

Urban Mobility

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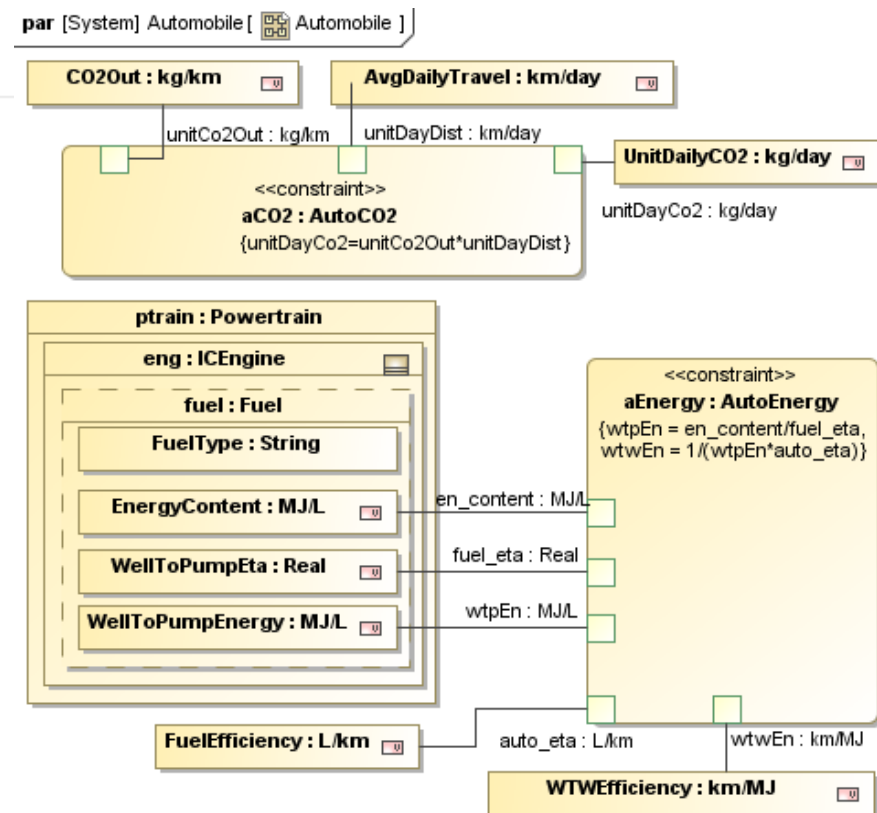


What are our objectives?

- Identify technical options to improve urban mobility
 - Designing hardware as well as software solutions
- Assess impact (financial, environmental and social benefits/costs)
 - Use existing and new tools and metrics
- Design an information exchange framework
 - Provide a basis for development of information applications
- Pilot implementations around Georgia Tech
 - Midtown, GA Tech campus, and Atlantic Station
- Create a research thrust around ‘sustainable mobility’
 - Working with city, transit, private operators

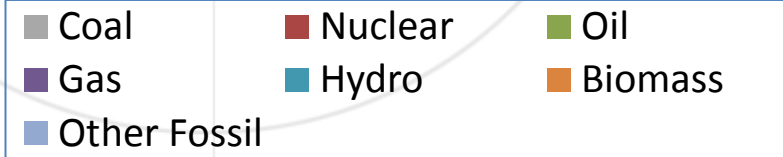
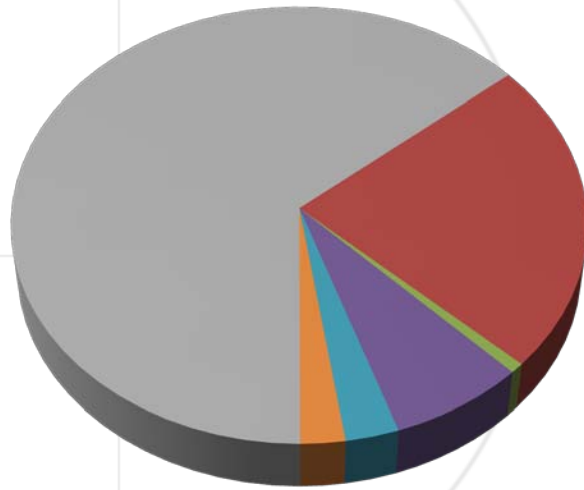
Assessing Impact

- Modeling sustainability of complex systems
 - How do regional variations affect environmental impact of a transportation network?
 - What are the most important factors?
- Creating an evaluation platform
 - Scalability, integration, and reuse are essential

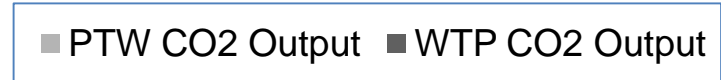
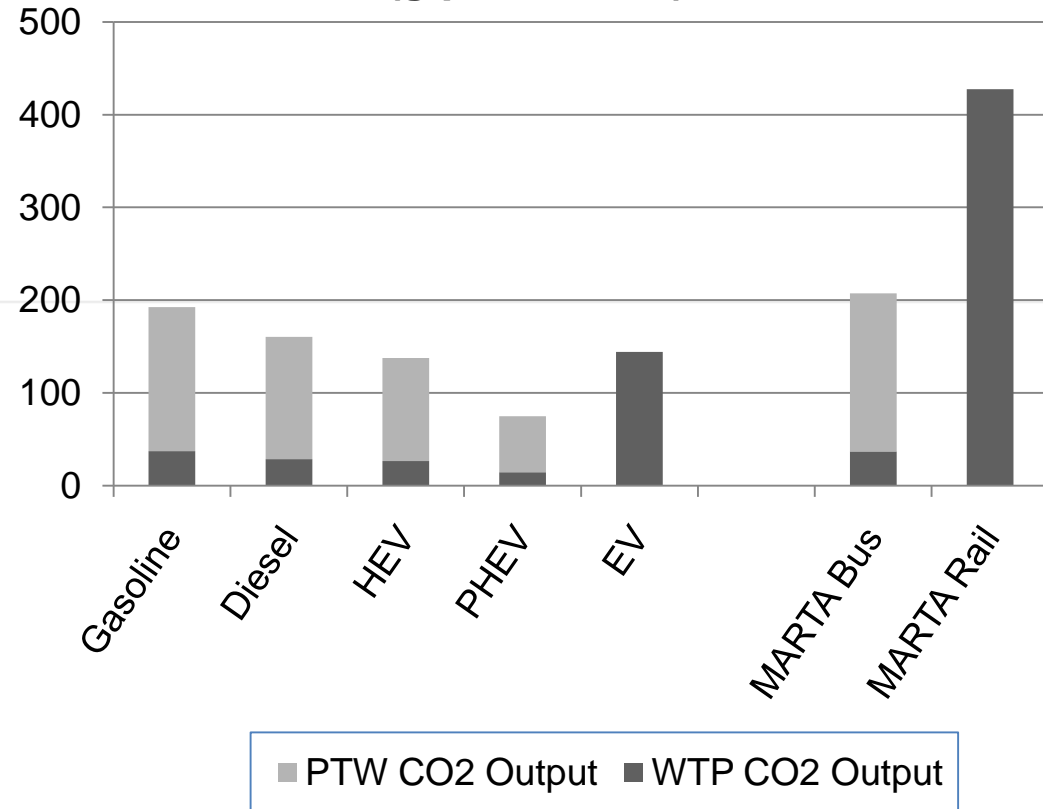


Modeling Results: Atlanta

Power Generation:
Georgia



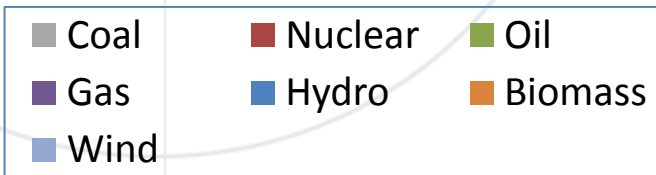
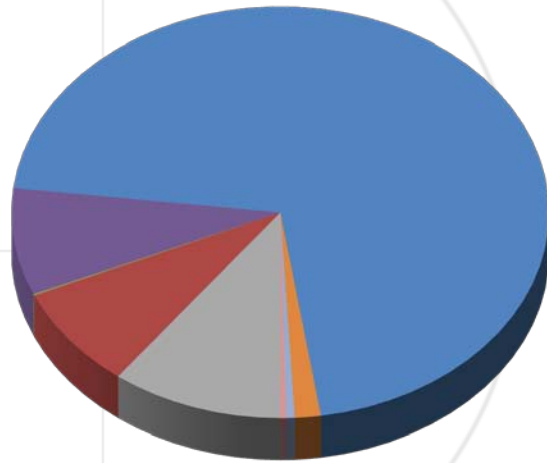
CO2 Output Per Passenger Distance
(g/person*km)



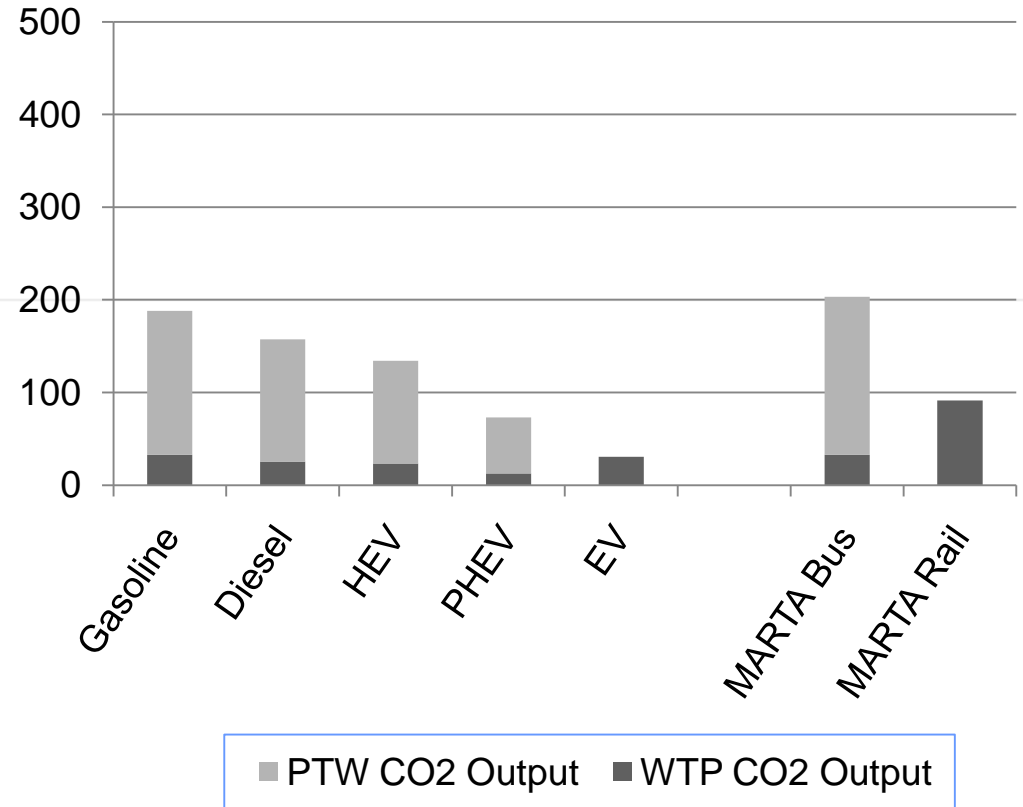
- Modal efficiency determined by many variables

Modeling Results: Atlanta

Power Generation:
Washington



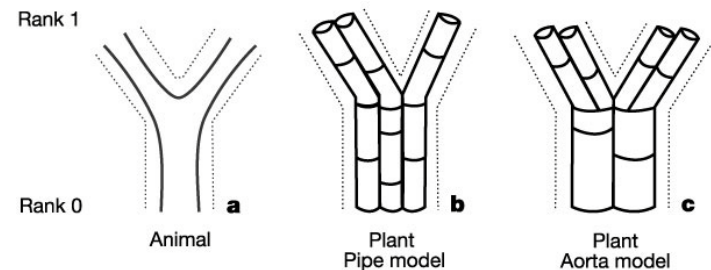
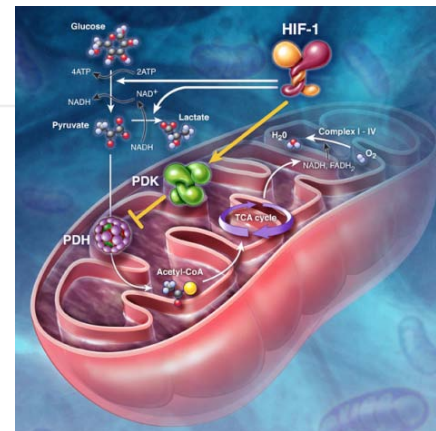
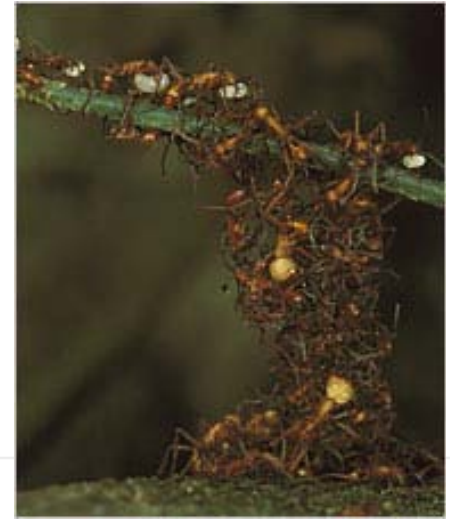
CO2 Output Per Passenger Distance
(g/person*km)



- Sensitivity analysis has widespread planning and policy implications

Applying New Concepts: Bio-inspiration

- Network scaling and routing
- Signaling and self-organization
- Energy limits and metabolic patterns
- Structural food webs



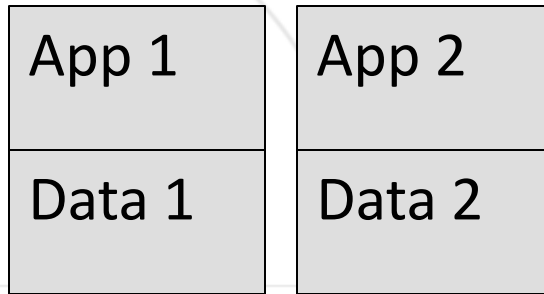
RideVIA

- RideVIA is an intelligent transportation system we are developing using a common information framework.
- Applications we are developing based on RideVIA:
 - Real-time user information systems
 - Fleet Management
 - Both with Multi-modal capabilities

Why do it?

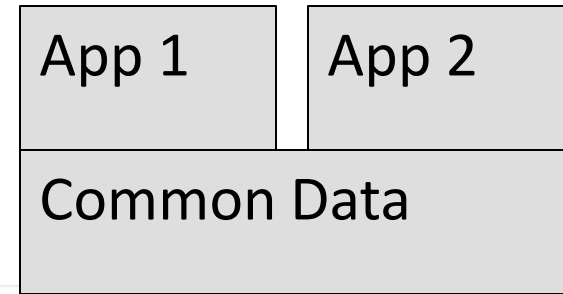
Current

- Vertical
- Proprietary

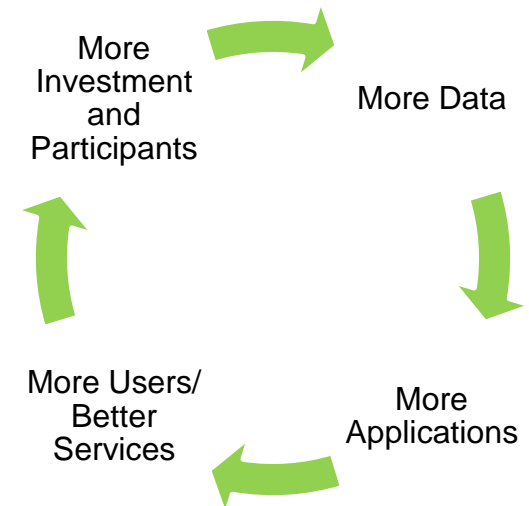


Proposed

- Horizontal
- Open standards



- Intelligent Systems will be **easier to develop**
- **Multi-modal** applications easier.
- **Reinforcing Cycle** - benefits increase as more stakeholders take part



RideVIA Elements



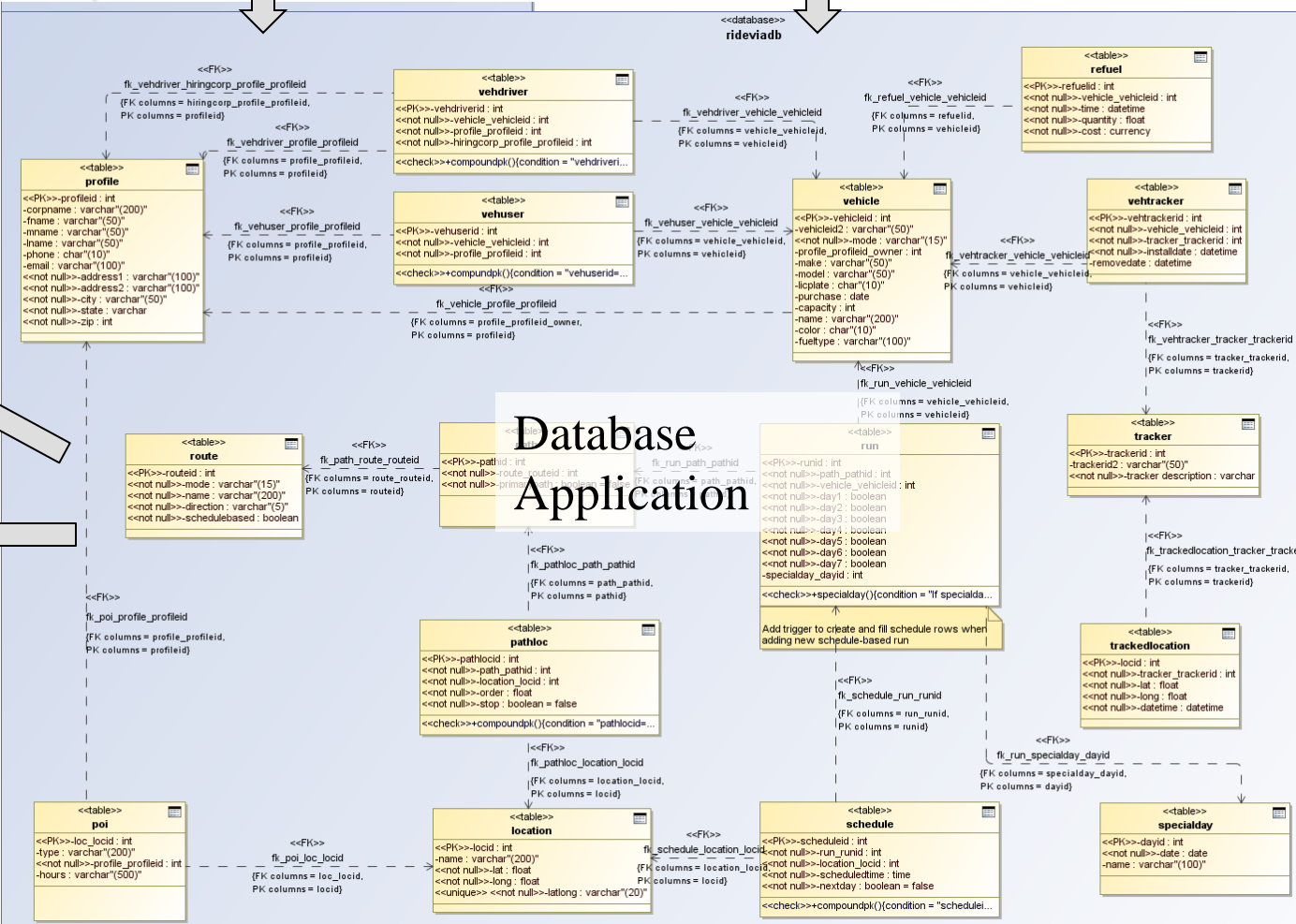
Existing Data



GPS Trackers



Multiple Interfaces



RideVIA 1.0 Applications


Step 1 of 3 Rides near  Arts Center Station Zoom + -



Step 2 of 3 You chose  Atlantic Station Shuttle



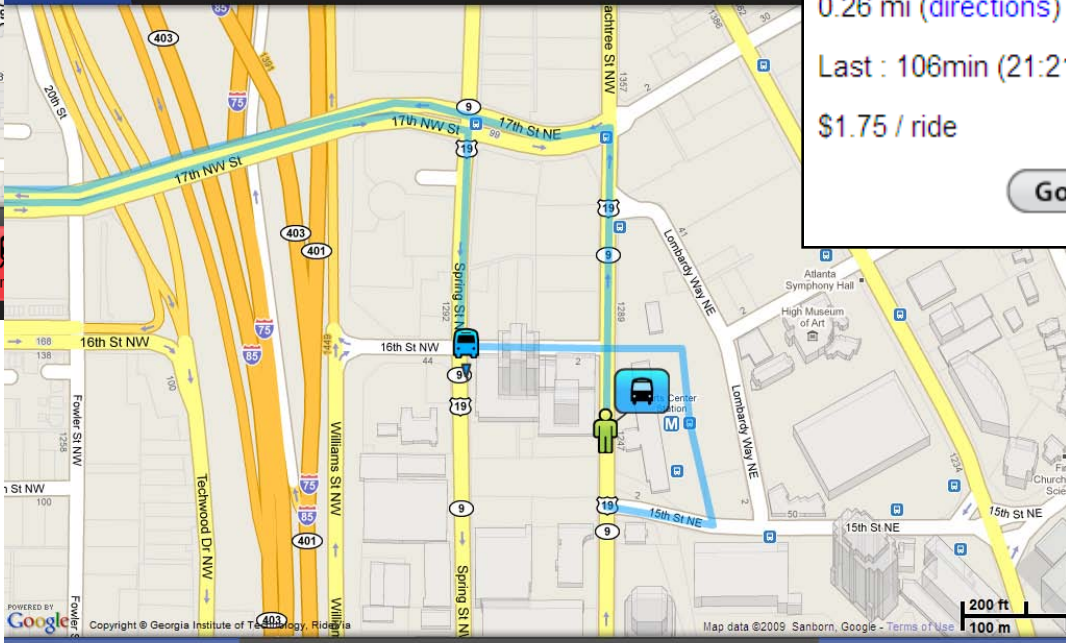
Start Over Pick your choice of rides:

-  Bus
-  Taxi
-  Train



North-South Line (Northbound): North Avenue Station
0.26 mi (directions)
Last : 106min (21:21:00)
\$1.75 / ride

Go Back Reserve



Selected Stop: Arts Center Station
Distance to Stop: 0 ft

Start Over Go Back Directions Send Info

RideVIA 2.0 Applications



- Start
- End
- Legend
- Options
- Search

Start: 120 North Ave. NE, Atlanta, GA 30332 End: 123 Bobby Dodd St., Atlanta, GA 30332

Atlanta Station FreeRide
Method of transportation: Walking
Approx. Dist.: 0.5 miles

RideVIA

Rail, Bus, Taxi Stops
[i] for options

San Francisco

Zoom - Menu

Send Info

Back



What Next?

- Pilot around campus
- Working with Georgia Tech
- Working with City of Atlanta
- Additional Funding Sources

www.ridevia.com