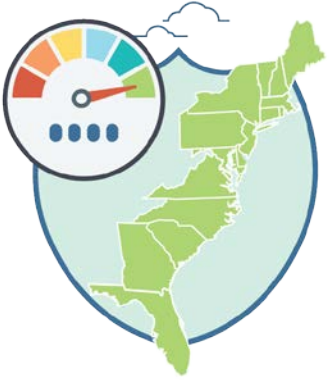


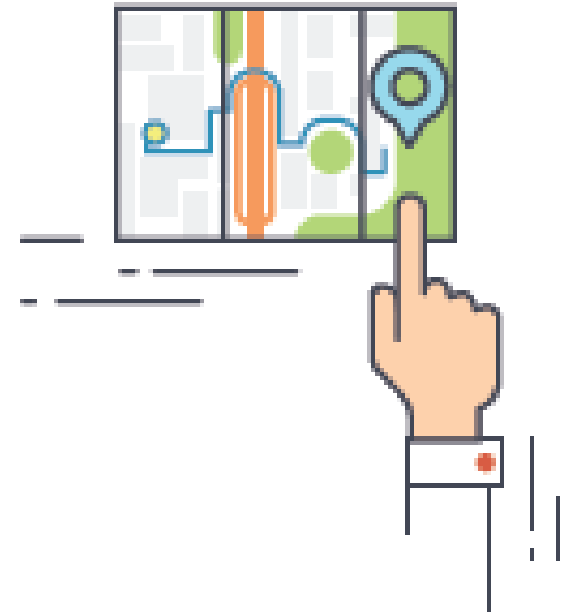
Bringing MBUF Exploration to the East Coast

Dr. Patricia Hendren
Executive Director, I-95 Corridor Coalition



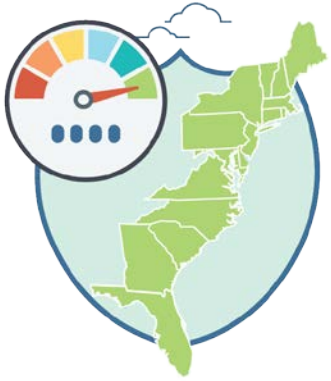
Insights to share from I-95 MBUF Study

1. The problem is here and now
2. Opportunities abound
3. I-95 MBUF study overview
4. Phase I pilot launch





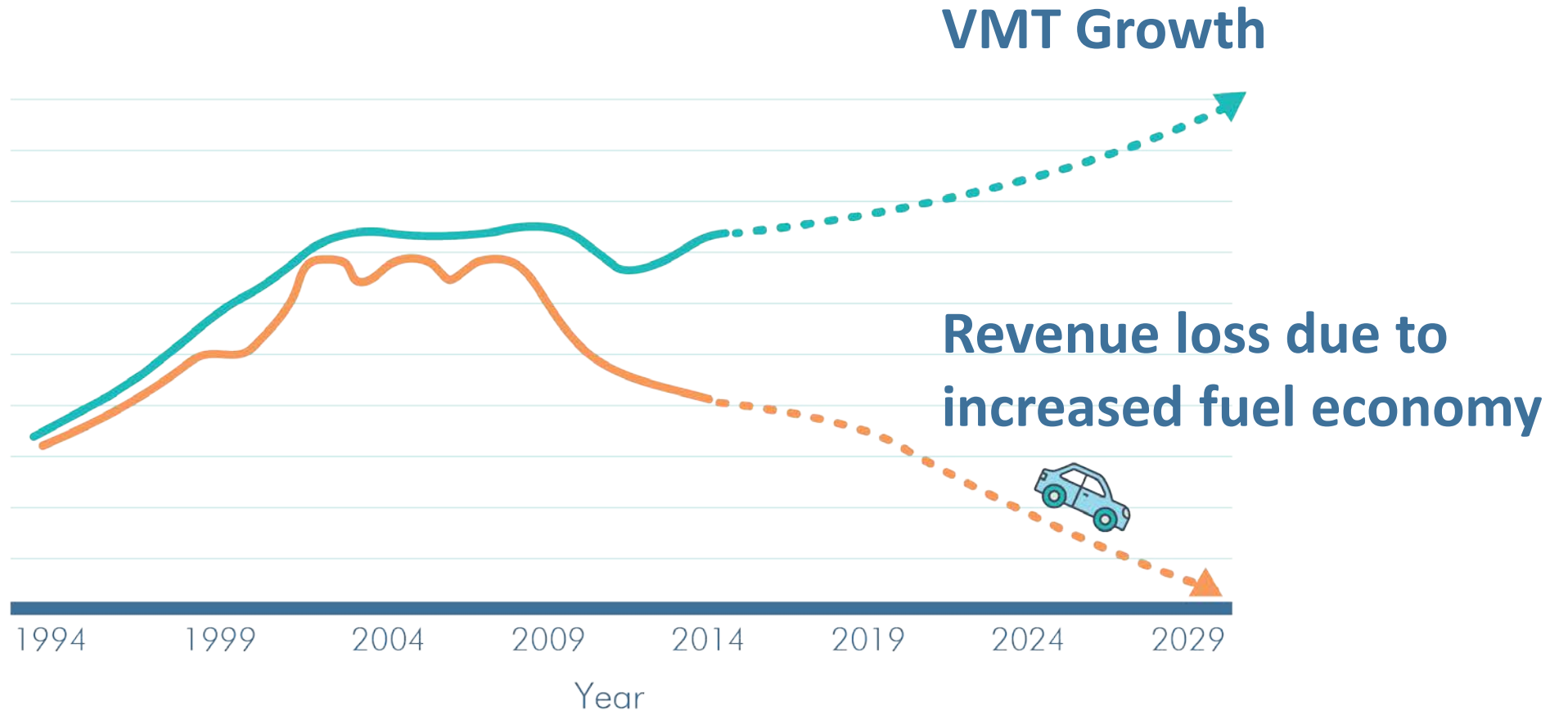
THE PROBLEM

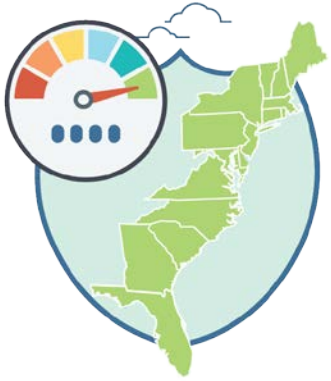


Transportation revenue is declining

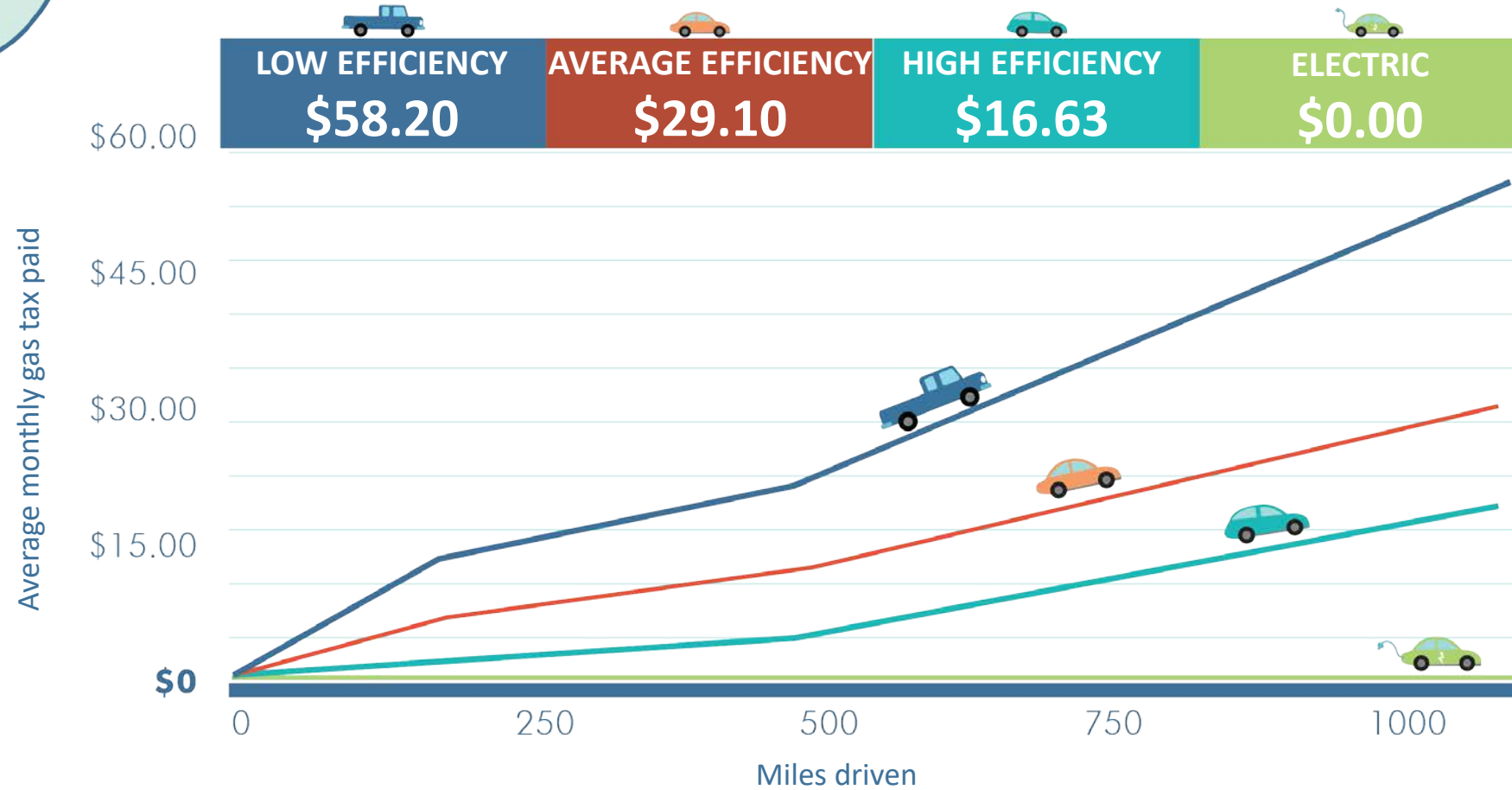
Vehicle Miles Traveled

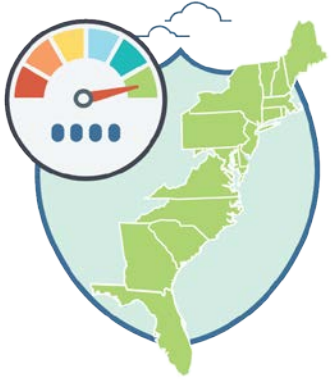
Gas consumption with increased efficiency





Transportation fleet is changing

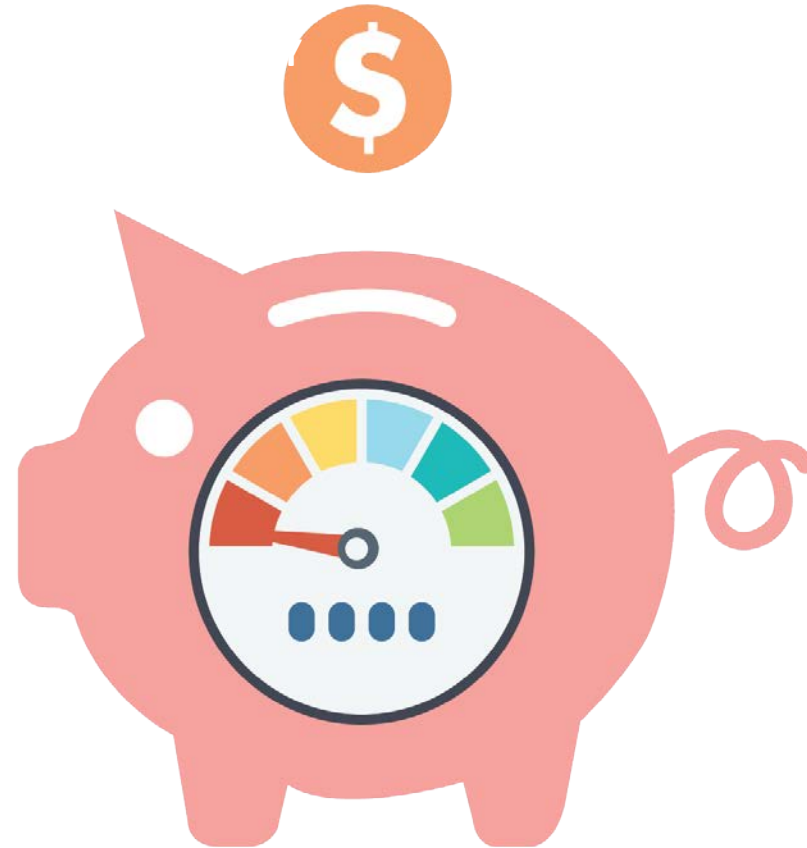




Transportation fleet is weakening

39%

Decrease in purchasing
power of gas tax
since 1993



～_(ツ)_/\~

**Drivers have no idea
how little they are
paying in gas tax.**

OPPORTUNITIES



**1 million times
more memory**



64G

of memory
on iPhone X

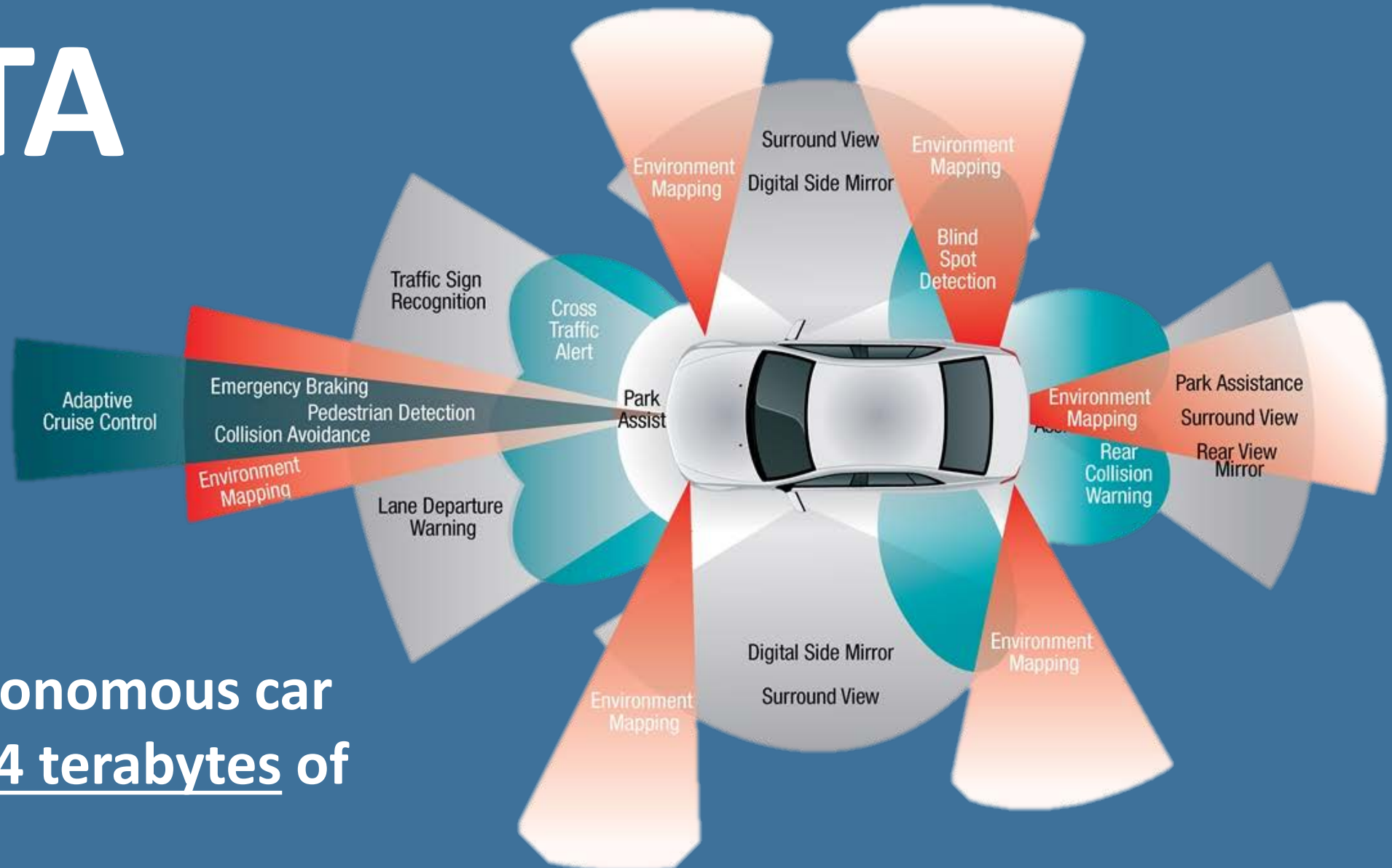


64K

of memory on
Lunar Module

DATA

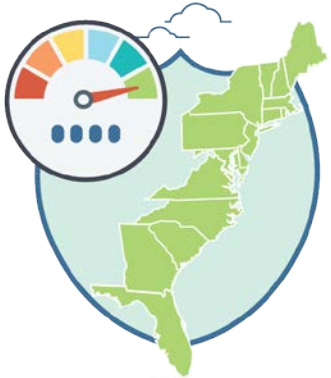
1 semi-autonomous car
generates 4 terabytes of
data a day





MORE DATA
THAN **3,000 PEOPLE**





People are more connected & demanding



411

Million devices
worth \$34 billion

WEARABLE TECH



92%

Of adults now have
a cell or smart
phone

SMART PHONES



\$6.5

Billion in revenue
By 2019

RIDESHARING



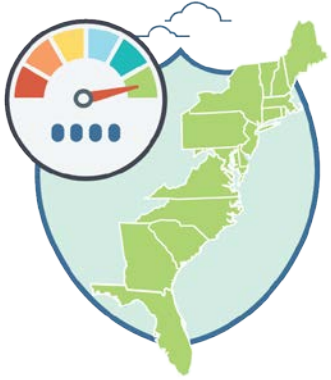
POSTMATES

NETFLIX

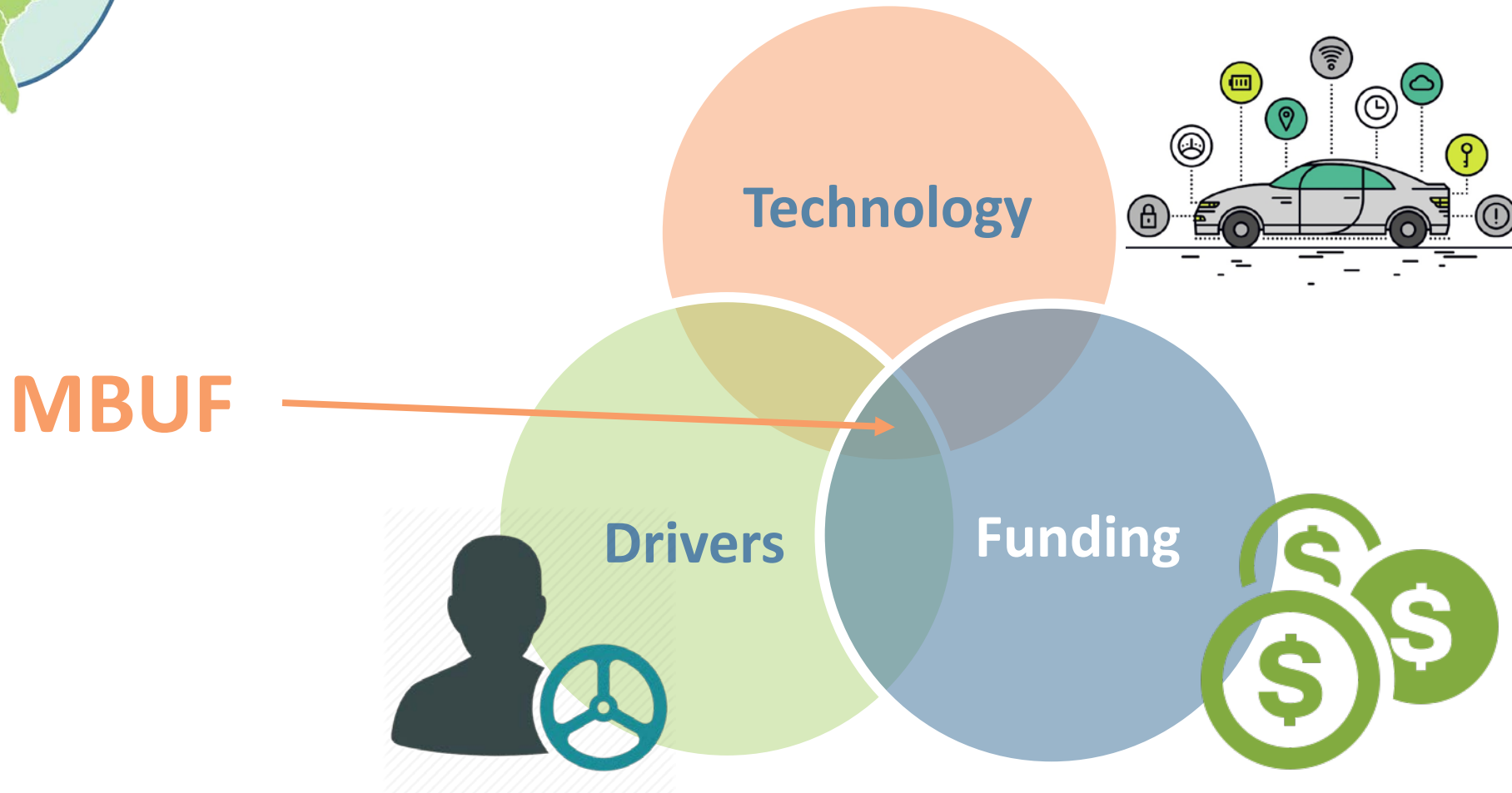
\$57.6

Billion a year on
the on-demand
economy

ON-DEMAND SERVICES

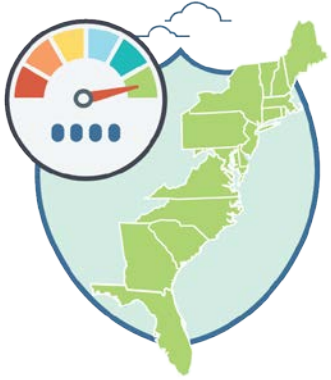


MBUF is the intersection of these trends

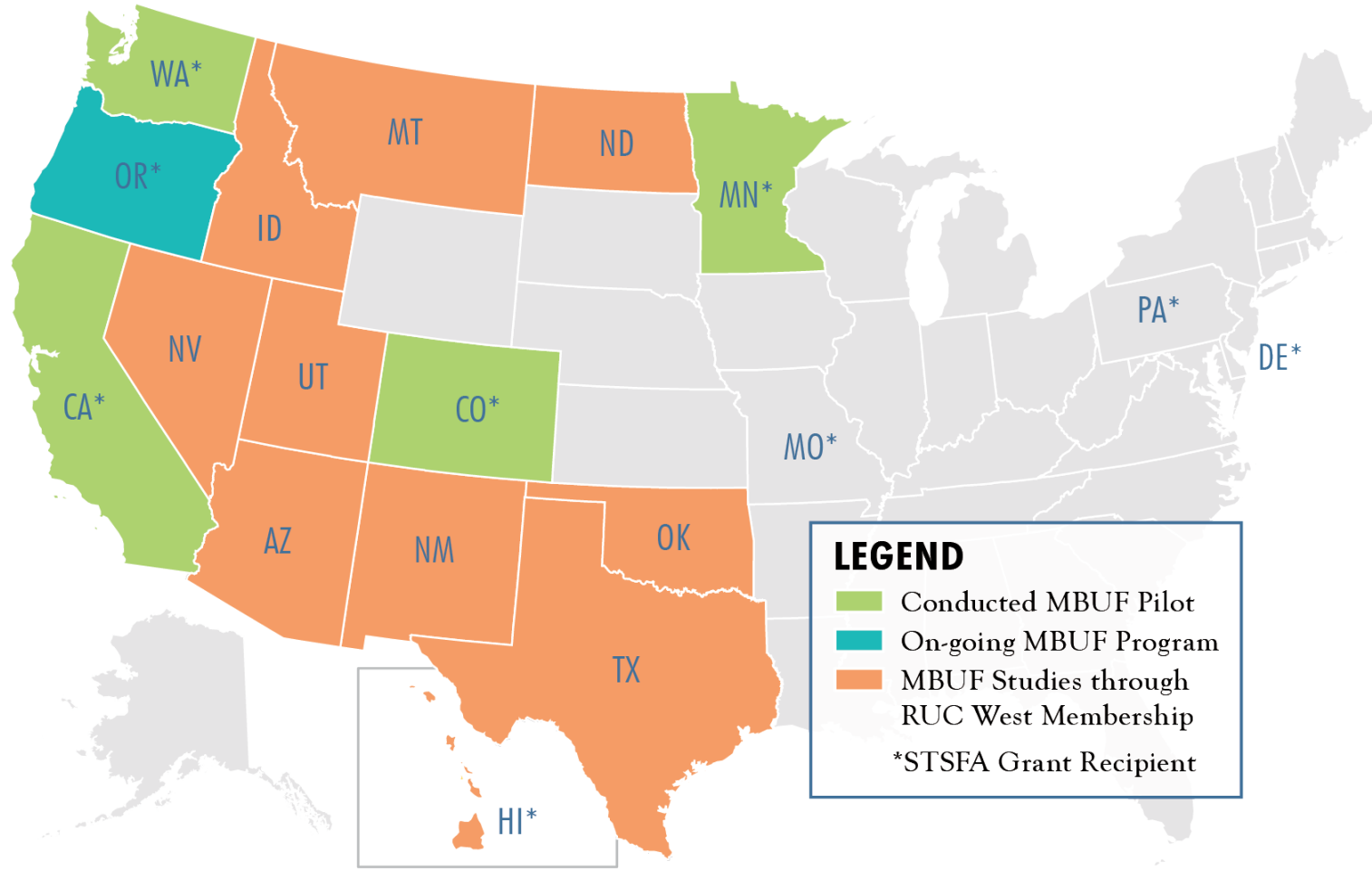


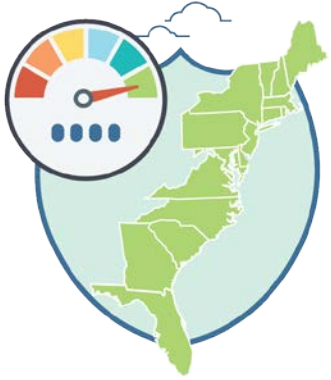


I-95 MBUF STUDY



East Coast voice is needed



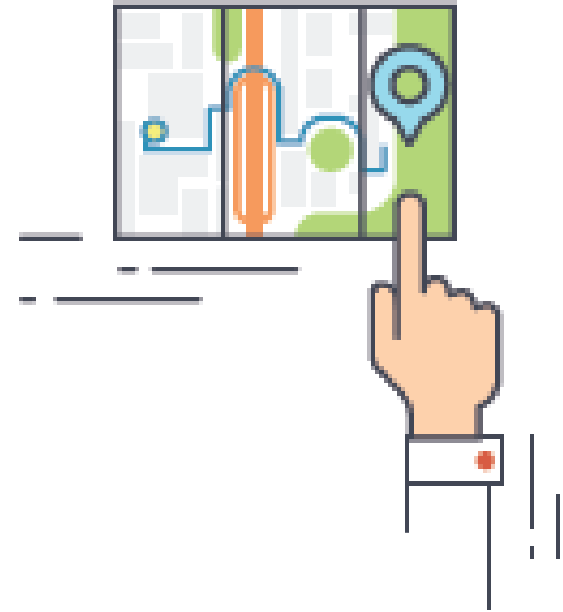


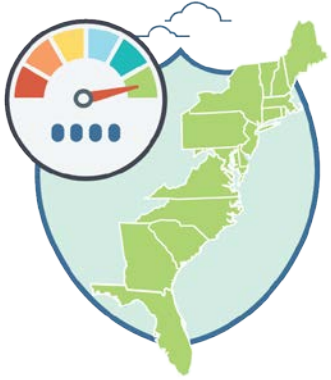
I-95 Coalition STSFA Grants

***Purpose:** Explore the feasibility of replacing the gas tax with a mileage-based user fee program in a multistate environment*

Awarded
two grants!

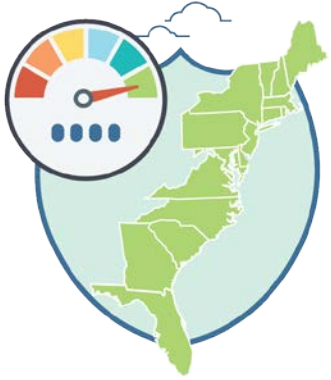
- **OUT-OF-STATE MILEAGE**
How will travel across boundaries be handled?
- **TOLLING**
What is the relationship between tolling and MBUF?
- **TRUCKING**
How does a user-fee fit into current requirements?
- **AMENITIES**
Will value-added amenities help with public acceptance?





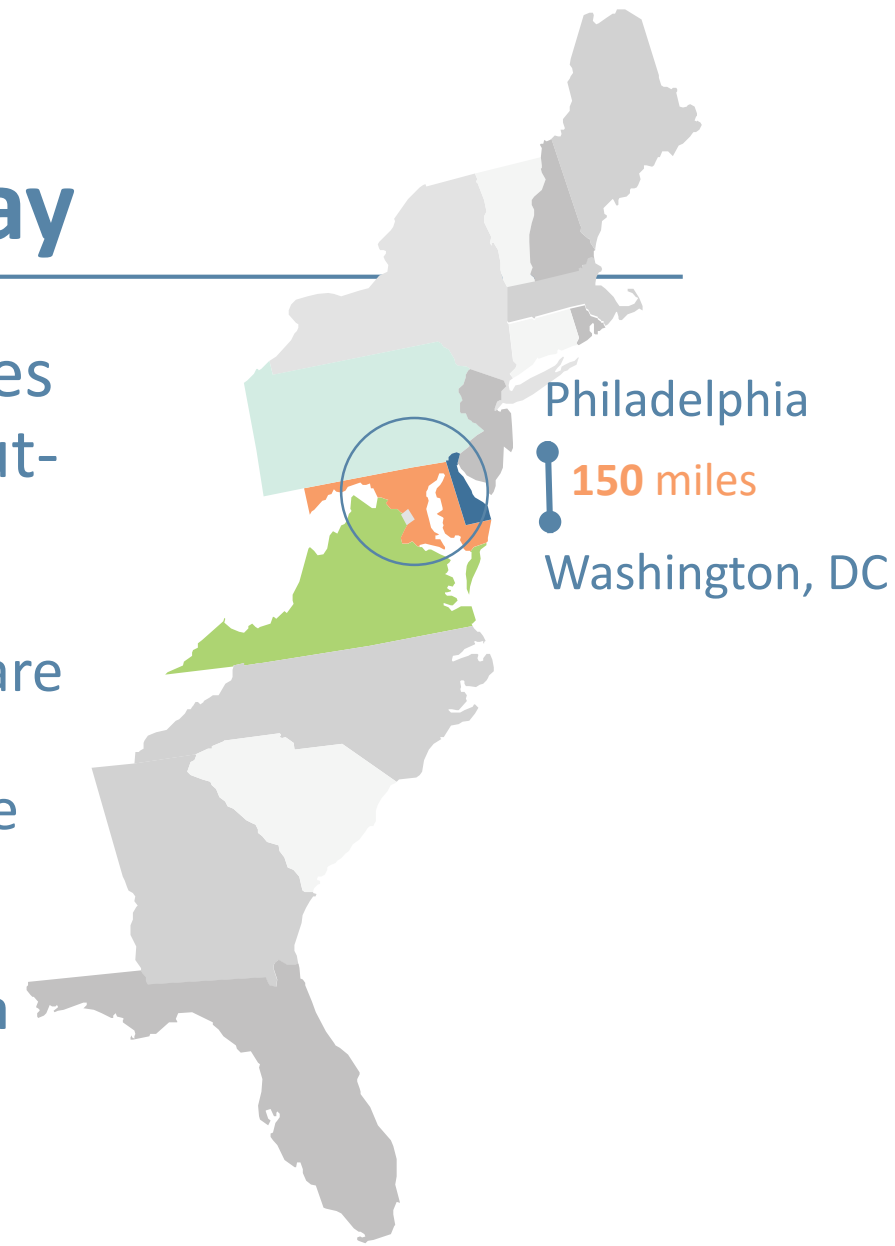
Important to Remember:

The I-95 Corridor Coalition members want to promote a better understanding of why investing in transportation is important, and why the current fuel tax does not provide a long-term and equitable solution in this regard. The Coalition, representing transportation agencies along the entire Eastern Seaboard, believes exploring the feasibility of a MBUF solution is important; for now, however, the Coalition is neutral if MBUF is the ultimate solution.



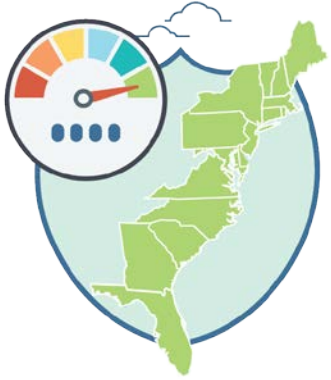
OOS travel happens everyday

- The I-95 MBUF study will examine issues associated with the large amount of out-of-state (OOS) travel in the corridor.
- For example, over **4 million person trips** are made annually by car between the Washington DC metropolitan area and the Philadelphia, Pennsylvania area.
- And, **16%** of Delaware residents **work in a another state** while **15%** of Delaware workers **live in another state**.



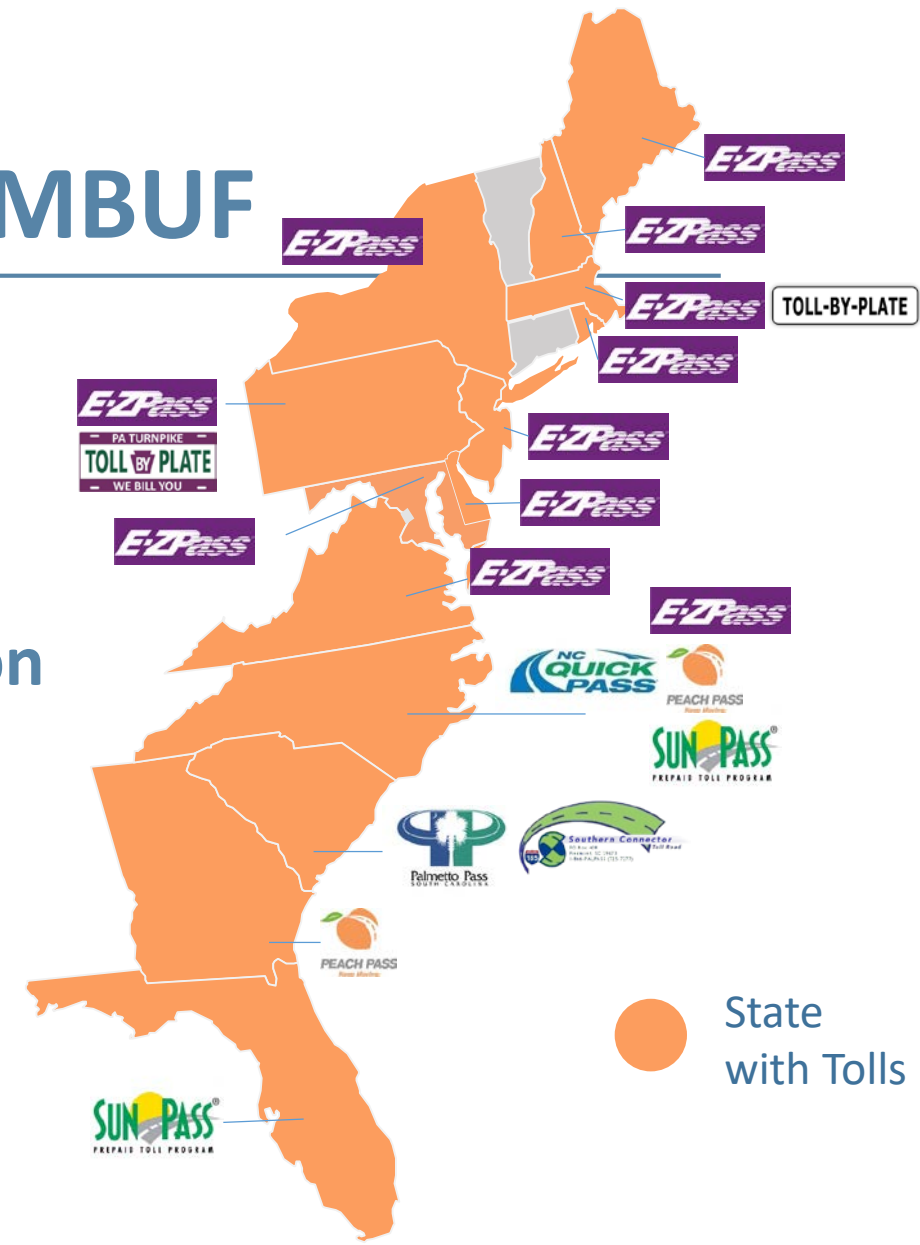
Toll roads are common in the corridor

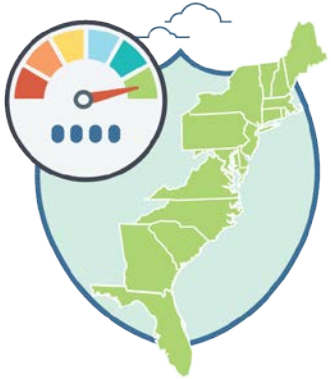




Intersection of Tolling and MBUF

- Interoperability
- Using toll data to support MBUF
 - Estimate out-of-state travel
- Using MBUF to support toll collection
 - I-95 (Two-way barrier toll)
 - Delaware Memorial Bridge (One-way barrier toll / entering DE)
 - Delaware SR-1 (Toll depends on where vehicle enters / exits)
- Role of back office centers in MBUF

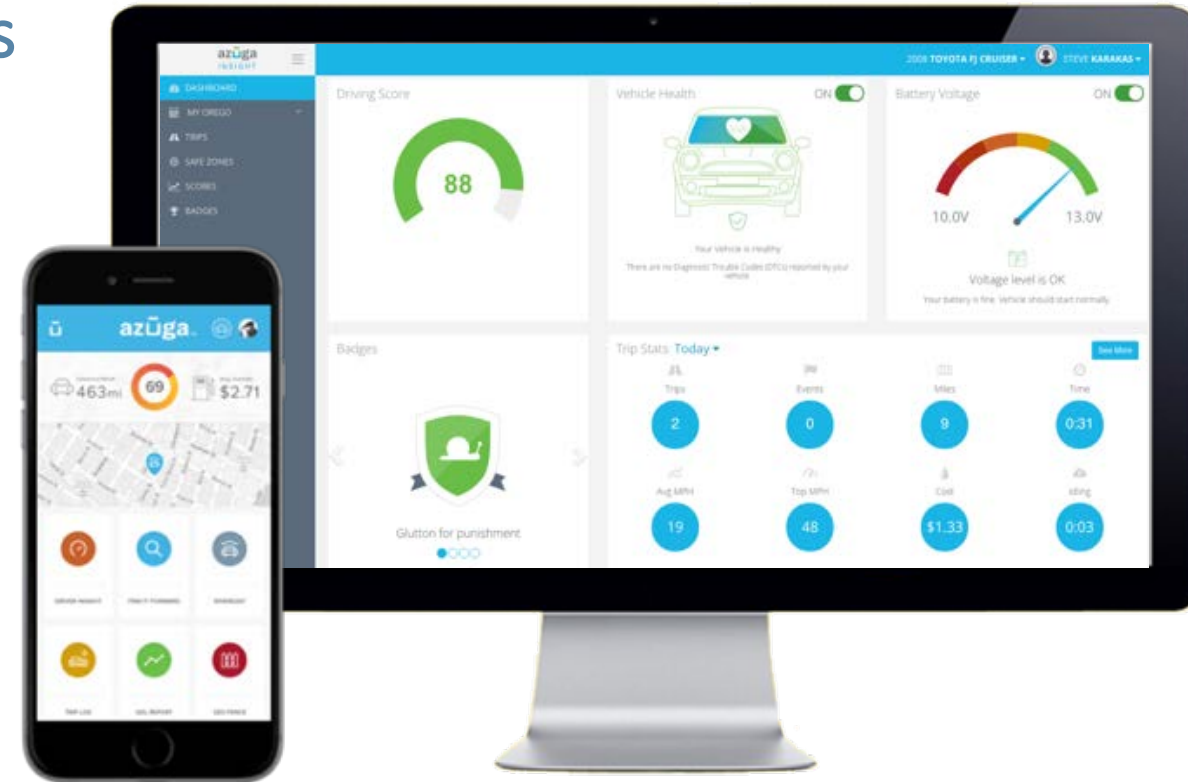




Exploring “Value-added” in cars

“Technology and drivers’ needs and wants are turning vehicles into a transportation ‘Fitbit’”

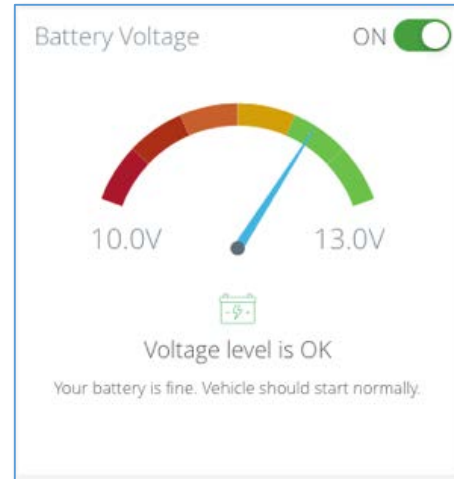
Source: I95CC Round II STSFA Proposal



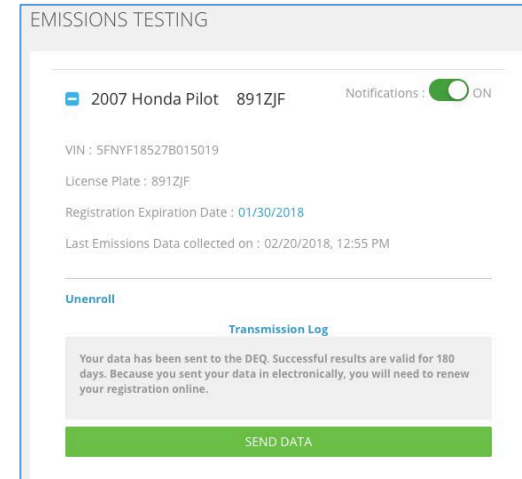
What do people want?



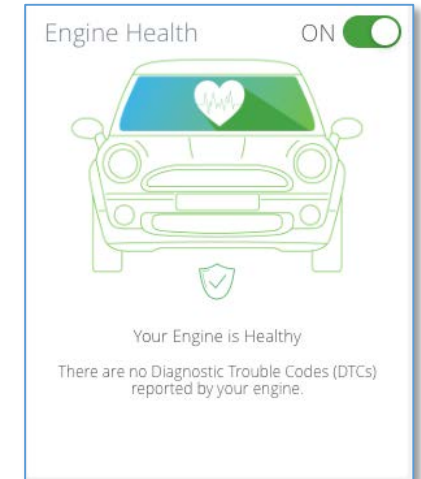
Geofencing



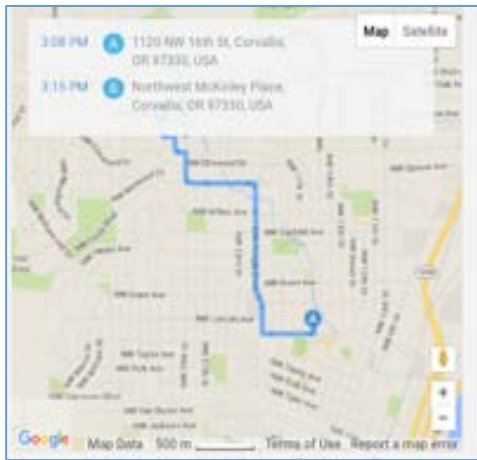
Battery Health



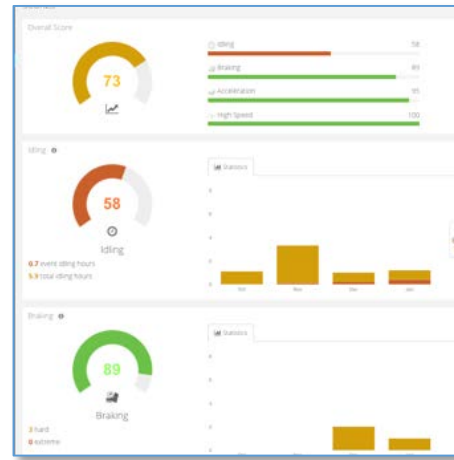
Remote Emissions



Engine Health



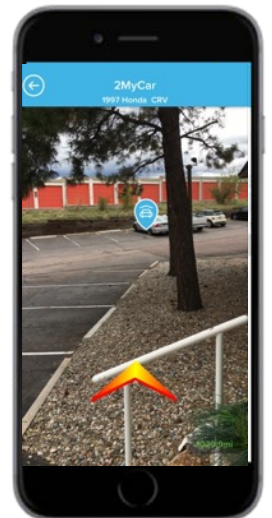
Trip Log



Driver Scores



Gamification

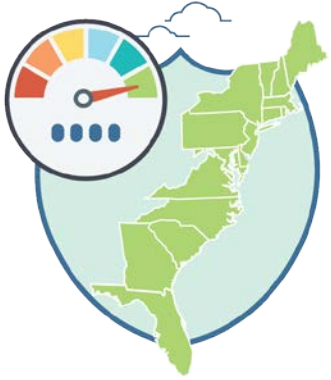


Find My Car



5 Billion TONS OF FREIGHT

Almost 40% of America's
GDP passes through the
Corridor



Multi-State Truck Pilot- Phase II

- The I-95 Corridor Coalition truck pilot, slated to begin by the end of the year, will include 50 vehicles equipped with EROAD in-vehicle hardware for six months.
- The EROAD system will record accurate GPS-based mileage data and use applicable formulas to support MBUF.

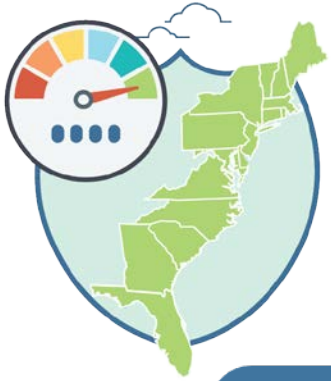


Trucks have been collecting MBUF data for decades as part of the International Fuel Tax Agreement (IFTA)



PILOT LAUNCHED!





Phase I Pilot: May 1 – July 31



149
participants



13
coalition states
with residents
participating

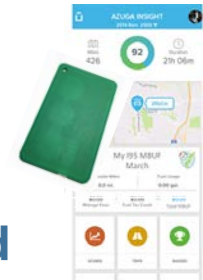
77%
Plug-In
Device
with Location

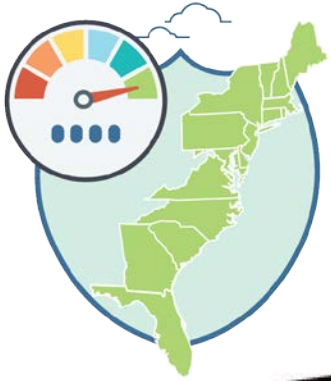


16%
Plug-in
Device w/o
Location

7%

Android
Phone w/
Location





Participating in the Phase 1 Pilot

**Plug-In
Device
with
Location**



**Trip Logs
Vehicle Health
Battery Voltage
Driver Scoring
Achievements
Safe Zones
2MyCar**

DASHBOARD

My I-95 MBUF



16 days left in cycle

Mileage-Based User Fees
-\$0.06

Funds in Wallet
\$48.50

Location



Battery is fully charged

Last Reading: 05/17/2018 2:38 PM

Voltage: 12.5

Low Battery Events
This Month: -



Voltage level is OK

Vehicle Health

Engine



Battery




Device


















Driving Score




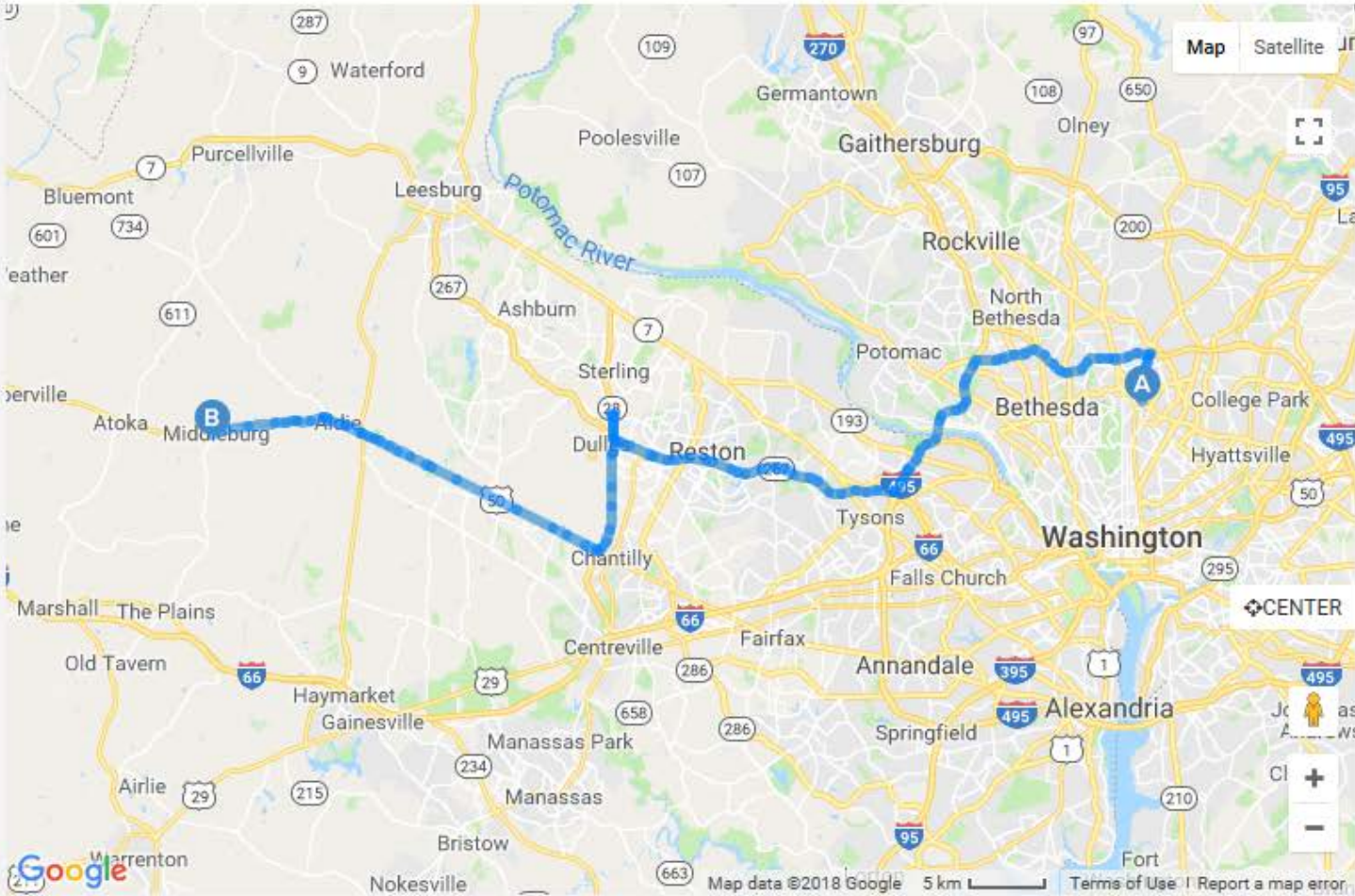
TRIPS

Last 7 days ▾ 

DATE	 START	 END	EVENTS	MILES
5/17	4:30 PM	4:38 PM		2.2
5/17	12:29 PM	1:45 PM		55.6
5/17	11:52 AM	12:01 PM		1.5
5/17	11:41 AM	11:47 AM		1.2
5/17	8:38 AM	8:41 AM		0.5
5/17	8:25 AM	8:32 AM		1.6
5/17	7:37 AM	7:42 AM		1.2
5/16	6:13 PM	7:03 PM		7.4
5/16	8:02 AM	8:48 AM		7.5
5/15	6:14 PM	6:50 PM		6.0
5/15	5:59 PM	6:10 PM		1.4
5/15	3:57 PM	3:57 PM		0.0

 Origin Address (in Maryland)

 Destination Address (in Virginia)



Any anomalies in route shown do not affect your Mileage-Based User Fees

ACCOUNT SUMMARY

16 DAYS LEFT IN CYCLE 

Funds in Wallet

\$48.50

Add Funds

Mileage-Based User Fee (MBUF)

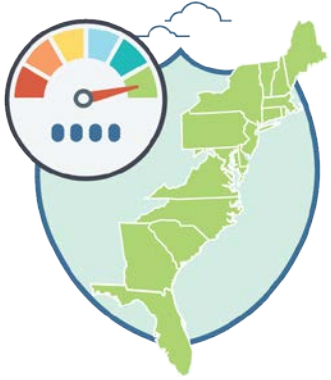
Mileage Based User Fee	\$3.07
Fuel Tax Credit	-\$3.13
<hr/>	
MAY MBUF	-\$0.06

Current Usage

DATE	STATE	BILLABLE MILES
05-01-2018	MD	65.5
05-02-2018	MD	37.0
05-03-2018	MD	0.0

04-15-2018	MD	0.4
04-15-2018	DC	6.8
04-15-2018	MD	0.6
04-15-2018	NC	72.0
04-15-2018	VA	198.6

MBUF Total -\$0.06 ^		
MILEAGE-BASED USER FEE (MBUF) (\$)	FUEL TAX CREDIT (\$)	NET MBUF (\$)
\$1.00	-\$0.68	\$0.32
\$0.56	-\$0.38	\$0.18
\$0.00	\$0.00	\$0.00



Learn More

www.i95coalitionmbuf.org