MEET DHAKA

Only 1% of people have cars

What do we predict will happen to Dhaka if nothing is done?


TAMAN GALAXI
4 pm
TRAFFIC JAM
IN JAKARTA
August 2011

DESIGN CITIES LIKE YOU GIVE A DAMN

An initiative of the URBAN LAUNCHPAD

DESIGN CHALLENGE

substantially improve the alternatives to driving in Dhaka
in 3 months or less

An initiative of the

URBAN LAUNCHPAD

DESIGN
YOUR
DHAKA

sexy sidewalks

DESIGN
YOUR
DHAKA

critical mass
cycling

DESIGN
YOUR
DHAKA

car-free zones / days

DESIGN
YOUR
DHAKA

making the invisible visible

DESIGN
YOUR
DHAKA

How?

3 INSIGHTS

1 cities don’t innovate as much as they should and when they do, they don’t share
2 we can seamlessly build effective glocal (global + local) teams and share knowledge across space and time
3 we can now rapidly prototype physical, digital and mobile designs that address urban scale problems

a) the places that need the help the most at this time – and b) that have a local team that we can work with

1 IDENTIFY THE CITY and the URBAN-SCALE DESIGN CHALLENGE

research, res earch, resear ch

crowdsource ideas from local constitutents

2 BUILD A GLOCAL DESIGN TEAM
IDENTIFY and REFINE THE BEST IDEAS that can be RAPIDLY PROTOTYPED

1-2 months

refine ideas with the help of global experts

2-3 weeks

3 RAPID PROTOTYPE IN THE CITY

some members of global team to assist in the rapid deployment of new ideas

local partners to own and document the experiment's progress

4 BROADCAST EXPERIMENTS TO THE WEB WHERE INVESTORS CAN HELP SCALE THEIR FAVORITE EXPERIMENTS
prototypes, including design files all open-sourced and freely available to any city

law of unintended consequences

5 DESIGNED CITY
LEVERAGES NEW IDEAS TO REBRAND ITSELF AS A CITY THAT IS LEAPFROGGING INTO THE FUTURE

6 OTHER CITIES
ADOPT SOME OF THESE NEW EXPERIMENTS

DESIGN YOUR

DHAKA JANUARY 2012

THEORY OF CHANGE

private Motorization in South and Southeast Asia excluding Singapore

requires well-organized, capable resourced gov't which usually doesn't happen till later in development stages

how this private motorization wave might be avoided

A

regulate cars (ownership and use)

A1

limit

done only when congestion is really bad eg beijing, jakarta

or with unprecedented control / foresight eg Singapore

A2

disincentivize

B

regulate land use (do not build more roads)

C

make alternatives much more appealing

C1

build more capacity

new INFRASTRUCTURE

sidewalks, bicycle paths, brts, metro stations

C2

enhance existing capacity

INFORMATION retrofits

on-demand para-transit, real-time bus and rail info

bicycle and car sharing

D

GOD e.g. natural disasters, apocalypse

mobiles can be a spark!

ecocabs

B ← C2

experiment spread by courts and media

1pad made car-free

rickshaw and service redesigned

mobiles on rickshaws make them new

IDEOPHONE

C2 ← C2

C3

make alternative purchases more appealing

C4

make appealing a lifestyle without cars

how to support and scale this experimentation

[Google CiO douglas merrill]

3 types of innovation

incremental	incremental with unintended consequences	transformative
Incremental Innovation	Incremental Innovation with a Side Effect	Transformational Innovation

localization → scalable

INFORMATION retrofits

transport user problem in a specific context + mobile-driven information that can help solve

entrepreneur

1 ideas

2 incentives

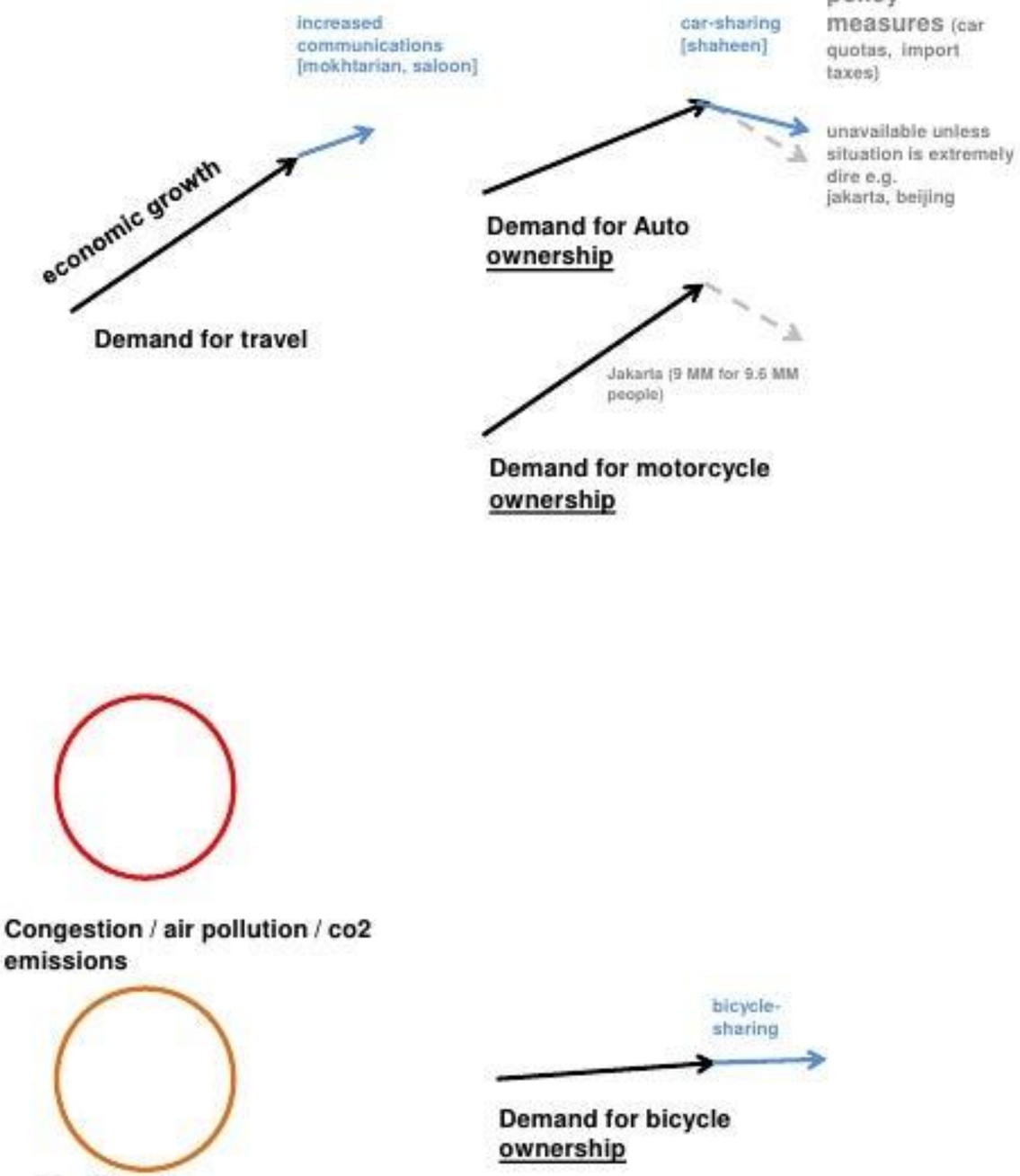
3 technical & implementation support

Developing Asia = **South and Southeast Asia excluding Singapore**

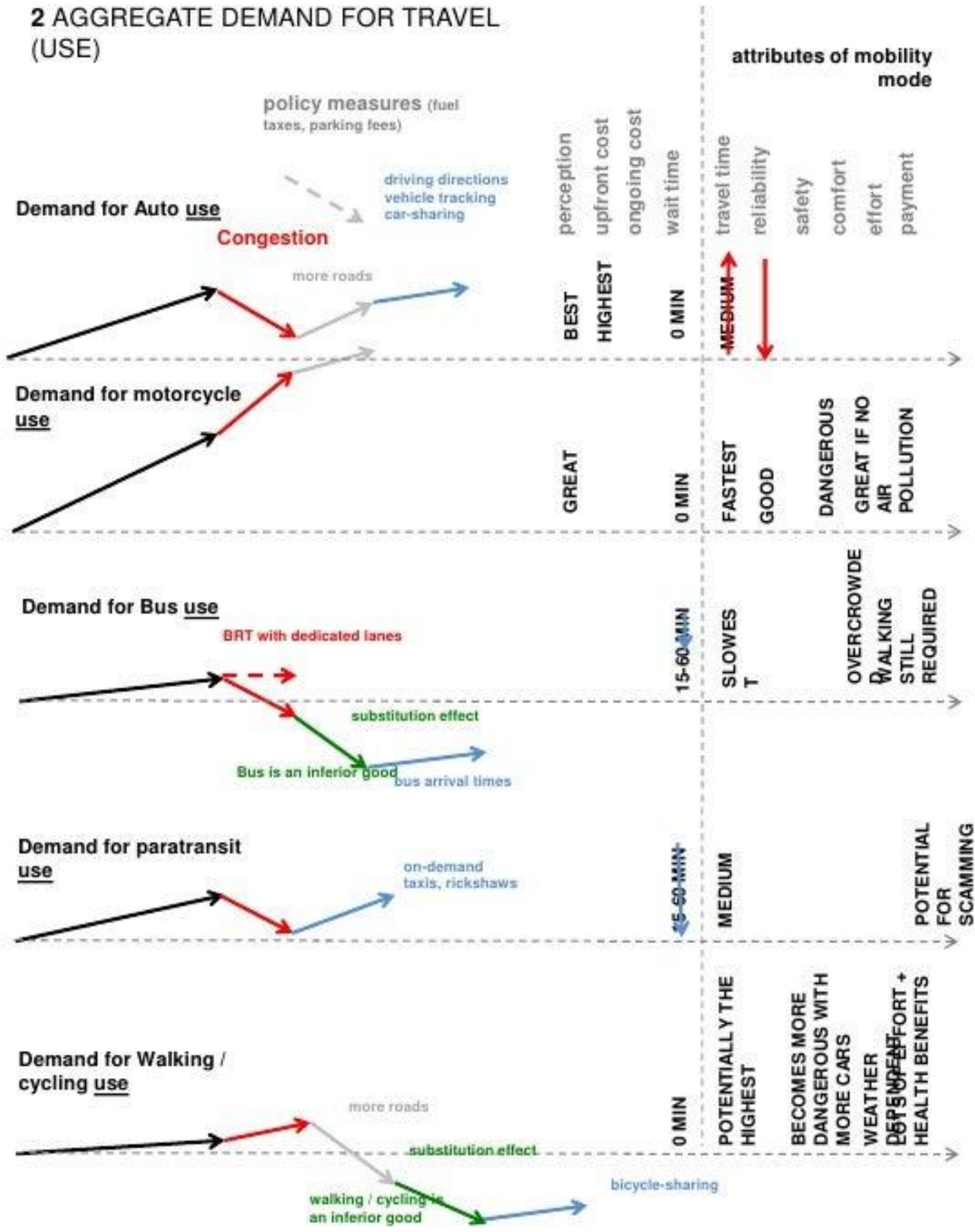
Demand-Side [1]

Can owning a Mobile phone reduce the desire to use and need an automobile? [user demand]

1 AGGREGATE DEMAND FOR TRAVEL (PURCHASE)



2 AGGREGATE DEMAND FOR TRAVEL (USE)



Demand-Side [2]

Developing Asia = **South and Southeast Asia excluding Singapore**

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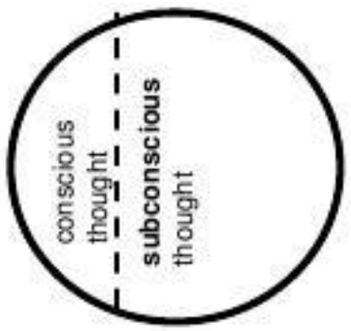
2 USER-CENTRIC TRAVEL DECISIONS

This is our brain (decision-making apparatus)



reason is often weak, our sentiments are strong, and our sentiments are trustworthy [brooks in the social animal]

taxes on cars, petrol, parking fees, subsidies for transit

dedicated bus lanes

Methods of changing motorization behavior

A REGULATE

car quotas

Difficult to do in developing contexts due to lack of enforcement mechanisms

also may impinge on freedoms, one of the core benefits of economic development [Sen]

B INCENTIVIZE

Money and Time

As incomes increase, financial incentives become less effective as transport share of income declines

Especially as congestion makes pushes the limits of commuting time. Time becomes a potentially powerful lever but one that may be difficult to push

C APPEAL TO HUMAN EMOTION

Aspiration, Love, sharing, surprise, wonder, sacrifice, delight

It's about the complete user experience

before transit

perception

which destination?

how long will it take?

will I get to my destination in time?

am I comfortable?

~~do I feel safe?~~

during transit

does something smell?

Killer marketing campaigns for walking, biking and transit

cool walking paths

activity / event based travel search

multi-modal, real-time transport planner

after transit

Time-Based destinations connected to transit

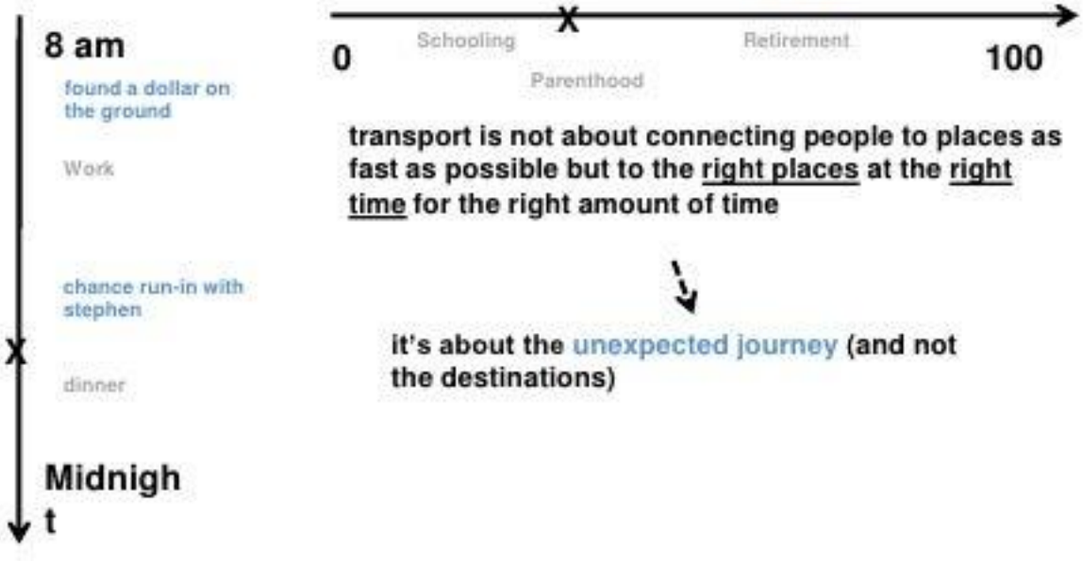
The Aspiration Index (AI), based on "current ownership" levels and "future intention" to buy a private car, shows that the AI for private car ownership is high in China, Indonesia, India, Thailand, Korea, Hong Kong and the Philippines, as illustrated in Table 2.1 (AC Nielson, 2005).

Table 2.1: Car ownership aspiration index in selected countries

High (AI>60%)	Medium (AI: 30-60%)	Low (AI<30%)
China	Malaysia	US
Indonesia	Singapore	Sweden
India	Taiwan	Germany
Thailand	Spain	Norway
Korea	Australia	Austria
Hong Kong	France	Netherlands
Philippines	Italy	Finland
	UK	Denmark
	Belgium	Japan
	Portugal	
	New Zealand	

Source: AC Nielsen (2005), Aspiration Index, http://tran.nielsen.com/pubs/2005_q1_ap_car.shtml

Managing space-Time



transport is not about connecting people to places as fast as possible but to the right places at the right time for the right amount of time

it's about the unexpected journey (and not the destinations)

destinations are not just fixed like home and work; or are they commercial like restaurants – they can be public places like parks

Family and Friends can be destinations; special events etc

50% car-free, development zones
car-quotas
free bus and train rides
fun shared transit

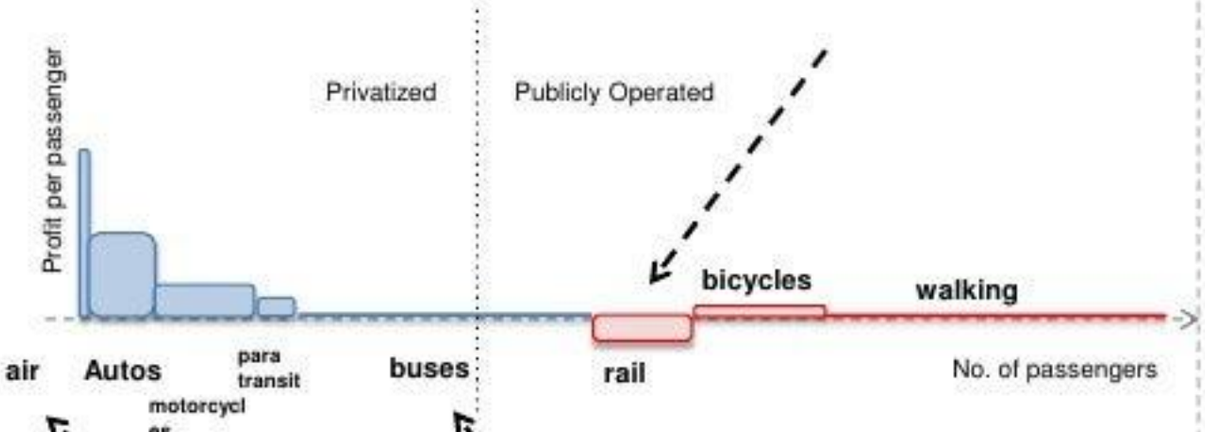
Supply-Side

Developing Asia = **South and Southeast Asia excluding Singapore**

Can Mobile phone intelligence improve the supply of automobile alternatives?

1 SUPPLY FOR TRAVEL

Rail economics highly dependent on density; Since costs are front-loaded, often build for political reasons [Guerra & Cervero]

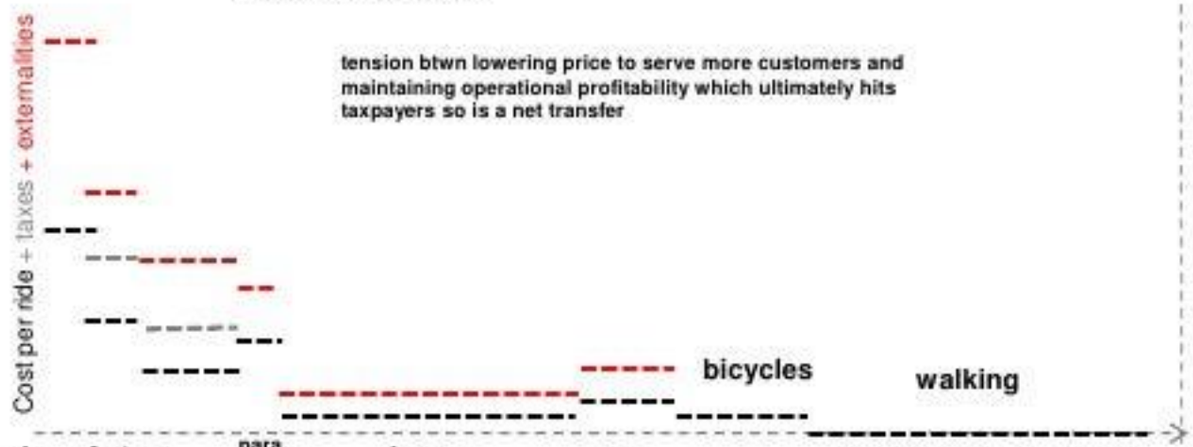


Airports as most profitable

Privatized b/c of high usage & competition in developing countries

Washington metro has one of the highest farebox recovery rates at 60% of opex [nelson etal]

[Gomez-Ibanez & Meyer]



tension btwn lowering price to serve more customers and maintaining operational profitability which ultimately hits taxpayers so is a net transfer

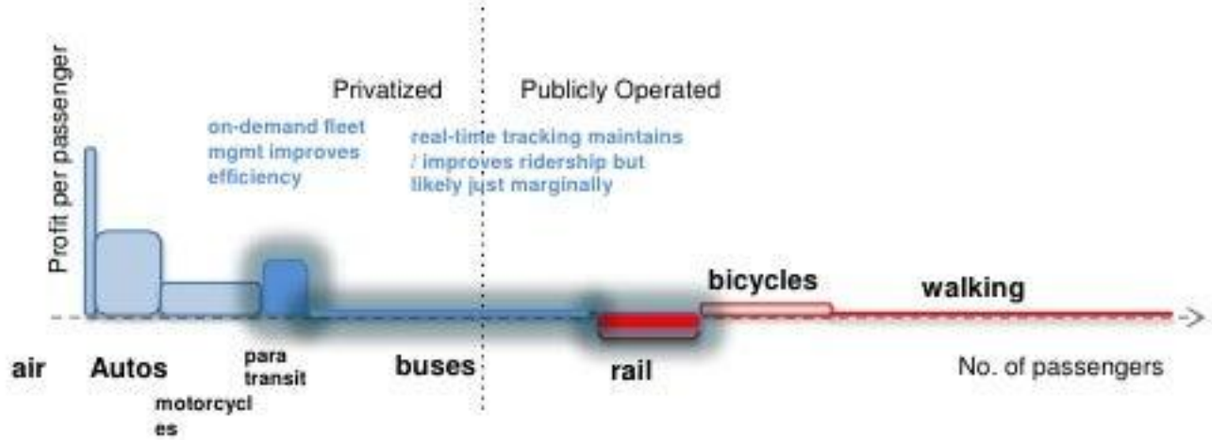
transport subsidies do not seem to be an effective way of helping the poor

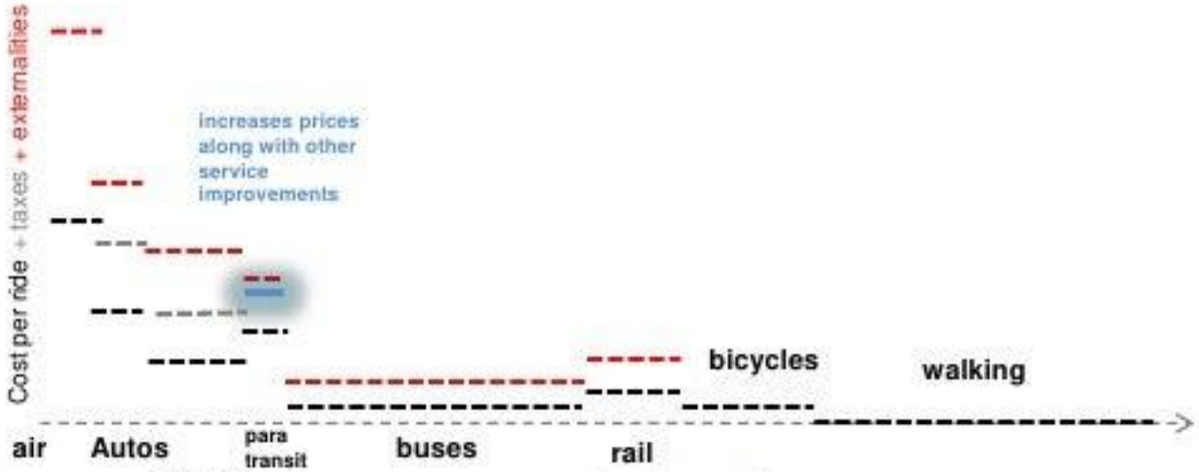
better to improve sidewalks & walking paths rather than subsidize motorized transport

[Serebrisky etal]

2 IMPACT of MOBILE PHONE INTELLIGENCE

Routing directions / mapping / local search lift all boats but especially driving





potential to decrease prices for buses but

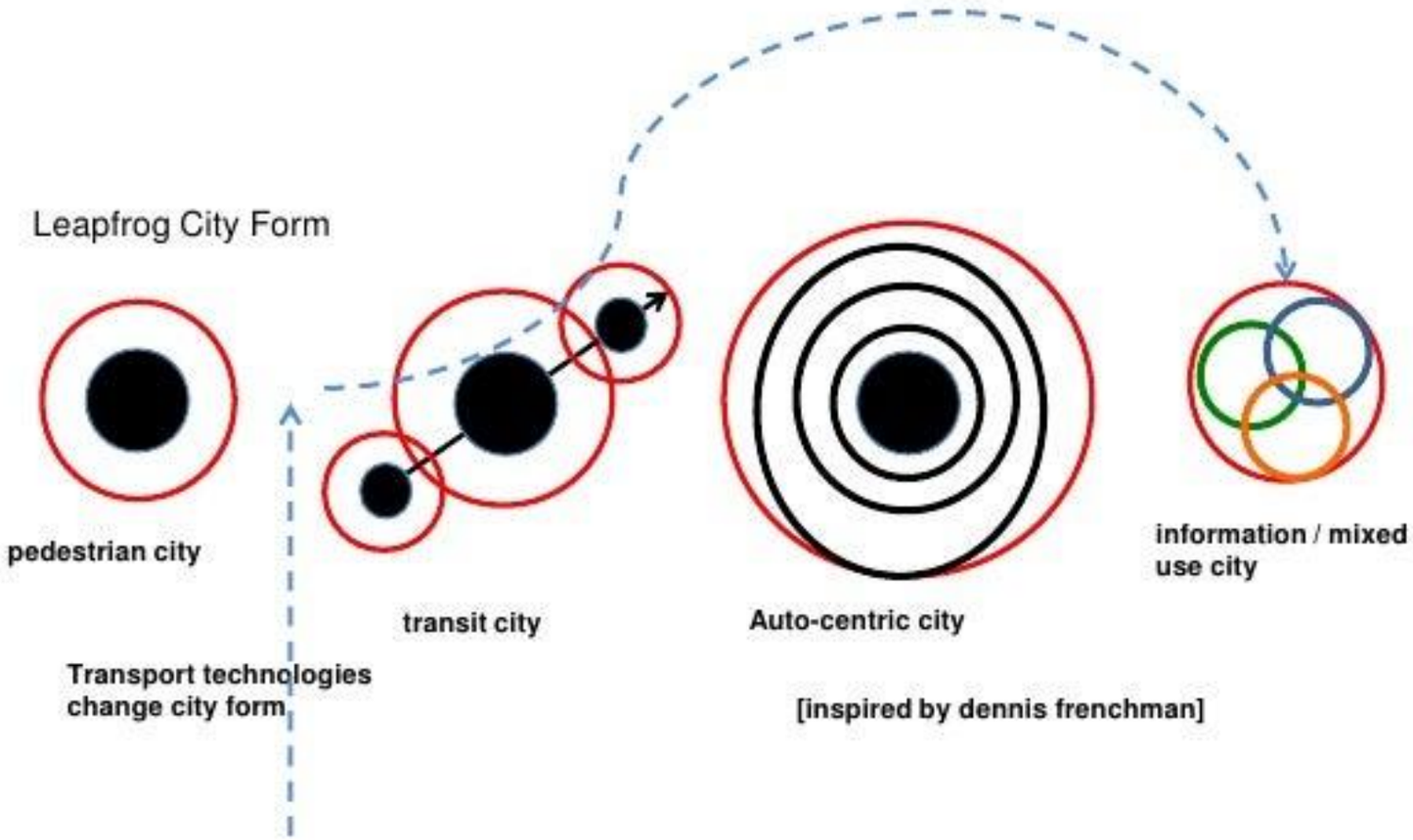
less leverage with rail prices since profitability is low

travel demand elasticity < 0.5 for rail & sometimes negative for bus [parry & small]

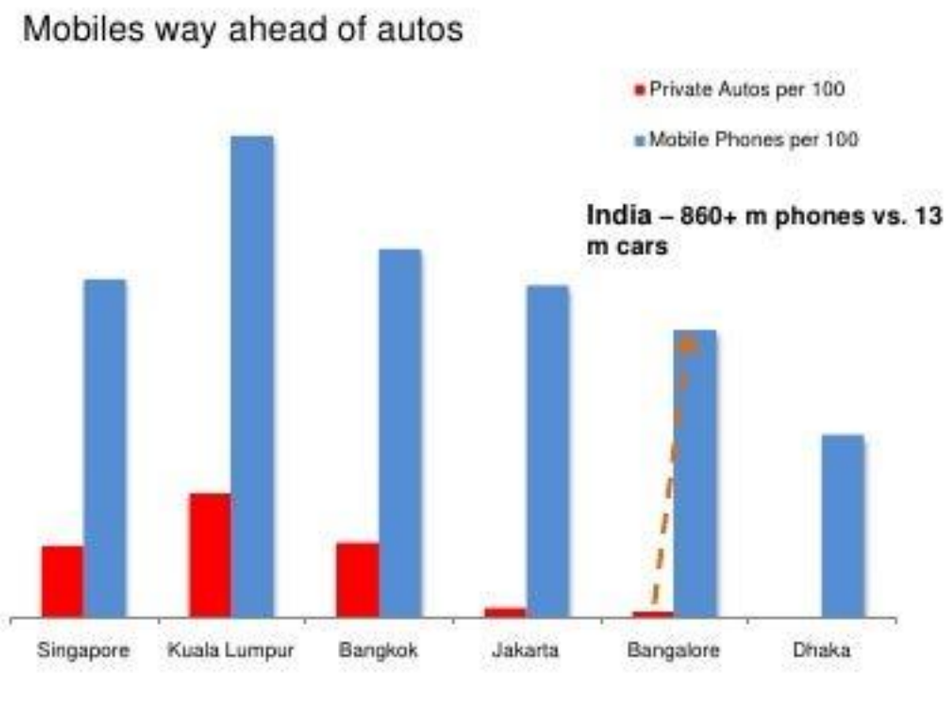
better to improve both transit and adjacent services

Leapfrog Development

private Motorization in **South and Southeast Asia excluding Singapore**



how will ubiquitous mobile technologies change city form?



failed history of leapfrog development[tendler etal]

private Motorization in **South and Southeast Asia excluding Singapore**

appropriate, scalable technologies

Mobile hardware

smartphones with 17+ sensors

Location-based (gps, wi-fi)

QR code

SMSs

Location-based tracking

Breakthrough technologies

what can you rapidly prototype?

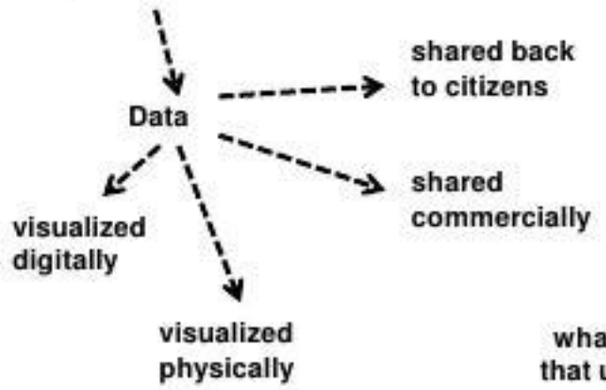
Mobile sensors can make the largely invisible much more visible and shared peer to peer

largely invisible
poor
pedestrians
environmental harm
things indoors
peoples' thoughts
peoples' movements
our own physical capabilities e.g. running speed

largely invisible
changing physical form
changing inhabitants
life lessons

low-cost smart city

distributed
people-centric
mobile phones and networks
social / puts people in groups



we can locate things on a microscale (3-5 meters) and in micro-time

what if we knew everything that usually goes on around us?