



## Blueprint Denver Task Force

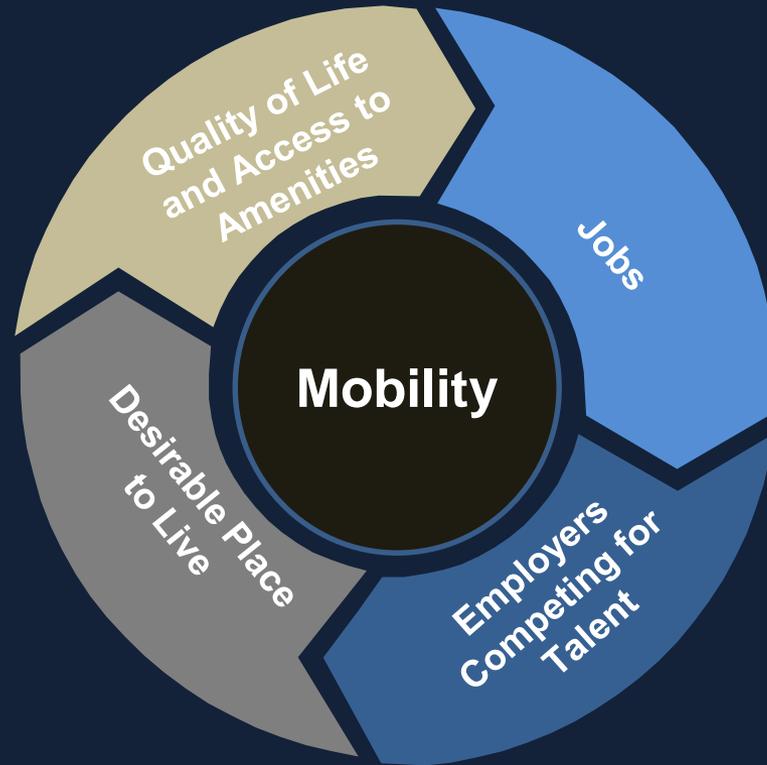
*Edward Klock-McCook, Manager, Rocky Mountain Institute  
April 27th, 2017*

# Denver is on FIRE

How do we keep that momentum while preserving that which brought it in the first place?



# Denver's Success Is Based On:



Electric

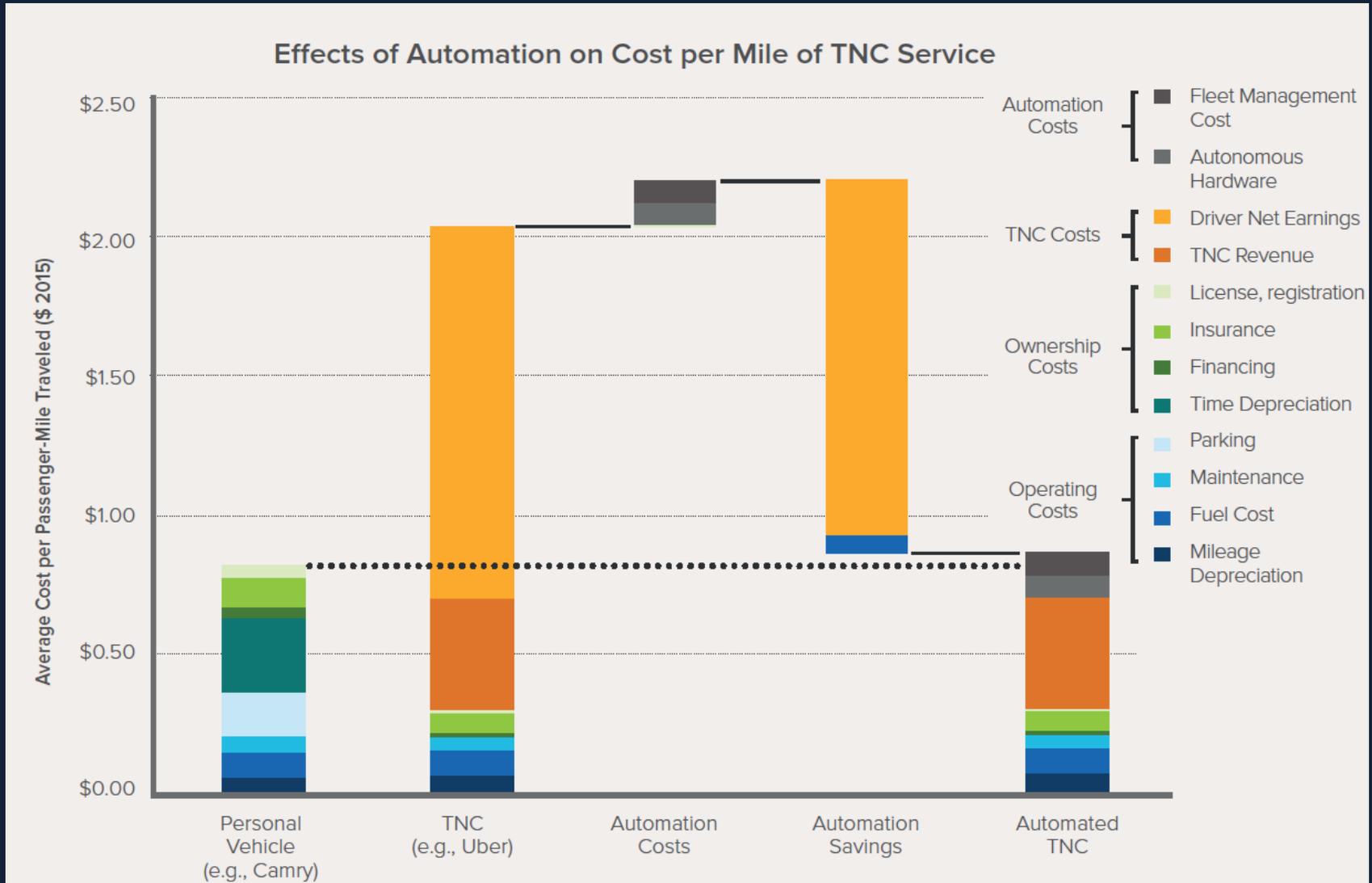
Autonomous

Mobility as a Service

**In a city designed for it**

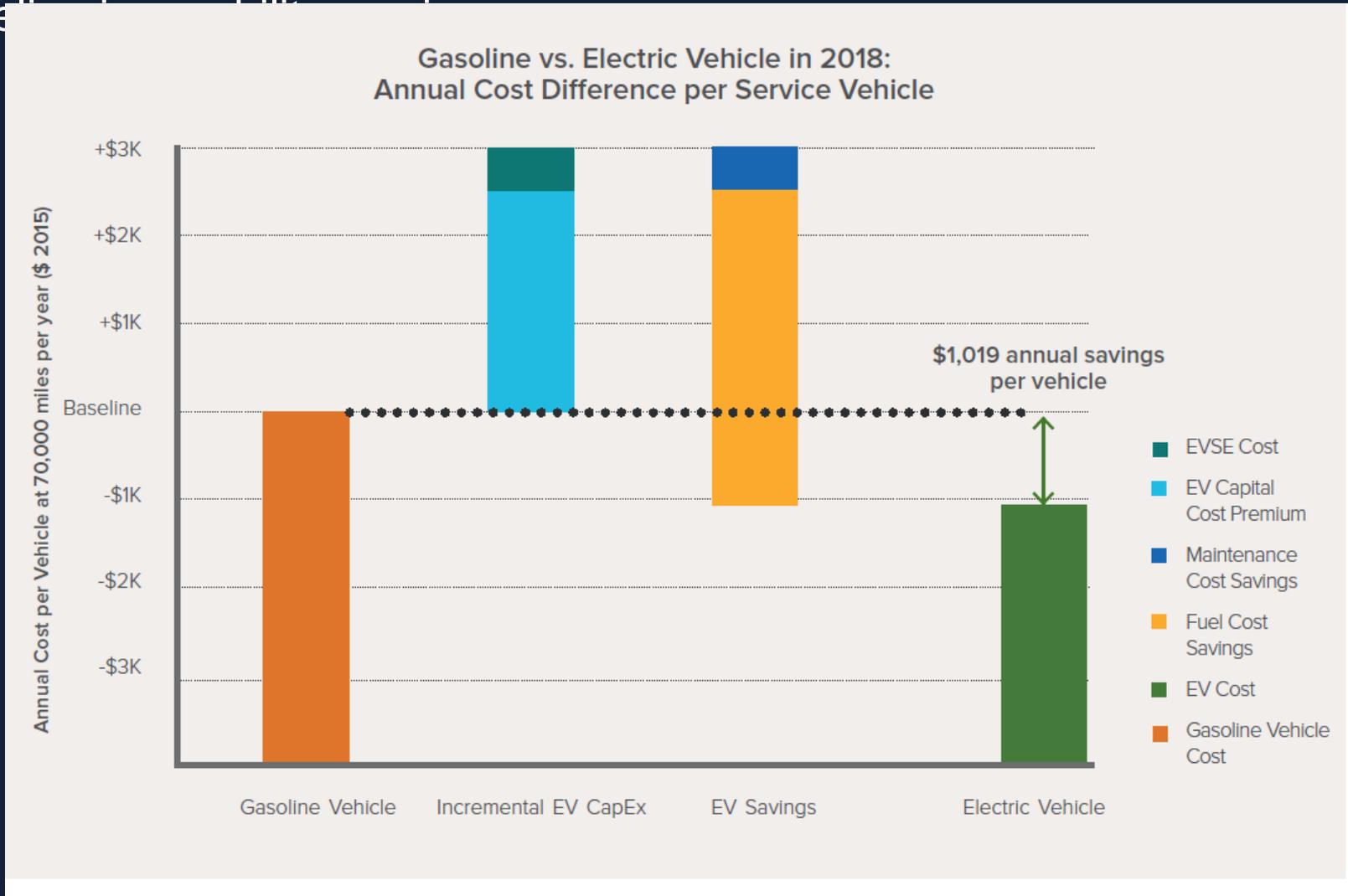
# Mobility services

By 2018, using electric, autonomous Mobility as a Service (eaMaaS) for transportation could cost the same as owning and operating a car.



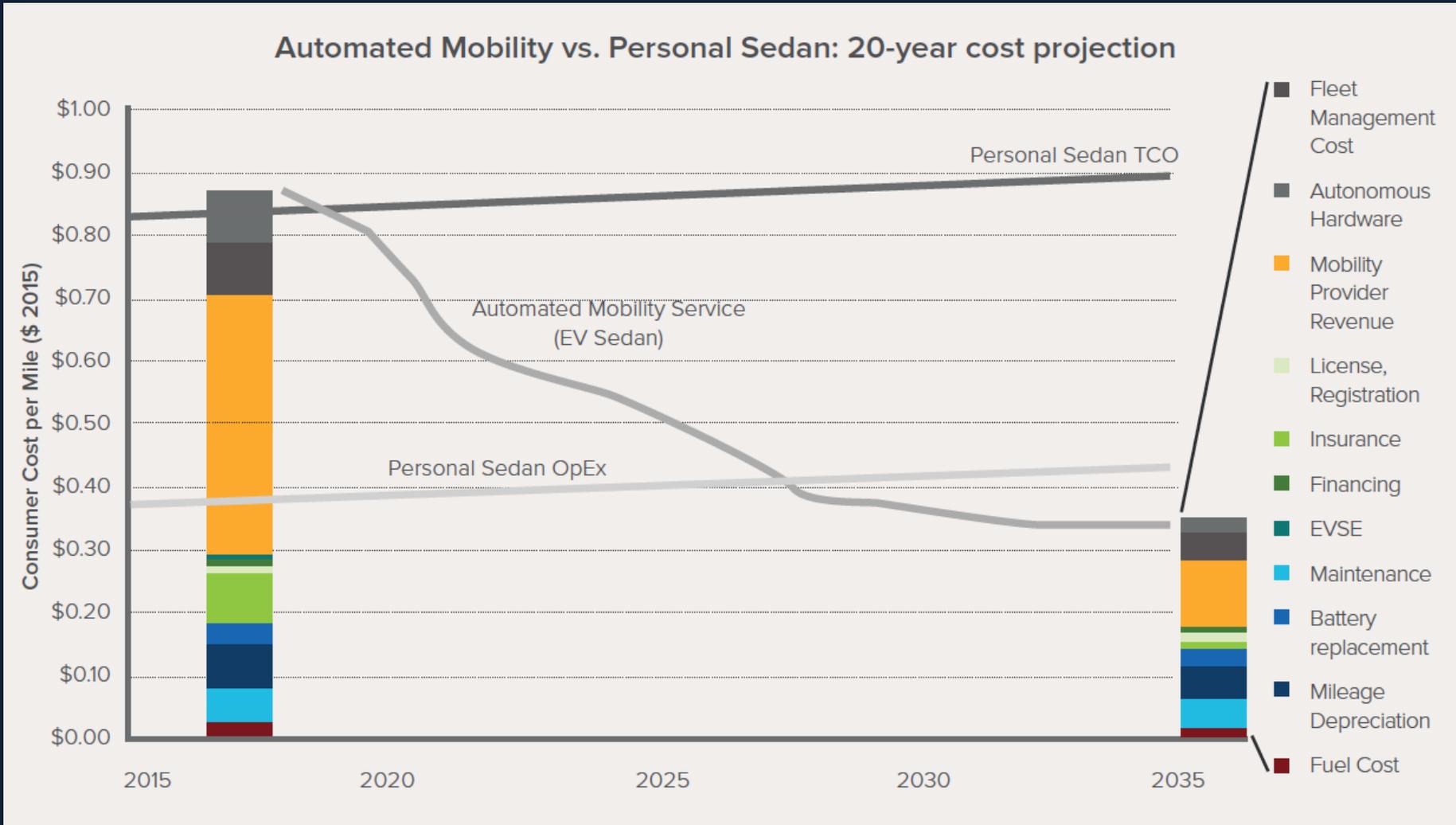
# Tipping the balance to EVs

EVs will have sizeable cost advantages over gasoline vehicles in



# As mobility services scale, costs will

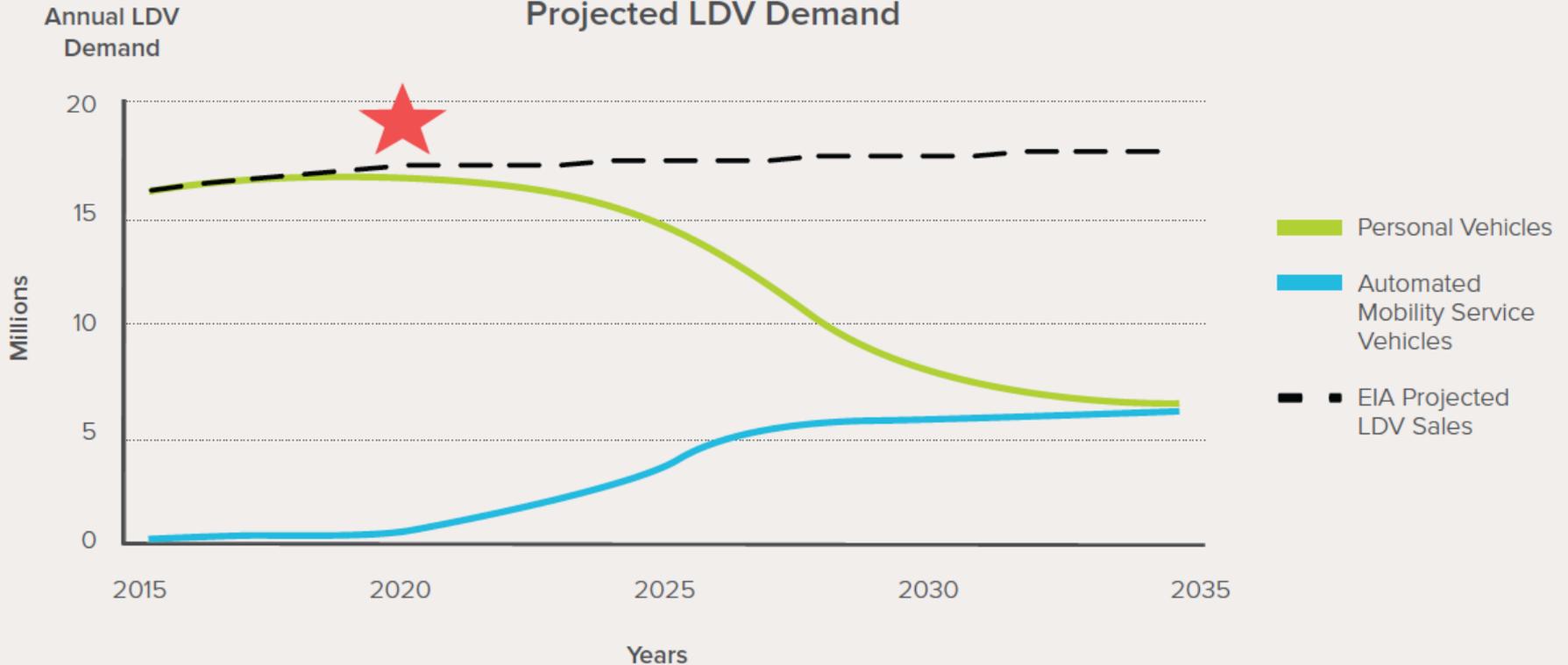
fall  
The cost advantage for automated mobility will increase over time.



# Peak car ownership

The total number of LDVs could fall as personal vehicle ownership declines.

Peak Car Ownership:  
Projected LDV Demand



# Why AVs will not be personally owned

**\$0.60/mile → Cost of a gasoline vehicle today**

+ **40%** → Cost premium for an individually owned AV (\$0.84/mile)

- **45%** → Cost savings for single-occupant autonomous mobility service (\$0.33/mile)

- **67%** → Cost savings for multi-occupant autonomous mobility service (\$0.20/mile)

**Individually owned AVs will cost almost \$8000 more per year than eaMaaS**

# A boon for public transit

- **In the long term:**
  - Electric, Autonomous Mobility-as-a-Service can be public transit
  - Public transit is not limited to 50 foot buses and large trains
  - Autonomous vehicles are not limited to small vehicles

**eaMaaS does not exclude public transit, it enhances it**

# Is this going to happen? It already is!

EV

+

AV

+

MaaS

INDUSTRY NEWS > TRANSPORTATION

## In U.S. first, Uber launches electric vehicle-focused program in Portland

Apr 12, 2017, 5:26am PDT Updated Apr 12, 2017, 1:45pm PDT

INDUSTRIES & TAGS Transportation, Energy, Sustainability

TECHNOLOGY

## Waymo to Offer Phoenix Area Access to Self-Driving Cars

By DAVID STREITFELD APRIL 25, 2017

Officials want to take 100,000 cars off Los Angeles County's streets in 5 years

KPCC Staff September 14 2016

= eaMaaS

What about the City Designed For It?

# Accelerate: Near-term Action

- **Main Hurdles**

- Cost
- Entrenched Behavior
- Unproven

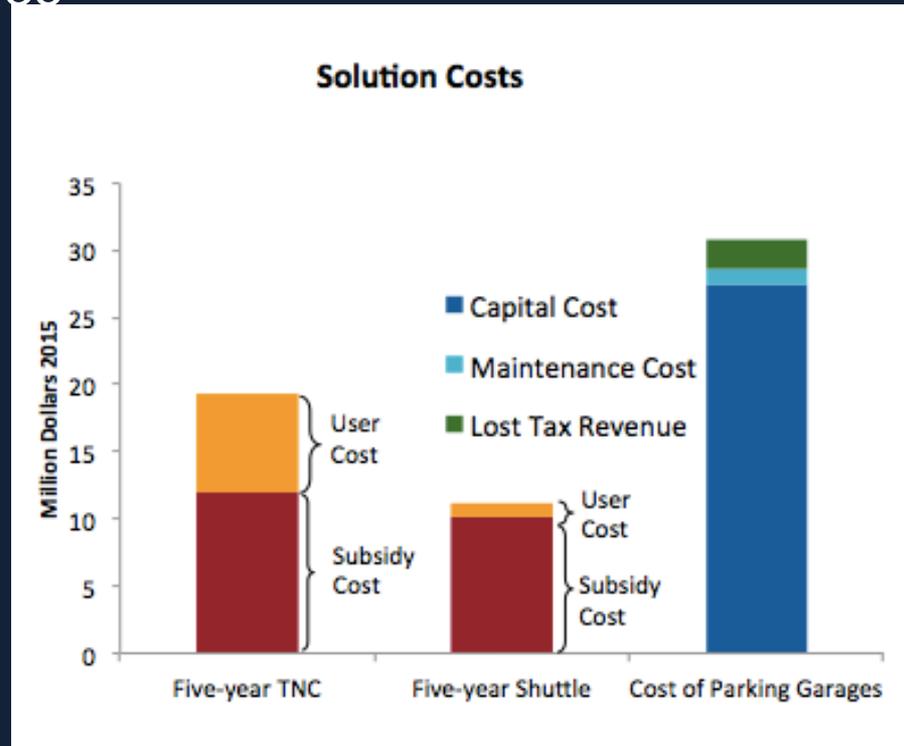
- **Solutions**

- Short-term Subsidy
- Fail fast and learn
- Generate data and lessons learned

**This is about greasing the skids**

# An Example

Conventional approach: Boulder needs 2700 more parking spaces in downtown by 2035



**In 5 years, the parking won't be needed, and neither will the subsidy!**

# Long-term Strategy

- **Questions that need answers**

- What happens if parking demand goes down by 50% in the next 10 years?
    - Surface Lots
    - Residential Parking
    - Office Parking
    - Street Parking
- Massive economic implications in addition to land use
- What is required if 50% of people are arriving to work by means other than SOV
  - What is required if light rail/BRT ridership doubles?

**Long-term plans need to accommodate these eventualities**

# What do we do now?

- Set a transformational goal → 20% of SOV drivers using new mobility by 2020?
- Outline the steps required to get there → There is no silver bullet
- Test early and often → Generate data, learn, communicate, repeat

**“A City Designed For It”**

Together, we can *accelerate*  
Denver toward the future