MID-OHIO REGIONAL
MORPC
PLANNING COMMISSION

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NOTICE OF A MEETING
SMART REGION TASK FORCE
MID-OHIO REGIONAL PLANNING COMMISSION
111 LIBERTY STREET, SUITE 100, COLUMBUS, OHIO 43215
SCIOTO CONFERENCE ROOM

January 14, 2020, 2:00 pm – 3:30 pm

AGENDA

1. **Welcome –** *Dana McDaniel, Chair*
2. **Smart Region Updates –** *Aaron Schill, MORPC*
3. **Public Policy Updates –** *Joe Garrity, MORPC*
4. **Australian Smart Community Association –** *Zoe Eather, The Smart Community Podcast*
   To Accelerate the Integration of Smart Mobility to Enable More Liveable Australian Communities
5. **Work on Deliverables**
   a. Smart Region Resource Guide
6. **Other Business**
7. **Adjourn –** *Dana McDaniel, Chair*

Please notify Lynn Kaufman at 614-233-4189 or LKaufman@morpc.org to confirm your attendance for this meeting or if you require special assistance.

The next Smart Region Task Force Meeting
will be February 18, 2020, 1:30 pm
111 Liberty Street, Suite 100, Columbus, Ohio 43215

PARKING AND TRANSIT: When parking in MORPC's parking lot, please park in a "MORPC Visitor" space or in a space marked with a yellow "M". Handicapped parking is available at the side of MORPC's building. Indoor bike parking is available for MORPC guests. MORPC is accessible by CBUS. The nearest bus stop is S. Front Street & W. Blenkner St. Buses that accommodate this stop are the Number 61 - Grove City, the Number 5 - West 5th Ave. /Refugee, and the Number 8 - Karl/S. High/Parsons.

Mid-Ohio Regional Planning Commission
111 Liberty Street
Columbus, Ohio 43215

Smart Region Task Force
Meeting Notes

November 12, 2019
2:00 pm

Members Present
Paul Benedetti, Logan County Commissioner
Courtney Falato, OSU, Smart Cities
Rocky Kambo, City of Powell
Chair Dana McDaniel, City of Dublin
Scott Miller, Ohio University, Russ College of Engineering
Kelly Scocco, City of Columbus Public Service
Angela Siefer, National Digital Inclusion Alliance
Vice-Chair Joe Stefanov, City of New Albany

Members Calling In
Terry Emery, City of Marysville
Patrick Harris, COTA
Eric Phillips, Union County Chamber of Commerce
Letty Schamp, City of Hilliard

MORPC Staff Present
Lynn Kaufman
Aaron Schill
Bevan Schneck
Nathaniel Vogt
Thea Walsh

Meeting Called to Order at 2:00 pm by Chair Dana McDaniel.

Welcome
Task Force Members and staff introduced themselves.

Smart Region Updates
Staff reported that the Regional Data Advisory Committee has recently created four Working Groups to address the goals and objectives of the Regional Data Agenda.

Regional Information & Data Group Working Group
The Working Group plans to hold the initial Regional Information & Data Group meeting in Spring 2020. The goal is to give data users the opportunity to meet and discuss sources, best practices, and challenges relating to data.

Data Policy Needs Survey & Toolkit Working Group
The Working Group is developing a survey to ask local governments about their challenges around data governance and data policy. After the survey is complete, the Working Group will develop a toolkit to address those challenges.

Regional Municipal Fiber Strategy Working Group
Aaron Schill and Gene Oliver, Working Group Chair, recently spoke to the Central Ohio Mayors and Managers Association to share the progress of the Working Group, and to ask for their

initial support and feedback. Aaron and Chair Oliver discussed several use cases, such as improving city services, economic development and other potential opportunities. The Working Group will develop a Memorandum of Understanding and a Nondisclosure Agreement to formalize that process.

Sustainability Dashboard Working Group
This Working Group is a joint effort between the Regional Data Advisory Committee and the Sustainability Advisory Committee. MORPC staff and staff at the Center for Urban and Regional Analysis are in the process of creating the dashboard, with a planned launch in Spring 2020. The Dashboard will address the metrics in the Regional Sustainability Agenda.

Smart Streets Policy Adoption
The City of Dublin's City Council adopted the Smart Streets Policy in October.

ICF 2020
The City of Dublin will host the 2020 Intelligent Community Forum, June 16 – 18, 2020.

Work on Deliverables
Smart Region Playbook
Staff will clarify the definition of "smart" in the Playbook.

The purpose of the Playbook is to specify who should be responsible for carrying this work forward once the Task Force is disbanded, whether that would be done within MORPC, or with other partners. MORPC develops a charter for every project undertaken, which is used for scoping and for defining how that project will progress. The Smart Region Playbook will become part of that scoping process, ensuring that MORPC incorporates smart initiatives into projects so that they are not overlooked going forward.

The Playbook will be shared with Task Force Members upon its completion.

Smart Region Resource Guide
Task Force Members recently responded to a survey regarding their priority topics to be included in the Resource Guide:

Priority 1
- Information on a regional data platform, which includes the Smart Cities Operating System and open data platforms in general.

Priority 2
- Innovative financing. Members want to know how to pay for the new technology, either by monetizing the publicly owned data or the infrastructure itself, and how to recover costs for developing that infrastructure and data.

Priority 3
- Connected and autonomous vehicle infrastructure
- Digital inclusion

Staff presented the proposed format of the Resource Guide by showing a draft of the Digital Inclusion section, showing how each topic will be organized. The Resource Guide will initially be prepared to address the top few priorities, with other topics to be added as needed.

Members suggested that staff add infographics to the Resource Guide, and make parts of the infographics and guide downloadable.

2020 Meeting Schedule
Members agreed that the Task Force will meet again in January 2020 and in February 2020. Staff will forward dates and times to members.

Other Business

Adjourned at 3:30 pm by Chair Dana McDaniel.

SMART REGION TASK FORCE

Introduction & Overview

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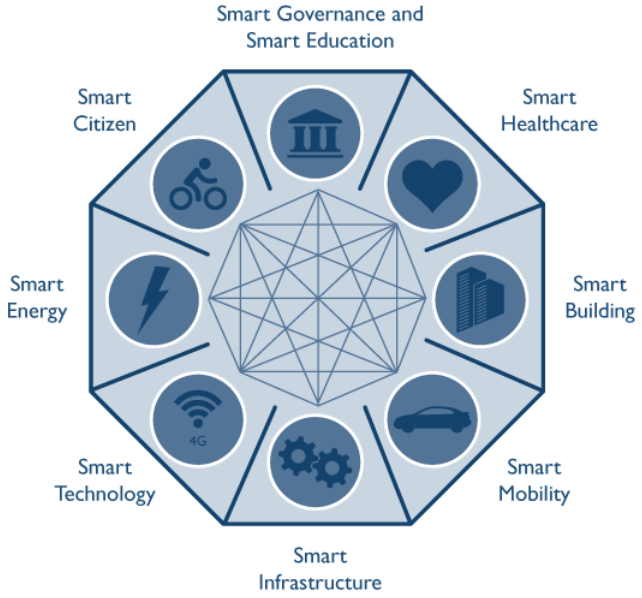
Mid-Ohio Regional
Planning Commission

Smart Region Vision and Bylaws

- Vision: Convene thought leaders within Central Ohio to develop a shared vision for what it means to be a Smart Region
- Questions we'll seek to answer
  - What is a "Smart Region?"
  - What are mutually beneficial "smart" policies that can guide investment decisions for our local communities?
  - What resources can MORPC provide to help?
- Bylaws overview
  - Duration: 18-24 months
  - Emphasis: Local communities
  - Membership appointed by MORPC Executive Director



Source: Frost & Sullivan

Proposed Purpose

Prepare and guide local governments on smart city investments.

Project Charter Overview

- Our opportunity: Proactively integrate Smart strategies into our planning and funding processes
- Proposed Deliverables
  - Smart Streets Policy
    - *Guides MORPC's <u>dollars</u>*
  - The Crosswalk: MORPC's Smart Region Policy Playbook
    - *Guides MORPC's <u>work</u>*
  - Smart Region Resource Guide
    - *Guides MORPC's <u>members</u>*

Smart Region

Working Definition:

A Smart Region collaborates across communities to leverage emerging technologies and data to provide services more effectively and improve the quality of life of all residents.

Vision:

To be a connected, inclusive and resilient region, effectively providing services to support a high quality of life.

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Mid-Ohio Regional
Planning Commission

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111 Liberty Street, Suite 100
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www.morpc.org

BRINGING SMART MOBILITY INTO SMART COMMUNITIES

2018 Churchill Fellowship to accelerate the integration of Smart Mobility to enable more liveable Australian communities

Zoe Eather, Churchill Fellow, CEO & Host


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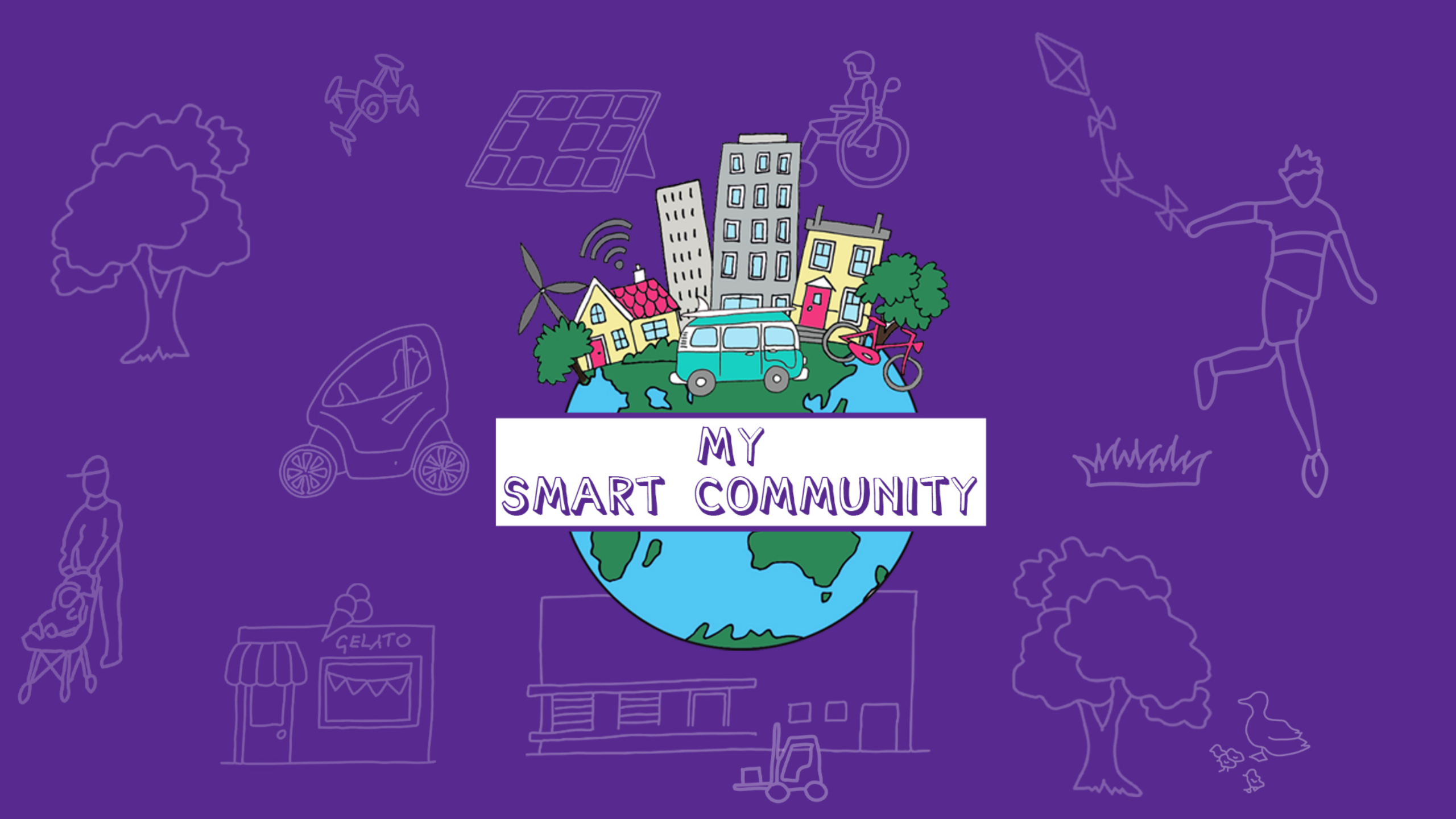
https://www.qld.gov.au/transport/projects/cavi/cavi-project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#smart stats

150 Episodes!

THE SMART COMMUNITY PODCAST

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74,125

Listens as at 30th of December 2019 and counting...

Over 100 hours of interviews

>100 countries

>2000 cities

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Winston Churchill Trust

Learn globally, inspire locally.

GLOBAL ISSUES

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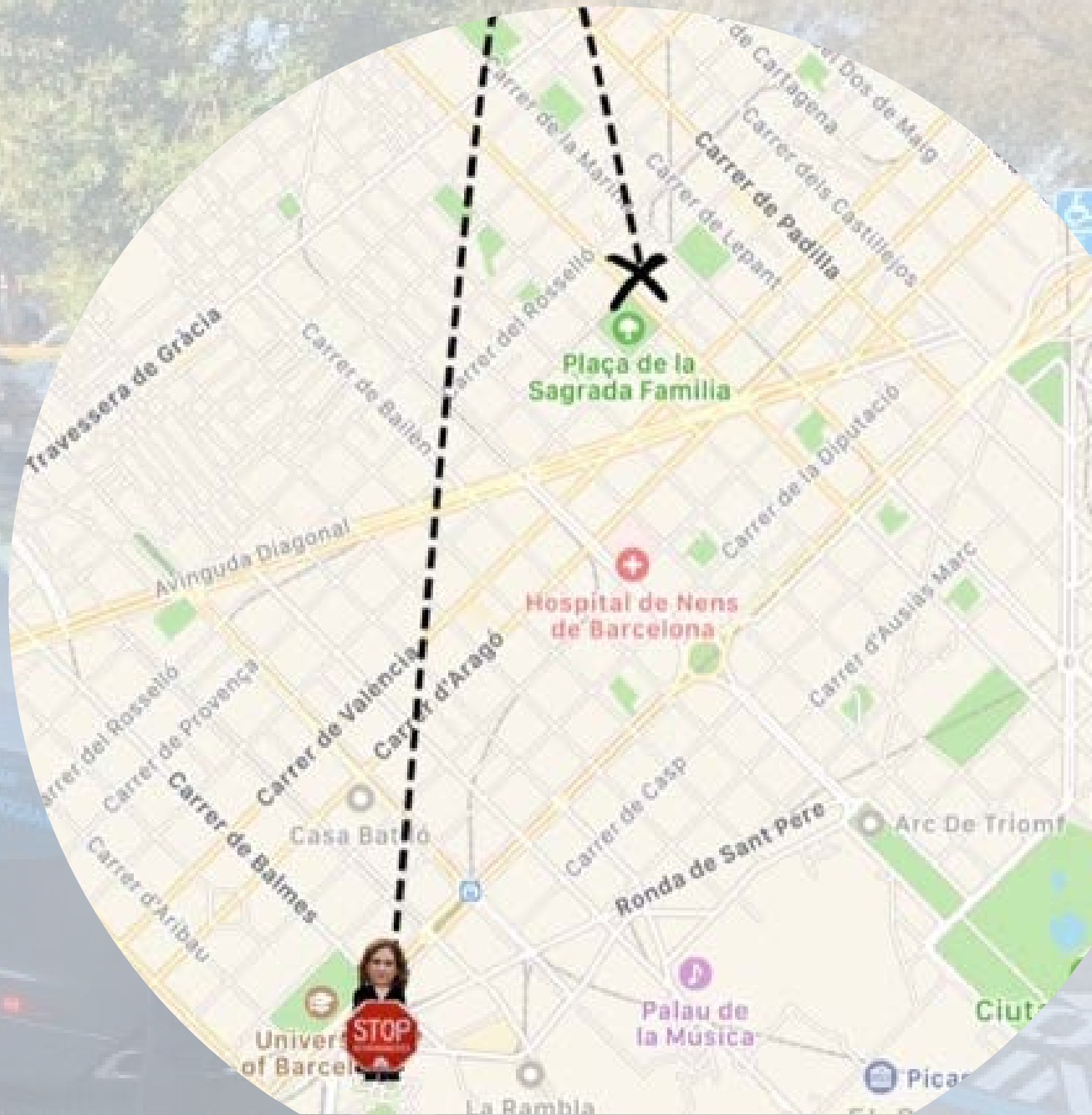
What's the Future?



What's Missing?

Mobility as a System

The Status of Mobility

Increasing Convenient Mobility

Regional Mobility

Mobility for Whom?

Holistic Mobility

Sustainable Mobility

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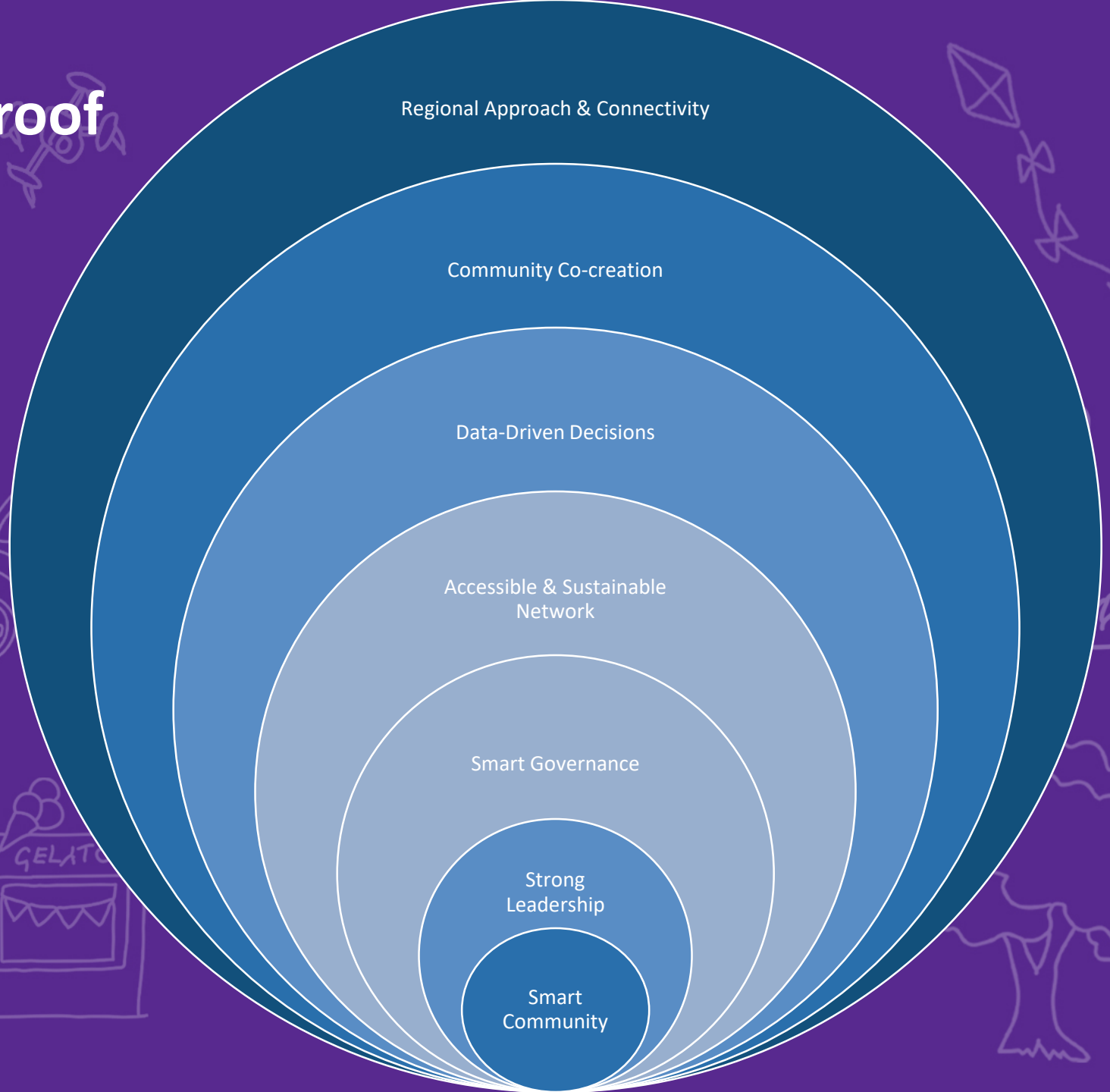
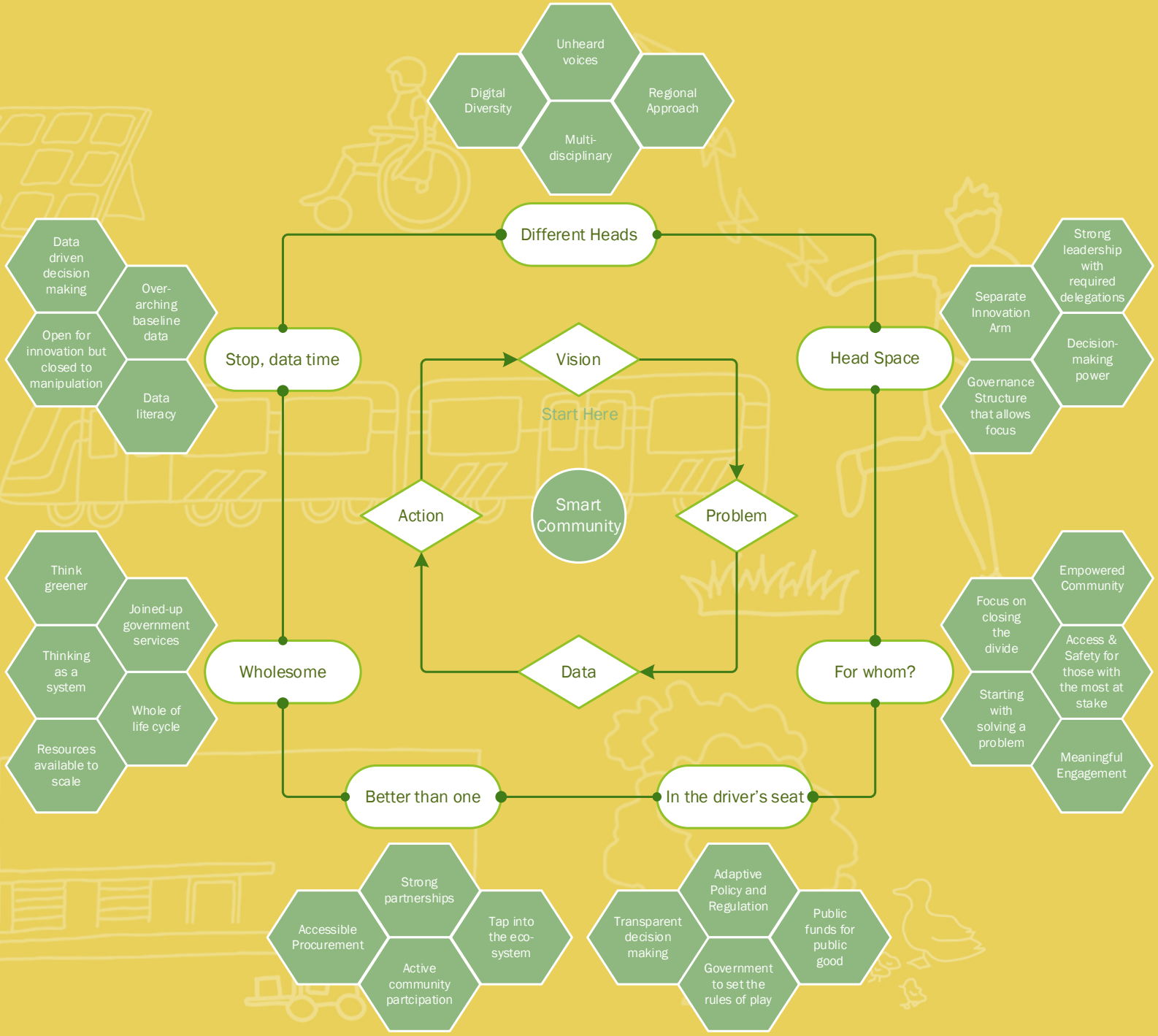
The Future Proof



The *Way to Go* Framework



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CONVERSATIONAL JOURNEY PLAN

Have we set up our Smart Governance?

Do we understand the data?

Do we have mobility as a system?

Are we sharing our stories and learnings?

Do we have a vision?

Who are we planning for?

Have we considered privacy and security?

Is the network physically and digitally integrated?

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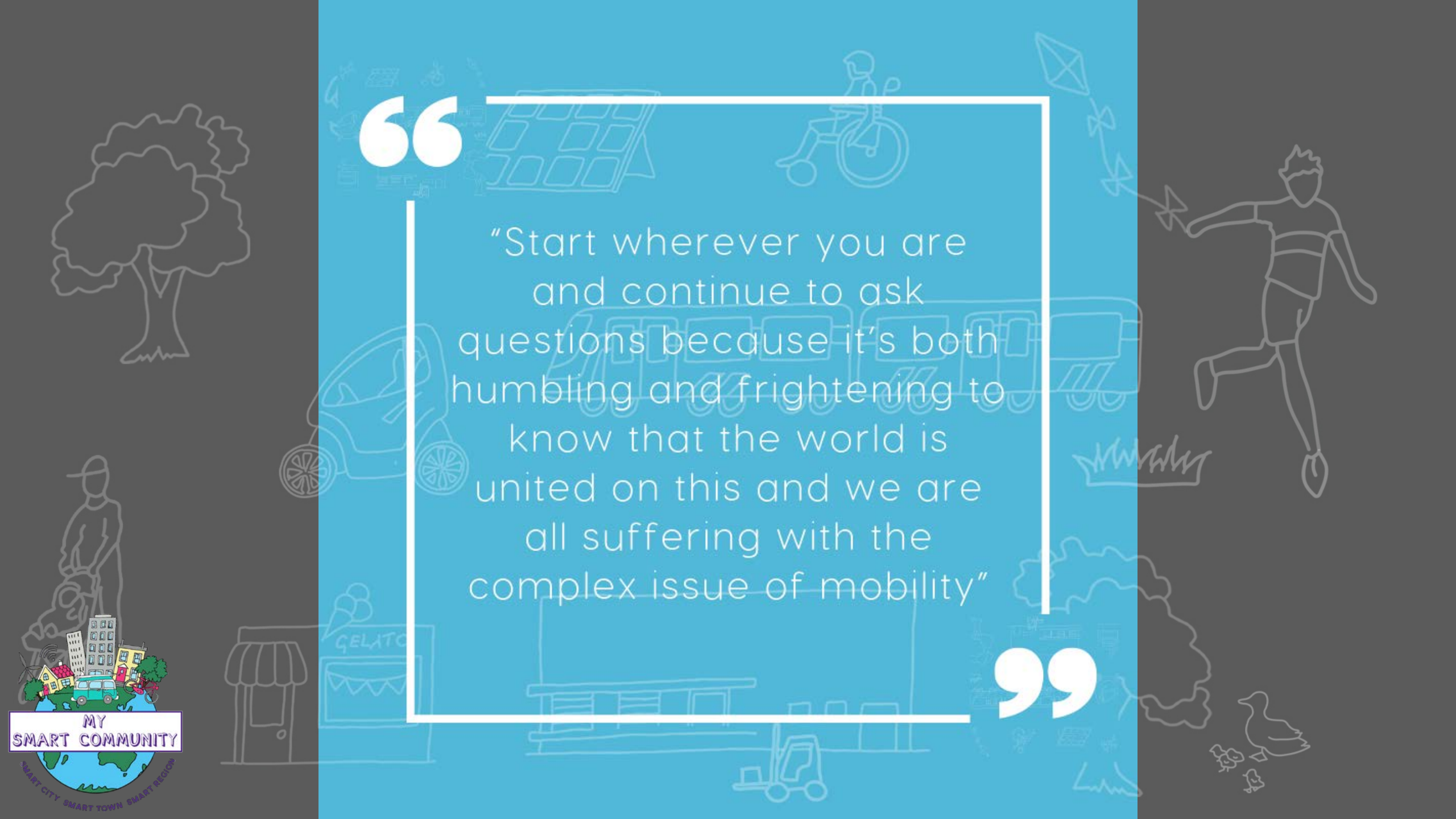
A Smart Community is...
Human & Diverse
Liveable & Well
Empowered & Informed
Resourceful & Connected
Accessible & Inclusive
Sustainable & Circular
Integrated & Open


“Start wherever you are and continue to ask questions because it’s both humbling and frightening to know that the world is united on this and we are all suffering with the complex issue of mobility”
GELATO
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SMART CITY SMART TOWN SMART REGION

Contact us

zoe@mysmart.community

www.mysmart.community

Listen to us at:

The Smart Community Podcast

Connected & Automated Vehicles

Why It Matters

Private companies producing automated vehicles (AVs) and connected vehicles (CVs) are investing billions in a race to market. New consumer products promise to fix intractable transportation challenges and make our lives easier. New business models in mobility are introducing market-based services and transforming travel behavior. Vehicles that are increasingly automated and connected have the potential to change personal, freight, and public transportation profoundly. Some impacts of those vehicles can be foreseen, others are uncertain, and all are complex.

In spite of that uncertainty, the transformational nature of AV and CV technology argues that public agencies should consider the strategies and possible outcomes to effectively manage public interest concerns. Overseeing the deployment of AV and CV technologies is a natural extension of the longstanding role of government to:

- Ensure safe and efficient operation of public roadways.
- Foster equity across users of the system.
- Mitigate negative effects of transportation.[1]

Definitions/Technology

Connected and automated vehicles (CAVs) are two separate but related advancements in transportation technology. A vehicle can be connected but not automated, automated but not connected, neither or both, and it is important to understand these distinctions.

Connected vehicles are those that can communicate with other vehicles (V2V), infrastructure (V2I) and devices (V2P) through wireless network technology, such as Wi-Fi and radio frequencies. Vehicle-to-Everything communications, or V2X, is the umbrella term for the communication systems contained within the connected vehicle network. These systems can sense the transportation environment around them and collect and share real-time information to alert drivers to nearby incidents, diversions or heavy traffic, thereby improving transportation safety and mobility.

Automated vehicles, also known as driverless cars, are vehicles equipped with technology that enables them to operate with little to no human assistance. These vehicles can drive themselves by using cameras, radar, lidar (image sensing), GPS and computer vision to sense their surroundings. Once an environment has been scanned and obstacles and relevant signage detected, the vehicle's equipment reacts as the situation dictates, controlling the steering mechanism, accelerator and brakes as required. Currently, there are no fully automated vehicles on the market; there are, however, vehicles that include connected and automated features that allow them to operate somewhat autonomously but still require the driver to be actively involved. There are six levels of automation, as defined by the Society of Automotive Engineers (SAE).[2]

Considerations for Local Governments

Local governments will want to consider how the effects of AV and CV technologies can contribute to broad community goals. Given the growing public and media interest in AVs and CVs, decision makers can leverage this interest toward prudent support of testing and deployment by aligning policy actions with goals that represent societal interests. This is particularly important where investment of public resources is at stake. Associated strategic planning activities undertaken at a high level may include:

- Identification of transportation and societal goals and objectives that may be achieved through AV and CV technologies.
- Development of performance measures that support specific safety, congestion, mobility, and environmental goals that may be supported by AV and CV systems and can be used to track the results of testing and investment in these systems over time.
- Setting the general parameters under which CV and AV deployment can be facilitated to achieve agency and societal goals.
- Contributions toward building the business case for investing in CVs, generating support for adoption of safety and mobility applications, and promoting incentives for producers to improve applications and technology. [3]

Local governments have led and funded initiatives, formed public-private partnerships with formal agreements that advance local priorities and allowed private sector programs to run on local roads with no written agreements. These programs have focused – and are focusing – on not only single occupancy vehicles but also automated shuttles and connected vehicle applications for transit, freight and emergency vehicles.[4]

Cities first need to assess existing laws and municipal codes that will impact any deployment of AV technology. With technology like AVs, cities need to get the right people to the table, which includes urban planners, public works, information technology, procurement policy, and law enforcement. Modifications to existing codes may be appropriate, or cities may have to think about the development of a new autonomous vehicles or smart infrastructure code.

Cities should engage in an open dialogue between all their residents and respond to varying levels of acceptance of this technology. This outreach should not be a one-off prior to introduction of AVs, but ongoing as new concerns emerge.

Cities should continue to stay informed and engaged by reaching out to their state and federal partners on this issue.

Cities should not only encourage [investment in CAV infrastructure], but become an active investment partner. Cities can try to negotiate matching loans from state infrastructure banks or other financing vehicles to match any local investment in this infrastructure. Besides the obvious benefits of greater investment towards these mobility technologies, the added investment on the part of cities puts their skin in the game and empowers cities to have more of a direct say over implementation, both on a municipal and regional scale.

Municipal leaders should consider their short and long-term infrastructure needs, and ensure that any new investments better position their cities to support and integrate autonomous vehicle technology. This will include efforts to invest in data storage and processing capacity, investing in sensor networks and broadband, and ensuring that streetscapes and right of ways can best accommodate AVs. As new patterns of transit evolve, cities should preserve flexibility in planning. Smart planning and collaboration now across all sectors for infrastructure needs will help ensure the safe, effective, and efficient deployment of AVs in ways that enhances the benefits for all residents.[5]

Current State & Future Directions

Smart Columbus Connected Vehicle Environment

US 33 Smart Mobility Corridor

Autonomous Vehicle Pilot Program

Ohio's Autonomous Vehicle Pilot Program links private industry with cities interested in serving as testing sites for autonomous and connected vehicle technology. Athens, Columbus, Dublin, and Marysville have

signed agreements with DriveOhio, the state's center for smart mobility, to test autonomous and connected vehicles along with other smart mobility infrastructure. The City of Springboro is close to finalizing an agreement. Several other cities, including Dayton, Youngstown and Cleveland, have also expressed interest in participating in the program.

Ohio Framework for Autonomous / Connected Vehicle Infrastructure

Denso announced that it is investing $1.42 million to launch a smart mobility ecosystem in Dublin, Ohio, designed to enhance transportation. In the project, Denso is working with a coalition of municipal, state, business, and academic partners to test and implement infrastructure technologies, create value-added mobility services, and gather previously untapped data the company says are vital to increasing road and pedestrian safety and reducing travel times.[6]

DSRC vs. 5G

Case Studies

Ann Arbor, Michigan

Ann Arbor Connected Vehicle Test Environment (AACVTE)

AACVTE is the largest operational, real-world deployment of connected vehicles and infrastructure in the world. The University of Michigan Transportation Research Institute (UMTRI) and its partners built upon an existing model deployment to become the standard for a national implementation.

New York City

NYC Connected Vehicle Project

The NYC deployment is primarily focused on safety applications – which rely on vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I) and infrastructure-to-pedestrian (IVP) communications. These applications provide drivers with alerts so that the driver can take action to avoid a crash or reduce the severity of injuries or damage to vehicles and infrastructure.

The goal of this project is to show that the benefits justify the sustainability of the operation and will encourage others to outfit their vehicles thus increasing the benefits to all.

Tampa, Florida

THEA Connected Vehicle Pilot

The Tampa Hillsborough Expressway Authority (THEA) and its partners are debuting innovative connected vehicle technology in Tampa's Downtown. THEA has equipped 10 buses, 8 streetcars and the cars of 1000+ individual volunteers with CV technology to make downtown Tampa a safer, smarter place to walk, ride and drive.

Las Vegas, Nevada

Las Vegas Innovation District

To date, 14 traffic signals within the region have been instrumented with DSRC, with the data integrated into the regional traffic system. The city is developing a connected corridor project that will install 24 additional DSRC radios in the downtown Innovation District.

Example Policies

Maricopa County, Arizona

Building a Stronger Maricopa County

Target: By the end of FY 2022, the Department of Transportation will upgrade 50% of traffic signal controllers to support connected vehicle technology and expand the related communication infrastructure to improve transportation safety.

Scoping & Cost Estimating

Local governments should assess their current procurement policies, and look specifically at whether these policies might inadvertently erect any roadblocks to purchasing the technology and smart infrastructure necessary to support AV deployment. There is an inextricable linkage between technology and city operations, and there has been a rapid advancement of technology over the past decade that has left many city governments without a clear procurement path for incorporating new technology into cities in a transparent manner.

Cities should ensure that the parameters around which kinds of proposals they can accept and who they can offer contracts to do not prohibit them from working with the new technology companies that provide the infrastructure and platforms to support AV technology. There are many new innovative contracting models being used by public agencies seeking to promote more collaborative procurements, while respecting the needed transparency when public dollars are being used on a project. This is an area where both the private and public sector should continue to collaborate.

Applicable Laws & Regulations

Executive Order 2019-26D Re-establishing DriveOhio as the Statewide Center for Smart Mobility

Executive Order 2018-04K Establishing Guidelines for Testing Autonomous Vehicles

Ensuring American Leadership in Automated Vehicle Technologies: Automated Vehicles 4.0 (AV 4.0) builds upon Preparing for the Future of Transportation: Automated Vehicles 3.0 (AV 3.0) by expanding the scope to 38 relevant United States Government (USG) components which have direct or tangential equities in safe development and integration of AV technologies. AV 4.0 is structured around three key areas:

1. *USG AV Principles*
2. *Administration Efforts Supporting AV Technology Growth and Leadership*
3. *USG Activities and Opportunities for Collaboration*

AV 4.0 seeks to ensure a consistent USG approach to AV technologies, and to detail the authorities, research, and investments being made across the USG so that the United States can continue to lead AV technology research, development, and integration.

Organizations

National Association of Counties. https://www.naco.org/resources/featured/connected-autonomous-vehicles-toolkit

National League of Cities. https://www.nlc.org/AVPolicy

DriveOhio. https://drive.ohio.gov/

Intelligent Transportations Systems Joint Program Office (ITS JPO) https://www.its.dot.gov/index.htm

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[1] National Academies of Sciences, Engineering, and Medicine 2017. *Strategies to Advance Automated and Connected Vehicles.* Washington, DC: The National Academies Press. https://doi.org/10.17226/24873.
[2] National Association of Counties (NACo) 2019. *Connected and Automated VehiclesToolkit: A Primer for Counties.* https://www.naco.org/resources/featured/connected-autonomous-vehicles-toolkit
[3] National Academies of Sciences, Engineering, and Medicine 2017. *Strategies to Advance Automated and Connected Vehicles.* Washington, DC: The National Academies Press. https://doi.org/10.17226/24873.
[4] National Association of Counties (NACo) 2019. *Connected and Automated VehiclesToolkit: A Primer for Counties.* https://www.naco.org/resources/featured/connected-autonomous-vehicles-toolkit
[5] National League of Cities 2017. *Autonomous Vehicles: A Policy Preparation Guide.* http://www.nlc.org/sites/default/files/2017-04/NLC%20AV%20Policy%20Prep%20Guide%20web.pdf
[6] https://www.autonomousvehicletech.com/articles/1922-smart-mobility-ecosystem-launched-in-dublin-ohio?

Digital Inclusion

Introduction

In the digital age, educational outcomes and economic mobility are tied directly to the ability to get online. Without broadband access, applying for jobs, completing homework assignments and getting transportation can pose insurmountable challenges.

Finding ways to connect currently disconnected communities is one of the most critically important priorities for our nation because it's a threshold question for many broader and more complex challenges. Restoring economic mobility, breaking cycles of poverty, retraining our workforce to cope with automation — all of these aspirational goals will remain far more difficult to tackle if large numbers of low-income families lack access to the digital lifeline of home broadband.

Research shows that reducing the cost of broadband is only one part of the answer for boosting low-income adoption. Awareness of low-cost options, the cost of devices and obstacles related to digital literacy are also barriers to broadband adoption.[1]

If becoming a smart region involves residents using broadband to connect to services and opportunities, then local government leaders need to have a strategy for digital inclusion and equity to avoid hardening the separations caused by the digital divide.

Definitions

Broadband: High-speed Internet access that is always on and faster than traditional dial-up access. Broadband includes several high-speed transmission technologies, such as fiber, wireless, satellite, digital subscriber line and cable. For the Federal Communications Commission (FCC), broadband capability requires consumers to have access to actual download speeds of at least 25 Mbps and actual upload speeds of at least 3 Mbps.[2]

Digital Equity is a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy. Digital Equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.[3]

Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This includes 5 elements: 1) affordable, robust broadband internet service; 2) internet-enabled devices that meet the needs of the user; 3) access to digital literacy training; 4) quality technical support; and 5) applications and online content designed to enable and encourage self-sufficiency, participation and collaboration. Digital Inclusion must evolve as technology advances. Digital Inclusion requires intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology.[4]

Digital Literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.[5]

Considerations for Local Governments

Cities should be aware that their wireless broadband needs will grow exponentially in the future, and should plan with the understanding that their infrastructure will need to be constantly updated. While 5G is an important goalpost today, it will surely be surpassed in the near future. Cities should be proactive in reaching out to the dominant provider in their region to plan the growth of infrastructure in a constructive

manner so that future needs can be planned for and met, including spectrum needs around public safety, transportation, and connected devices becoming more integrated into cities.

Cities should make informing themselves about federal broadband regulation a municipal priority because it will affect them significantly for the foreseeable future, and there are important timing considerations around new provider applications. The preservation of local control over the right-of-way with regard to wireless and broadband deployment is an important issue that cities need to continue to proactively monitor and be involved with.[6]

Current State & Future Directions

The 2018 American Community Survey One Year Estimates (ACS), released by the U.S. Census in September 2019, include 2018 household Internet access data for 623 U.S. cities and "Census designated places" with populations of 65,000 or more. The City of Columbus was the only city in Central Ohio with data available.

For the City of Columbus:

27% of households do not have "wireline" broadband subscriptions ("Broadband such as cable, fiber optic or DSL")

13% of households do not have broadband Internet subscriptions of any type, including mobile data plans.

The Ohio Broadband Strategy, with input from business and community leaders, explores ways to provide service to all communities by leveraging our state assets and resources, encouraging public-private partnerships, and coordinating broadband expansion with economic development initiatives.

The Connected Nation Ohio mapping initiative is working closely with broadband providers from across the state to develop a variety of broadband inventory maps for public use.

Recommended Reading

Why Smart Cities Need Digital Inclusion reviews what some cities have done to bridge the digital divide in their region and provides some practical steps for other cities to follow.

Case Studies

Long Beach, California

City of Long Beach Digital Inclusion Initiative

It is important to the City of Long Beach to promote and implement an equity lens in all decisions, policies and practices. To eliminate the challenges and barriers, the City and local stakeholders will continue to connect low-income communities and communities of color to digital literacy training, the Internet, technology devices and other digital resources.

ANOTHER VIEW: A Smart City for All – Op-ed by a council member who led a digital inclusion initiative.

Portland, Oregon

City of Portland Priorities Framework

The Priorities Framework has two sections plus the Smart City PDX goal.

Section 1 outlines a process to guide decision making by City staff about data collection and Smart City PDX investments. Integrating community engagement of underserved populations into data collection efforts is vital.

Section 2 outlines criteria to vet and evaluate Smart City PDX projects, plans, and policies. The criteria help us integrate our values into decision-making processes. Improved allocation of public resources is also a benefit of the criteria.

Read the full text of Resolution 37371 and the Priorities Framework as Exhibit A with this link to the City's Auditor's Office records: https://efiles.portlandoregon.gov/Record/12067443/

Chattanooga, Tennessee

The Enterprise Center

The Enterprise Center is a non-profit, technology-driven, economic development partner to the City and County, tasked with establishing Chattanooga as a hub of innovation and improving lives by leveraging digital technology to create, demonstrate, test and apply solutions for the 21st century. It has been tasked with developing programs to meet the digital divide challenge head-on by building programs to ensure that the city's digital assets are available to everyone in Chattanooga.

Charlotte, North Carolina

North End Smart District

The NESD's innovative approach to Smart Cities is one that ensures residents have a seat at the table making decisions for their community.

Example Policies

Digital Inclusion Trailblazers is a public inventory of local government initiatives promoting digital literacy and broadband access for underserved residents. There are six indicators for a Digital Inclusion Trailblazer:

1. *The local government has, or directly funds, at least one full-time staff dedicated to digital inclusion initiatives, policies and/or programs.*
2. *The local government has a digital inclusion plan or is in the process of developing a plan.*
3. *Representatives of the local government participate in a digital inclusion coalition.*
4. *The local government has conducted or plans to conduct and publish survey research on Internet access and use by your residents.*
5. *The local government directly funds community digital inclusion programming.*
6. *The local government is taking steps to increase affordability of home broadband service.*

The Digital Inclusion Resource Library is a community-driven materials hub, where practitioners, policy-makers, librarians and educators can submit their best documents and slides, distribute community broadband plans, localize curricula, and share out their best practices. The Resource Library is a work in progress.

Scoping & Cost Estimating

Costs at-a-Glance: Fiber and Wireless Networks (PDF)
BroadbandUSA collected information about network construction expenses to increase awareness of the costs associated with deploying a broadband network. This information can help project leaders engage with providers and network operators in their area.

Broadband Funding Guide (BroadbandUSA)

Applicable Laws & Regulations

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Organizations

Based in Central Ohio, *the National Digital Inclusion Alliance is a unified voice for home broadband access, public broadband access, personal devices and local technology training and support programs.*

An initiative of the United States Department of Commerce, *BroadbandUSA serves as a strategic advisor to communities that want to expand their broadband capacity and promote digital inclusion. We bring stakeholders together to solve problems, contribute to emerging policies, link communities to other federal agencies and funding sources, and address barriers to collaboration across agencies. We know that each community is unique and no "one-size-fits-all" approach will work.*

Connected Nation Ohio is a subsidiary of Connected Nation and operates as a nonprofit. We work to blanket Ohio with broadband Internet access and dramatically improve the use of related technology. This comprehensive initiative works across all sectors of the state economy to accelerate the availability and use of broadband.

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[1] Broadband access isn't just a rural issue. We need a national solution. Op-Ed by Angela Siefer and Francella Ochillo. *The Tennesean.* October 12th, 2019. https://www.tennessean.com/story/opinion/2019/10/12/broadband-internet-access-needs-national-strategy-tackle-access-not-just-rural-problem-united-states/3945571002/

[2] Broadband Glossary. https://broadbandusa.ntia.doc.gov/sites/default/files/resource-files/bbusa_broadband_glossary_161024.pdf

[3] National Digital Inclusion Alliance. https://www.digitalinclusion.org/definitions/

[4] Ibid.

[5] Ibid.

[6] National League of Cities 2017. *Autonomous Vehicles: A Policy Preparation Guide.* http://www.nlc.org/sites/default/files/2017-04/NLC%20AV%20Policy%20Prep%20Guide%20web.pdf