Community 2040

## How today's trends are shaping tomorrow's communities

A brief note

3 Quick Things About Me

> **Strategic Foresight Manager at SGR**
> Helping local governments anticipate change and adapt proactively

> **Consulting Futurist for Start-ups, Associations, and Businesses**
> Co-created long-term strategy to embrace uncertainty and emerging issues

> **Background in Data Analytics and Leadership Development**
> Experienced in critical analysis, workshop design, and facilitation

The last few years have been chaotic and uncertain.
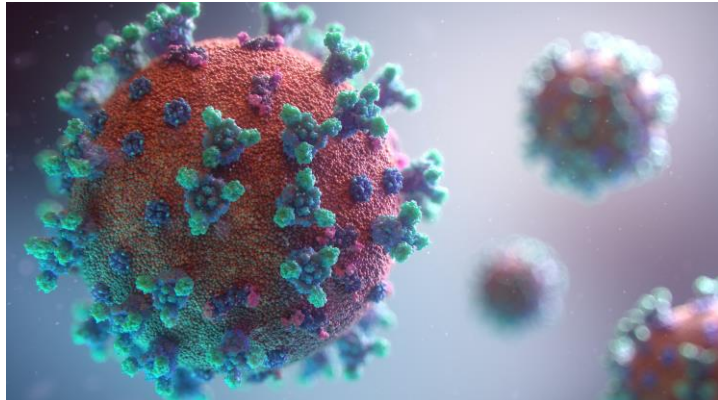
Technological and social change are adding to the complexity.

GENE EDITING
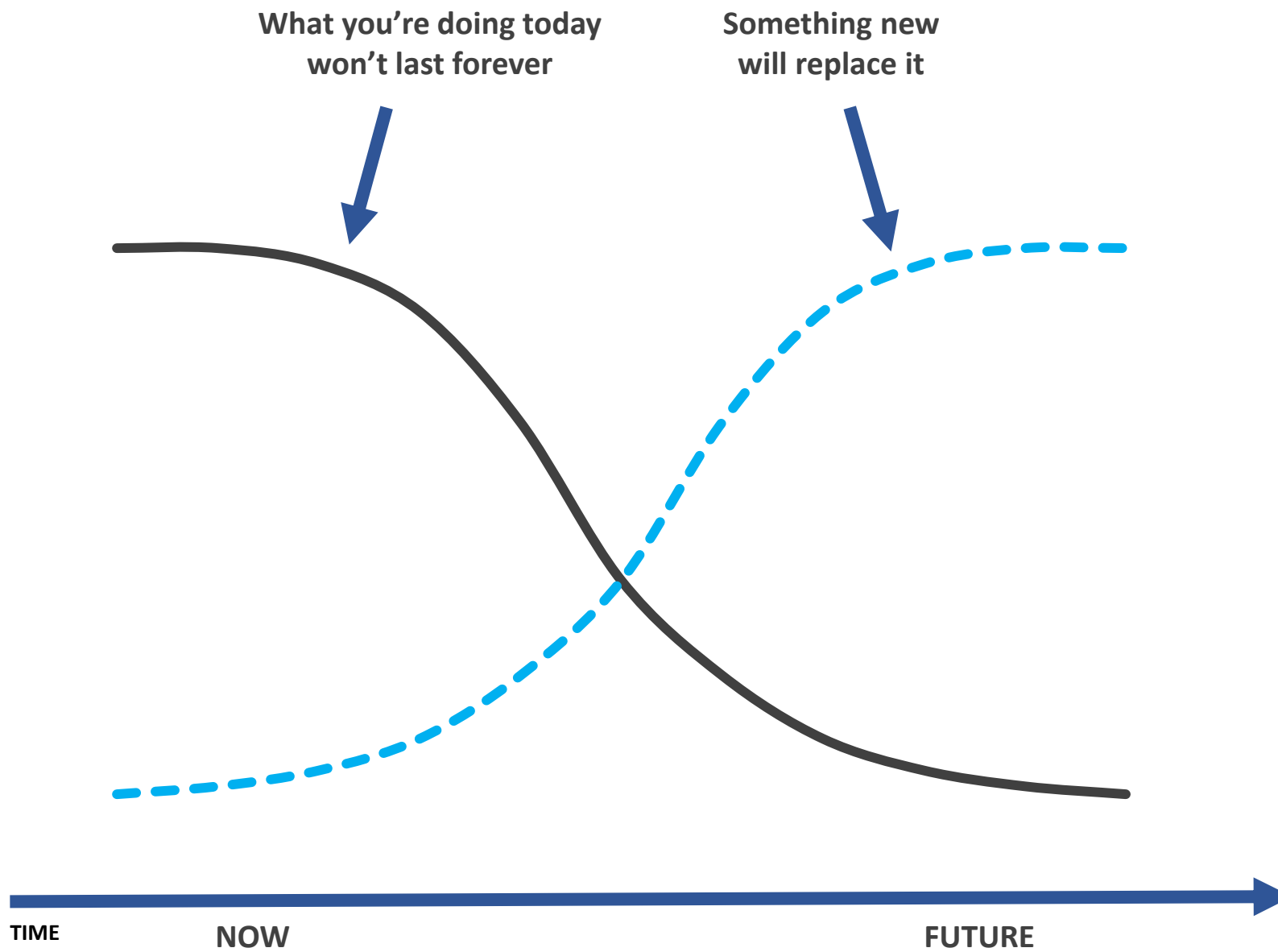
REMOTE WORK

PUBLIC SPACE FLIGHT

3D PRINTED FOOD

E-SPO

OWNERLESS COMPANIES

LANDING ON MARS

DIGITAL NOMADS

GIG WORKERS

PEAK OIL

What you're doing today won't last forever

Something new will replace it

TIME   NOW   FUTURE

3 Horizons Framework
Adapted from Andrew Curry & Anthony Hodgson "Seeing in Multiple Horizons:
Connecting Futures to Vision and Strategy" 2008

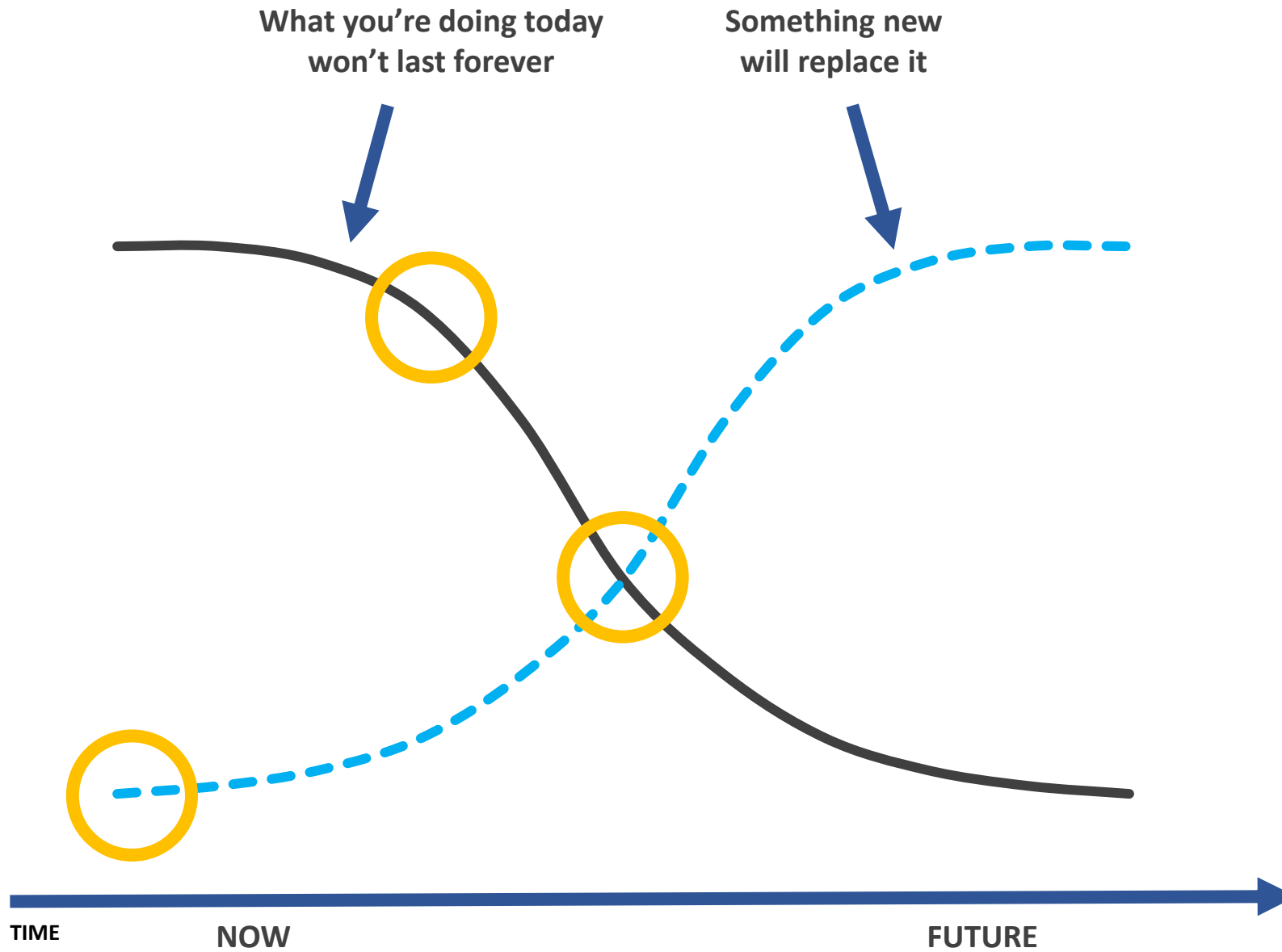What you're doing today won't last forever

Something new will replace it

TIME   NOW   FUTURE

3 Horizons Framework
Adapted from Andrew Curry & Anthony Hodgson "Seeing in Multiple Horizons: Connecting Futures to Vision and Strategy" 2008

Can't have our eyes closed to the signals.

Advent of the internet

Online shopping

YouTube

Subscription-based business models

Rise of convenience culture

Pay-per-view / On-demand video

Digital transformation

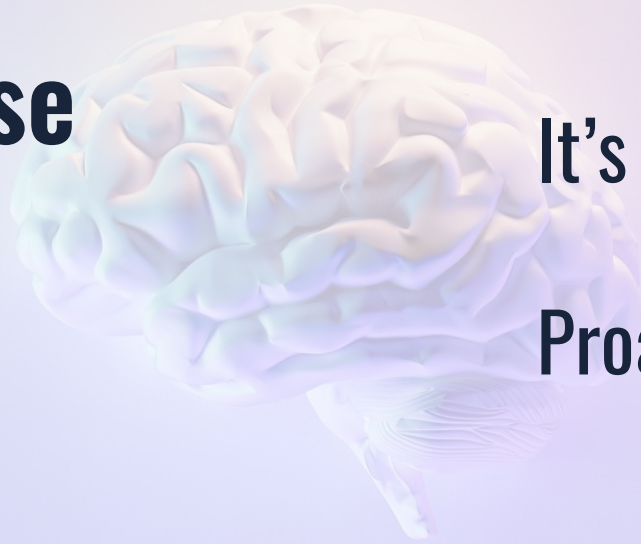Image credit: "Dish shuttering one-third of remaining Blockbuster locations, still sees value in the brand" The Verge

The world is in a state of disorder and flux

We must lead with curiosity.

Things to consider while reviewing these trends

Change is a certainty

It's **not** "not relevant"

Proactive, not reactive

Today we'll be talking about the future of communities.

Community needs are changing. Local government will need to change they way they meet them.

TRANSPORTATION

DATA

PUBLIC SPACE

DIGITAL SPACE

PUBLIC SERVICES

ENVIRONMENT

the post-car era

transportation

Trends impacting the future

54 – 260 hours per year sitting in traffic.

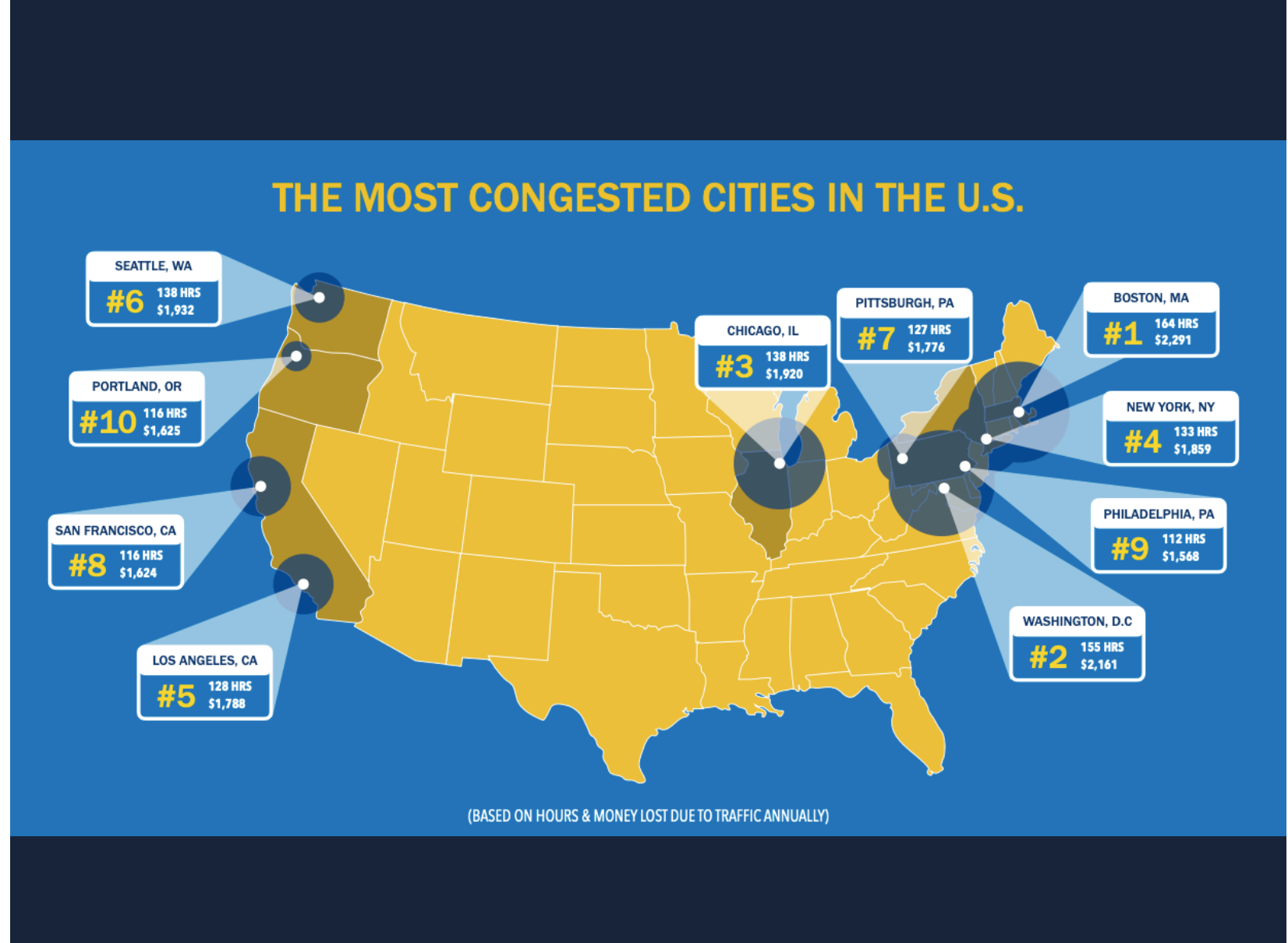30-minute average commute. 1 in 36 with an extreme commute.

THE MOST CONGESTED CITIES IN THE U.S.

SEATTLE, WA
#6 138 HRS
     $1,932

PORTLAND, OR
#10 116 HRS
      $1,625

SAN FRANCISCO, CA
#8 116 HRS
     $1,624

LOS ANGELES, CA
#5 128 HRS
     $1,788

CHICAGO, IL
#3 138 HRS
     $1,920

PITTSBURGH, PA
#7 127 HRS
     $1,776

BOSTON, MA
#1 164 HRS
     $2,291

NEW YORK, NY
#4 133 HRS
     $1,859

PHILADELPHIA, PA
#9 112 HRS
     $1,568

WASHINGTON, D.C
#2 155 HRS
     $2,161

(BASED ON HOURS & MONEY LOST DUE TO TRAFFIC ANNUALLY)

Image credit: Traffic congestion cost the US economy nearly $87 billion in 2018
World Economic Forum

Trends impacting the future

60% of land in metro areas used for cars – 10% of all available arable land.

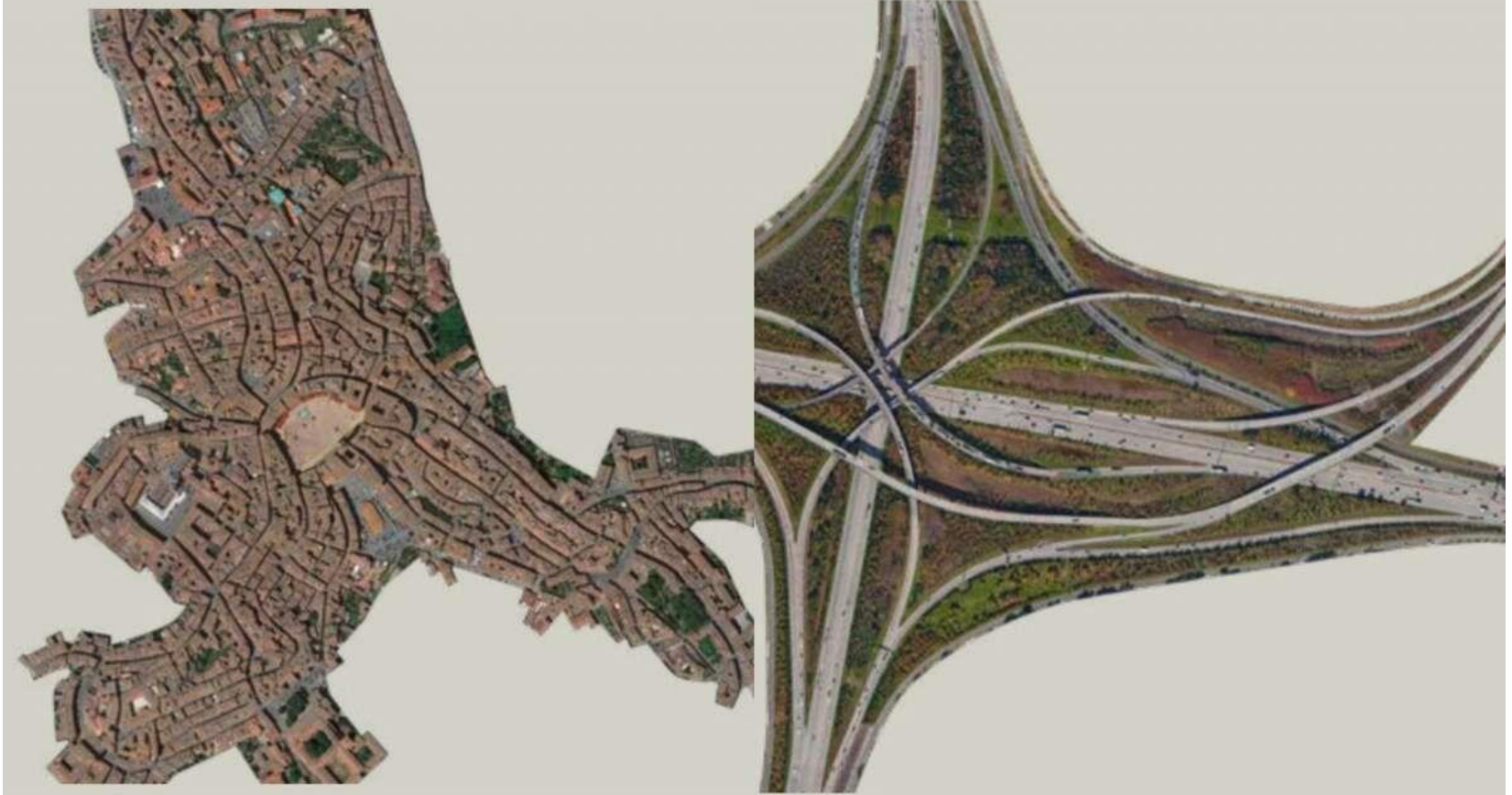**95% of time parked, 5% of time in use.**

Image Credit: "30,000 people can fit in the space taken by this Houston highway intersection" Houston Chronicle

Trends impacting the future

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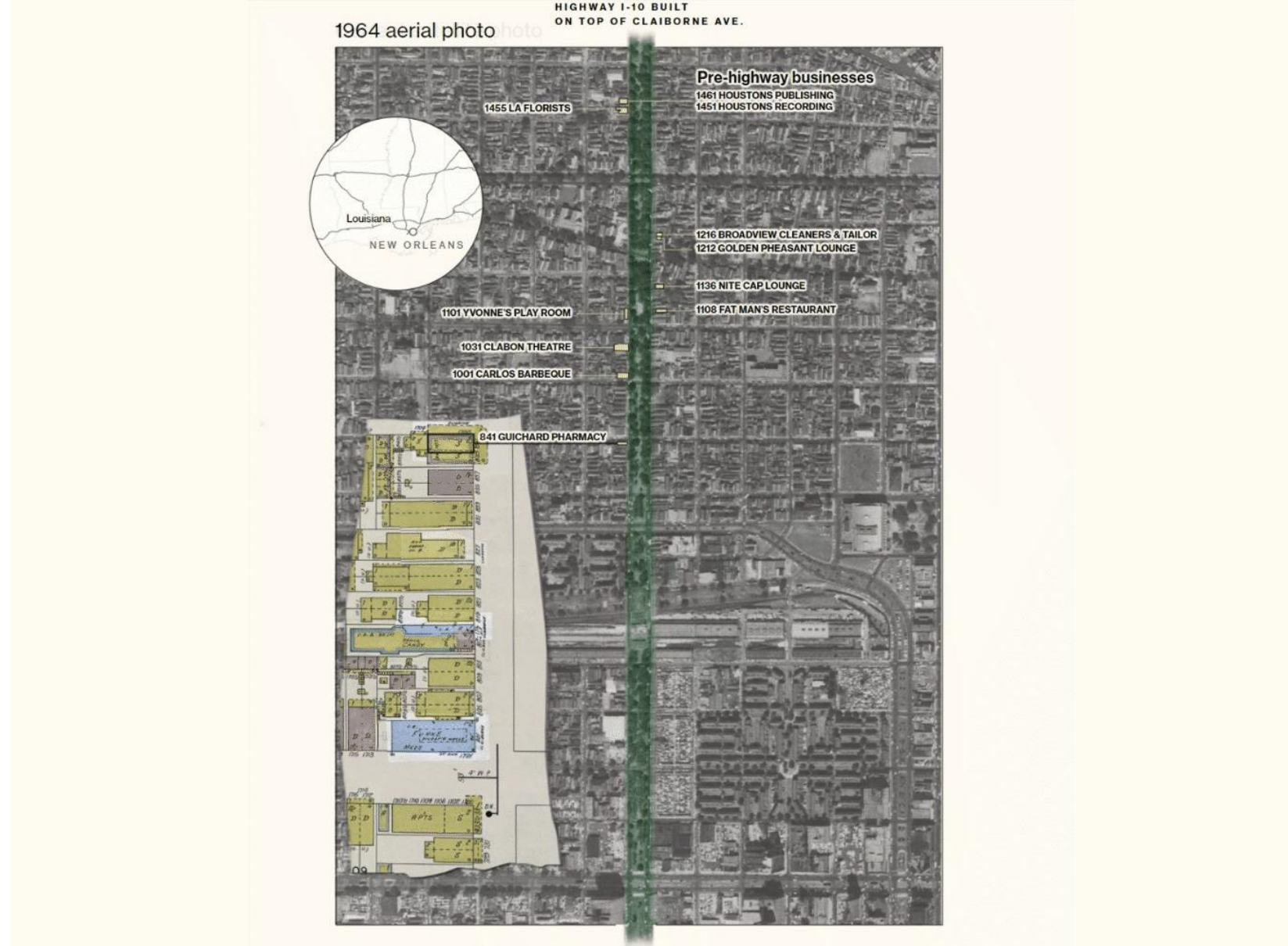**Highways bisect communities, splitting neighborhoods and cutting residents off from amenities.**

Image Credit: "What It Looks Like to Reconnect Black Communities Torn Apart by highways" Bloomberg

An image of the future...

Bans on non-essential through traffic in city centers.

Image Credit: "Driving Through Paris? That's Going to Get a Lot Tougher in 2024" Bloomberg

An image of the future...

Uptick in cycling due to pandemic concerns, sustainability, wellness, and e-bikes.

Bloomberg

Live Now   Markets   Technology   Politics   Wealth   Pursuits   Opinion   Businessweek   Equality   **Green**   CityLab   Crypto   More

Green
Hyperdrive

Bicycles Are Pushing Aside Cars on Europe's City Streets

- Green consumer trend dovetails with contagion concerns
- Pandemic has spurred 930 miles of new bike lanes in Europe

A cyclist passes a newly-marked cycle lane in Milan. *Photographer: Camilla Cerea/Bloomberg*

By Richard Weiss
July 4, 2020, 12:00 AM CDT

Image Credit: "Bicycles Are Pushing Aside Cars on Europe's City Streets" Bloomberg

SGR | ALLIANCE FOR INNOVATION

An image of the future...

Street reclamation movements and pedestrian blocks improve quality of life and build community.

Image Credit: "'Liveable streets': how cities are prioritizing people over parking" The Guardian

An image of the future...

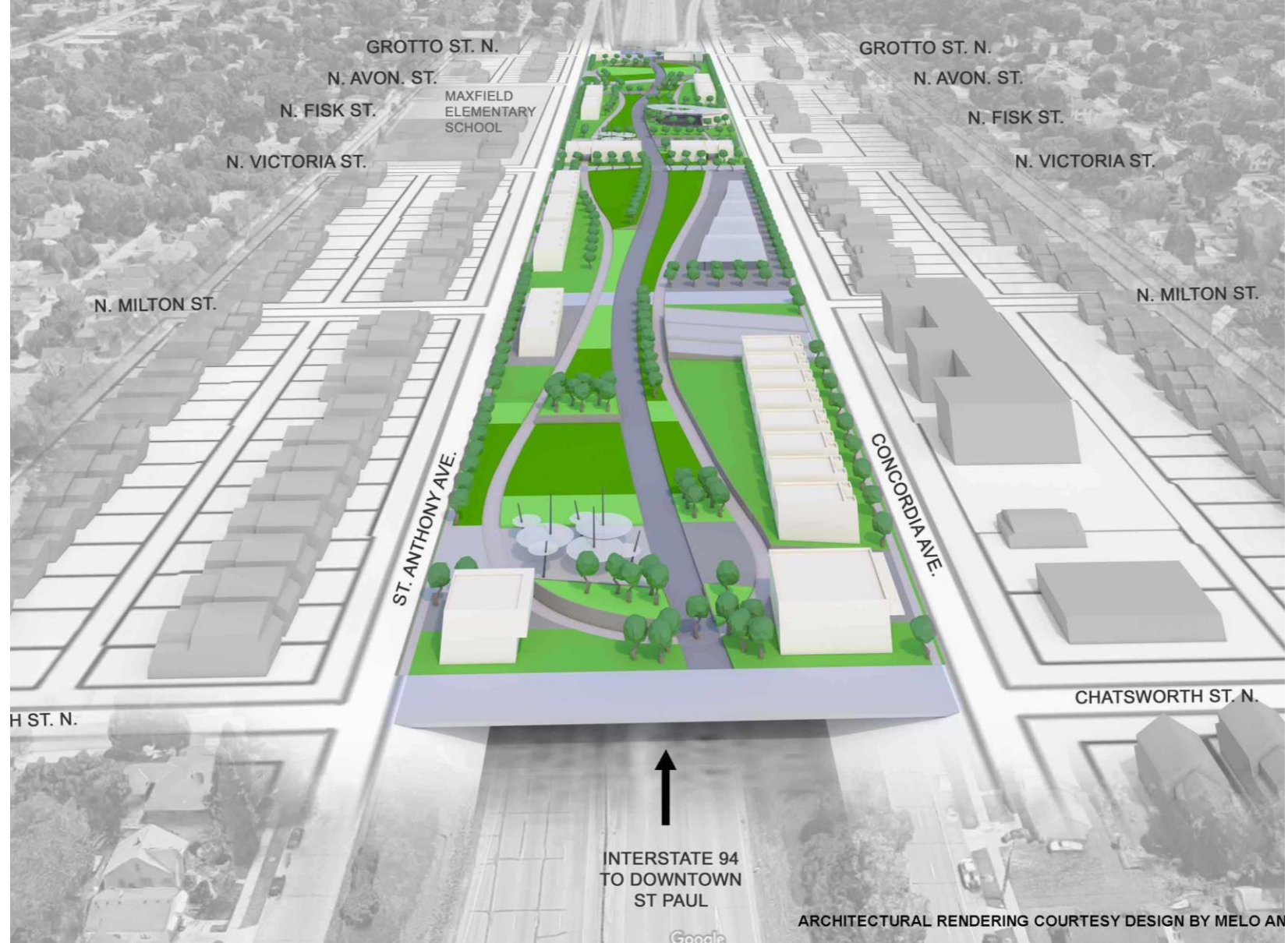**Street reclamation movements.... including land bridges that force roadways underground.**

Image Credit: "Rondo advocates push back against GOP efforts to halt state funding for I-94 land bridge" Star Tribune
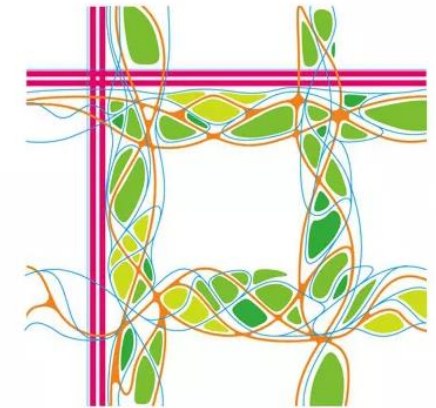
An image of the future...

Creates conditions to entirely rethink urban mobility to better serve needs of community.

Image Credit: "What Might Our Cities Look Like Without Cars?" Treehugger

Rigid Mobility Grid
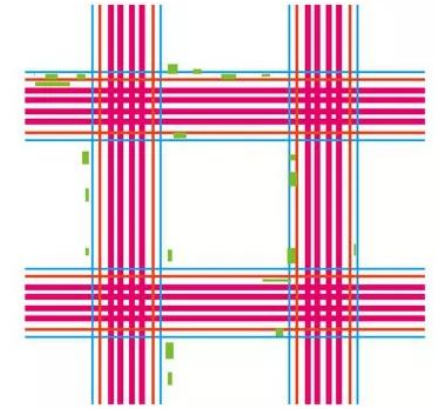
Dynamic Mobility System

SLOW MOBILITY: PEDESTRIAN
ORGANIC MOBILITY: MICRO-MOBILITY
FAST LINEAR MOBILITY: PUBLIC TRANSPORT, AUTOMOTIVE
ACTIVATED AREAS: PARKS, RECREATIONAL, RETAIL, EVENTS,...

Car-centric cities are no longer fit for purpose.

Design citizen-centric cities.

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rethinking public spaces

public space

Trends impacting the future

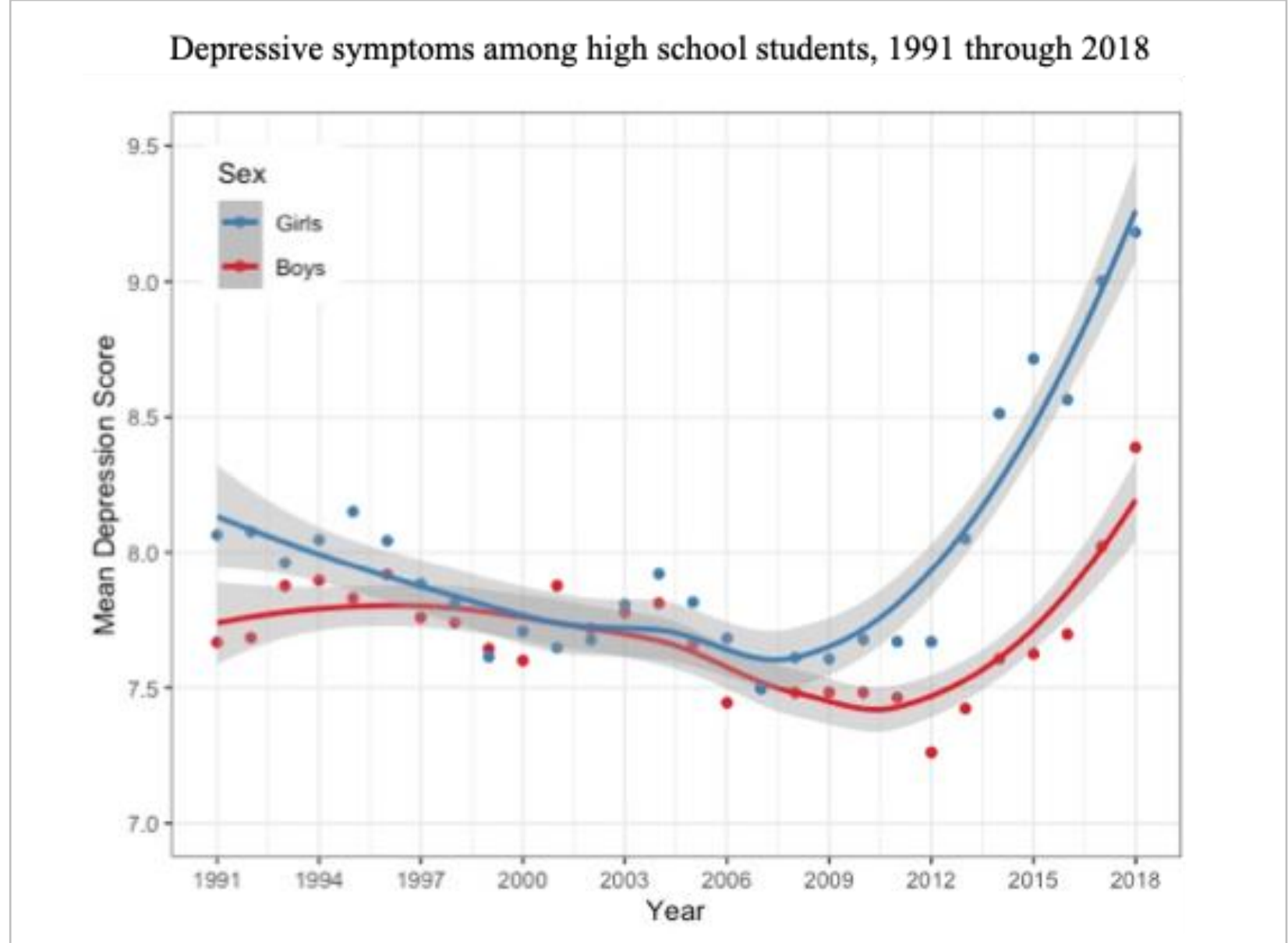**Anxiety, depression, suicide, feelings of helplessness, and narcissism have increased sharply.**

Depressive symptoms among high school students, 1991 through 2018

Image Credit: "Depression During Development" Public Health Post

Trends impacting the future

Social isolation is at an all-time high.

Image Credit: "Loneliness and Social Isolation Linked to Serious health Conditions" CDC

Trends impacting the future

Calls to provide more equitable services to marginalized communities.

Trends impacting the future

People are overscheduled, overworked, and living through a period of immense turmoil and uncertainty.

An image of the future...

Affinity spaces provide pockets of community based on shared interests.

Image Credit: "Utilizing the Space Beneath Bridges" streets mn

An image of the future...

Inclusive spaces invite marginalized populations into the community.

Image Credit: "Teen Girls Need Better Public Spaces to Hang Out" Bloomberg

An image of the future...

Design of more open-ended spaces that promote exploration, experimentation, and learning.

Image Credit: "'Liveable streets': how cities are prioritizing people over parking" The Guardian

An image of the future...

"Restorative urbanism" seeks to provide more holistic urban living - places that ease stress and anxiety and isolation.

Image Credit: "An Anxious Age Demands More 'Restorative Cities'" Bloomberg

An image of the future…

The "one-minute city" concept empowers citizens to co-design the spaces in immediate proximity.

Image credit: "Make Way for the 'One-Minute City'." Bloomberg

How we move between the spaces we inhabit defines our behaviors and our communities.

Design health and well-being into your public spaces.

smart cities

data

Trends impacting the future

People are time impoverished – they are busier than ever, with a growing list of demands on their time.

Image Credit: "'Ugh, I'm So Busy': A Status Symbol for Our Time" The Atlantic

Trends impacting the future

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Simultaneously, they have grown accustomed to 24/7, instant, and easy-to-use services.

Trends impacting the future

More than 10 billion active IoT devices.

Projected to pass 25 billion by 2030.

Image credit: "Here's why police in Dallas-Fort Worth are partnering with doorbell-camera company Ring, despite privacy concerns" The Dallas Morning News

Trends impacting the future

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Local governments around the nation are struggling with labor shortages...

A problem that is only likely to get worse in the future, as the US population is no longer growing.
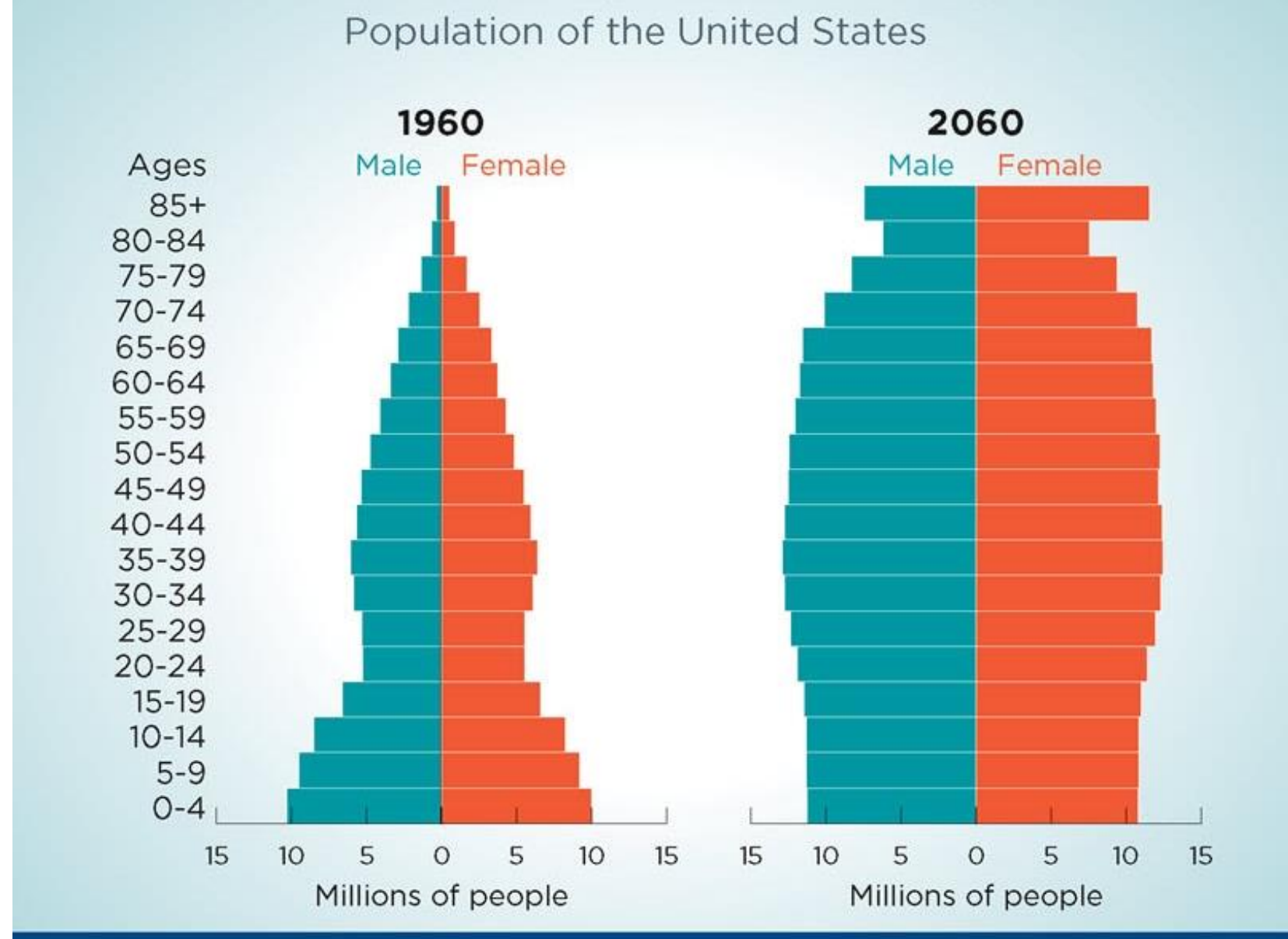
Image Credit: "From Pyramid to Pillar: A Century of Change, Population of the U.S." US Census Bureau

Trends impacting the future

Active projects in 178 cities globally.

Capture data from vast array of sources.
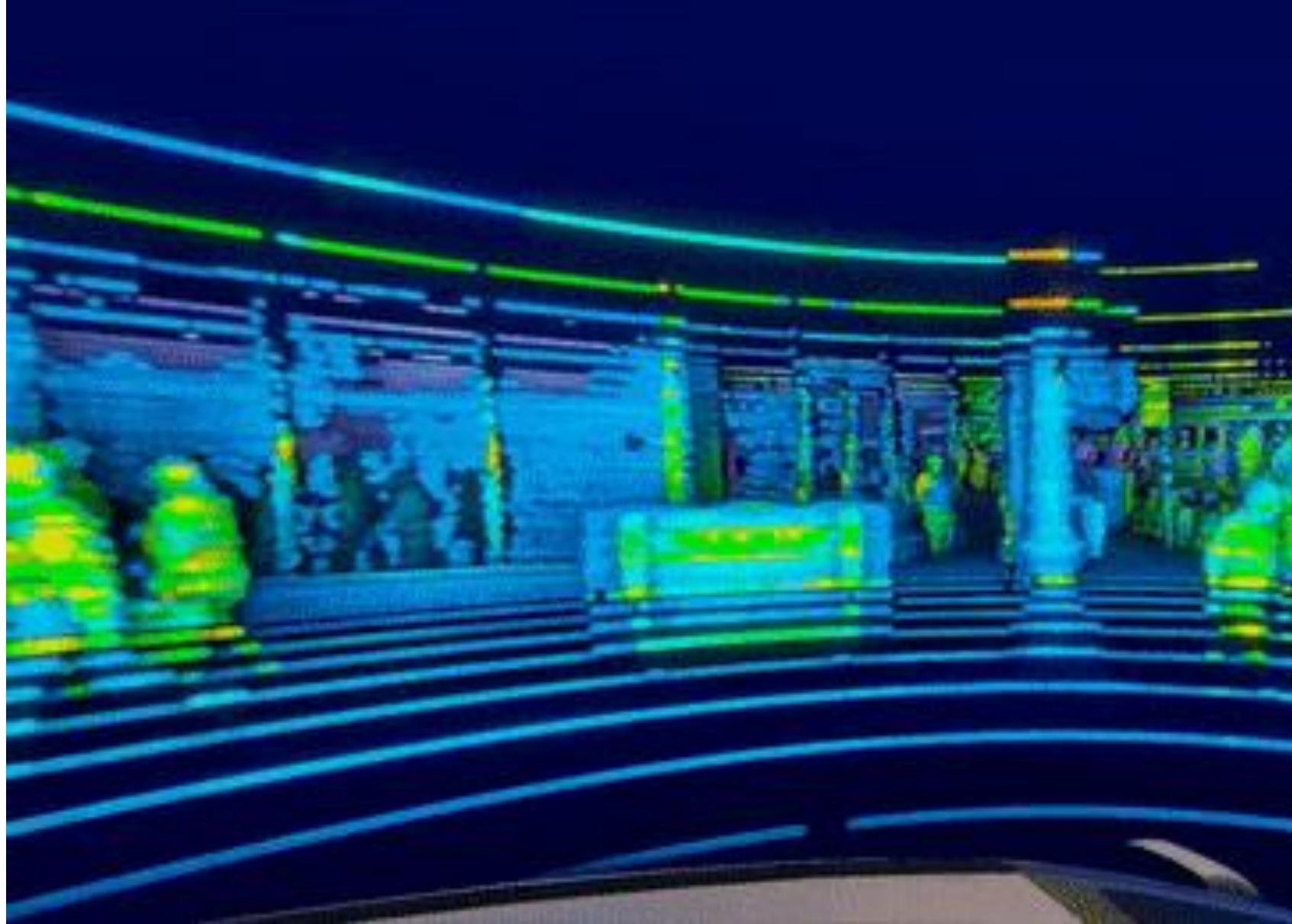
Image Credit: "Lidar Technology Safeguards Privacy in Smart City Applications" Velodyne Lidar

An image of the future...

Automated cleaning keeps facilities and roadways presentable and healthy.

Image credit: "Robots Cleaning The World" mekaworks

An image of the future...

Inspection drones can automate everything from building inspections to wildlife surveillance.

Image credit: "Sharks and Drones: How SharkEye Uses Drones to Keep People Safe from Great Whites" UAV Coach

An image of the future...

Delivery drones bring the city to your door.

Image Credit: "Alphabet's nascent drone delivery service is booming" The Verge

An image of the future...

Patrolling bots keep parks and community spaces safe, while EMS drones deliver life-saving medical interventions.

Image credit: "A RoboCop, a park and a fight: How expectations about robots are clashing with reality" NBC News

An image of the future...

Robots are even taking on caretaking....

Image credit: "Robots rise to meet the challenge of caring for old people" nature

Trends impacting the future

Tax, police, utility, and transportation departments as smart city and data processing hubs.

Image Credit: "AI powered face recognition for smart cities and smart retail" Deep Vision via YouTube

An image of the future…

Allows for the creation of sophisticated digital twins… of cities and citizens.

Image Credit: "Two-i Smart-City" Two-i

An image of the future...

Data can be run through policy-engines that simulate policy changes and iterate to find better outcomes.

Learning and documenting

We've also been engaging with NSW Government agencies to demonstrate Rules as Code and build a pipeline of projects. We brought our users and stakeholders together in a recent workshop seeking feedback on our proof of concept. The workshop was the first in a series of activities aimed at continually testing and iterating the proof of concept with users.

What does our proof of concept look like now?

A Toolkit to help turn rules into logic statements so they can be coded and loaded into the Rules Engine

Contains up-to-date codified rules

The Rules Engine and API can be used by any user group to build internal or external-facing digital services based on the rules

TOOLKIT → RULES → **RULES ENGINE** → API → **USER GROUPS**

Rules are prescriptive conditions found in legislation and policy

The Application Programming Interface (API) allows different systems to talk to each other

Image Credit: "Rules as Code – Test, learn, Repeat" NSW Government

An image of the future...

Growing citizen science movements use available technology and citizen behavior to provide large datasets for research.

Image Credit: "Join the Community Beach Monitoring by taking a pic for CoastSnap" Visit Bournerouth

An image of the future...

Smart Citizen kits go beyond participatory data collection, to analysis and action.

Image Credit: "Smart Citizen Kit" [fablabs](#)

An image of the future…

Digital services and AI systems create accessible systems and automatic life event tracking.

enter e–estonia

We have built a digital society and we can show you how

THE E–ESTONIA STORY   GET IN TOUCH
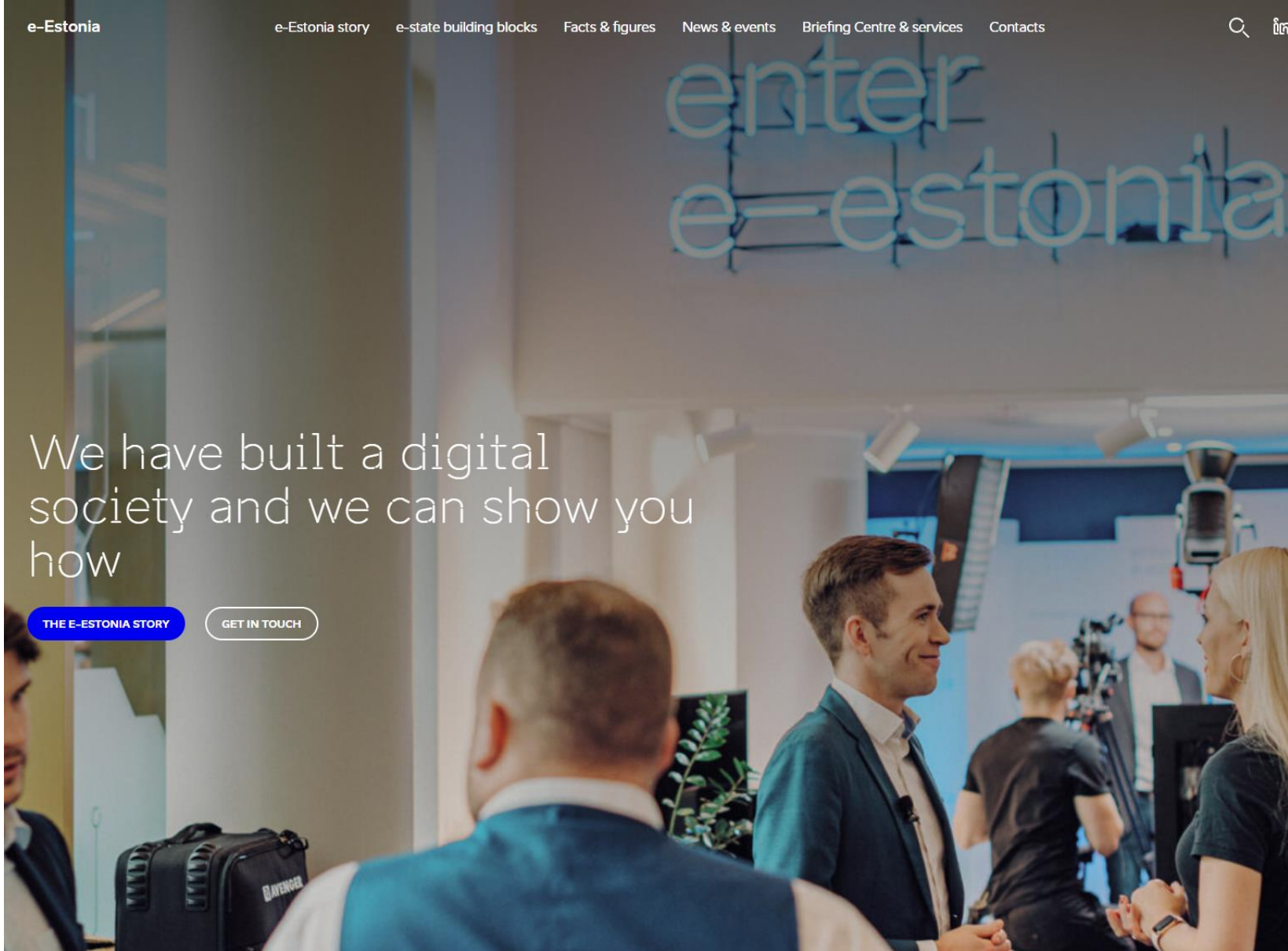
Image Credit: "e-Estonia" Estonia

An image of the future...

At the far end, fully autonomous cities reimage what a city can do and what it can be.

Image Credit: Freethink

Data-driven technology will be key in proactively meeting community needs.

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You don't have to go it alone.

All stakeholders can play a part in collection data.

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expanding reality

digital space

Trends impacting the future

Virtual reality is gaining momentum as a form of media.

Trends impacting the future

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Serious investment in AR – to be commonplace by 2030.

Trends impacting the future

Represents a new avenue for public services and community engagement.

An image of the future...

Navigating a city becomes a personalized, AI-enabled experience.

Image Credit: "The XR and You Series: AR for Navigation" Stambol

An image of the future...

Can build connections to the past and illuminate the unique culture and history of a community.

Image credit: "The Shaw and 54th Regiment Memorial Augmented Reality Experience" Hoverlay via YouTube

An image of the future...

Can pull people outdoors to encourage more active lifestyles with adventure games.

Image credit: "RideOn Intro" RideOn via YouTube

An image of the future...

And into public spaces with games that take people through city centers.

Image credit: "Watch Dogs – Cash Run Tips" Prima Games, "Pokemon Go's new AR+ Mode for iOS" TechCrunch

An image of the future...

Outdoor museum of AR sculptures makes art available to anyone in the city – very large audiences.

Image credit: "Watch London's Cool, Quirky Augmented Reality Art Exhibit at Home" SingularityHub

Digital experiences can connect communities in new ways – especially the next generation of digital natives.

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going green

environment

Trends impacting the future

Billion-dollar weather events have increased from an average of 2.9 per year in the US in the 1980s to 17.2 per year in the last 5 years.

1980-2022 United States Billion-Dollar Disaster Event Count (CPI-Adjusted)

Legend: 2018 (15), 2011 (18), 2017 (18), 2021 (20), 2020 (22), 2022 (9), Average (7.7)

December 2020: 22
December 2021: 20
December 2011: 18
December 2017: 18
December 2018: 15
December Average: 7.69

Updated: July 11, 2022   *Event statistics are added according to the date on which they ended.*   Powered by ZingChart
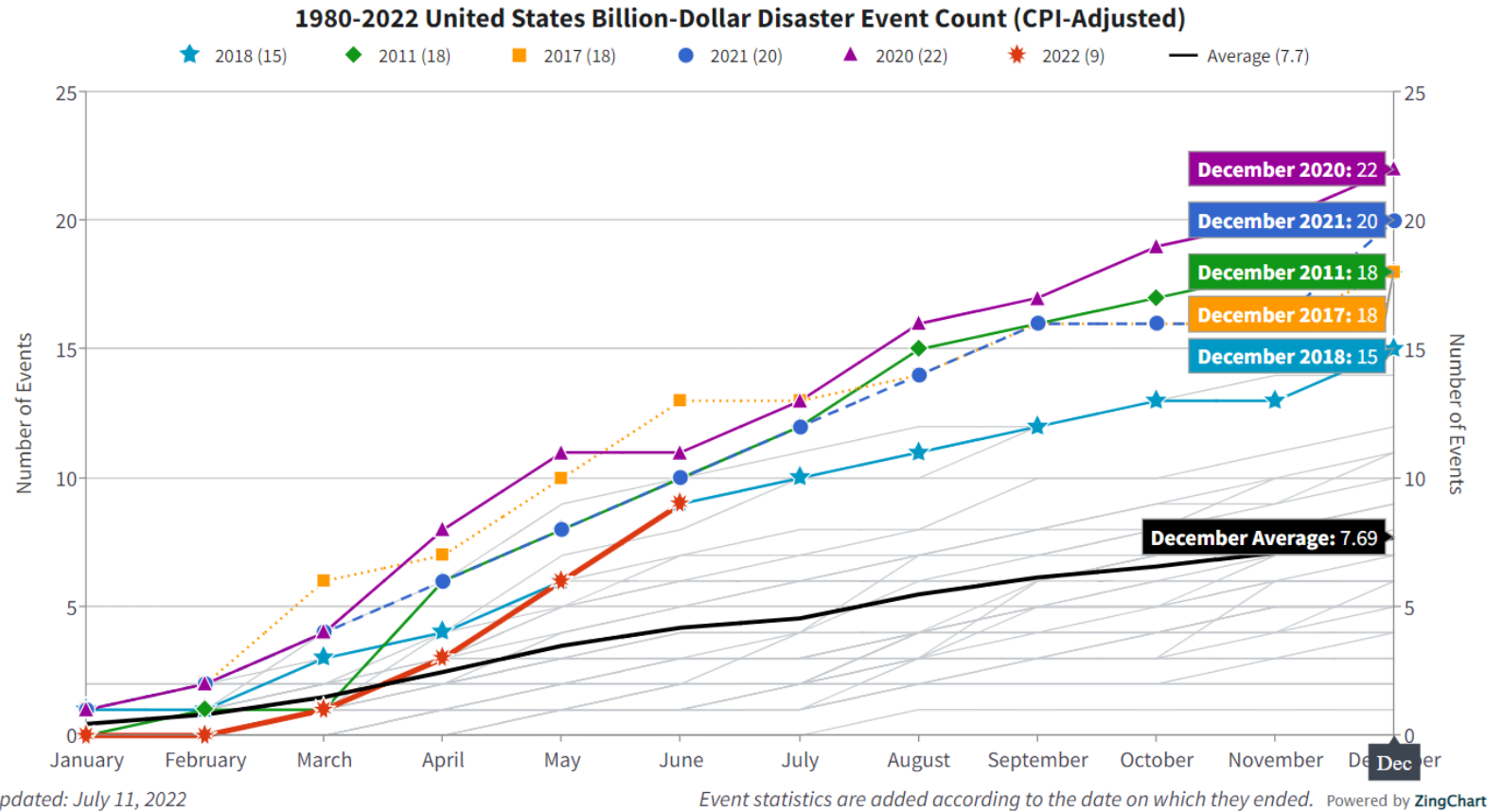
Image credit: National Centers for Environmental Information

Trends impacting the future

Emerging environmental threats – sea level rise, land erosion, food instability, water scarcity, climate refugees.

Revenue Vulnerability & Dependence
from Headwaters Economics

16%
of Boston's city revenues are at risk from sea level rise
(Shi and Varuzzo 2020)

Case study: Massachusetts
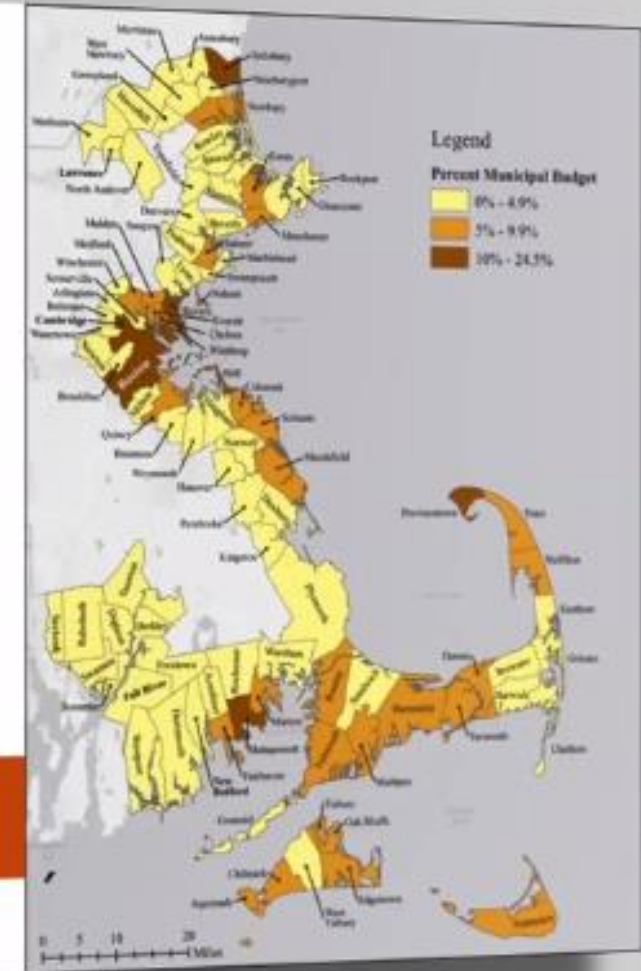
Legend
Percent Municipal Budget

Image credit: "Revenue Vulnerability & Dependence" Headwaters Economics

Trends impacting the future

By 2050, loss of natural processes could cost upwards of $83 billion annually in the US and $479 billion globally.

Trends impacting the future

Cities, states, and nations are setting aside billions of dollars to prepare for climate resilience.

Trends impacting the future

Incorporate nature to foster climate resilience.

Image credit: "Using nature in infrastructure projects could save USD 248 billion per year - study?" IISD

An image of the future...

Leveraging natural processes to improve quality of life:

Plants filter air pollution from roadways.

Harmful gasses from vehicles are trapped against the concrete walls and urban structures around the motorway

With a green wall lining these 'urban canyons' pollution will be absorbed by the plants and recycled in to oxygen

Oxygen

Pollution

Pollution

Image Credit: "'Living green walls' lined with trees and bushes could help reduce toxic pollution by absorbing carbon dioxide on major commuter routes" Daily Mail

An image of the future...

Leveraging natural processes to improve quality of life:

Plants filter air pollution from public spaces.

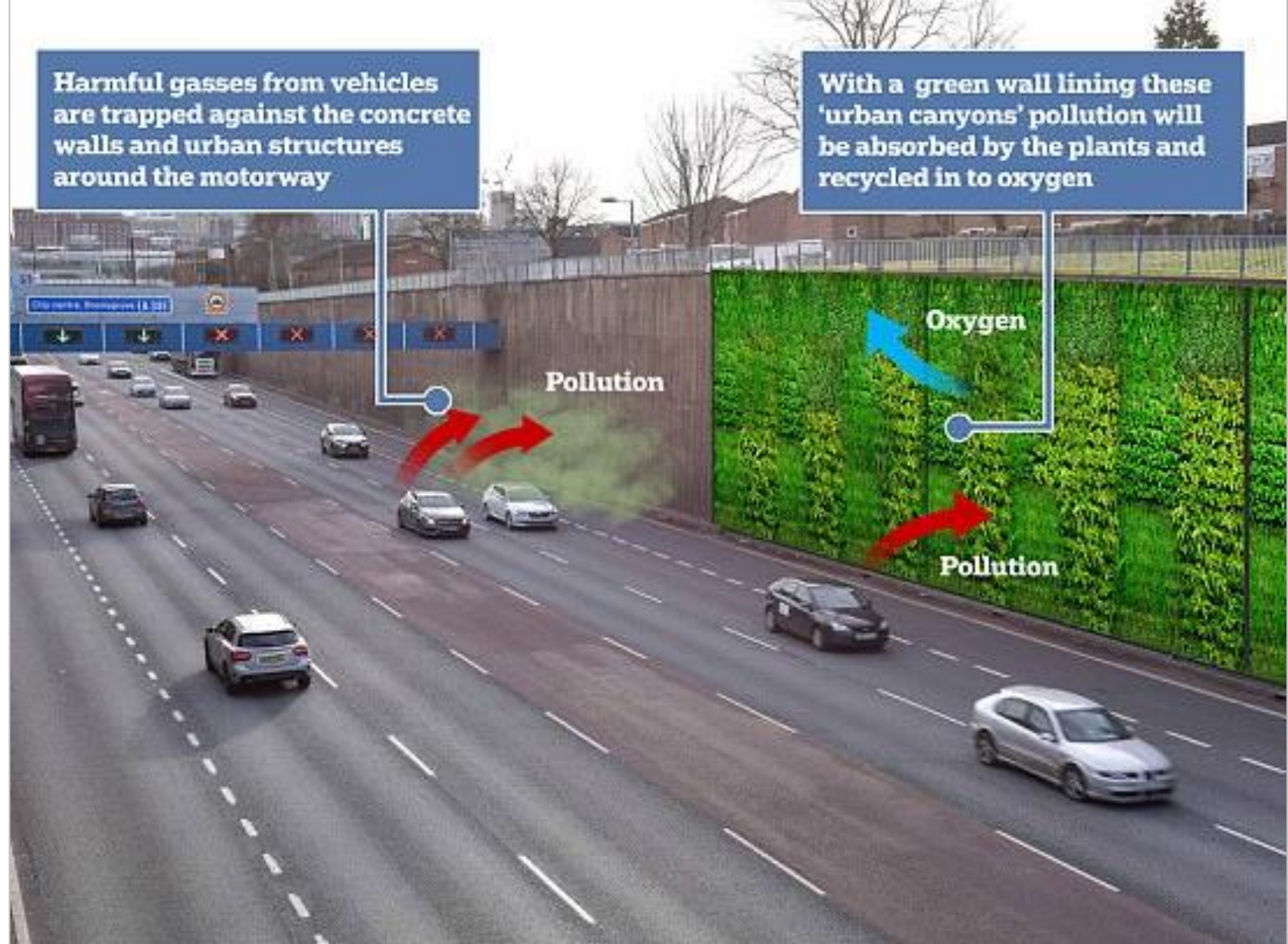Image Credit: "'With AirBubble we bring to life the world's first biotechnological playground to integrate air-purifying micro-algae." Ecologic Studio

An image of the future...

Growing interest in more resilient and local urban farms, including everything from community gardens to commercial food production.

Image Credit: "Floating Farm in Rotterdam is now home to 32 cows'" DeZeen

An image of the future...

Circular city initiatives aim to reduce waste, improve sustainability, and positively impact the bottom line, while making for stronger, healthier, communities.

Image credit: "Circular cooking in Kenya: poop becomes clean fuel" Government of the Netherlands

An image of the future…

Rewilding cities yields overall benefits in climate resilience, biodiversity, and lowered maintenance costs.

Image credit: "Cities' answer to Sprawl? Go Wild." Bloomberg

An image of the future...

Design of vertical gardens and sky gardens that "rewild" urban areas.

Be resilient in environmental disruption by integrating nature.

SGR ❯❯

citizen empowerment

citizen engagement

Trends impacting the future

Citizens feel increasingly disconnected. Many do not know what local governments do or how to engage.

Citizens want authentic engagement opportunities, not just notifications

With modern solutions and professional support, digital engagement can become an everyday event for any community.

Published March 7, 2022

By Andrea Facini

Kirill Smyslov via Getty Images

Andrea Facini is the President of ACTIVE Network, a company providing software and service solutions.

Image Credit: "Citizens want authentic engagement opportunities, not just notifications" Smart Cities Dive

Trends impacting the future

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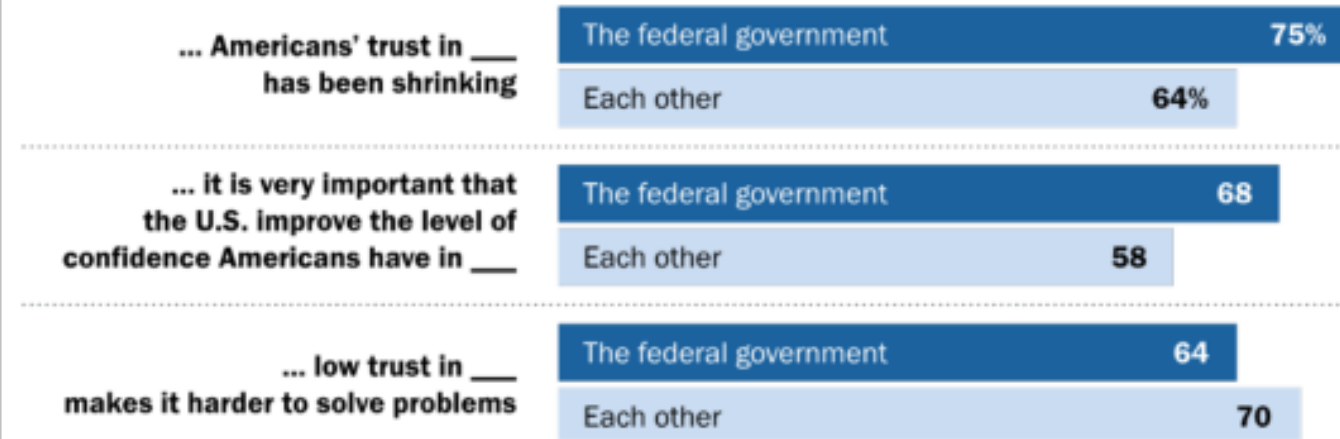**Facing large, systemic problems, people often feel powerless and lose their sense of agency.**

Trends impacting the future

Trust in traditional establishments is failing across the nation. Local government is the last bastion of public trust.

Americans think their distrust of the federal government and each other is a problem that gets in the way of solving issues

% of U.S. adults who believe ...

... Americans' trust in ___ has been shrinking
- The federal government — 75%
- Each other — 64%

... it is very important that the U.S. improve the level of confidence Americans have in ___
- The federal government — 68
- Each other — 58

... low trust in ___ makes it harder to solve problems
- The federal government — 64
- Each other — 70

Source: Survey conducted Nov. 27-Dec. 10, 2018.
"Trust and Distrust in America"

PEW RESEARCH CENTER

Image Credit: "Trust and Distrust in America" PEW

An image of the future...

Leveraging design research techniques can improve the overall citizen experience.

An image of the future…

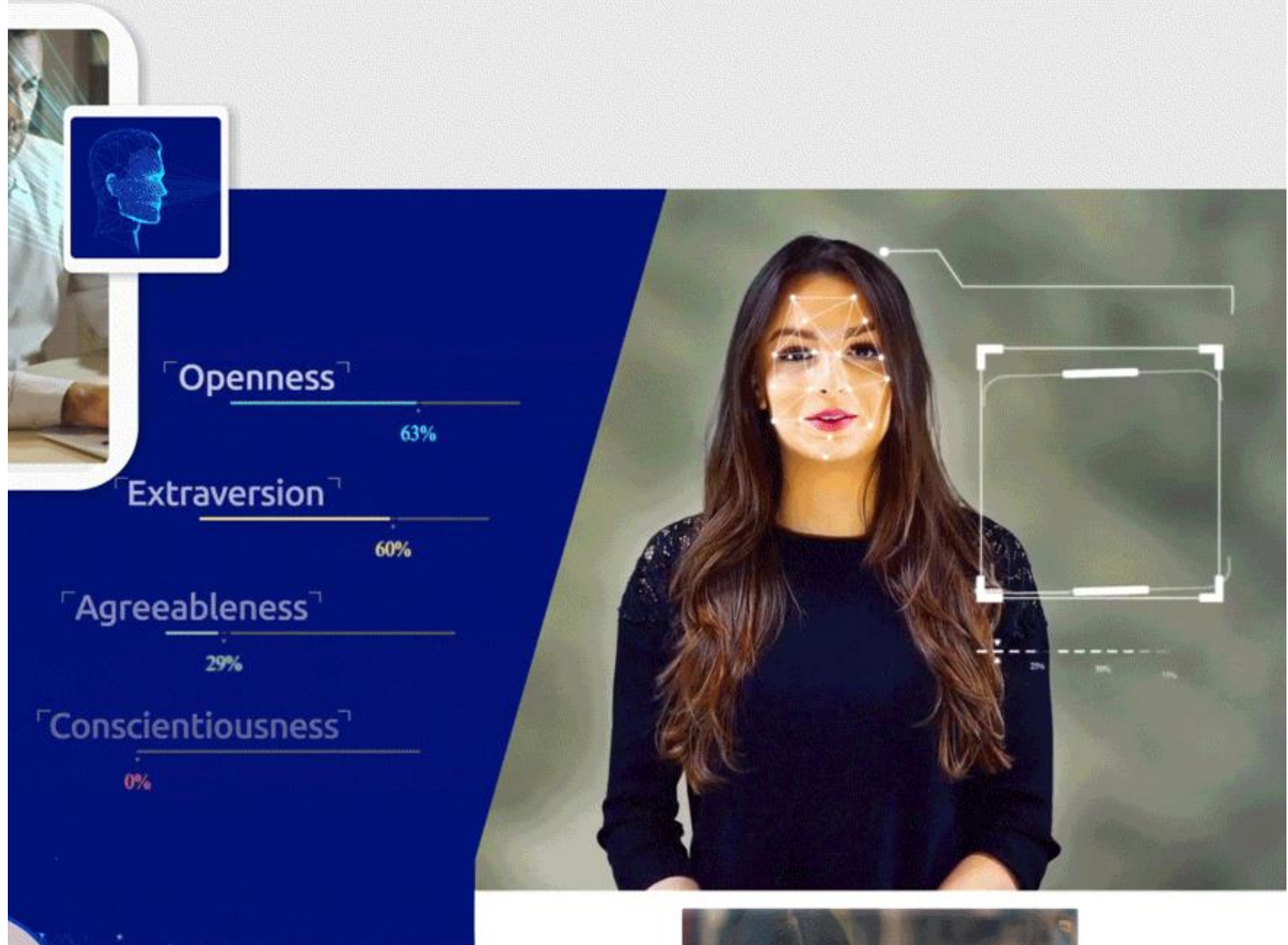**Advanced technologies make it easier than ever to analyze and interpret citizen feedback.**

Image credit: "AI hiring technology made for everyone." Elevatus

An image of the future...

Governments are embracing participatory governance models – including planning and budgeting.

What is a participatory budget?

Let's start with a definition of the term. A participatory budget is an **innovative policy-making tool** that directly involves community members in the allocation of public funds. Local governments ask community members and relevant stakeholders to help them define which social domains, problems or opportunities should receive a share of the city budget, which share of the budget that should be, and which issues or initiatives have the highest urgency. By organizing a participatory budget, cities can tap directly into the collective intelligence of their communities and align the allocation of public money with real-life community needs.

Allowing residents and stakeholders to weigh in on the allocation of public funds requires a significant degree of engagement. That's why participatory budgeting is one of the highest-ranking engagement methods on the participation ladder. While it requires careful planning and preparation, it also bolsters the legitimacy of your decision-making and the sense of trust community members foster towards their elected representatives.

ENGAGE | OUR PARTICIPATION TOOLBOX

Helping you find the **right way** to engage

INFORM▶ Residents stay updated via email or text — Information, Outreach

CONSULT▶ Residents give quick or detailed feedback - results are private unless shared — Quick Polling, Advanced Surveys

INVOLVE▶ Residents publicly discuss and choose from options, or pin ideas on a map — Option Analysis, Online Mapping

COLLABORATE▶ Residents share and discuss their own ideas or do so live in virtual meetings — Ideation, Online Workshops

EMPOWER▶ Residents allocate funds to their favorite ideas or propose their own projects — Participatory Budgeting, Community Proposals

Image Credit: "8 steps towards effective participatory budgeting" citizenlab

Trends impacting the future

A 55-year study found that proportional representation resulted in 7.5% higher voter turnout.

"Canada was the top ranked OECD country on the UN Human Development index. And in the last 20 years, we've been overtaken by eight OECD countries that all use proportional voting"
-Tony Hodgson, President, Vote PR BC

Quote Source: Health Sciences Association

An image of the future…

The "one-minute city" concept empowers citizens to co-design the spaces in immediate proximity.

Image credit: "Make Way for the 'One-Minute City'." Bloomberg

Citizens hold the keys to thriving community more than ever before.

2
evolution of community
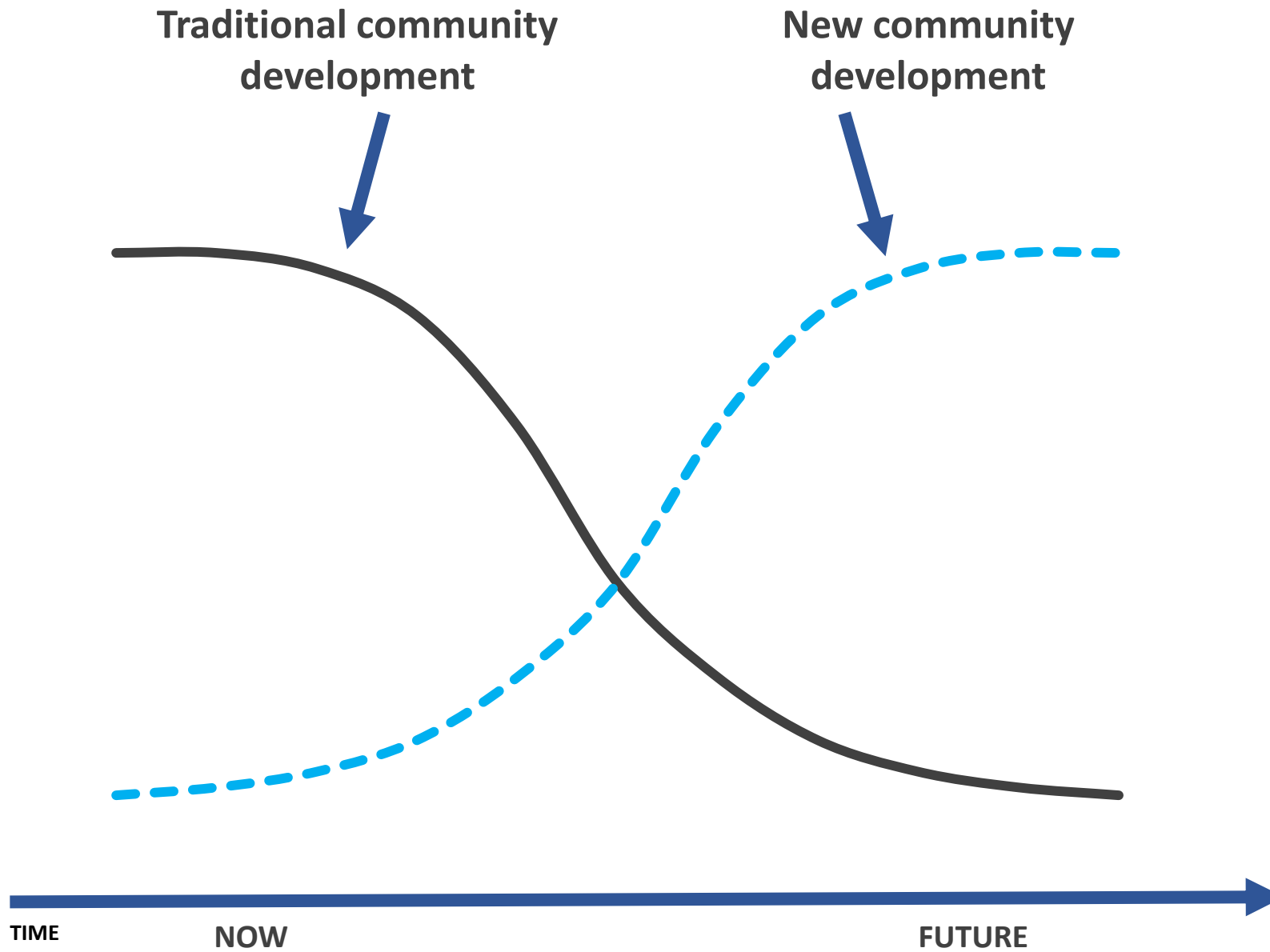
Traditional community development

New community development

TIME   NOW   FUTURE

3 Horizons Framework
Adapted from Andrew Curry & Anthony Hodgson "Seeing in Multiple Horizons:
Connecting Futures to Vision and Strategy" 2008

Declining fit	Car space	Cookie-cutter design	Technology for efficiency	Human first	Citizen engagement

Signals of change	Community space	Intentional design	Technology for connection	Nature first	Citizen empowerment

Agricultural Age
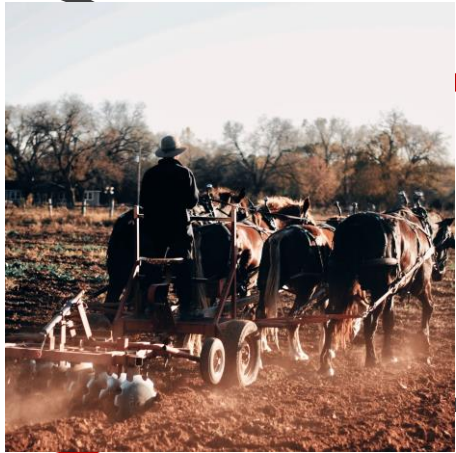
Industrial Age

Information Age

The Next Age
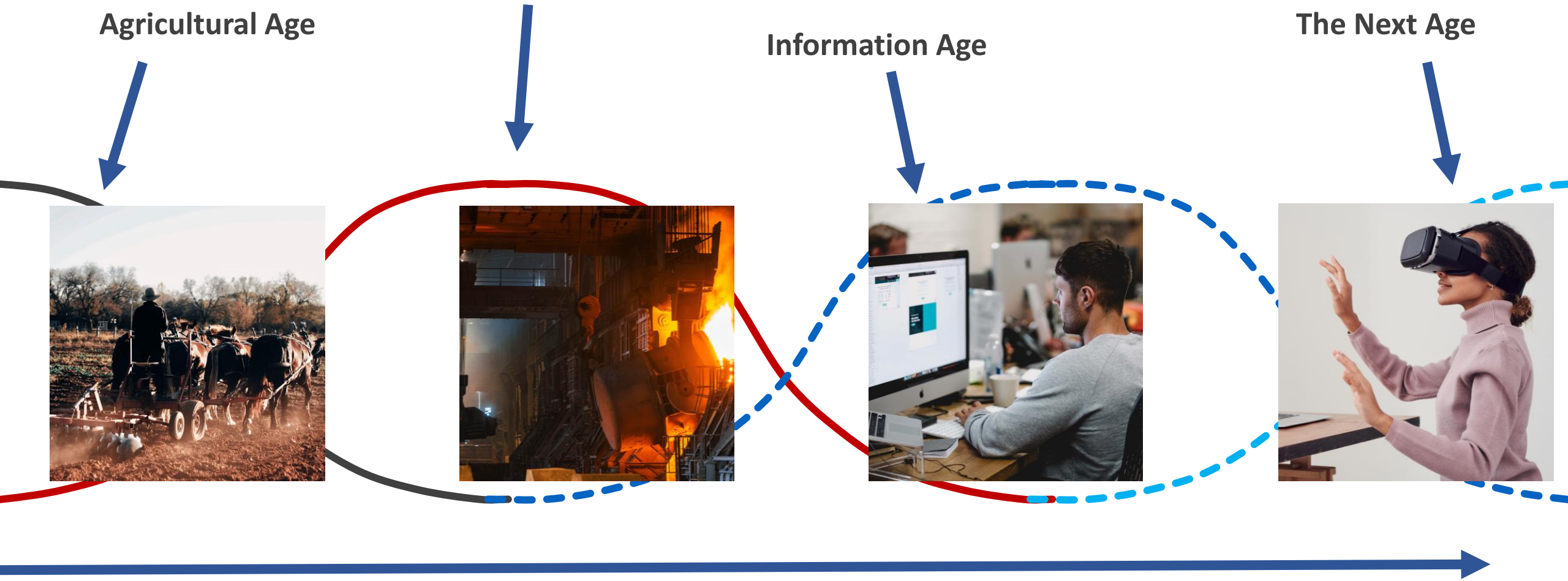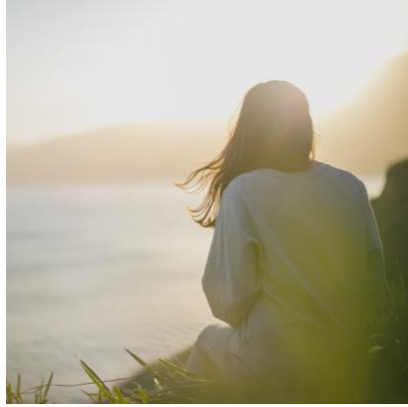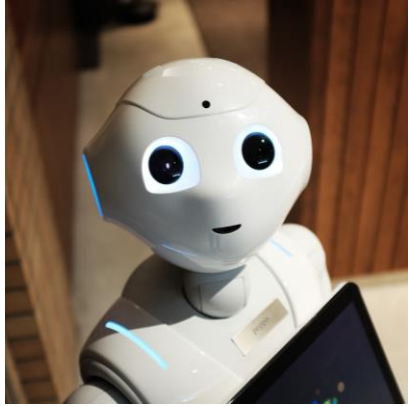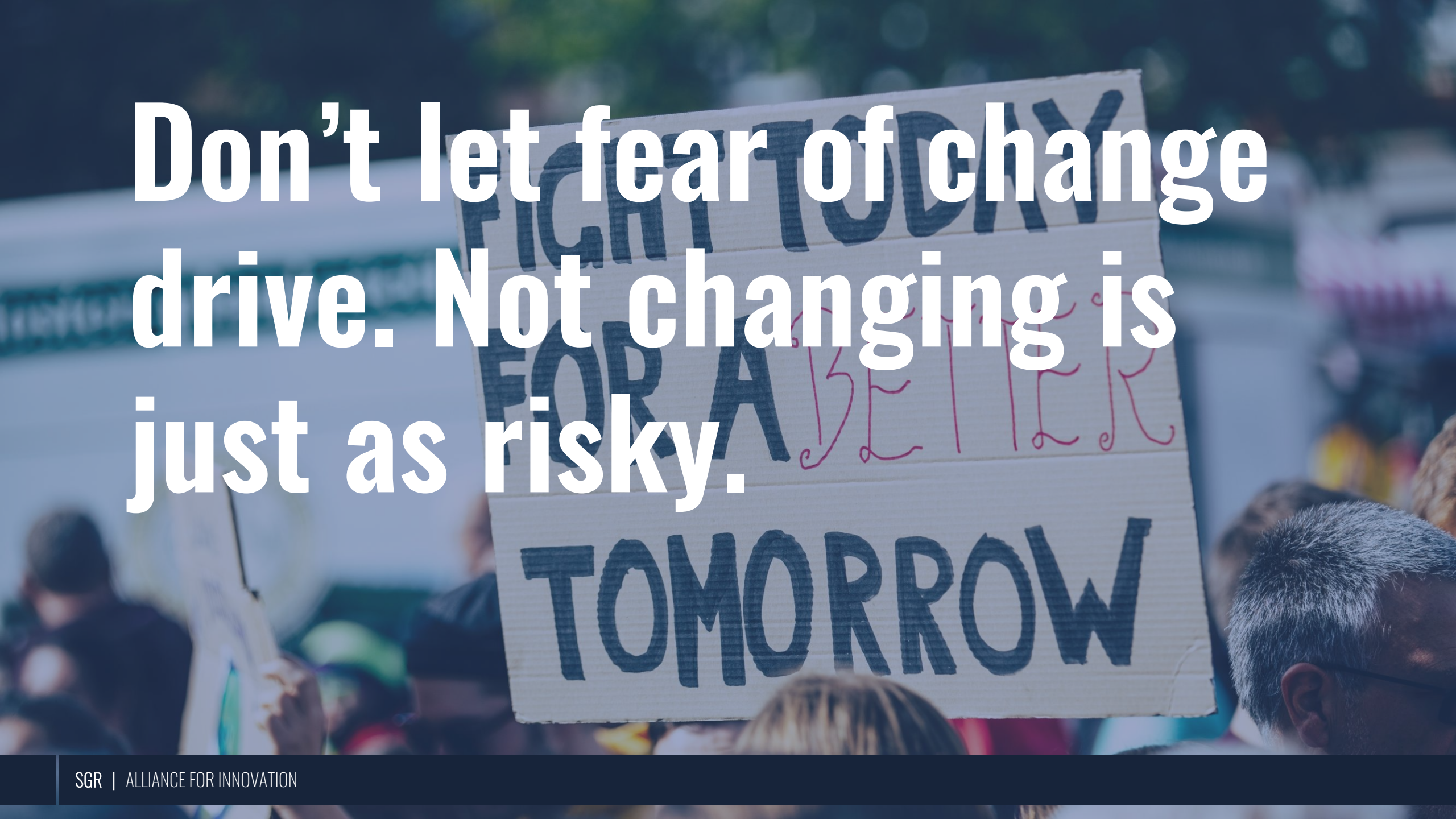
What future community are you building?

3

final thoughts

Q: How do we want to live in the future?

Don't let fear of change drive. Not changing is just as risky.

Continuing the Conversation

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@governmentresource.com

Founded in 1999, SGR exists to help local governments become more successful by Recruiting, Assessing, and Developing Innovative, Collaborative, Authentic Leaders.

We use the acronym RADICAL. The original Latin radicallis means "back to the roots." The current vernacular means "out on the very leading edge." Not only does RADICAL highlight our business lines, but it also captures the constructive leadership tension between valuing the roots of healthy relationships while simultaneously being out on the very leading edge of change.

Find out more at www.governmentresource.com.