MBUF III

Breckinridge, Colorado
2011.06.14

6: Roles of the Public and Private Sectors

History, Manifesto, Recipe & Proposal

Bern Grush

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History of tolls starts in Greek mythology…

Charon - Alexander Dmitrievich Litovchenko, 1889

Charon charged a toll to carry the dead across the Styx. If a toll was not paid, the soul wandered between death and life for eternity.

The god **Embuftus** of Transportus

"… if drivers do not pay a toll they will forever crawl in congestion between work and family."

Cornelius Krieghoff "The Tollgate", 1863

1857 1859
1861 1863

How to End the War on Cars:

Manifesto for the New Automobility

The rise and rise of the automobile

Two billion cars by 2025

Daniel Sperling

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One

The car is not wrong

…thoughtless use Is

Why demonize what is not going away?

Better to have car as customer than pariah

Leverage ubiquity and preference for SOV for funding

Focus design on TDM

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Two

Switch

**…from fuel tax
to road use tax**

Take advantage of
Peak Oil

Offer rewards to early
volunteers

Thomas Friedman &
Dan Akerson in reverse

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Three

Voluntary

…is the only path to acceptance

You can't make me…

…but you can tempt me

- Make it fairer
- Make it convenient
- Make it pay off
- Make it fun
- Reward smart driving
- Offer services

- …build the platform

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Four

Parking

…is the on-ramp to road-use metering

Drivers understand paying for parking

Drivers do not understand paying for road-use

Go to regional councils, DOTs seldom have parking mandate

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Five

Make safety

…a key change driver

Easy to say "no" to VMT Charging

Hard to say "no" to safety

The *Connected Vehicle* opens both doors at once

DOTs and industry already collaborate, here

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Six

Demand Management first

…funding sustainability follows easily
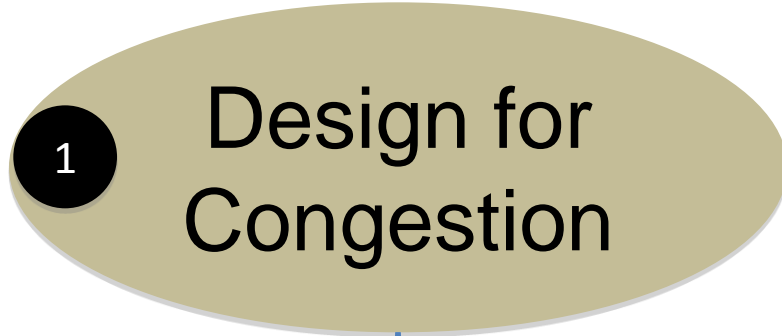
TDM fix requires intelligence

Funding fix requires courage

It is easier to be smart than brave

Design for TDM = $$
Design for $$ ≠ TDM

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Time, distance, place, vehicle type

1 Design for Congestion

Encourage move to alternate energy

Price every road

2 Adjust for the Environment

3 Scale for Funding

Eventual by-product

4 National Security
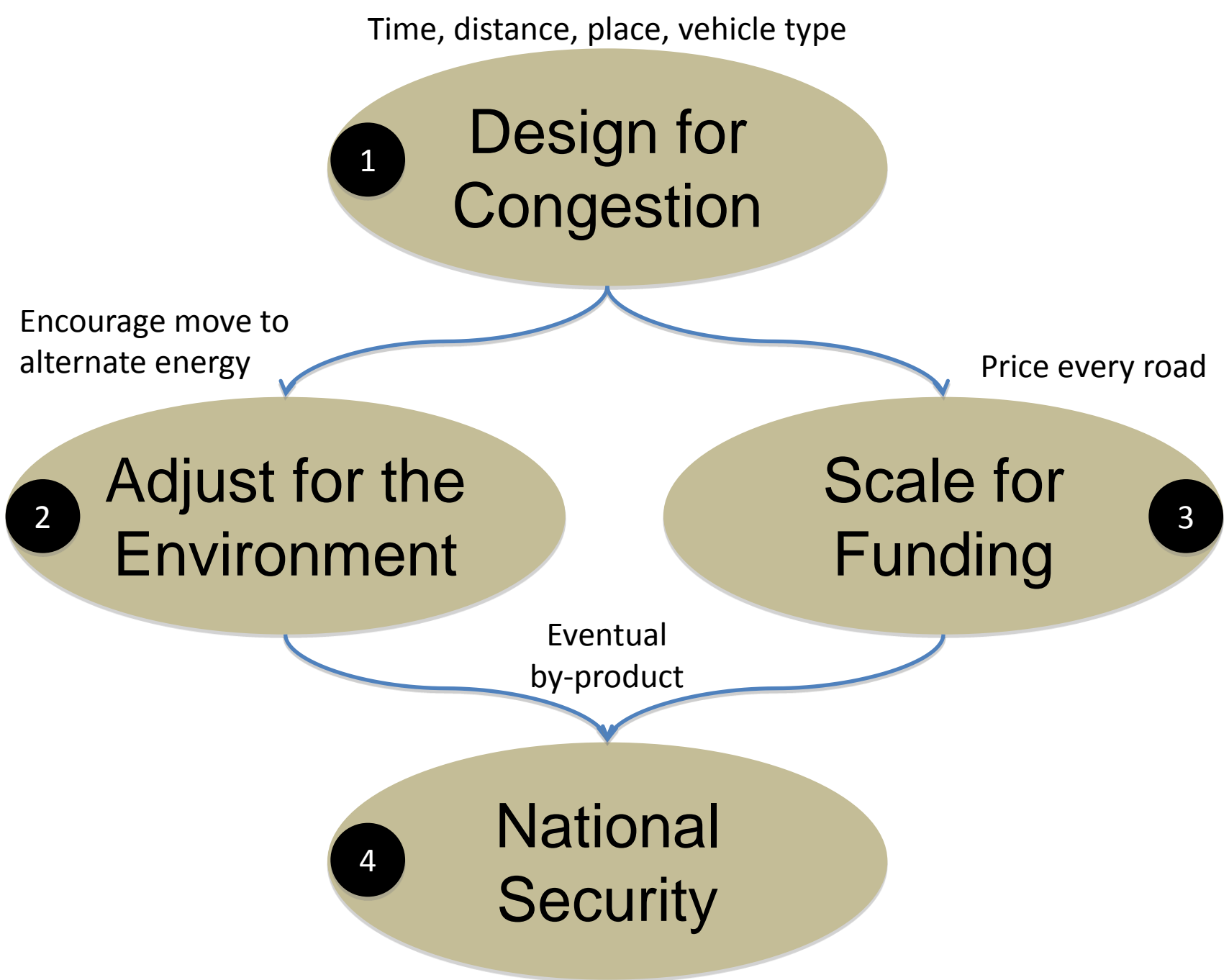
Seven

Government mandates

…industry operates

Democratic governments are unable to toll private cars…via MBUF

Score to date:
- one million heavy trucks
- zero cars

14 distinct barriers
- Voluntary can skirt all of them

1. The "what-for" confusion
2. The privacy misunderstanding
3. The dedicated charge-collection barrier
4. The car-wars mistake
5. The "better way" trap
6. The bad for the poor trip wire
7. The "transit first" roadblock
8. The surprising psychology of transport pricing
9. The "we don't believe you" excuse
10. The "we don't trust you" factor
11. The referendum blunder
12. The politics of congestion pricing
13. The rebound effect
14. The misunderstanding of what "road-user" means

Eight

Services first

…tolling second

Complete the shift by 2025…

…by giving users 2.5x incremental value over status quo starting now

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Nine

Megaregions

…not states or nations

Most SOV driving happens within a single megaregion

Consistent, valuable services throughout will attract volunteers

NYCDOT leads here

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Ten

Focus on equity

…deal with [perceptions of] unfairness

Technology solved

Cost solved

Privacy solved

Equity is not solved
… fear of the unknown

Government View

Industry View

Mandate vs Invite

Value-Added Services

Tolling

Tolling

Value-Added Services

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Role of the

Public Sector

Seed sustainable programs
- Megaregion programs
  - e.g., NYCDOT's DriveSmart
- Parking reform
- PAYDI
- ENGO rewards
- Loyalty rewards
- *not* technology trials

Ensure
- Audit
- Standards
- Interoperability
- Privacy
- Equity
- Access
- Public Transit

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Privacy

International Working Group on Data Protection in Telecommunications

Guideline for RUC systems:

- Maintain anonymity of the driver
- Delete detailed trip data on settlement
- Process personal data only for purposes agreed
- Do not ascertain identity of driver or owner

Location anonymous GPS smart meters are more private than DSRC/RFID, ANPR, Cellular, or Credit cards

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Role of the

Private Sector

Innovate Systems and Equipment

Acceptance by a Thousand Services™

Incredible customer care

Make drivers happy

Make TDM profitable

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BY BERN GRUSH

WHAT WOULD STEVE JOBS DO?

If Steve Jobs were to design a dash-top device that handled road use payments, what would such an *iVMTcharger (US)* or *iTDPcharger (EU)* look like? You might suppose he wouldn't be caught dead doing that, but what if he figured there was a market for one in nearly every vehicle in the US, Europe and Asia in 2015–2025 for when we can no longer ignore the failing ability of fuel taxes to fund our roads, or start using alternative power sources and the gas tax dries up, or when we start doing something about congestion as we keep talking about? What will road user fee collection look like then?

IF STEVE JOBS WERE TO DESIGN A DASH-TOP DEVICE THAT HANDLED ROAD USE PAYMENTS, WHAT WOULD SUCH A DEVICE LOOK LIKE?

Imagine how Jobs would think about the design of *acceptable* road tolling telematics. And he'd expand that thinking far beyond tolling only limited access interstate or interurban routes. He'd imagine a system capable of replacing the fuel tax. Or tolling all roads as the Dutch announced they would do.

Jobs likes customers to line up outside mobility stores starting the night before product release to be first to get an iWhatever. So his thinking would be one far cry from a simple $12 transponder. Of course, the cost of low-end road tolling telematics must be dramatically less than an iPhone — perhaps closer to $50–70.

Market framework

NCHRP/RAND (2010.10)
- demonstrate MBUF

Government
- regulate
- seed infrastructure provider
  not the toll operator

Industry
- invest
- innovate
- build sustainable services

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NYCDOT

SmartDrive
(RFEI)

Offspring of PlaNYC

(Note Megaregion perspective)

Industry asked:

- Invest in Trials

- Ideas

- Services
  - safety
  - money-saving
  - time saving

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How to start…

National auction for four mobility payment service operators

Like the $17B 3G spectrum auction of 2000/2001

Minimum bid $1B ($4B)

10 year non-compete

Use proceeds to incent:
- PAYDI
- Satellite parking
- Zero-infrastructure tolling
- Safety programs
- Rewards programs
- Loyalty programs
- others

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A journey of a thousand miles begins with a single step

Confucius

Thank you.

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Elevator Version

4 slides

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"Government can't toll roads"
- Grushhour 2010-06-24

(Government cannot mandate the shift from fuel tax to MBUF)

Barriers

Knowledge

Narrow focus

Politics

2.5 factor

**Industry
can toll roads**

PPP

Telcos

Knowledge

Broad focus

Motivation

Customer Service

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