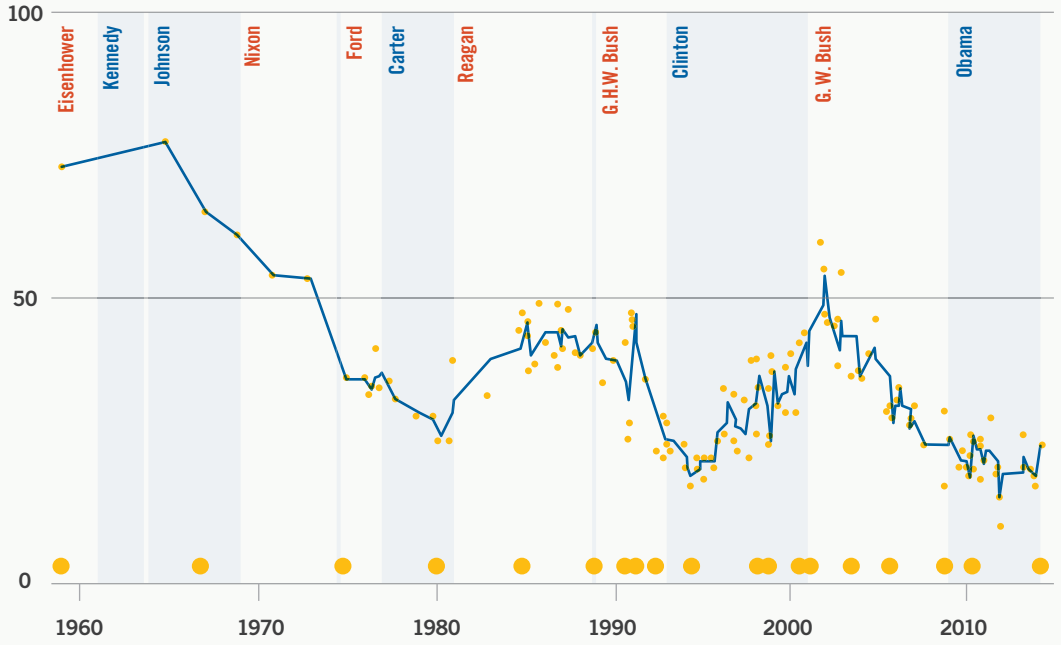
38

Trust in Government

Trust in the national government is at an all-time low in the United States.

Public Trust in Government: 1958-2014, Pew Research Center

Figure 15. Trust in U.S. Government



Source: Pew Research Center

How did we get here?

Messages from the Executive branch may help explain it:

"Government cannot solve our problems, it cannot set our goals, it cannot define our vision. Government cannot eliminate poverty or provide a bountiful economy or reduce inflation or save our cities or cure illiteracy or provide energy. And government cannot mandate goodness."

– *Jimmy Carter, State of the Union Address, 1978*

"Government is not the solution to our problem; government is the problem."

– *Ronald Reagan, Inaugural Address, 1981*

"The era of big government is over."

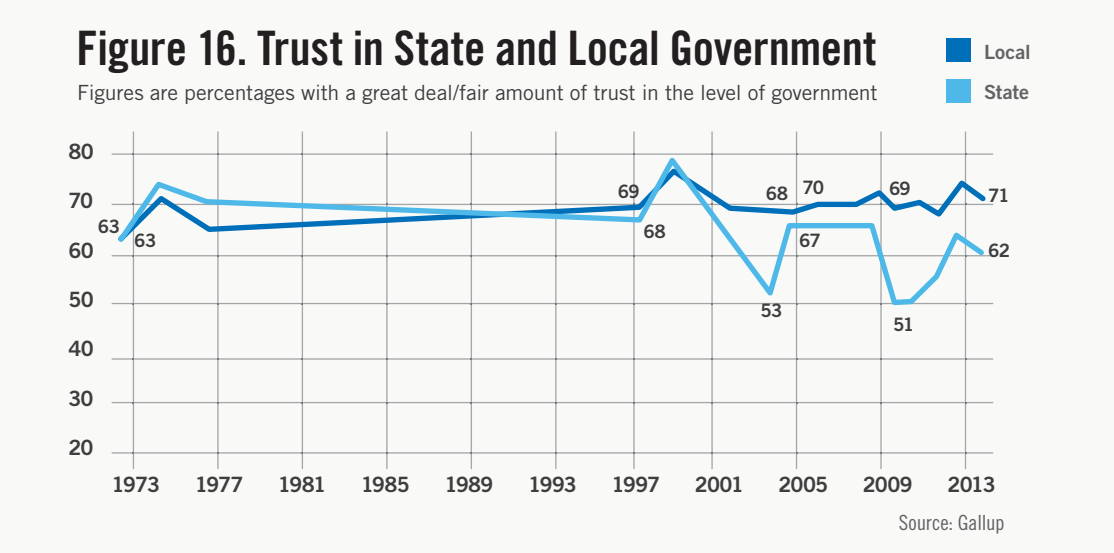
– *Bill Clinton, State of the Union Address, 1995*

"I trust people; I don't trust the federal government."

– *George W. Bush, Presidential debate v. Al Gore, 2000*

"Change doesn't come from Washington. Change comes to Washington."

– *Barack Obama, DNC speech, 2008*



Trust in local government creates a competitive advantage for those local governments with the vision and ambition to reinvent and become more relevant to citizens. Research shows that trust between citizens and their government is an important and independent predictor of support for government policies, more important than partisanship or ideology alone.[40]

To maintain the public's trust, future-ready communities must pay close attention to political trust and social trust, which operate together *and* seem to be mutually reinforcing:

Political trust

★ ★ ★

transcends partisanship; it "happens when citizens appraise the government and its institutions, policy-making in general and/or the individual political leaders as promise-keeping, efficient, fair and honest."[41] Political trust depends on legitimate policy-making.

Social trust

* * *

refers to citizens' confidence in each other. Communities with greater social trust have more cohesion and are more resilient.

(*See Trends 26, 28, 29, and 31 for key trends related to social trust.*)

40 Peri K. Blind, "Building Trust in Government in the Twenty-First Century, presented in Vienna Austria, 2007.

41 Ibid.

39

City-to-City Collaboration

In the absence of leadership at the national or state levels, local governments are taking matters into their own hands, e.g. the Mayor of London announced the "London, England Visa" program, which would enable the City to authorize Visas for the brightest and best, part of a talent strategy that works around Members of Parliament and the national government.

City leaders are also increasingly forming their own global or regional coalitions to address their most pressing issues, e.g. the C40 includes forty of the world's largest cities committed to mitigating climate change. They tackle joint research projects, share best practices, and have committed to each other to reduce carbon emissions.

These types of issue-based, city-to-city collaborative networks are already reaping rewards for members and may supplant traditional professional state or national associations.

> *"I talk more with the mayor's office in Barcelona than I do with my own state and national representatives."*
>
> *– Jim Keene, City Manager of Palo Alto, California.*

40

VUCA Leadership

A common term used when training military leaders is "VUCA," an acronym for Volatile, Uncertain, Chaotic and Ambiguous. This is precisely the environment that local government leaders are inheriting as tax revenues fall, staff retire or leave early, citizens' expectations increase, and more of the "problems" in society fall to local governments to solve. This VUCA environment is not likely to diminish soon, and local leaders can either bury their heads and try to continue to make things work, or they can embrace this opportunity to reinvent local government.

Nathan Bennett and G. James Lemoine suggest that each of the four conditions in VUCA require their own, appropriate response.

The following chart, although designed for corporations, offers some insight about how leaders in any domain can approach complexity, volatility, ambiguity and uncertainty, based on how much is known about a situation and how well you can predict the results of your actions[44]:

Figure 17. How Leaders In Any Domain Can Approach Complexity, Volatility, Ambiguity And Uncertainty

HOW WELL CAN YOU PREDICT THE RESULTS OF YOUR ACTIONS? (- to +)

complexity

Characteristics: The situation has many interconnected parts and variables. Some information is available or can be predicted, but the volume or nature of it can be overwhelming to process.

Example: You are doing business in many countries, all with unique refulatory evvironments, tariffs, and cultural values.

Approach: Restructure, bring on or develop specialists, and build up resources adequate to address the complexity.

volatility

Characteristics: The challenge is unexpected or unstable and may be of unknown duration, but it's not necessarily hard to understand; knowledge about it is often available.

Example: Prices fluctuate after a natural disaster takes a supplier off-line.

Approach: Build in slack and devote resources to preparedness— for instance, stockpile inventory or overbuy talent. These steps are typically expensive; your investment should match the risk.

ambiguity

Characteristics: Casual relationships are completely unclear. No precedents exist; you face "unknown unknowns."

Example: You decide to move into immature or emerging markets or to launch products outside your core competencies

Approach: Experiement. Understanding cause and effect requires generating hypothesis and testing them. Design your experiments so that lessons learned can be broadly applied.

uncertainty

Characteristics: Despite a lack of other information, the event's basic cause and effect are unknown. Change is possible but not a given

Example: A competitor's pending product launch muddies the future of the business and the market.

Approach: Invest in information - collect, interpret, and share it. This works best in conjunction with structural changes, such as adding information analysis networks, that can reduce ongoing uncertainty.

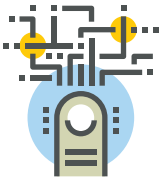
HOW MUCH DO YOU KNOW ABOUT THE SITUATION? (- to +)

44 Nathan Bennett and G. James Lemoine, "What VUCA Really Means for You," Harvard Business Review, January-February 2014.

The Delphi panel that advised *The Next Big Things* was exceedingly mindful of this VUCA environment and identified several areas where greater leadership from local government could make a large, long-term difference in the lives of citizens.

These include:

Design a 50-year plan for the community. Fifty-year time horizons are appropriate for some of the greatest challenges to our communities. They also allow us to amortize costs over a longer time frame, and shift the conversation from "How will this impact me?" to "How will this impact my grandchildren?" It may also mitigate "NIMTO" (Not in my term in office) thinking among electeds.



Embracing innovation and instilling an innovation mind-set among staff, thereby reframing the culture of government from a culture of compliance to a culture of innovation.

Intentionally minding "the gap" between the political will for change and municipal government's ability to administer it.[45]

A critical challenge for local government leaders is to recruit and retain qualified leaders at every level. Research shows that in the U.S., Caucasian administrators are out of touch with the levels of satisfaction among African Americans. Specifically, Caucasian administers estimate that African Americans are satisfied with government services, while African Americans report dissatisfaction.[46]

45 John Nalbandian at the University of Kansas has written extensively about this: https://webapps.icma.org/conference_Handouts/handouts2014/Nalbandian-Political%20Astuteness.pdf

46 Mark D. Adbury and J. Edward Kellough, "Representative Bureaucracy," Journal of Public Administration and Research, November, 2007.

41

Citizen Engagement

How do you engage citizens in rich discussions that have long-term importance to the community?

Over the next twenty years, next-generation citizens will become the majority of our citizens. They don't "show up" to place-based events in traditional ways. Citizen engagement—how it's planned, executed, incorporated and measured— will be key.

Innovations are being tested in local governments around the world and cities are sharing their best practices widely. Future-ready communities will experiment with a broad range of citizen engagement techniques.

42

Direct Democracy

In the age of social media and real time digital communication, some residents are calling for more direct democracy. In the U.S., the use of ballot initiatives is a traditional form of direct democracy, but the development of new technologies has expanded the possibilities. Experiments with participatory budgeting, for example, have blossomed from cities in Brazil, to countries around the world. In the U.S., this has included Chicago, New York, Boston, San Francisco, St. Louis, and Vallejo and Long Beach, CA

According to Karen Mossberger and Yonghong Wu, technology can make it easier to create conditions for direct democracy – providing information and participatory opportunities, including the use of social media or online town halls to discuss issues, and platforms to rank or rate ideas, which have been used by some cities in their budgeting processes.

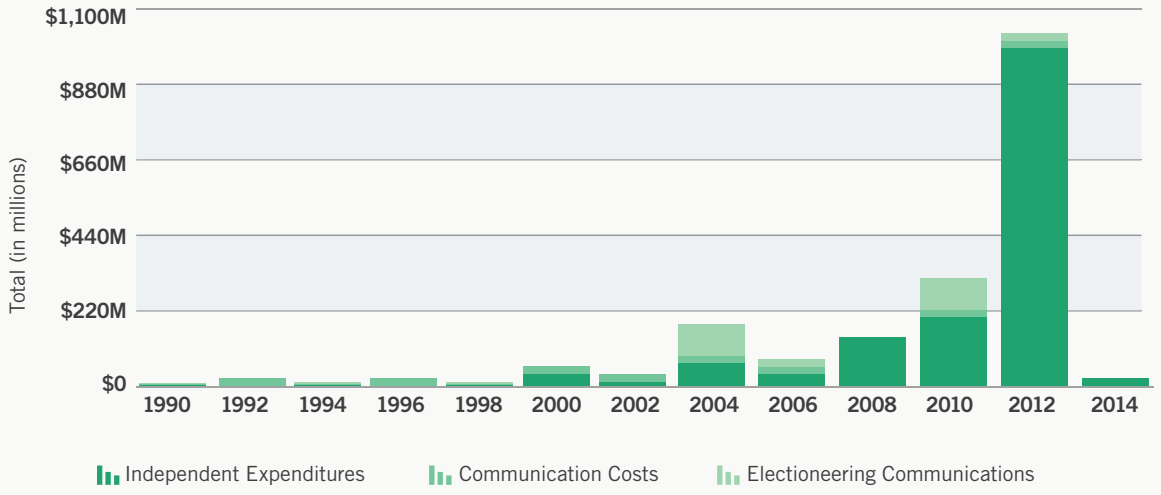
43

Corporate and Special Interest Influence

> *"There are two things that are important in politics. The first thing is money, and I can't remember what the second one is."*
>
> *— Mark Hanna, 19th Century Industrialist and US Senator*

In January 2010 the Supreme Court issued *Citizens United*, which allows companies and unions to make unlimited contributions to pay for political ads and other election tools. Since then, concerns about the ruling's impact on public policy began to escalate. More money is now flowing into elections as the following chart shows.

Figure 18. All Money Flowing Into Elections



Source: The Sunlight Foundation

And there is at least a corollary connection between corporate political donation and payoffs. The Sunlight Foundation reports:

> *"After examining 14 million records, including data on campaign contributions, lobbying expenditures, federal budget allocations and spending, we found that, on average, for every dollar spent on influencing politics, the nation's most politically active corporations received $760 from the government. The $4.4 trillion total represents two-thirds of the $6.5 trillion that individual taxpayers paid into the federal treasury.*
>
> *"Of the 200 corporations we examined, we could sum the financial rewards for 179. Of those, 138 received more from the federal government than they spent on politics, 102 of them received more than 10 times what they spent on politics, and 29 received 1,000 times or more from the federal government than they invested in lobbyists or contributed to political committees via their employees, their family members and their PACs."*

The results aren't limited to the federal level.

Of the 200 largest corporate donors, state and local governments awarded subsidies to 174 (87%) of them, according to Good Jobs First, an organization that tracks economic development programs.

And there's another mitigating factor: redistricting. Many argue that redistricting allows incumbents to choose their voters, further entrenching political interests, and the corporate and special interests they represent.

Is your community ready to handle more corporate contributions in a way that maintains the public trust (Trend 38)?

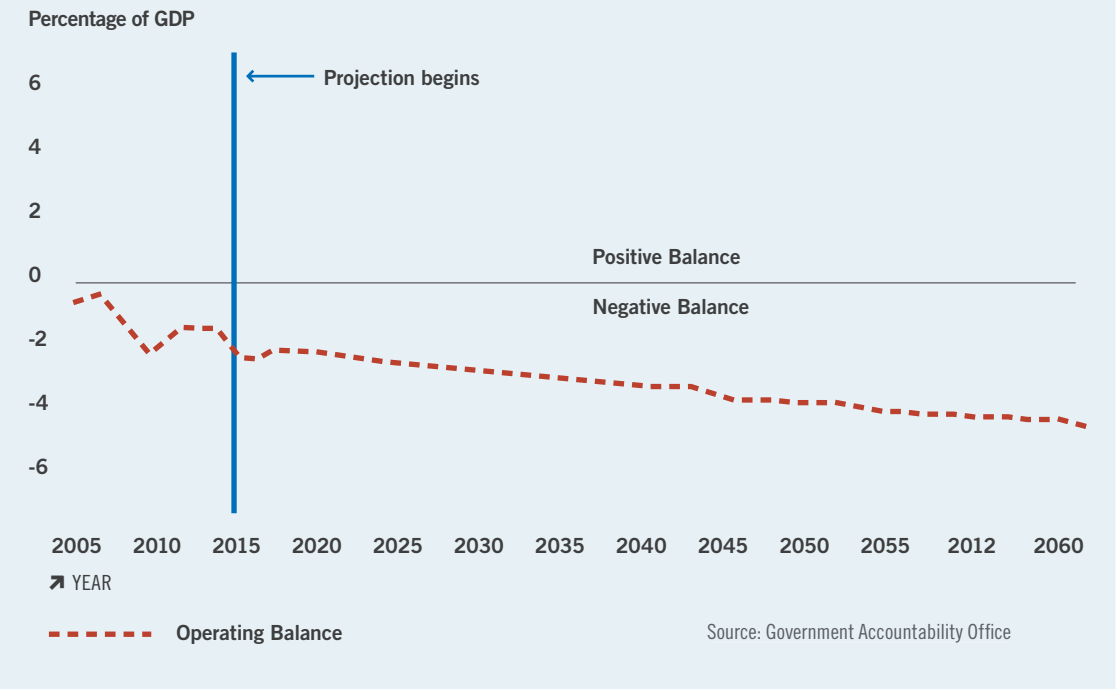
44

Fiscal Uncertainty

As nations and states transfer more responsibilities to local governments, we have the challenge of "too little money chasing too many needs."

The U.S. Government Accountability Office (GAO) predicts that, "at current rates total tax revenues for the (state and local government) sector would not return to the 2007 historical high until 2058."[47]

Figure 19. Simulated State and Local Operating Balance, as a Percentage of GDP



47 State and Local Governments' Fiscal Outlook, 2014 Update, Government Accountability Office.

Some local governments in the United States are overwhelmed by debt. Nine cities, towns and counties (in red on the map below) have filed for Chapter 9 bankruptcy since January 2010. The cities in black indicate utility authorities or other municipalities.

Figure 20. Municipal Bankruptcies Map

Source: Mike Maciag, Governing Magazine

The two primary drivers of local governments expenses are pensions and health care costs. State and local Medicaid expenditures and the cost of health care compensation for state and local government employees and retirees generally grow at a rate that exceeds GDP, which runs local budgets deeper and deeper into trouble. Many cities and counties rely on their state governments to grant them authority to address their local fiscal uncertainty. States must therefore be responsive to their communities' needs and avoid a one-size-fits-all solution.

The GAO estimates that:

"...closing the fiscal gap would require action to be taken today and maintained for each year equivalent to an 18 percent reduction in the state and local government sector's current expenditures. Closing the fiscal gap through revenue increases would require action of similar magnitude through increases in state and local tax revenues. More likely, closing the fiscal gap would involve some combination of both expenditure reductions and revenue increases."

III. FOUR FUTURE SCENARIOS

In the previous section, we shared forty-four trends that could impact your community. By sorting them based on their certainty and impact, in The Big Sort activity (*See Section V*), you see where your community's vulnerabilities are, and where you might need to focus.

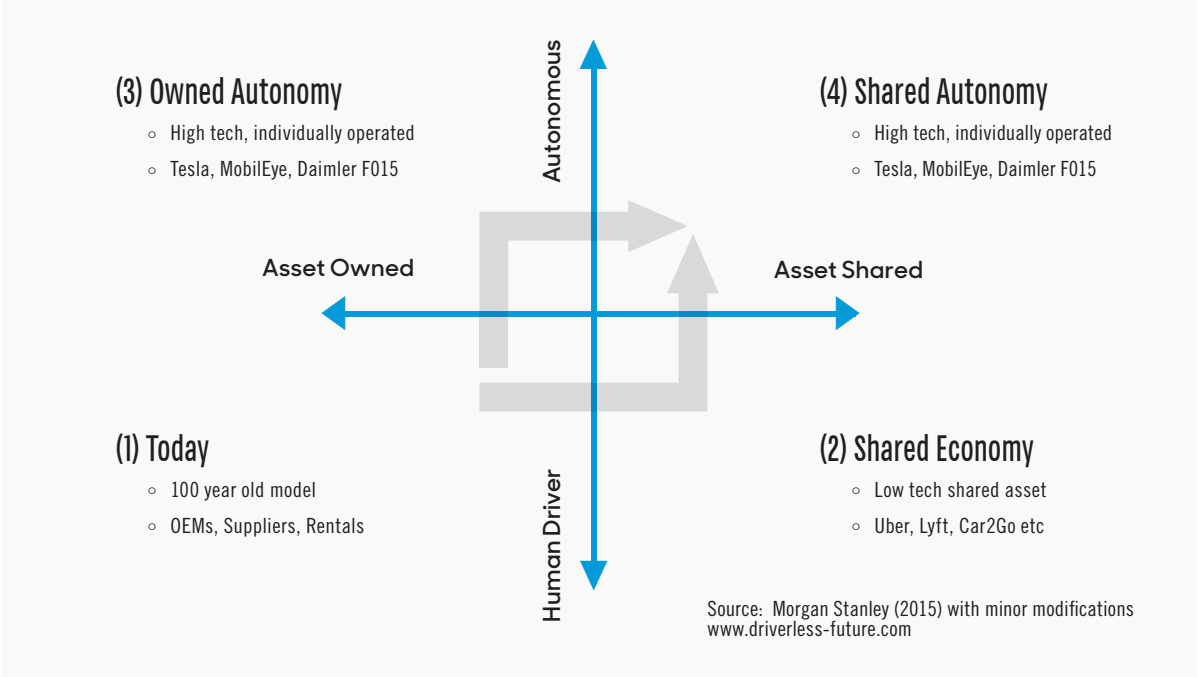
> *But what will the future really be for your community?*

Truth is, there is not one, single future for your community.

Your community will be impacted by multiple external events that are beyond your control —like a hurricane or a decision by a major employer to bring thousands of new jobs to your community. We call these "outside-in" events, because they start outside your control and impact your community.

Your community will also be impacted "inside-out"— by the decisions and actions your community takes, or doesn't take, that will impact its future.

For example, take the issue of cars. Will we continue to drive our own cars, or have driverless cars? Will our cars be self-owned, or shared assets? This map points to four possible futures. Any of them, or a combination, could exist in the future. Public policy can nudge these futures (outside-in) but human choice (inside-out) should also be considered:



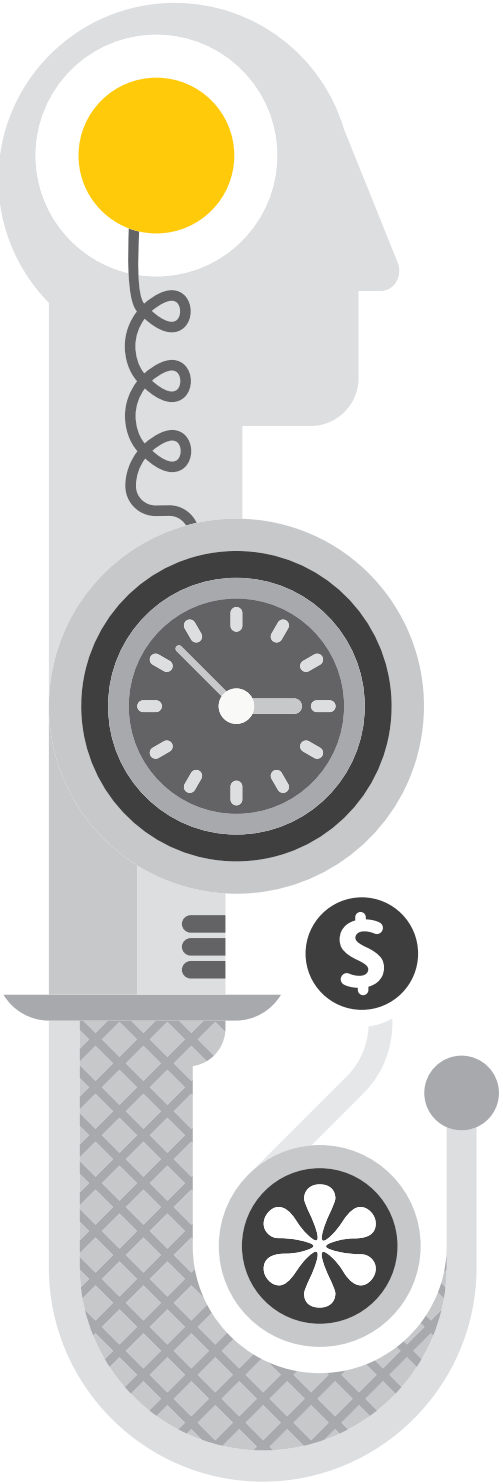
Here, we summarize four plausible scenarios for communities through 2035. Three of the scenarios have accompanying animations; download or view them: **transformgov.org.**

SCENARIO ONE:

THE OFFICIAL FUTURE

It assumes that local government, the electorate, electeds and trends will continue on their current trajectories.

The largest impacts come from increased population (in-migration from the South where water is scarce), 3D printing and robotics, which both shrink the traditional workforce, but also cause new cottage industries to spring up, and the eventual death of Baby Boomers, which drives down the population, but also drives up city revenues, because the city no longer has to pay retiree Boomer pensions or health care.



SCENARIO TWO:

NOMENTUM

Nomentum is the story of Laurel County, which won the 2016 award for "Most Innovative Community"

due to its progressive government, embrace of technology, and high citizen engagement. After its award, Laurel County attracts lots of young families and new companies. Unfortunately, Laurel continues to tout its "best place to live" credentials long after its "innovative" reputation runs dry. Laurel fails to see the signs that global competition is impacting its major employers, and withdraws major technology investments after one failed implementation attempt for a core system. "It's better to be safe than sorry" is the mantra of the County Supervisor. As their employers downsize and quality of life diminishes by 2026, a group of "Boomerang" residents (folks who moved away to finish college, but returned in the wave of in-migrants after the 2016 award) band together and start to raise hell. The story ends in 2036 when the county supervisor faces a run off election with one of the Boomerangers, a young woman who is supported by many of the community's most progressive citizens, and promises that Laurel can re-earn its "innovative" reputation.

SCENARIO THREE:

WE'RE NOT GONNA TAKE IT

This scenario builds on the income and class disparities affecting so many of our communities.

. .

and then a natural disaster hits, affecting the "have" and "have not" parts of town very differently. The disaster highlights the inequities within the community and results in a lawsuit brought against the city by disenfranchised citizens. The lawsuit is settled in the residents' favor and as part of the settlement, the City must agree to more inclusive processes and more equitable services. At the same time, a new City Manager is hired, who grew up in the city and is committed to making changes. He takes major steps to ensure the city is equitable for all. "We're Not Gonna Take It" shows how the next generation may help resolve our communities' most divisive issues.

SCENARIO FOUR:

DEMOCRACY V.3.0

This is the most tech-enriched future.

It tells the story of autonomous vehicles, tech-driven education, the fragility of our electric and telecommunications network, and the possibilities of privatization. The climax of the story occurs when citizens realize how much impact corporations have on education and "public" services; citizens revolt in protest, throw out all of their elected councilwomen and men and transform to a high-tech direct democracy. Direct democracy is fun for awhile; citizens receive alerts on their tablets and smart phones to vote on key municipal decisions. And initially, participation is high and many other cities copy this model. But eventually, decision fatigue sets in and citizens wonder if direct democracy, although possible, is worth it.

Will any of these scenarios come completely true? Probably not.

But elements of these scenarios may come true in many communities, including yours. The purpose of building scenarios based on trends is to see how things could play out over time, and where the pitfalls and opportunities are.

IV. PUTTING IT TO WORK

If you're here, you're committed to making change happen. We've sorted the following suggestions into Basic, Intermediate, and Transformative solutions to address *The Next Big Things*.

Basic Solutions

1. Determine your community's resource threats and opportunities

Resources are most closely tied to human existence and are therefore the most important to your community. As you review the *Resource Force Trends 1-6*:

- Which Resource trends will have the greatest impact on your community? Will the affect be positive or negative?
- How is your community responding to these trends?
- What else is needed? By whom? By when?
- If your community will be impacted by these trends but has not responded to them, have you designed a likely scenario for your community and shared it with your electeds and community leaders?
- If you already have responses to these trends, how can you extend or strengthen your response? For example, if you have a climate change plan, how can you broaden its impact, e.g. requiring departments to adopt climate change plans; requiring vendors to have climate change plans; setting more ambitious targets; etc.

2. After Resources, what are your next areas of greatest vulnerability?

Considering the other three of the Four Forces—Technology, Demographics, and Governance—where is your community most vulnerable?

- Does your community have plans or scenarios to address these vulnerabilities? If not, why not?

- What other information do you need to know, to develop responsible plans in any of these areas?
- Who else needs to be involved? How can they help?

3. Invest in leadership development – for electeds and staff

Local governments are facing a series of unprecedented changes, from frail budgets to climate change. We can't assume that ordinary citizens who get elected will be well equipped to handle these new realities, or the disruptive changes that may come.

Future-ready communities should invest in training their electeds on the most important issues facing the community, and in processes related to VUCA leadership. In Austin, TX the new city council went through several months of "deep dive" trainings on a series of topics that the Mayor and City Manager deemed as critical. Whenever possible, staff should be included in these trainings and trainings should be the highest quality possible.

4. Collective Procurement

To handle revenues carefully, many communities already coordinate their purchasing through a central purchasing department or work through a consortium like the UK's Local Government Procurement Network or the United States' US Communities Consortium.

- How can this be extended to other areas like information technology, maintenance, and professional development, to scale savings event further?

5. Strengthen community networks

The RAND Institute has shown that resilient communities are those that have multiple ties between individuals, public, private, nonprofit and civic sectors.

When disaster strikes, local governments that have high-trust relationships with organizations outside the bureaucracy rebound the most quickly and completely.

- Map your networks. What formal and informal community networks and relationships do you have? How strong are these connections? Are they strong enough to handle a community disruption?
- What connections are needed? How could you develop, expand and enhance them?

6. Be a place for all people

As we saw in the Demographics section (*Trends 26-35*), communities can be torn apart by factions and tribes, which decrease social trust and trust in government (*Trend 37*). To address this potentially destabilizing force, local governments must intentionally work to be a place for all people.

Some ideas to get you started:

- Provide "Bias Awareness" training for all employees, to help them understand their unconscious bias and how to address it;
- Make connections and specifically invite taskforce members or community volunteers who are not "the usual suspects," i.e. young professionals, Hispanic Chamber of Commerce, Urban League, senior coalitions, nonprofit leaders, etc.
- Increase your community engagement. Chattanooga, Tennessee set a goal to engage one million people in its regional future. It wasn't just about soliciting input; engaging the public actually changed the tone of the community and the relationship between the public sector and its residents.[48]

48 Read more: http://www.governing.com/cityaccelerator/blog/4-important-lessons-from-40-years-of-civicengagement.html

Intermediate Solutions

7. Interdisciplinary, Innovative Local Government

When Woodrow Wilson wrote his seminal 1887 essay "The Study of Administration," cities and counties were smaller and more homogenous, the middle class was larger (there were fewer disparities), and issues were less complex,

Wilson's siloed and specialized administration regime made sense in the 1880s. But it is inadequate today. Today's issues, like the declining middle class, can't be solved in a single department. Does it belong in "economic development," "workforce development" or should it be shuffled to the Department of Education?

Future-ready cities are taking two approaches to tackling their communities' thorniest issues:

- Innovation Teams. Cities like Decatur, Georgia and Palo Alto, California are using Innovation Teams to break down departmental silos and use interdisciplinary groups to address some of their communities' most vexing challenges.[49]
- Convening broad community stakeholders to address cross-community issues. For example, in Fort Lauderdale, Florida, the city is working with a consortium of governments to assemble transportation stakeholders and identify "first principles" for a regional transportation plan.

8. Broaden your definition of Sustainability

Can a community be considered truly "sustainable" when its middle class has shrunk by half and most households are not earning a living wage? What if its fastest growing demographic groups are not receiving adequate education?

49 Learn more about the Alliance for Innovation's Innovation Academy: http://transformgov.org/en/learning/innovation_academy

These questions are at the heart of a global movement to broaden the definition of sustainability beyond the traditional environmental components to include economic and social justice factors.

- Does your community have a scorecard to report on its environmental, social, and economic sustainability goals?
- Is your community working in consortium with other communities to share best practices and deepen its sustainability outcomes?

9. Develop contingency plans for both rapid growth and rapid decline

There is not one, single future for your community. Population in your community can change due to natural disaster, climate change, or economic opportunity. Future-ready communities have contingency plans in place.

Facilities like *Arizona State University's Decision Theater* are wonderful resources to help you envision the real world impacts of significant shifts in population.[50] The benefit of doing contingency plans is that it shows the strength or weakness in existing systems, and enables you to "practice" with a new possibility.

10. Balance the community's focus on growth with quality of life

To attract ***and keep*** citizens, communities must be inclusive and have the assets and amenities residents enjoy. And as technology advances, the mobile, nomadic workforce (*Trend 35*) will be able to work anywhere. What will make them choose your community?

Perhaps what the "Nomentum" scenario teaches us more than anything is that quality of life isn't accomplished one year, and then completed. Quality of life requires ongoing maintenance, and even measurement. How does your community measure quality of life?[51]

50 Learn more about Decision Theater: https://dt.asu.edu/

51 NEXT Generation Consulting offers a free quality of life measurement and visual: http://www.nextgenerationconsulting.com/how-to-measure-quality-of-life/

Transformative Solutions

11. The Fifty-Year Plan

Development of a 50-year plan would help local governments achieve their maximum potential.

A fifty-year plan enables a city or county to make long-term investments in much-needed infrastructure, and do so in a way that feels appropriate to the time horizon. A fifty-year plan enables residents to think about their choices as their grandchildren and great grandchildren will see them. And perhaps most important, a fifty-year plan gives a community a set of guiding and enduring principles that can better withstand term-by-term political pressure.

12. Invest in Strategic Foresight

Strategic Foresight is a professional process to help a community assess trends, explore possible futures, and determine its future vision. Strategic Foresight was used to develop *The Next Big Things*.

Here are several ways future-ready communities can employ the power of Strategic Foresight:

- Conduct a trend analysis and scenario development workshop like the one offered in the premium version of this report.
- Have a member of your staff trained in Strategic Foresight, and deploy them throughout the city (and community) to conduct foresight processes for departments and community stakeholders. The University of Houston offers a five day intensive certificate program in Strategic Foresight.[52]
- If you are an Alliance member, join the Future-Ready Cities Consortium.
- Monitor. Trends do not remain static and future-ready communities will review their trends on a regular basis and adjust their plans as necessary.

52 Learn more: http://www.uh.edu/technology/programs/professional/foresight/

13. Invest in Open Government and Smart Citizens

The wisdom of crowds teaches that all of us are smarter than any one of us. By sharing community data and engaging your citizens – digitally and through "old school" methods – you receive a raft of community benefits that outweigh the hassle:

- You engage citizens (*Trend 41*)
- You leverage the benefits of open government and community solutions (*Trend 10*)
- You deepen trust (*Trend 38*)
- You facilitate social cohesion, and may breakdown tribalism (*Trend 26*)

14. Reinvent local government

Why does local government exist, really? How has its purpose shifted since your city or county was founded? What should the role of government be for the next generation?

The benefits of reinventing local government include:

- Offering a more relevant mission and vision that will enable you to attract and keep great talent who are aligned with your purpose;
- Re-energizing the electorate;
- Recreating an organizational framework that enables you to redefine or restructure programs and departments so they can be more valuable, more effective…and more beloved
- Eliminating programs that will not be needed in the future, or can be done more effectively by other stakeholders

The threat is that if local governments *don't* reinvent how they work, what they offer, and why they exist, others will do it for them.

We are entering the city century. We must lead this effort, or we will be led.

V. PREMIUM TOOLS AND RESOURCES

#NBT

The free version of this document does not include Section V. Members of the Alliance for Innovation or those who've paid for the premium version of the report have access to this section.

Section V includes three activities to help communities put The Next Big Things to work, and become future ready. The activities are the Big Sort, Designing Community Scenarios, and a Foresight Workshop, which includes the previous activities in one, day-long whiz-bang workshop.

Please visit transformgov.org *for more information about membership or to purchase the premium report.*

VI. METHODOLOGIES AND REFERENCES

The following methodologies were used to inform The Next Big Things:

- Dr. Charles Grantham conducted a Delphi Panel including dozens of subject matter experts to determine local government's possible futures.
- A team led by Rebecca Ryan conducted a literature scan to determine what else was being written about and studied regarding the future of cities, counties and local government. Most of those resources are listed below. If you would like to receive a Drop box link to many of the original materials in this library of resources, please email rr@nextgenerationconsulting.com.
- A team of experienced and emerging City Managers worked alongside international architects, futurists, and innovators to develop the scenarios for the future of communities.

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