Data Science for Smart Cities

CE88

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Today

Introduction and motivation: cities as complex systems.

Lecture 1. Introduction to urban systems. Inter-dependent infrastructures with human in the loop.
Lecture 2. Modeling principles. Causality and experiments in demand- and supply-side data analysis.

Agenda:

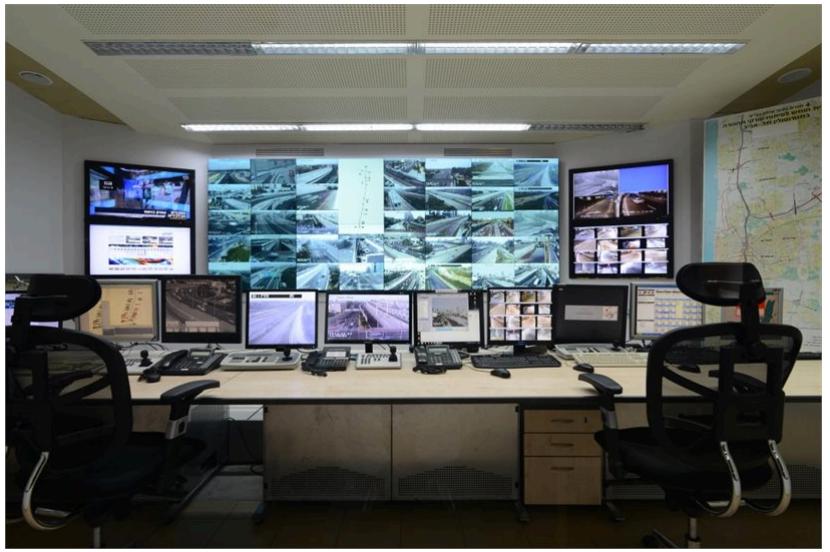
9:10 Lecture 3. Spatio-temporal nature of urban data.
9:50: Mini-lab setup
10:00 Break
10:10 Mini-lab
10:40 **Lecture 4. Data flows in cities. Decision making feedback loops.**

1st mini-lab in class, 1st homework

Data flows and decision making: traffic control.

Traffic counts
Video streams

Data

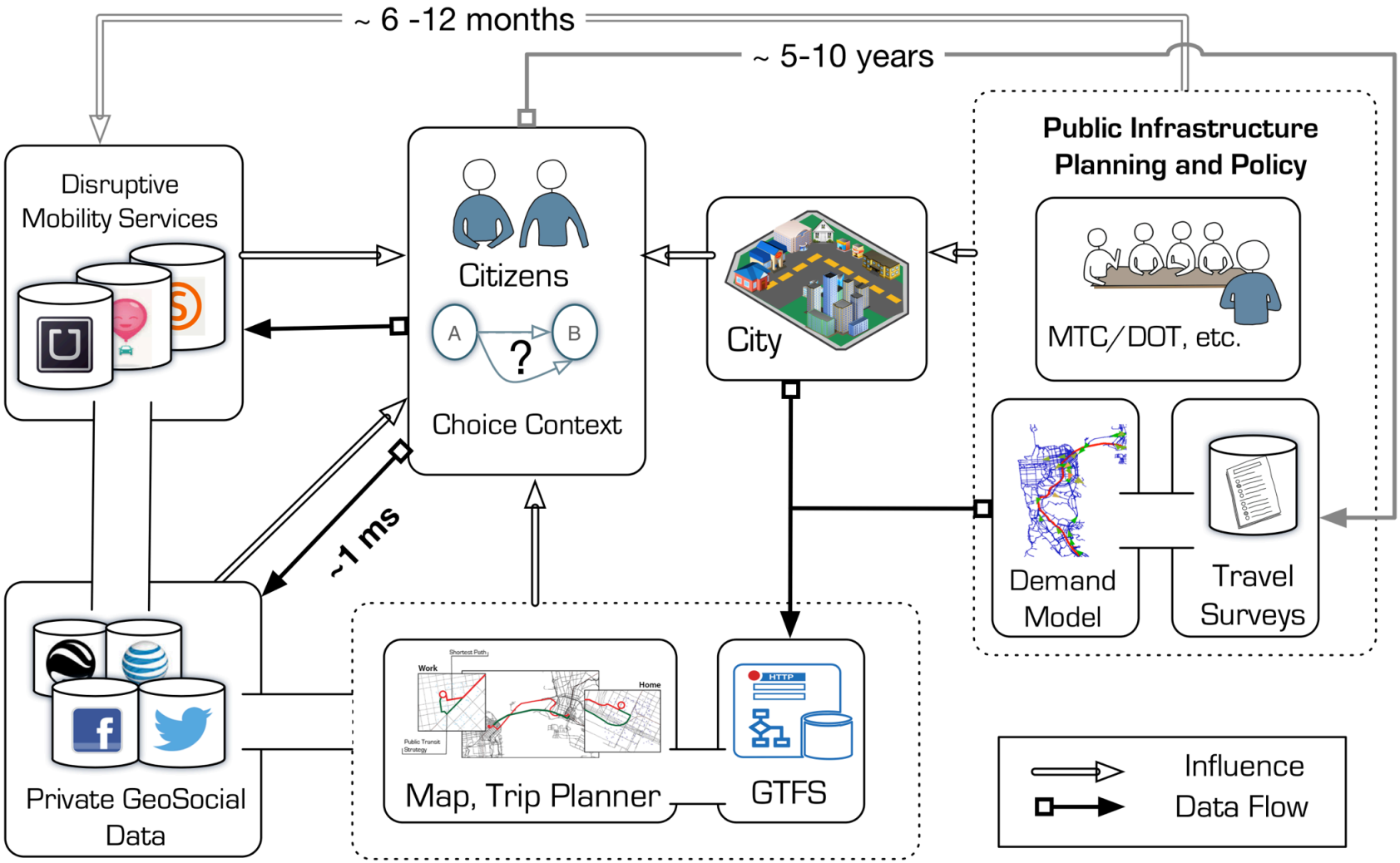


Controls

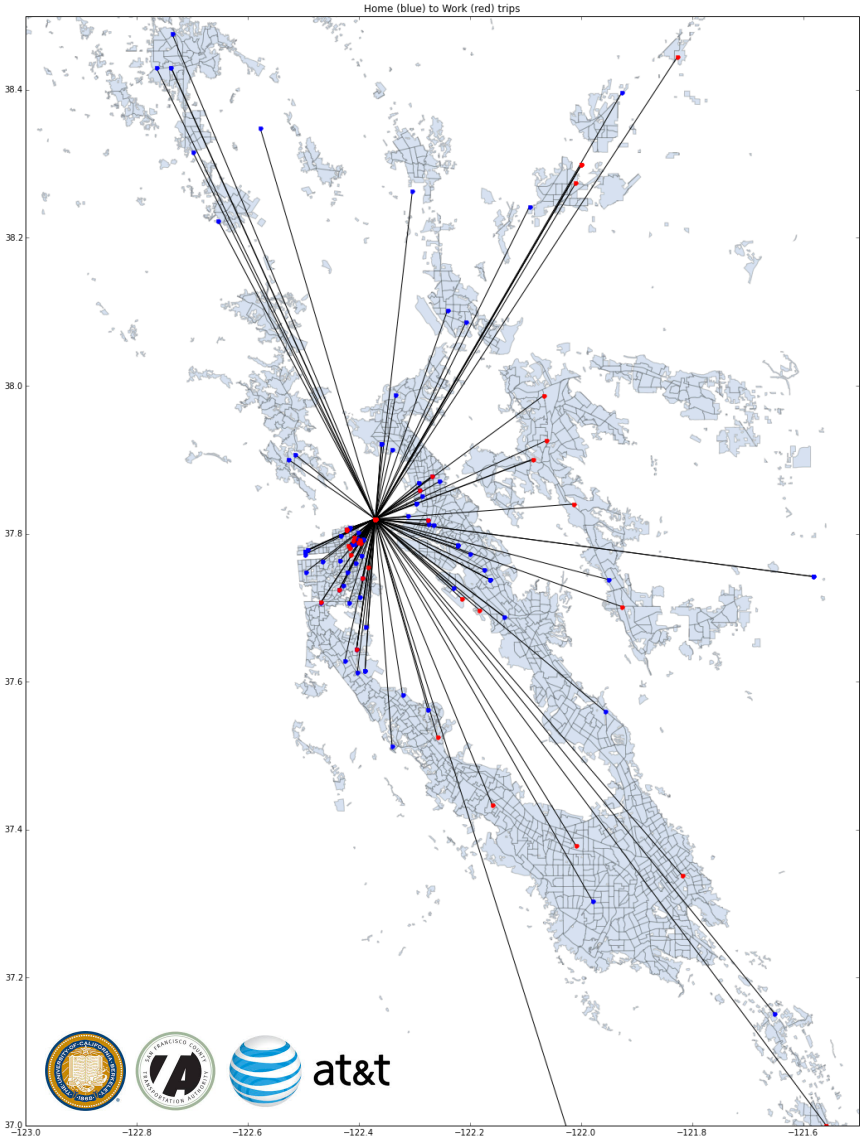
Traffic lights timing
Message signs, announcements

Data flows in cities

Example: personal location data



Decision making: urban planning.



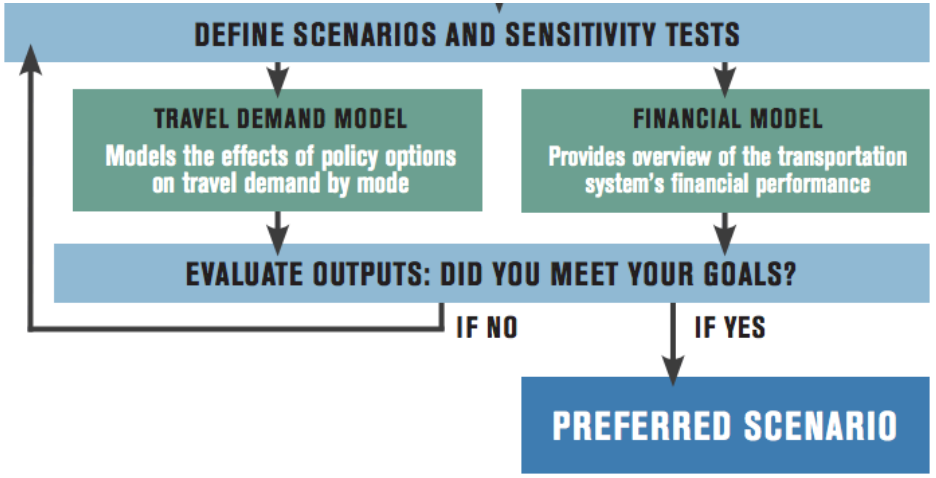
SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY

Fact Sheet
LAST UPDATED
July 2014

CONGESTION PRICING TO ENABLE NEW NEIGHBORHOOD DEVELOPMENT

Treasure Island Mobility Management

Current Activities: Pricing Program Policy Analysis

The Treasure Island Mobility Management Study, currently underway, will analyze and recommend pricing program policies, and establish financial viability.

- **Who Should Pay Toll:** Residents only, or all drivers?
- **Toll Pricing Structure and Hours of Operation:** All day, weekday peak only, weekends?
- **Directionality of Tolling:** Toll both on and off the Island, or one direction?