

Princeton Univ. & FMERA

Creating a World-class Center for

Research, Certification and Commercialization of SmartDrivingCars

by

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NY/NJ/wPA Met Region

- **Observation:**

- NY/NJ Region:

- HQ of Verizon, Prudential Ins., NJM Insurance,
- NAHQ of: Munich Re, Mercedes, BMW, Subaru, Volvo, Jaguar/LandRover, MobilEye, Seimens,...
- Home to 40M people with well educated workforce
- Home of some reasonable Academic & Research Institution
- Home of 3 of the nation's 4 largest Transit Systems: MTA, NJ Transit, Septa
- Economy supported by largest fleet of commercial trucks

- **Action Item:**

- **Create an environment that is conducive for these entities (and others) to successfully:**

**enhance, test and accelerate the adoption
of their versions of SmartDrivingCars**

Autonomous Car Benefits to New Jersey

Amount	Item	Units
-50%	Reduced chance of dying in a car accident	Per Collision Avoidance (Level 2) car
~ 1	Lives Saved	Per 1,000 cars equipped with Level 2 (= # new cars sold each day in New Jersey)
~300	Lives Saved	Per year in NJ (Widespread Level 2 adoption)
-50%	Reduced chance of a collision	Per Collision Avoidance (Level 2) car
~ 1	Injury Avoided	Per 15 cars equipped with Level 2
~20,000	Injuries Avoided	Per year in NJ (Widespread Level 2 adoption)
>\$125	Self insurance payments	Per year per NJ driver
>\$250	Insurance discount	Per year per NJ driver
\$1.25B	Reduced Insurance Claims	Per year in NJ (Widespread Level 2 adoption)
-50%	Reduced Energy	Widespread autonomous Taxi Deployment
-50%	Reduced Pollution	Widespread autonomous Taxi Deployment
Elimination	Road Congestion	Widespread autonomous Taxi Deployment
5X increase	Ridership on NJ Transit	Widespread autonomous Taxi Deployment
1,000	Well-paying jobs	Directly connected with the Center
100,000	Well-paying jobs	Created around the Center to implement Commercialization of the technology

Fort Monmouth



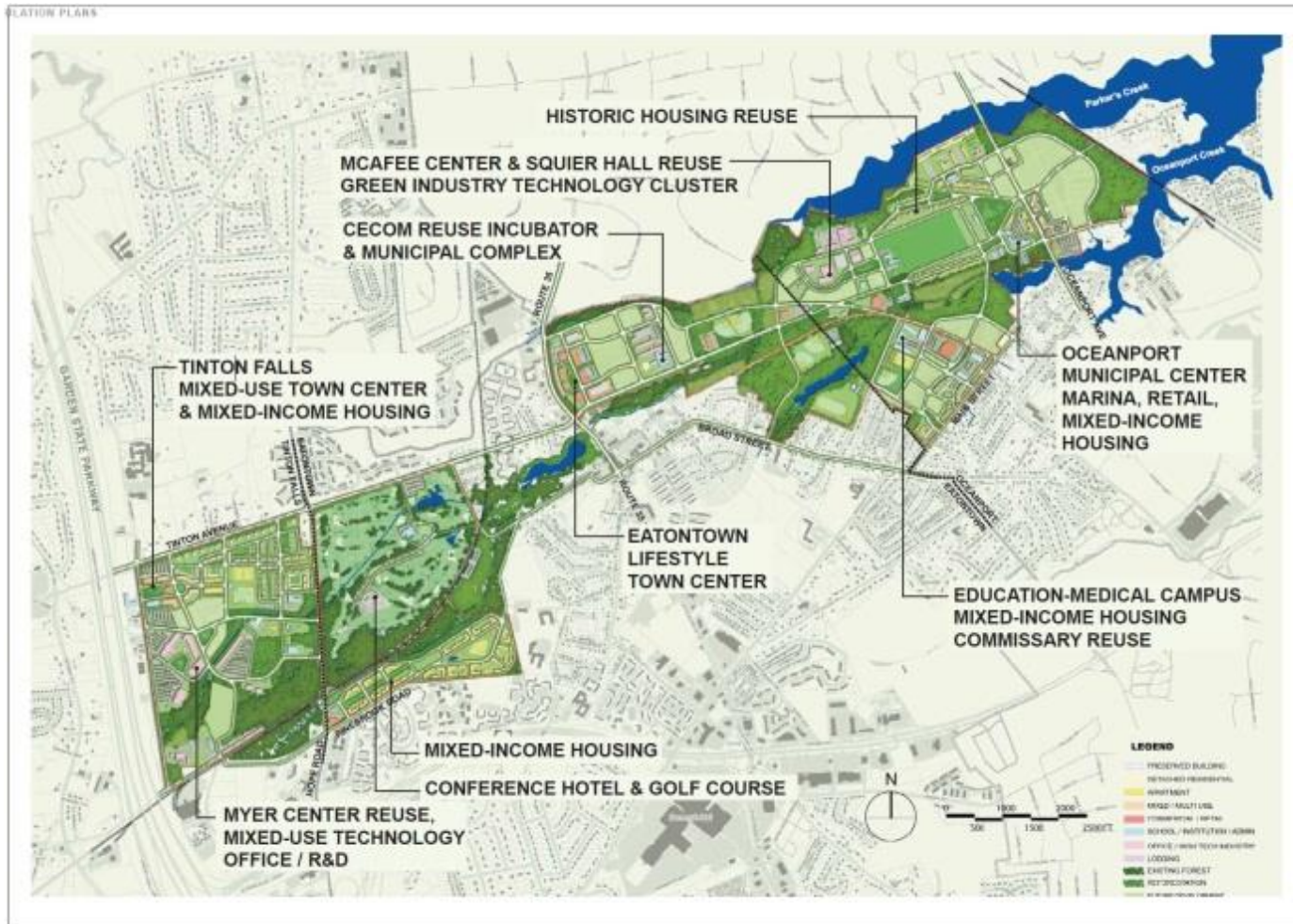
Fort Monmouth

- **1,126 acre former US Army base closed in 2011**
- **State of New Jersey created Fort Monmouth Economic Revitalization Authority (FMERA)**
- **Promote, develop, encourage and maintain employment, commerce, economic development, and the public welfare**
- **Conserve natural resources; and**
- **Advance the general prosperity and economic welfare of the people in the affected communities and throughout the state.**

Fort Monmouth



Fort Monmouth





Tech giant COMMVAULT has 650,000 SF under construction

Fort Monmouth

- **FMERA has embraced the vision that Fort Monmouth is uniquely positioned to become the premier east-coast Center for Research, Certification and Commercialization of SmartDrivingCars**
- **Facilities already in place to host specialized vehicle R&D and internal urban roadway network will support real-world testing**

Why Fort Monmouth?

- **Observation:**

- Ft Monmouth may well be one of the most hospitable sites for various automated vehicle entities to develop, test, certify and commercialize their intentions.

- **Action Item:**

- Create a **Testing & Certification Environment** for use by **Various stakeholders** to transition their products **from Research to Full Commercialization**

Announce Creation of...

Princeton University
Research Center for Automated Vehicles
@ Fort Monmouth



Princeton University's Research Center for Automated Vehicles
@ Fort Monmouth

**McAfee Center – 100,000 sf – office and lab space - has
anechoic chamber and garage bays large enough to
accommodate trucks and buses**



FMERA Executive Director Bruce Steadman hosts Princeton/CARTS tour of Fort Monmouth



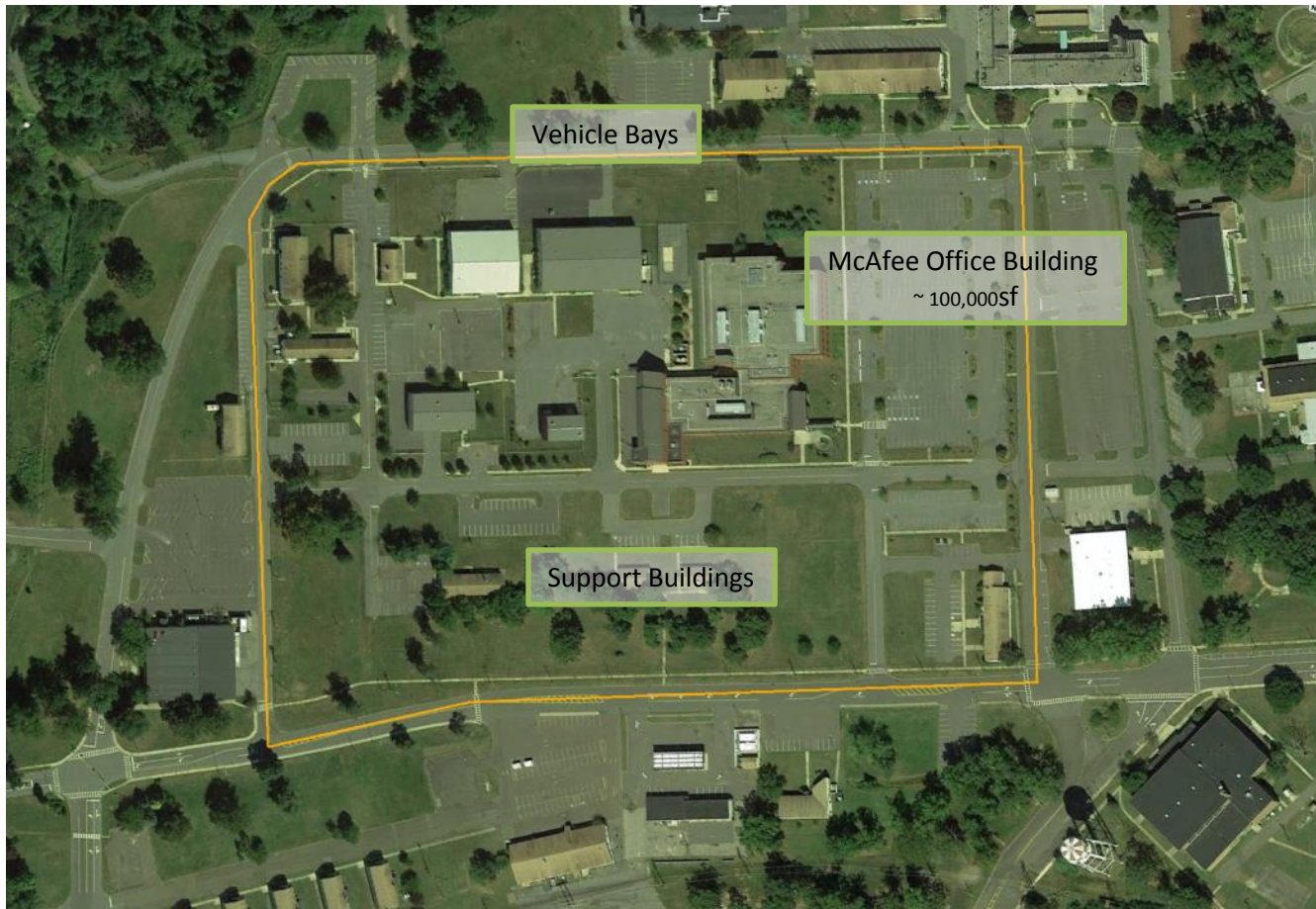
Unique facilities – McAfee Center - entrance to large vehicle bay

PAVE Research Center for Automated Vehicles

@ Fort Monmouth

McAfee Complex

1250' x 865' ~ 25.8 acres (10.5 ha)



PAVE Research Center for Automated Vehicles

@ Fort Monmouth

Exclusive Use Roadways Area

~ 80 acres (32.3 ha)



**PAVE Research Center for Automated Vehicles
@ Fort Monmouth
Mixed Use Roadways**

½ The Fort ~ 1 sq. mile





Internal roadway network and authority to create transportation network to test and utilize smartdrivingcars

Observation:

2011 Nationwide Bus Casualty and Liability Expense

Source FTA NTD

Casualty and Liability Amount	Vehicle-related	\$483,076,010.
Total Buses		59,871
Sub-Total Casualty and Liability Amount Per Bus		\$8,069/Bus/Year

The **Cost** of Installing an
Active Collision Avoidance System
on a Bus Could be Recovered
in as Little as One Year
Through Reductions in
Casualty and Liability Claims

The Initial Project of:

Princeton University

**Research Center for Automated Vehicles
@ Fort Monmouth**

Focuses on

**Research, Certification and Commercialization
of**

SmartDriving Technology for Buses

To that end..



Is bringing together:



AMERICAN PUBLIC TRANSPORTATION ASSOCIATION



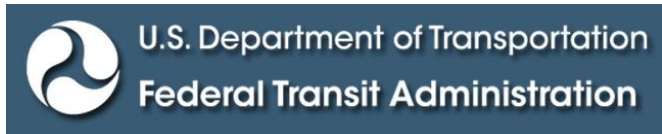
Greater Cleveland Regional Transit Authority
1240 West 6th Street
Cleveland, Ohio 44113-1302
Tel: 216-566-5100



Inviting:



And hopefully

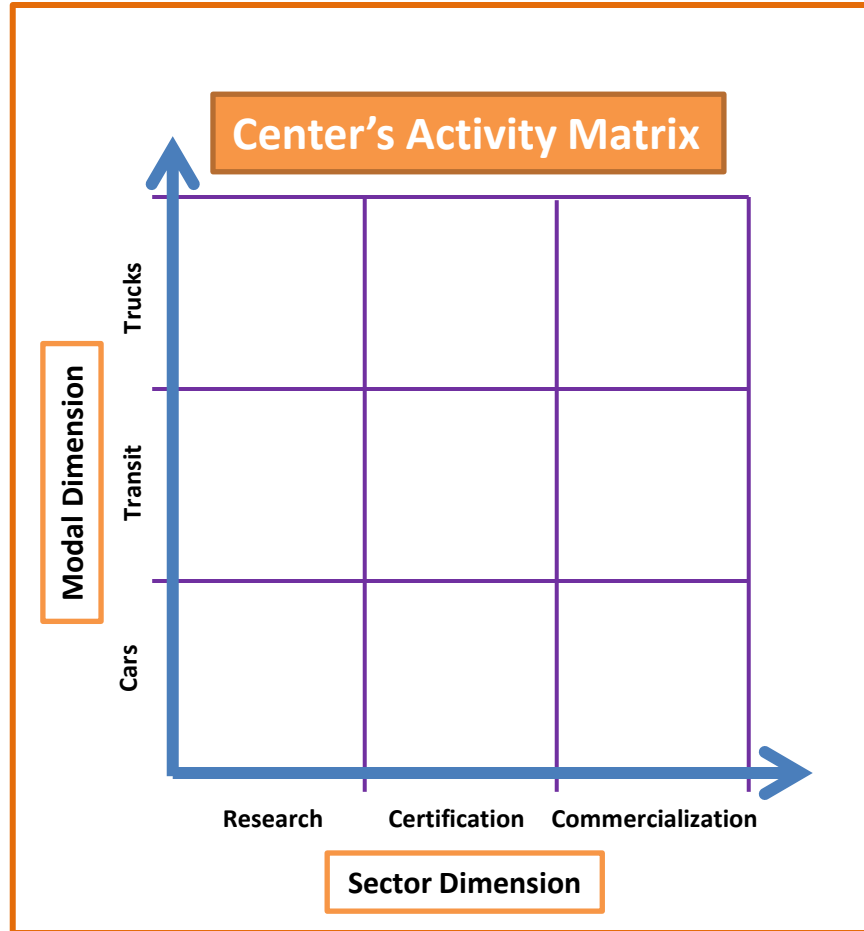


The “Venue” The McAfee Center and The Fort’s Roadways



Going Further: Basic Business Model

- **Vehicles last a long time – technology progresses at a faster pace**
- **Emphasize retrofitting existing and future vehicles with better technology**
- **Focus on collaboration with many stakeholders**
 - **Technology suppliers**
 - **Insurance companies**
 - **State regulators**
 - **Vehicle manufacturers**
 - **Fleet owners**
 - **Mobile communications providers**



Collaborative and Synergistic activity intended across both the modal and sector dimensions

The Team

Fort Monmouth Economic Redevelopment Authority (FMERA):

Vision for World-Class Advanced Technology Center @ The Fort

Princeton Autonomous Vehicle Engineering (PAVE):

Facilitating FMERA's Vision with a World-Class

Center for Research, Certification and Commercialization of SmartDrivingCars (& Trucks & Buses)

Targeted Participants:

The Center is intended to serve major New Jersey and Global corporations and institutions whose futures will be greatly involved with automated vehicles. The following are some of those who are being invited to participate in visioning for, and activation of, the Center

Agencies & Companies	Suppliers	Facilitators	Insurance	Universities	Public Sector
Mercedes Benz (NAHQ-NJ)	Continental	Bertram Capital	NJ Manufacturers	Princeton	NJ DoT
BMW (NAHQ-NJ)	Bosch	Verizon	Ins. Inst. for Hwy Safety	Monmouth	NJ Transit
Subaru (NAHQ-NJ)	Delphi	AT&T	State Farm	Rutgers	Greater Cleve. RTA
Am Public Transp Assoc.	Texas Inst	DCH AutoGroup	Progressive	NJIT	NYC MTA
Am Trucking Assoc.	autonomouStuff	FHWA + FTA	Munich Re	U of Maryland	PANYNJ
Am Transp. Research Inst.	MobilEye	VisLab	Geico	Region 2 UTRC	Monmouth County

The McAfee Center and The Fort's Roadways



Discussion!
Suggestions, Please!

Thank You

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www.SmartDrivingCar.com