Transport and urban governance in a platform-driven world

Kevin Webb, November 7, 2019
@ UMN Center for Transportation Studies Research Conference
The “platform” questions we’re grappling with today are fundamentally about how “connectivity” shapes our communities.

Let’s unpack “connective platforms” three ways...
1. Connectivity as a technology
2. Connectivity as a business
3. Connectivity as a public good
1. Connectivity as a technology
2. Connectivity as a business
3. Connectivity as a public good
“Connectivity” is not the “the Internet”

We’ve dealt with the impact of connective technologies before.
Proximity is a form of connectivity.

Cities are fundamentally a connective technology.
New connective technologies change how we experience proximity

They lessen our dependence on spatial proximity, allowing us to organize around new forms social and conceptual proximity.
Connective technologies change more than just how we connect or move: they reorganize the spatial, social, and economic structures of how we live.
1. Connectivity as a technology
2. Connectivity as a business
3. Connectivity as a public good
Connectivity is infrastructural: its purpose is to enable others to do more.
Businesses that operate infrastructure raise unique questions:

1. How do we decide who operates infrastructure?
2. How do we ensure infrastructure serves the public, and the public good?
While railroads laid the foundation for modern infrastructure regulation, communications technology has changed the mechanics and role of connective infrastructure.
We have move from coordination via control of physical infrastructure (supply), to coordination via demand aggregation.
Supply-side vs demand-side coordination

Infrastructure coordinates

NEW YORK CENTRAL

UNION PACIFIC

CHICAGO NORTHWESTERN LINE

Uber

amazon.com
Supply-side vs demand-side coordination

Coordination as infrastructure
The turning point from supply to demand coordination: **airline ticketing**
Global Distribution Systems (GDSs) and “Screen Bias”
Airlines & Airports

The freedom to market, sell, serve and operate the way airlines want

We develop and implement a broad range of software and data solutions to help airlines market themselves, sell their products in both the direct and indirect channels, serve their passengers and operate efficiently. We work with major network carriers, hybrid airlines, low cost carriers, cargo companies, charter airlines, corporate fleets and airports across the globe. Our travel marketplace, the Sabre global distribution system, provides airlines access to millions of travelers worldwide. This invaluable distribution channel is used by more than 435,000 global travel agents.
Customized airfare: Should airlines be able to offer individualized prices?

By Christopher Elliott
July 3, 2013

Should your airline be allowed to offer you a customized ticket?

That’s the intriguing and somewhat thorny question being raised by the worldwide airline industry through a little-known proposal called Resolution 787 — not to be confused with Boeing’s troubled 787 aircraft.

And it hopes that the answer is “yes.”

The airline industry, represented by the International Air Transport Association (IATA), wants to establish a new standard for selling airline seats, called the New Distribution Capability (NDC).

Resolution 787 would, among other things, allow an airline to collect personal information such as your address, birthday and frequent-flier information and offer you a special or custom fare based on what it knows about you.
New Distribution Capability

Together, Let’s Build Airline Retailing
NDC (New Distribution Capability) will enable the travel industry to transform the way air products are retailed to corporations, leisure and business travelers, by addressing the industry’s current distribution limitations: product differentiation and time-to-market, access to full and rich air content and finally, transparent shopping experience.

The NDC program

NDC (New Distribution Capability) is a travel industry-supported program (NDC Program) launched by IATA for the development and market adoption of a new, XML-based data transmission standard (NDC Standard).

The NDC Standard enhances the capability of communications between airlines and travel agents.
As airline ticketing evolved it combined two market-coordinating superpowers:

1) Aggregating demand to coordinate supply
2) “Personalized” distribution and pricing
Demand-side market coordination and personalization techniques pioneered by the airline industry now define the modern Internet economy
These “maps” are at the core of emerging forms of urban connectivity and coordination.

But the word “map” is inadequate for describing the thing we’re actually building.
It’s part yellow pages...

(discovery infrastructure?)
It's part social network..

(information coordination infrastructure?)
It’s part marketplace...
(distribution infrastructure?)
And, weirdly, the modern “map” doesn’t yet have a business model...
1. Connectivity as a technology
2. Connectivity as a business
3. Connectivity as a public good
Changes in connective technologies, and emergent connective business models force us to confront these questions:

1. How do we decide who operates infrastructure?
2. How do we ensure infrastructure serves the public, and the public good?
Good news:

None of these questions are new.

We’ve got this...
Existing leverage points:

Physical infrastructure
Existing leverage points:

- Capital investment
- Street/curb regulations
- Pricing and subsidies for infrastructure use
Existing leverage points:

- People
- Vehicles
- & Goods
Existing leverage points:

- Driver and vehicle licensing
- Operating subsidies for services
Existing leverage points:

Markets & Business structures
Existing leverage points:

- Pricing & utility regulation
- Labor & consumer protection
- Antitrust
- Public Investment
Existing leverage points:

Regulation of infrastructure/space
Existing leverage points:

Regulation of business/markets
Important (but limited) tools

- Capital investment
- Street/curb regulations
- Pricing and subsidies for infrastructure use
- Driver and vehicle licensing
- Operating subsidies for services
Proven yet under discussed tools

- Pricing & utility regulation
- Labor & consumer protection
- Antitrust
- Public Investment
Fair pricing, transparency, and competition:

Limit rent-seeking, discrimination, and ensure markets allow competition wherever possible
We need innovation in pricing regulation

Industrial-era pricing regulations are focused on supply-side coordination and reducing power of supplier trusts. Today we need demand-side pricing regulation.
Create new kinds of public utilities

Ensure that core infrastructure, particularly where there are efficiencies from centralization, or opportunities for capture
We need a more dynamic approach to infrastructure regulation, and innovation in governance

Picking the right layers of infrastructure is crucial, as is knowing when/how to unwind
Complex, tightly integrated systems are capturable.

Instead of top-down “platforms” we need **bottom-up infrastructure**, that enables everyone to do (and understand) more.
Labor protection/regulation is a powerful lever

Today’s emergent urban technologies have redefined labor obligations, just like past
THE TOURNAMENT OF TODAY—A SET TO BETWEEN LABOR AND MONOPOLY.
Privacy regulations are consumer protection regulations. They reduce information asymmetries, amplify pricing regulation, and enable transparent, open competition.
As part of defining our right to personal privacy, **we need to define a right to collective action and communal agency through insights derived from personal information.** These are two sides of the same coin.
Emerging forms of algorithmic governance depend on collective insight and data. If we build those systems on privacy-protecting approaches to measurement, everyone can participate.
We need to make bold public technical investments in that *commodify core infrastructure*, ensuring it serves as a building block for others, and prevents capture.
The opportunity: we have the tools we need to understand and manage the power of “connective platforms”

The risk: we miss the forest for the trees, and treat today’s challenges as a technical problem