

ON TO 2050

# ON TO 2050 Strategy Paper:

## Emerging Transportation Technology

June 21, 2017



shared-use mobility  
**MODES**

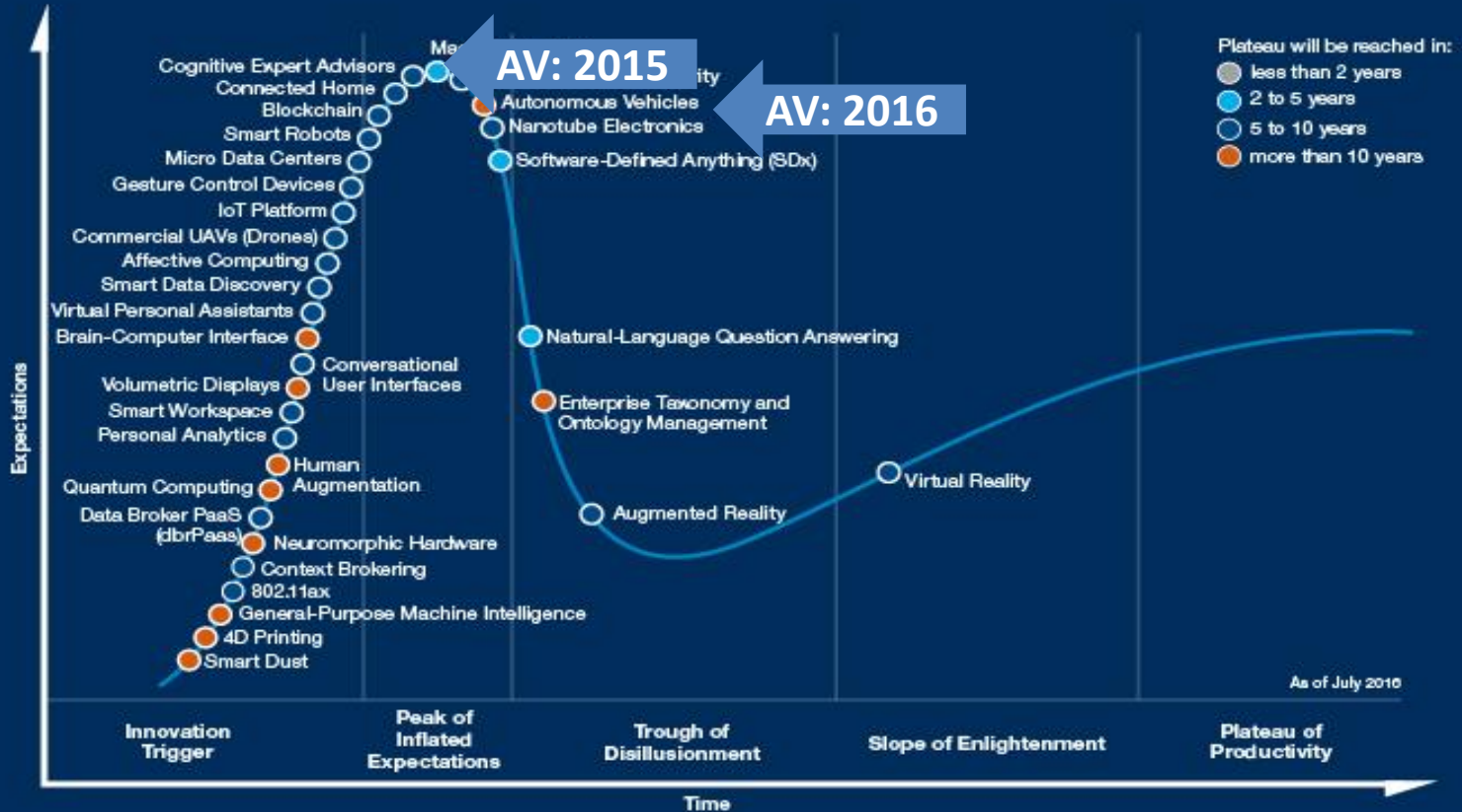


# Emerging Technologies

- Connected Vehicles & Smart Infrastructure
- Automated Vehicles
- Shared Mobility
- Big Data
- Alternative Energy

# Uncertain Trajectories

## Gartner Hype Cycle for Emerging Technologies, 2016

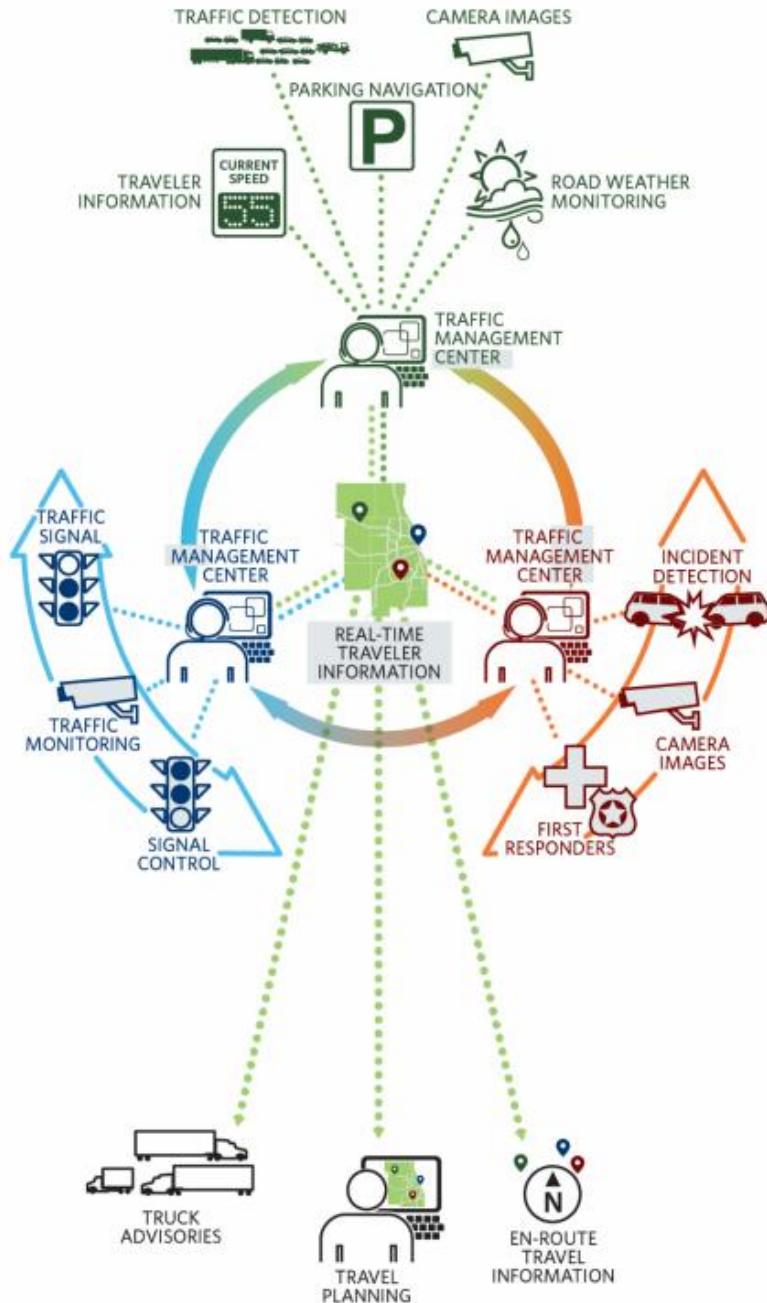


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Gartner.

# Connected Vehicles and Infrastructure



- Build on existing highway operations strategies
- Increase capacity on roads without expansion
- Improve transit operations and increase transit attractiveness
- Communication standards still under development
- May change capital maintenance and data processing needs

## AUTONOMOUS VEHICLES & THE EVOLUTION OF THE PARKING GARAGE

PHASE 2: 2025 - 2035

As car ownership evolves to a subscription service with intelligent fleets, there will be less need for parking. Garages are transformed into other uses such as office, residential and hotels.

In 2035, the need for parking should decline by more than 5.7 billion square meters in the United States  
(This equates to half the size of Connecticut) Source: McKinsey & Co.



# Automated Vehicles

- In combination with connected vehicles and infrastructure, could dramatically improve safety and reduce congestion
- Potential to reduce parking needs in commercial areas
- Ownership model
  - » Private ownership could expand region's perimeter
  - » Shared ownership could promote walkability



shared-use mobility  
**MODES**



- Most effective in denser environments
- Can facilitate more walkable mixed-use development and support carless households
- May complement or compete with transit
- Questions about long-term business model viability
- Lack of data from private sector mobility providers



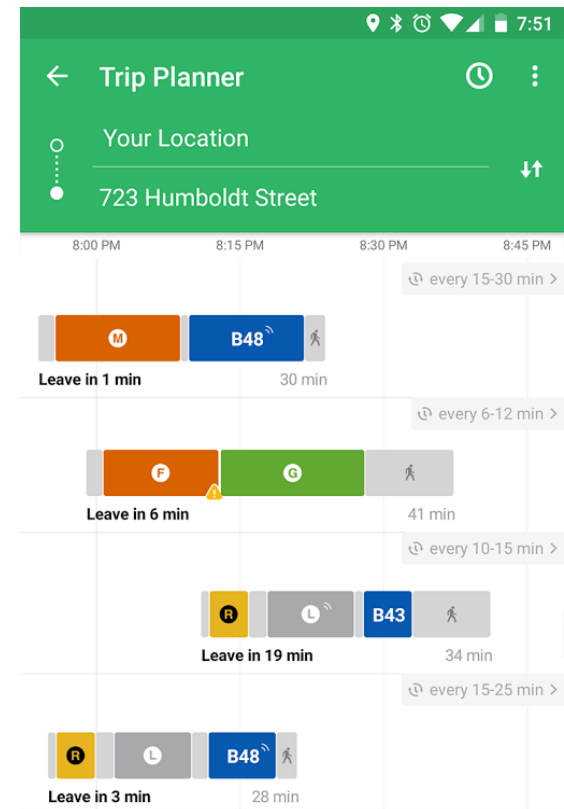
# Big Data

- Better tracking and communication of current conditions
  - » Operations and infrastructure
  - » Increased transparency
- Better understanding of active transportation modes
- Transformed suburban downtown space needs
- Changing supply chains
  - » Online ordering of goods and increased local deliveries
  - » Less retail, changed manufacturing and distribution



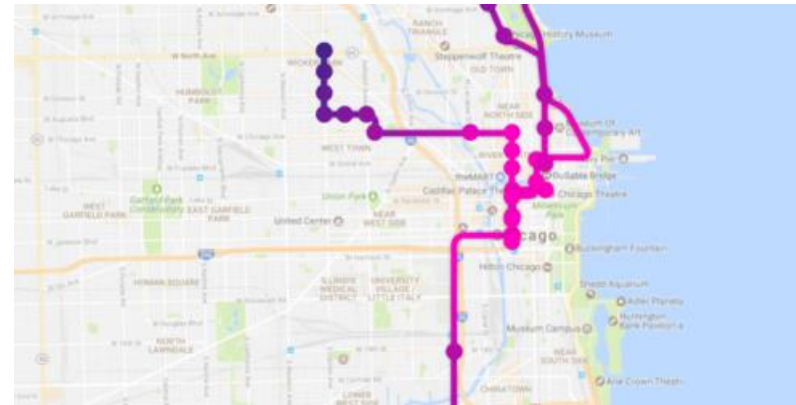
# Transportation Strategies (selected)

- Direct transportation funding to innovative technology (e.g. Divvy, operations centers, alternative fuels)
- Pursue innovation to continue to make transit competitive on high ridership routes
- Develop pricing options for AVs that:
  - Minimize VMT
  - Support the competitiveness of transit
- Develop new freight fee and parking pricing structures



# Land Use Strategies

- Provide infrastructure to support shared mobility in downtowns and activity nodes
- Further active transportation as a first/last mile solution through added bike/ped infrastructure
- Plan for development that can transition to more walkable format over time



# Questions

- How is emerging tech affecting communities?
- What strategies can support local and regional land use goals?
- What are municipal needs in planning for emerging tech?

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**Emerging Technologies:**

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