

MAY 15, 2018

CLARK COUNTY  
COMMISSION ON  
AGING

TRANSPORTATION  
SPEAKER SERIES



# MOBILITY IN THE TECH GILDED AGE

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# KEY TECHNOLOGY TRENDS

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# USER- FACING TRENDS

- Mobile Devices
  - Multi-purpose
  - Networked
  - Location- & environment-aware
  - Personal avatar in the internet
- Cost of Communication  
Approaching Zero
  - Question now is “Should We?”  
rather than “Can We?”

# TRANSPORTATION INDUSTRY TRENDS

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## Vehicles Will Be:

- Connected
- Shared
- Electrified
- Automated
- FAVES  
(Fleets of Autonomous Vehicles that are Electric and Shared)



# TECH SECTOR TRENDS

- Big Players
- Internet of Things
- Big Data
- Artificial Intelligence
- The Cloud
- (X)aaS – Everything as a Service

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# MOBILITY AS A SERVICE (MaaS)

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(AKA: MOBILITY ON DEMAND, TRANSPORTATION AS A SERVICE)

# GOAL of MaaS

To provide a comprehensive package of transportation services that can replace personal vehicle ownership

# KEY MaaS ELEMENTS

- Easy Discovery
- Easy Decision-Making
- Easy Booking
- Easy Mode Transfers
- Easy Payment



# A FEW SELECT MaaS PLAYERS

- |                      |  |
|----------------------|--|
| • Apps               | <ul style="list-style-type: none"><li>• Moovel (Daimler)</li><li>• Uber</li></ul>  |
| • TNCs               | <ul style="list-style-type: none"><li>• Lyft</li><li>• Uber</li></ul>  |
| • Transit            | <ul style="list-style-type: none"><li>• Chariot (Ford)</li><li>• Bridj (defunct)</li><li>• Public Transit Agencies</li></ul> |
| • Car Share          | <ul style="list-style-type: none"><li>• Car2Go (Daimler)</li><li>• Reach Now (Mercedes)</li><li>• Maven (GM)</li></ul>       |
| • Bike(ish)<br>Share | <ul style="list-style-type: none"><li>• Jump (Uber)</li><li>• LimeBike, Ofo, MoBike, ...</li><li>• Scoot Networks</li></ul>  |
| • Fare<br>Payment    | <ul style="list-style-type: none"><li>• Visa</li><li>• Cubic</li><li>• TriMet (Hop)</li><li>• Uber</li></ul>                 |
| • Also               | <ul style="list-style-type: none"><li>• Amazon</li></ul>   |

# EASY DISCOVERY

- Requires
  - Apps
  - Data Sharing
  - Data Standards
    - General Transit Feed Spec
    - GTFS Real Time
    - GTFS Flex
- Challenges
  - Tragedy of the Commons

# EASY DECISION- MAKING

- Requires
  - Apps
  - Market-Based Pricing
- Challenges
  - Subsidies
    - Venture capital
    - Infrastructural debt
    - Other externalized costs

# EASY BOOKING

- Requires
  - Apps
  - Standardized Application Programming Interfaces (APIs)
  - Vendor API Terms of Use That Presentation With Other Options
- Challenges
  - Subsidies
  - Anti-competitive API Terms of Use

# EASY MODE TRANSFERS

- Requires
  - Apps
  - Big Data (Sharing)
    - Historical
    - Real Time
  - Good Design
- Challenges
  - Research Needed
  - Institutional Barriers

# EASY PAYMENT

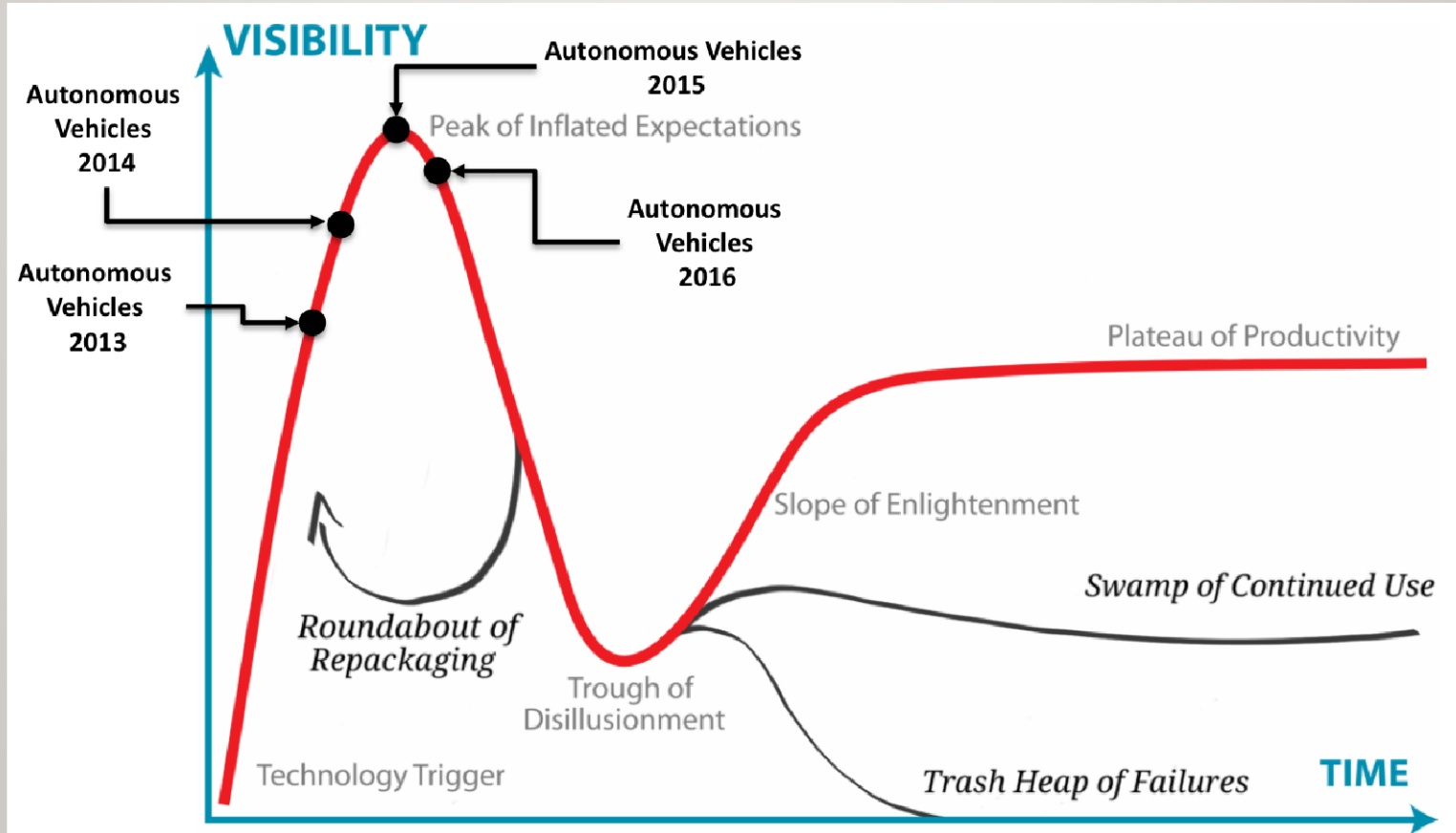
- Requires
  - Apps
  - Data Standards
  - Mobility Accounts
- Challenges
  - Institutional Barriers
  - Bringing Competitors to the Table
  - Affordable Micropayments

# OTHER MaaS REQUIREMENTS

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- Central “Mobility Manager” Role
  - Everyone wants to be the hub
  - Complex role that’s easy to abuse
  - How to get both agility + public interest?
  - Business models matter. A lot.
  - Transportation trusts?
- Density
  - Currently pencils out in urban areas
  - Changing that will require thoughtful policy & planning
  - Automated fleets
  - Integrated community-based transportation

# CHALLENGE: IT'S STILL EARLY



Gartner Hype Curve, 2016, edited by Graham Currie



# THE OPPORTUNITY: **UNIVERSAL MaaS**

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- Fully Include People with Barriers to Mobility
- Reduce the Need for “Parallel” Services
- Universal MaaS Can Make “Conventional” MaaS More Workable for the General Public
- Where Innovation and New Business Models meet Equity, Inclusion, and Social Outcome Goals
  - Age-Friendly Communities
  - Aging in Place
  - Mobility as a Form of Healthcare

# Q & A

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# Attributions

Autonomous Bus Photograph by [Gnangarra](#), commons.wikimedia.org

“FAVES” acronym coined by Robin Chase, [robinchase.org](#)

“Universal MaaS” term coined by Jana Lynott, Senior Strategic Policy Advisor, AARP Public Policy Institute

“Transportation trust” concept by Steve Guttman, Senior Account Manager, Moovel

Automated Vehicles Technologies and their Progress through the Hype Curve, “Lies, Damned Lies, AVs, Shared Mobility, and Urban Transit Futures”, *Journal of Public Transportation*, Vol. 21 No. 1 [2018] pp. 19-30.

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