History, Manifesto, Recipe & Proposal

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6: Roles of the Public and Private Sectors

MBUF III
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History of tolls starts in Greek mythology…

The god **Embuftus** of Transportus

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

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.

Charon - Alexander Dmitrievich Litovchenko, 1889
Cornelius Krieghoff  “The Tollgate”, 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
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
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
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

Three

Voluntary

…is the only path to acceptance
Drivers understand paying for parking

Drivers do not understand paying for road-use

Go to regional councils, DOTs seldom have parking mandate
**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
TDM fix requires intelligence

Funding fix requires courage

It is easier to be smart than brave

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

1. Time, distance, place, vehicle type

2. Adjust for the Environment
   - Encourage move to alternate energy

3. Scale for Funding
   - Price every road

4. National Security
   - Eventual by-product
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
Nine Megaregions …not states or nations

Most SOV driving happens within a single megaregion

Consistent, valuable services throughout will attract volunteers

NYCDOT leads here
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

Mandate vs Invite

Value-Added Services

Tolling

Industry View

Tolling

Value-Added Services

Government View

Mandate vs Invite

Value-Added Services

Tolling

Industry View

Tolling

Value-Added Services
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
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
Role of the Private Sector

Innovate Systems and Equipment

Acceptance by a Thousand Services™

Incredible customer care

Make drivers happy

Make TDM profitable
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
NYCDOT

SmartDrive
(RFEI)

Offspring of PlaNYC
(Note Megaregion perspective)

Industry asked:

- Invest in Trials
- Ideas
- Services
  - safety
  - money-saving
  - time saving
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
A journey of a thousand miles begins with a single step

Confucius

Thank you.
“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