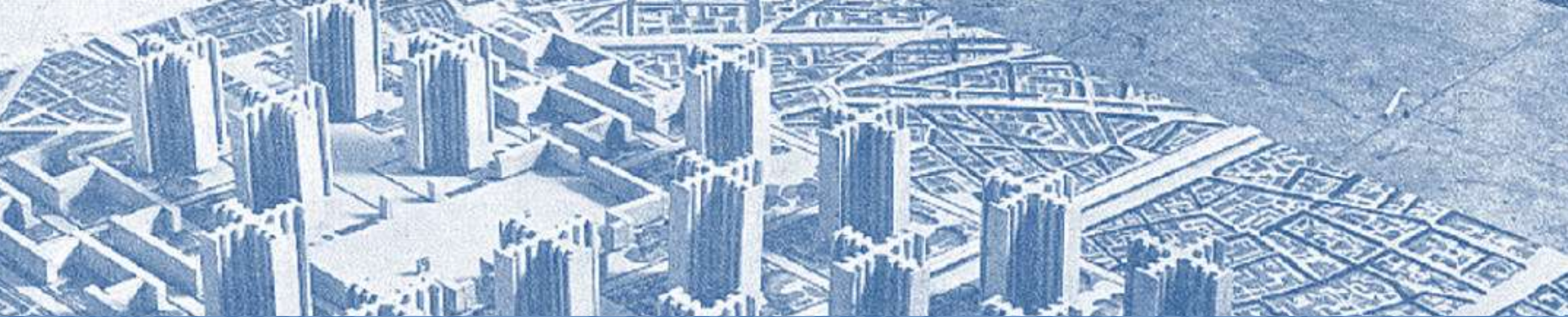


Leading Communities in the Second Machine Age

Stephen J. Conschafter, AICP, LEED AP
ICMA Conference Presenter





Leading Communities
in the Second Machine Age



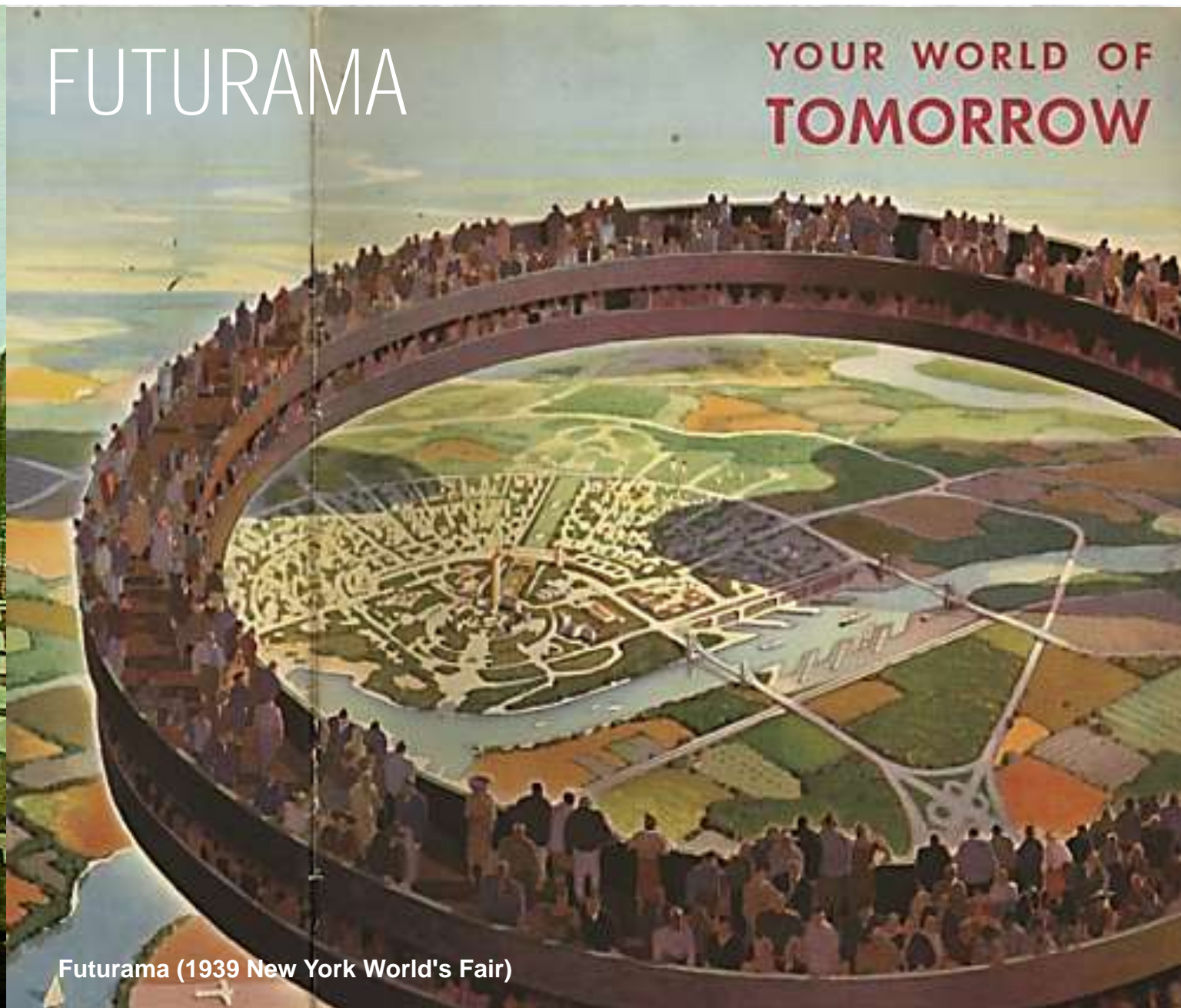
INNOVATION BRINGS UNFORSEEN CHANGES

ALONG WITH DAZZLING INNOVATIONS - *NEW TECHNOLOGIES* CAN BRING *NEW PROBLEMS* WITH THEM



VILLE RADIEUSE

Ville radieuse, *Radiant City*) - designed by the French-Swiss architect Le Corbusier



FUTURAMA

YOUR WORLD OF
TOMORROW

Futurama (1939 New York World's Fair)

CABRINI-GREEN: PUBLIC HOUSING AND POVERTY CONCENTRATION



Cabrini-Green, were adjacent Chicago Housing Authority (CHA) public housing projects

“URBAN SPRAWL”: NEGATIVE IMPACTS TO PUBLIC HEALTH

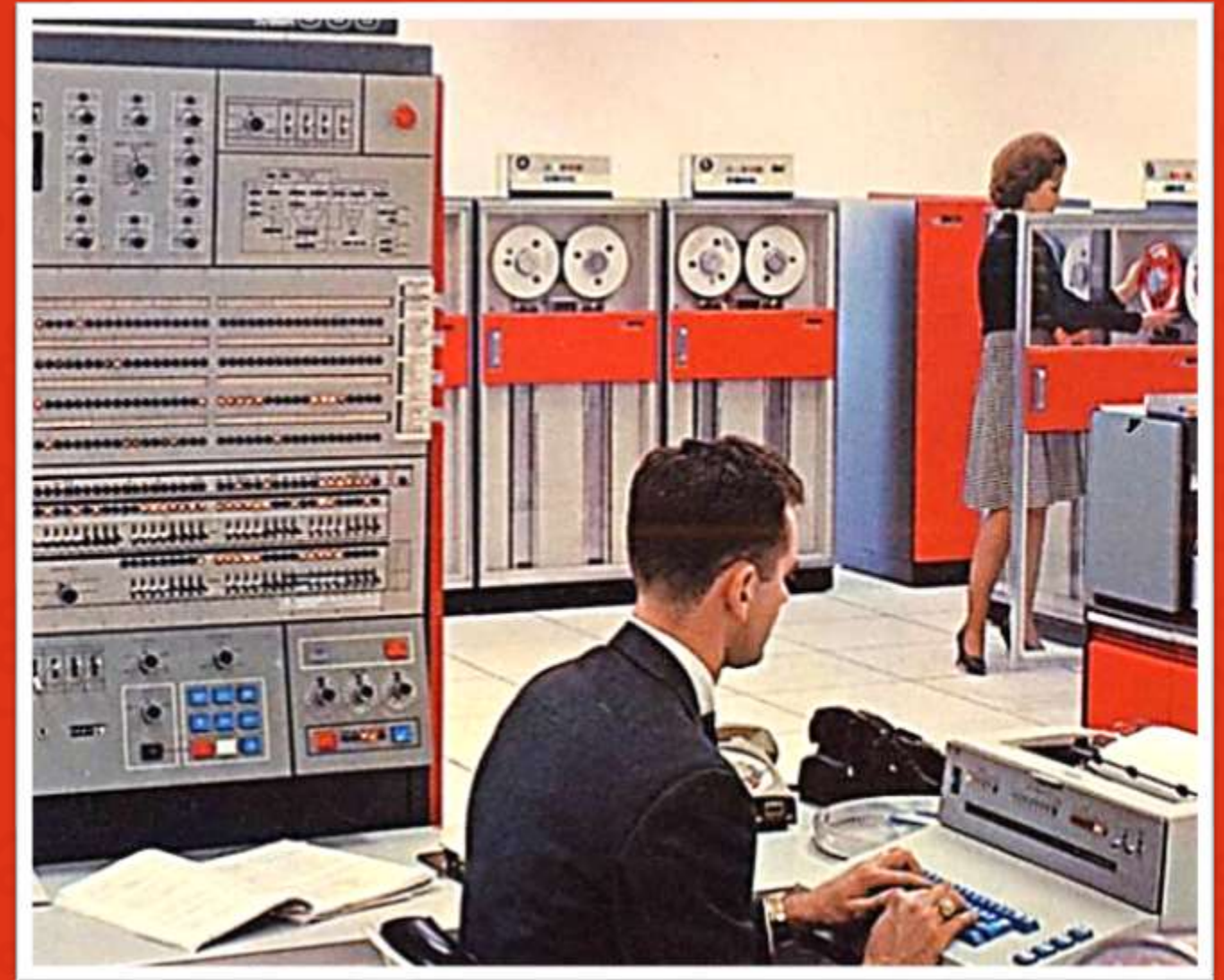


Modern “urban sprawl” in the United States
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1497432/pdf/12432132.pdf>

TWO CATEGORIES OF TECHNOLOGIES DRIVING CHANGE...



1. Transportation & Physical
"Hardware" Innovations



2. Labor Automation: Software &
Artificial Intelligence

CURRENT & FUTURE TECHNOLOGICAL INNOVATIONS

1.



Transportation & Hardware Innovations:

- Autonomous vehicles
- Drones
- Robotics
- Augmented Reality/Virtual Reality
- 3D Printing



2.



Human Labor Automation & Software Innovations:

- Machine learning
- Natural language processing
- Computer vision



1. HARDWARE INNOVATIONS: IMPACTS ON COMMUNITY AND THE BUILT ENVIRONMENT

Potential Changes:

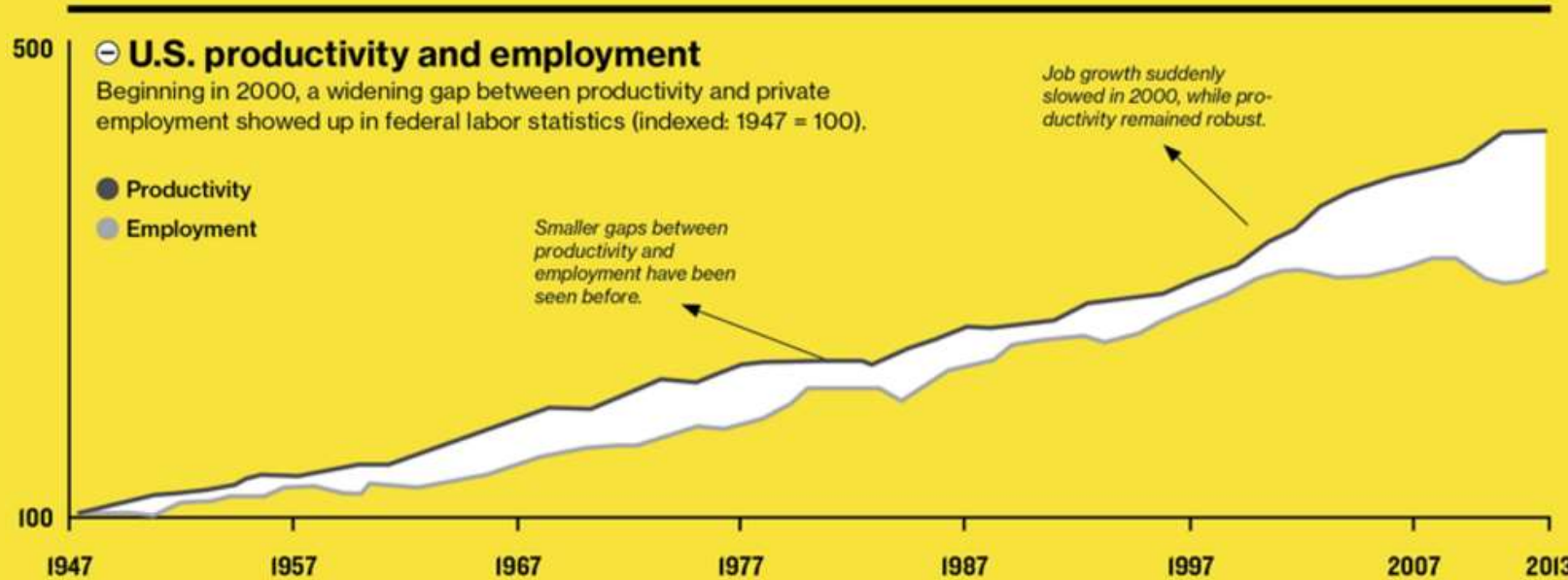
- Land use disruptions
 - Changes to supply and demand of land
- Impacts on pedestrian safety
 - How do innovations affect the pedestrian realm?
- Interactivity: Potential for enhanced interaction with physical environments
- “Smart Cities” – improvements in urban efficiency, operations, energy savings...



2. ARTIFICIAL INTELLIGENCE: IMPACTS ON COMMUNITY AND THE BUILT ENVIRONMENT

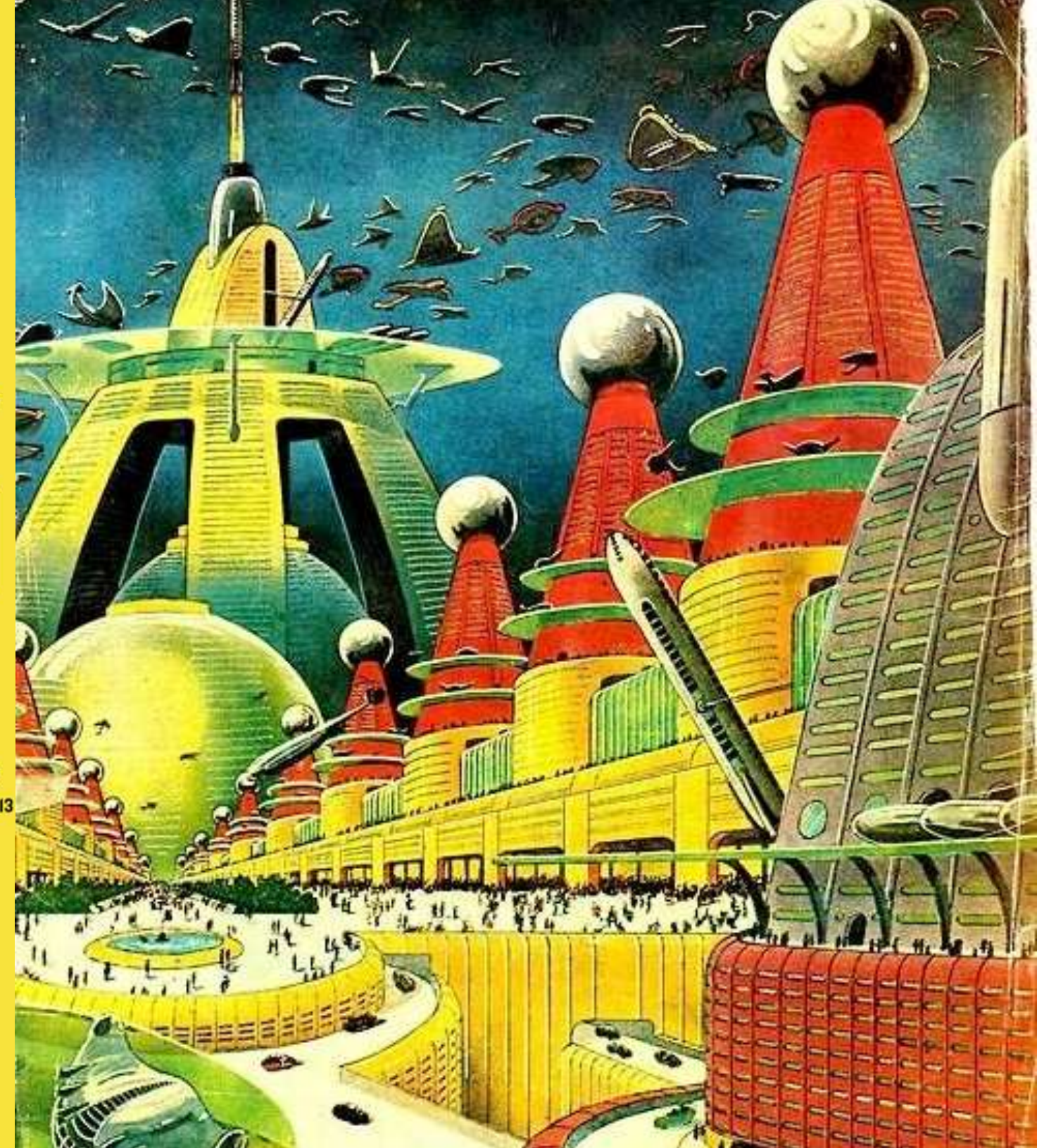
Decoupling Productivity and Employment

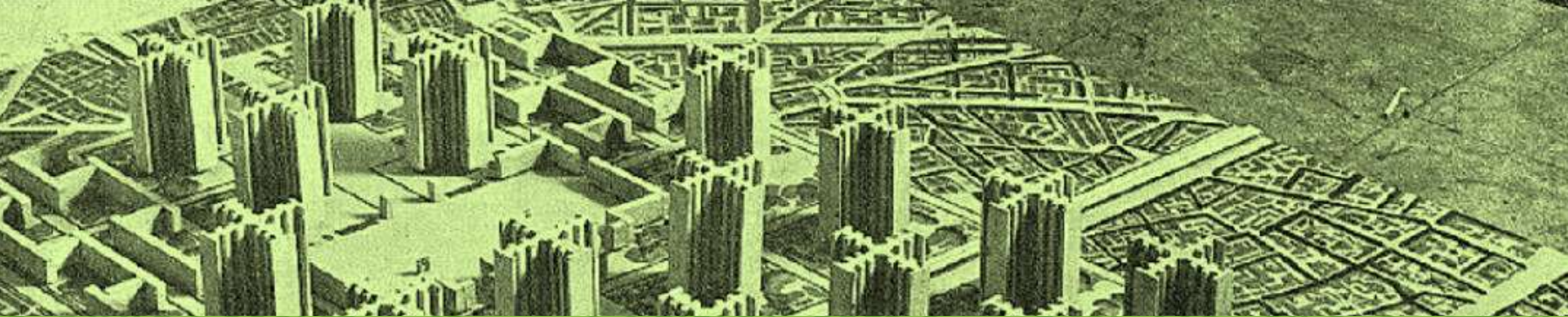
Digital technologies have boosted productivity in the United States without also spurring the expected job growth, argue Erik Brynjolfsson and Andrew McAfee. A result of this decoupling is that while gross domestic product (GDP) has risen, median income has not, and inequality has grown.



Economic Impacts of AI & Automation:

- Increasing income inequality
- Reducing demand for physical spaces – commercial office and retail real estate
- Changing traffic patterns – decentralization of CBDs
- General deflationary effect on the economy





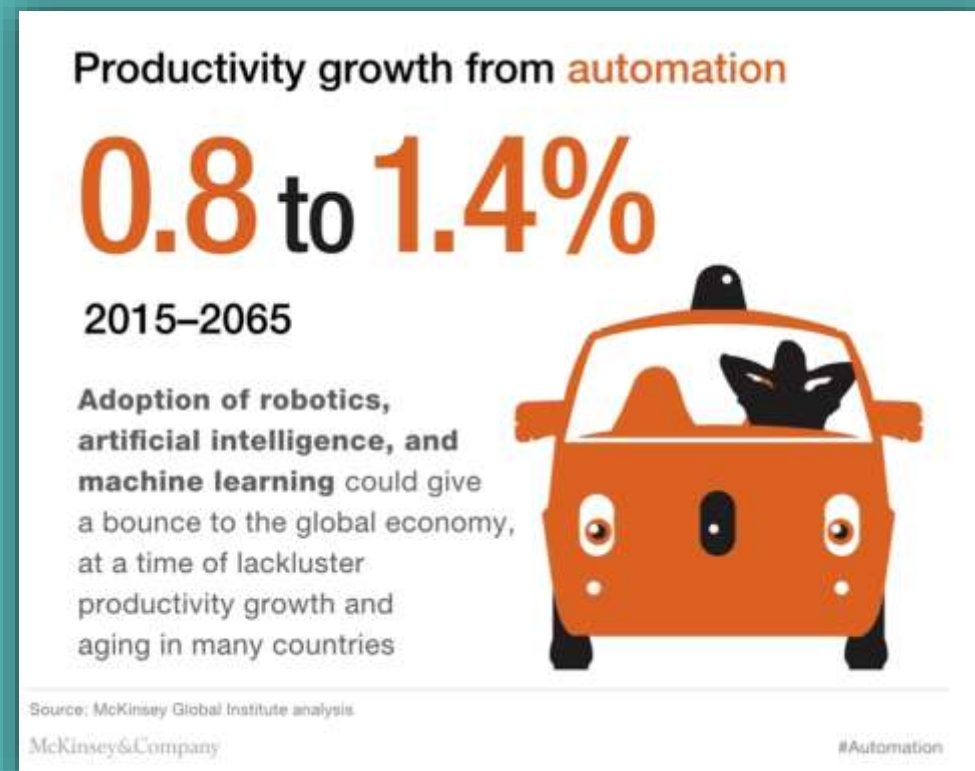
The Path Forward for Cities?



THE FUTURE OF WORK?

How Automation & Tech Affect Work

- Many activities that workers carry out today have the potential to be [automated](#)
- About 60 percent of all occupations have at least 30 percent of activities that are [technically automatable](#),



Concept for redevelopment of DC's Union Market: An office building of the future that integrates co-working and active retail space to give a "neighborhood" vibe to the workplace





Urban Centers as Engines of Human Capital:
Georgia State Law School in Atlanta, Georgia

ECONOMIC & POLITICAL SOLUTIONS:

- Promoting lifelong learning – which is also supported by government and private enterprise ([The Economist](#))
- Shortening the work week (per Carlos Slim, [Bloomberg](#) article)
- Providing “social dividends” that compensate citizens for jobs lost by technology ([Financial Times article](#))
- The World Economic Forum in Davos has been discussing “Universal Basic Income” ([The Institute for New Economic Thinking](#))
- Create incentives for private-sector investment to treat human capital like other capital ([McKinsey](#))

URBAN DESIGN SOLUTIONS:

Can City Design Promote Equality?

- Walkable environments & pedestrian safety: pedestrian-only zones – sanctuaries from vehicular traffic
- Mix of uses supporting pedestrian activity – adaptive reuse of buildings with outdated uses
- Affordable housing; micro units & tiny houses
- Accessible public spaces that are open to all people
- Tactical urbanism: empowering citizens to create public spaces
- Sustainable development: designed around solar & renewables

...and more



City Design & Autonomous Vehicles

- [LoopNYC](#): one lane in each direction dedicated to self-driving cars on the highways that outline Manhattan and also turn several major cross streets into expressways for autonomous vehicles, adding pedestrian overpasses to keep people off streets
- **“Public Square,”** by FXFOWLE, provides New York City a way to rethink its streets and reclaim space for pedestrians - winner of [The Driverless Future Challenge](#)



LoopNYC: New York City Reimagined through Autonomous Vehicles



Turning Broadway into Open Space

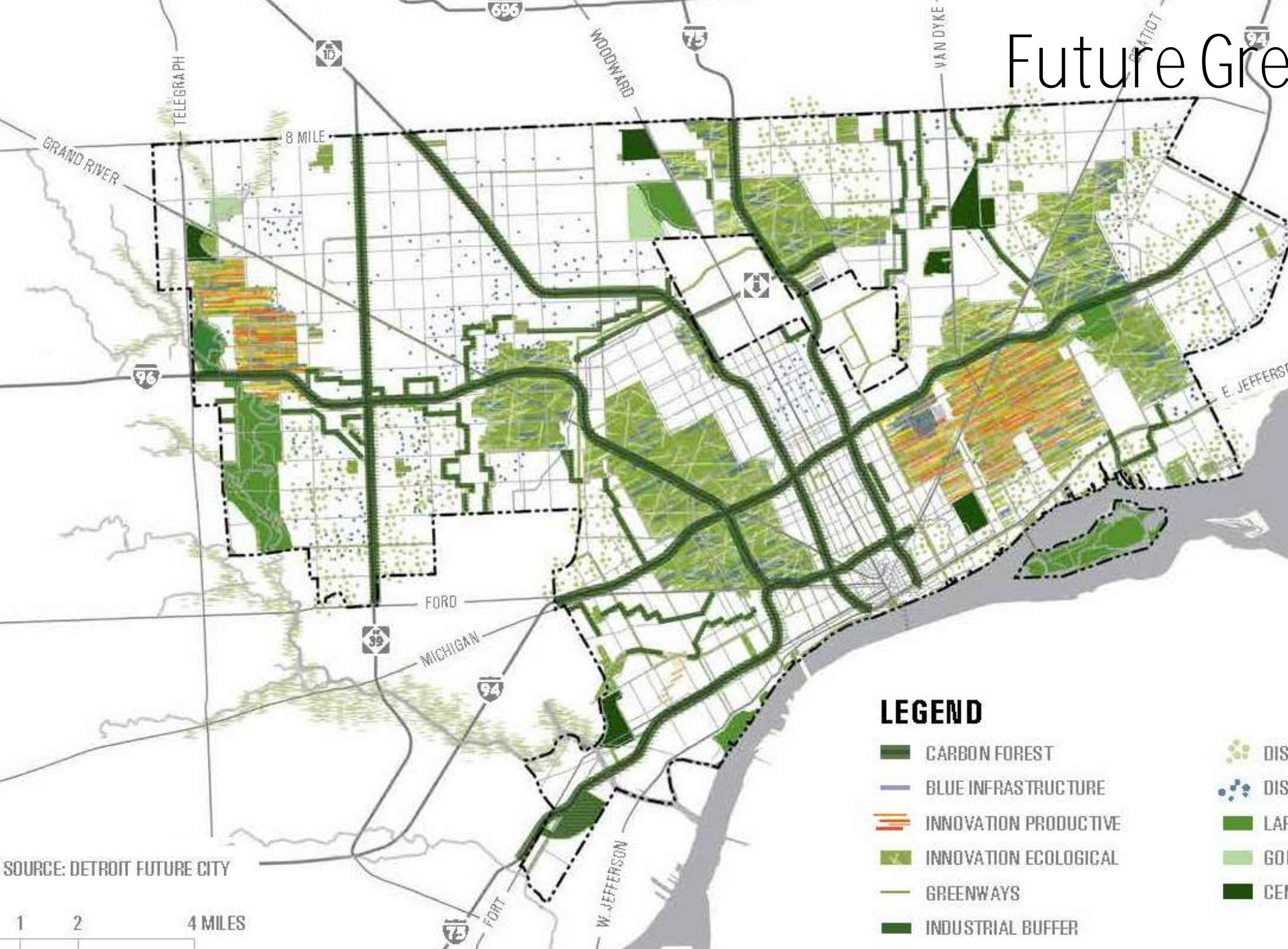


The Driverless Future Challenge

Future Green Infrastructure

Increasing the amount of green infrastructure can connect people to

- natural resources
- cultural destinations
- employment
- healthy food options



SOURCE: DETROIT FUTURE CITY

1 2 4 MILES

The background of the image is a solid blue color with a repeating pattern of white lines and small circles, resembling a printed circuit board (PCB) or a network diagram. The pattern consists of interconnected lines and nodes, creating a complex, maze-like structure. The word "Discussion" is centered in the middle of the image in a white, sans-serif font.

Discussion