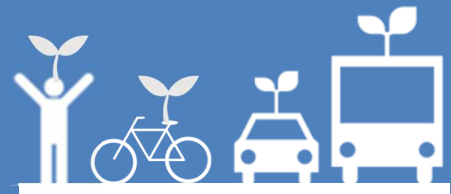


Seoul Transportation

September 2014

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The Seoul Institute



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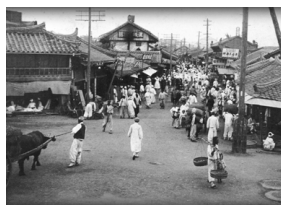
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1. Past & Now

1. Past & Now

Seoul transportation in the past

Mode of transportation



Walk (~ 1945)



Streetcar (1945 ~ 1970)



Bus (1971 ~ 1985)



Car (1986 ~ 2000)

Expansion of Road Network

1936



1966



1972



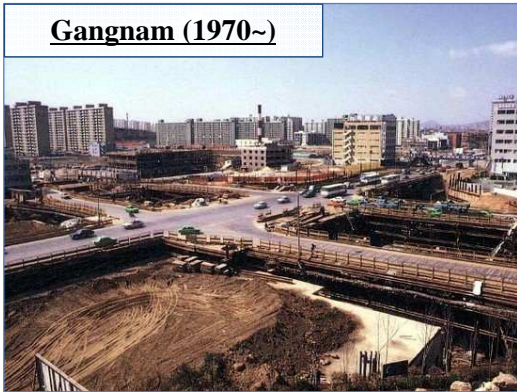
2000



1. Past & Now

Rapid urban Development

Gangnam (1970~)



Yeouido (1967~)

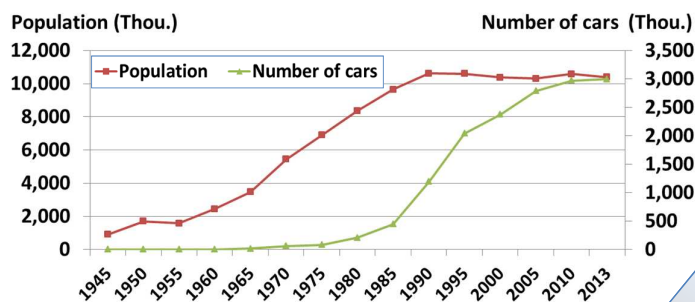


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1. Past & Now

Car- oriented policy

Population & number of cars



5

1. Past & Now

Car- oriented policy

Freeway traffic management system (FTMS)

- Start to operate in 1997
- Road length of operation: 259km



6

1. Past & Now

Car- oriented policy

Traffic impact analysis (TIA)

- What are in TIA?
 - 1) Forecast travel demand
 - 2) Examine the impacts of development on the traffic conditions
 - 3) Prepare measures to mitigate the impacts
- Introduced in 1986 as a mandatory legal process before development
- Review committee members:
Experts at transportation, road, urban planning and architecture



Process: 4 steps

Draft TIA by
developer



Submit TIA



Review on the TIA

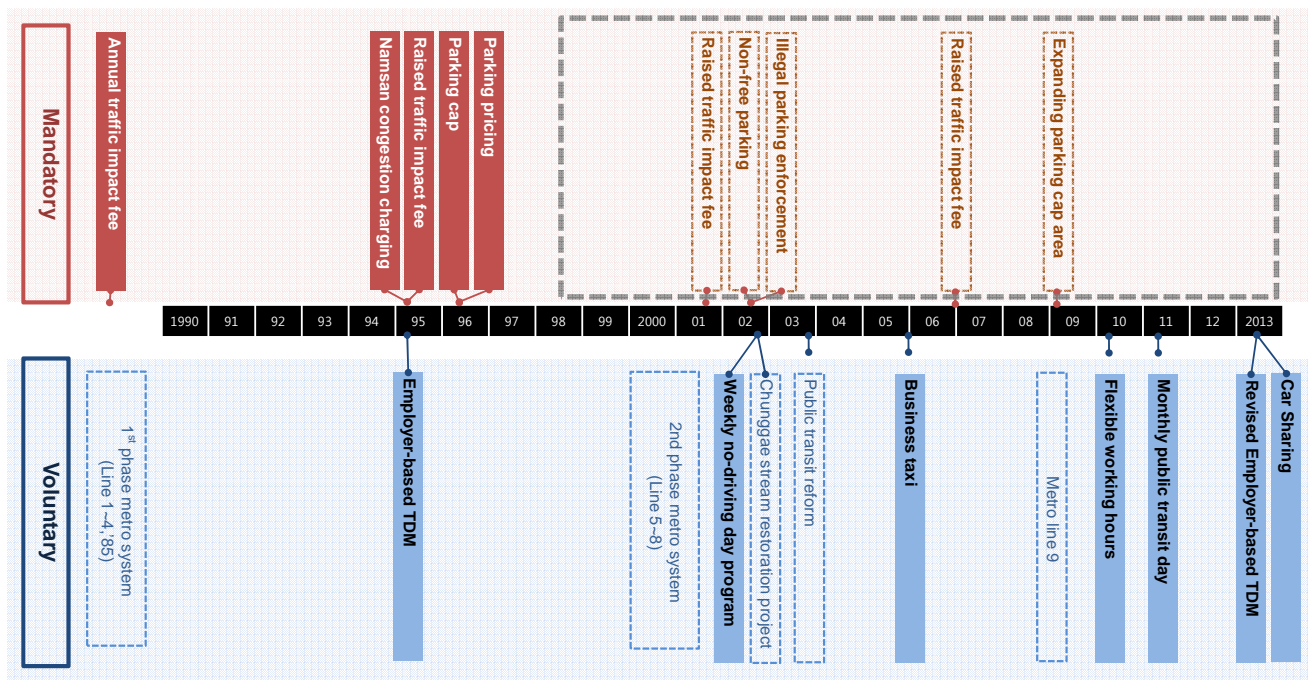


Approval

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1. Past & Now

Transport demand management (TDM)



8

1. Past & Now

Transport demand management (TDM)

Annual traffic impact fee (ATIF)

- **Floor area × Unit fee × Traffic impact factor**
- **Target buildings with floor area ≥ 1,000 m²**
- **Unit fee: 350~700 KRW/ m²**
- **Traffic impact factor:**
0.47 (factory) ~ 9.83 (department store)

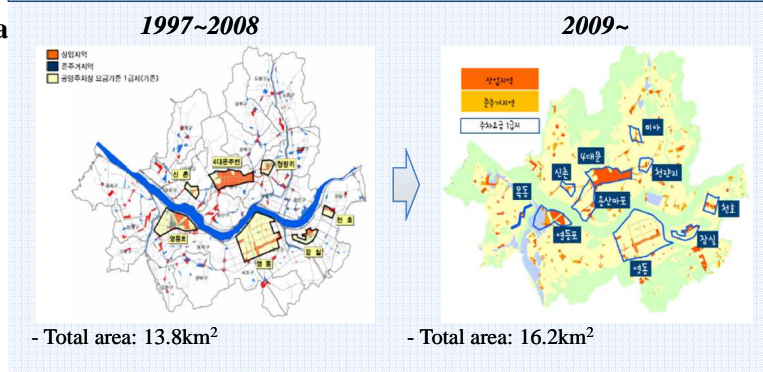
Employer-based TDM

- Alleviate ATIF if employer joins in traffic reduction programs (TRPs)
- TRPs: Parking pricing, Business taxi, etc.
- Reduction rate of ATIF (each TRP): 5~30%

 Parking cap

- **Target: highly developed area**
- **Limit parking space:**
Maximum 50% of regular area

Parking cap area



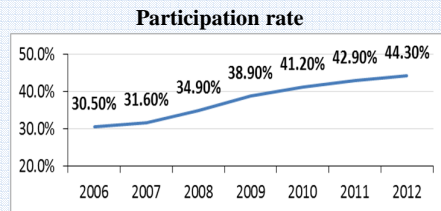
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1. Past & Now

T Transport demand management (TDM)

Weekly No-Driving Day program

Start to implement in 2003



Cheonggyecheon Stream Restoration (2003)



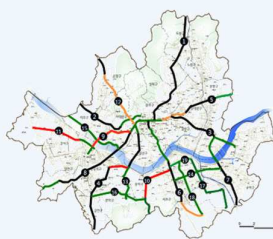
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1. Past & Now

P Public transportation

Bus system change (2004)

Median bus lanes



Color-coded hierarchical bus system



Inter-regional Lines



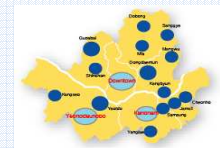
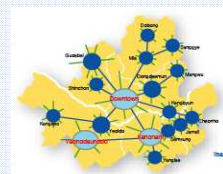
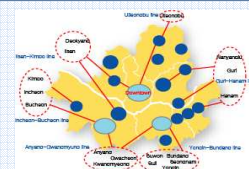
Trunk Lines



Feeder Lines



Circular Lines



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1. Past & Now

Public transportation


Bus system change (2004)

Transportation Center

Before




↓



Integrated distance-based transit fare system

- Free transfer between bus-bus and bus-subway, free transfer within 30 minutes. (maximum 5 times)
- Introduction of transportation card
- Distance-based fare system

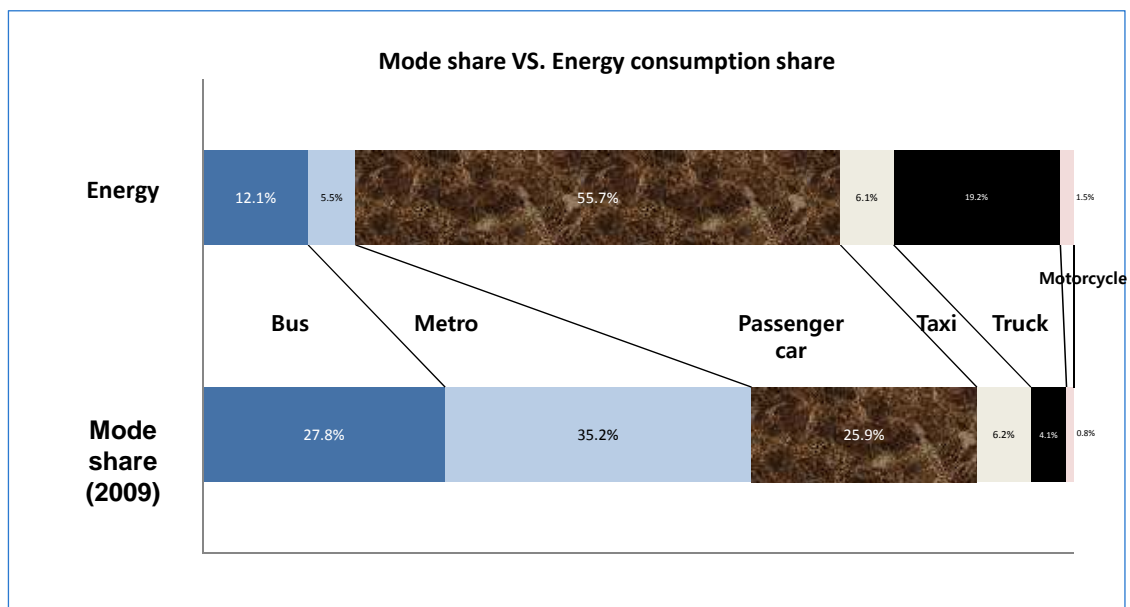


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1. Past & Now

Mode share vs. energy consumption share

- Mode share of car **25.9%** vs. energy consumption share **55.7%**
- Mode share of subway **35.2%** vs. energy consumption share **5.5%**

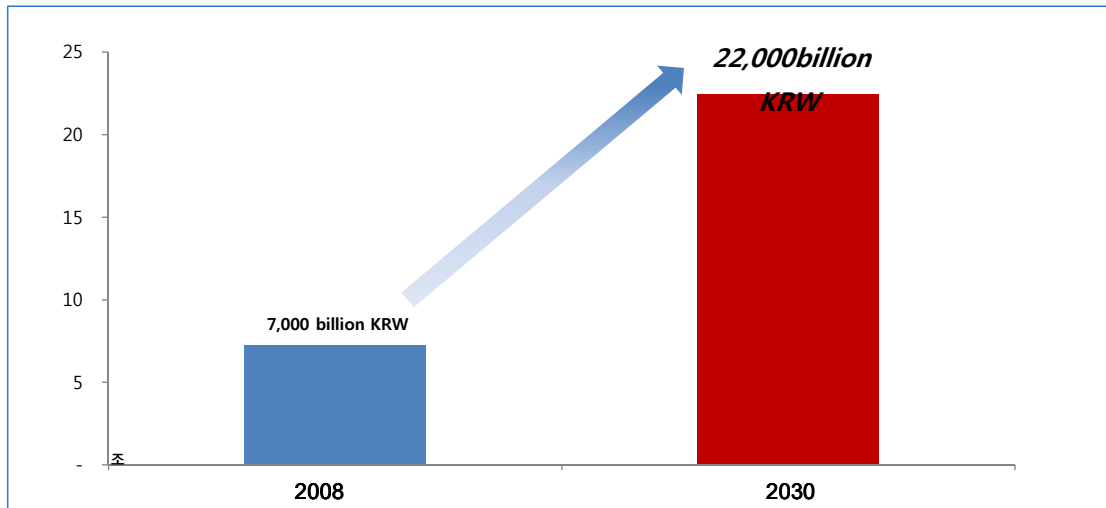


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1. Past & Now

Uprising congestion cost

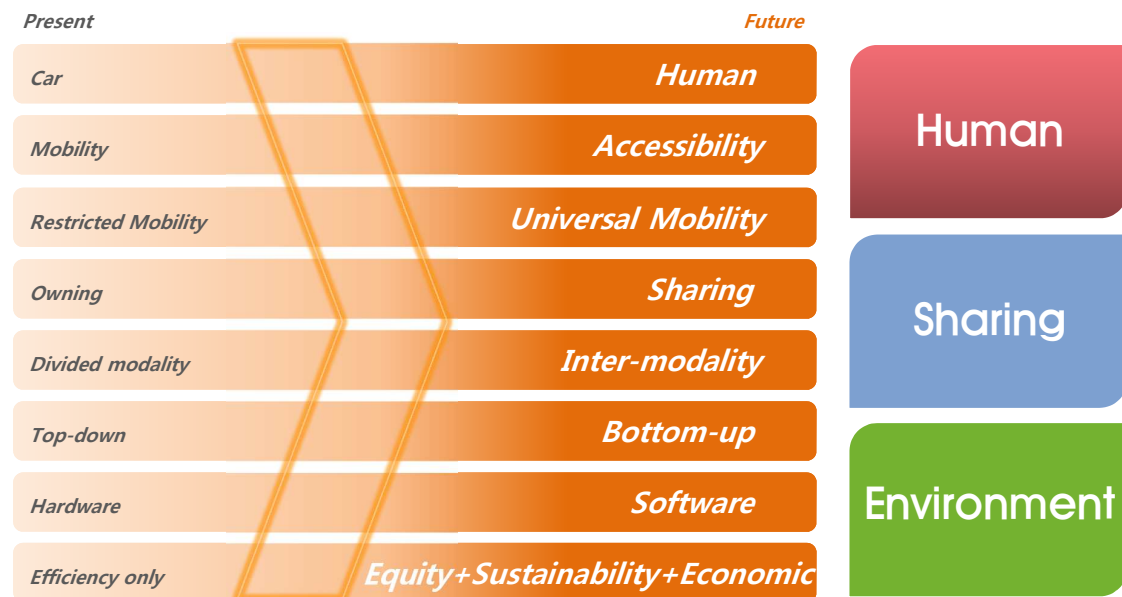
- Congestion cost 7,500 billion KRW(2009) \Rightarrow 22,400 billion KRW(2030) by simple trend analysis



//. Vision

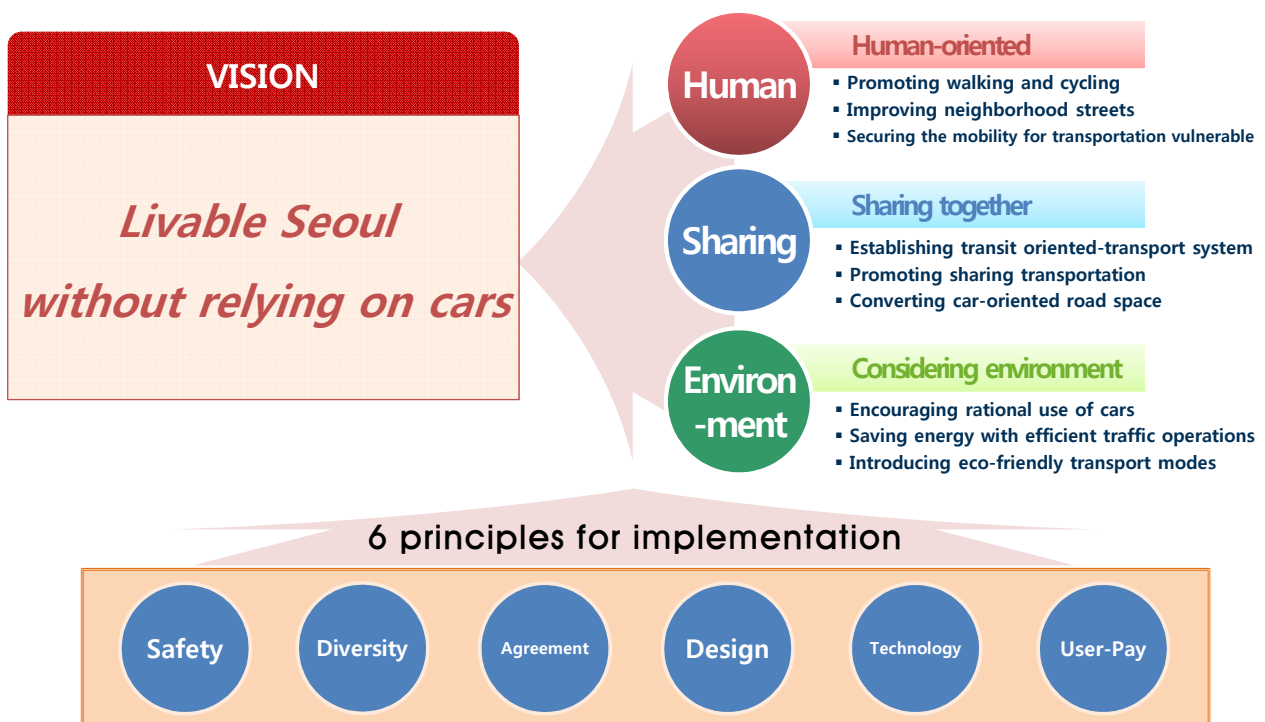
2. Vision

Toward paradigm shift



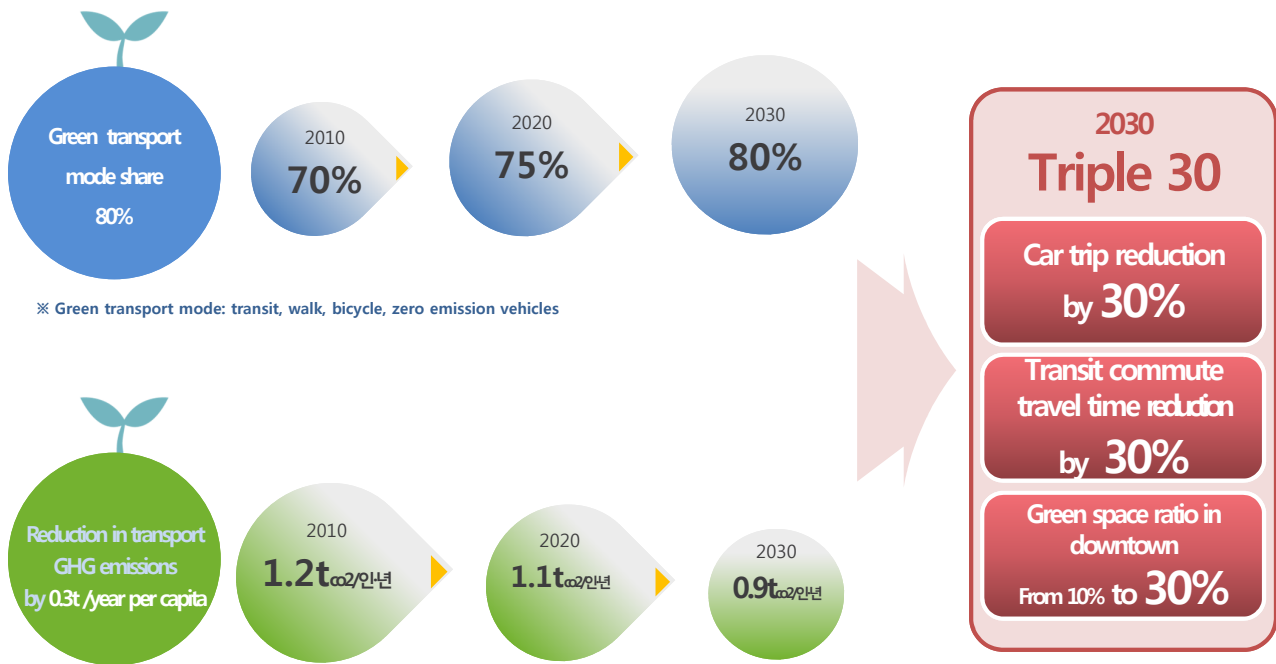
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2. Vision



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2. Vision



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III. Implementation

3. Implementation

「Seoul Transport 2030」 11 Promises

-  Building pedestrian-oriented environment
-  Encouraging the wide use of bike
-  Making accident free city
-  Removing barriers for the transportation vulnerable
-  Establishing rail-oriented public transit system
-  Making public transit faster and more convenient
-  Encouraging shared transport
-  Reducing unnecessary trips
-  Introducing environmentally friendly transport modes
-  Making cars on the road flow smoothly
-  Improving the citizen's awareness of the better transport culture

Human

Sharing

Environment

20

3. Implementation



Human



Sharing



Environment

Doubled
Sidewalks &
Bike roads

At least 80%
decrease in
car accident
deaths

Present 430 deaths/year

100% Equipped
with barrier-free
facilities

Present 75%

Accessible to
subway stations
within 10 min

Bus speed
25km/h
on bus lanes

Present 20.1 km/h

At least 2
car sharing
spots
per neighborhood

Present 0.7/administrative unit

10% car
modal share
in downtown

Present 19.3%

80% transit
cars with
zero emissions

Present 0.2%

90% arterial
roads with
no-congestion

Present 80%

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3. Implementation

01 Transit mall

Introducing transit mall on Sinchon-ro in January, 2014
Pedestrian-only road on weekends



<http://www.dtoday.co.kr/news/articleView.html?idxno=105873>



<http://m.bizwatch.co.kr/?mod=mview&uid=4887>

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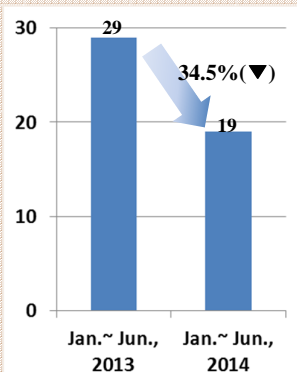
3. Implementation

01 Transit mall

Decrease in traffic accidents
Increase in citizen's satisfaction and stores' sales

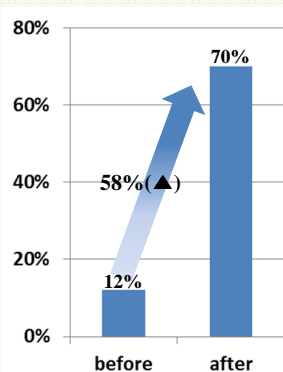
Traffic accidents

Number of traffic accidents
in Sinchon district



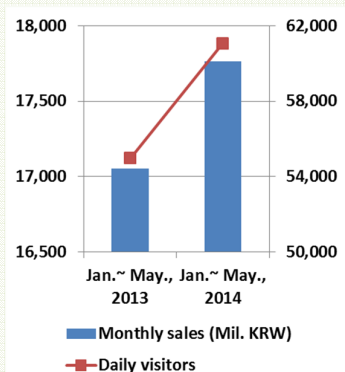
Satisfaction degree

Citizen's satisfaction degree
of Sinchon transit mall (N=1,300)



Sales

Stores' sales & number of visitors
in Sinchon district

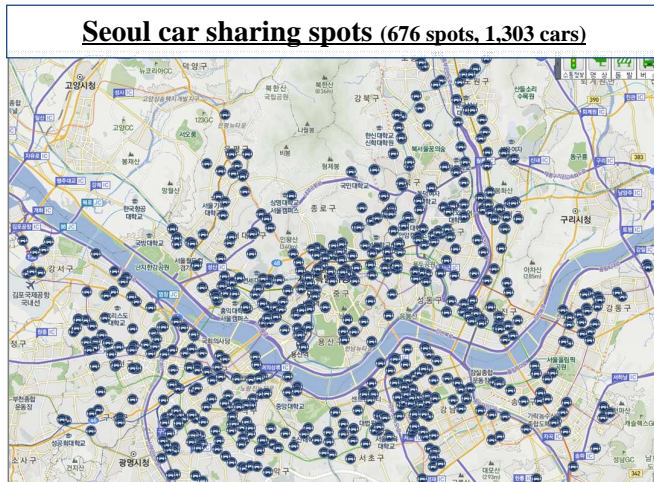


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3. Implementation

02 Car sharing

Start to operate in February, 2012 including a fleet of electric vehicles (EVs)



Easy renting system



Introducing EVs



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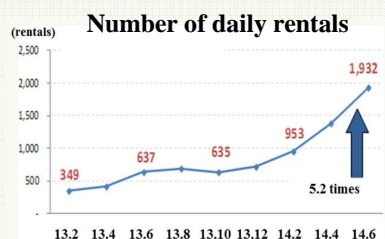
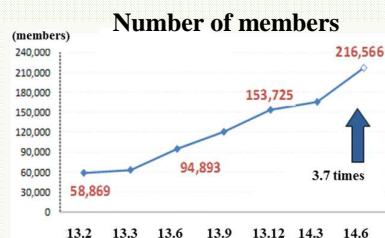
3. Implementation

02 Car sharing

Rapid increase of car sharing members and rentals

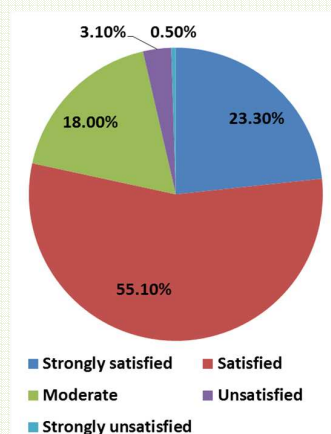
High degree of car sharing member's satisfaction

Car sharing members & rentals



Satisfaction degree of car sharing

Number of respondents: 5,950



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3. Implementation

03 Removal of overpass

Start to remove overpass in 2002
Enhancing urban scenery, vitality, and traffic conditions

Sinseol (2007)



Gwanghui (2008)



Mullae (2010)



Hwayang (2011)



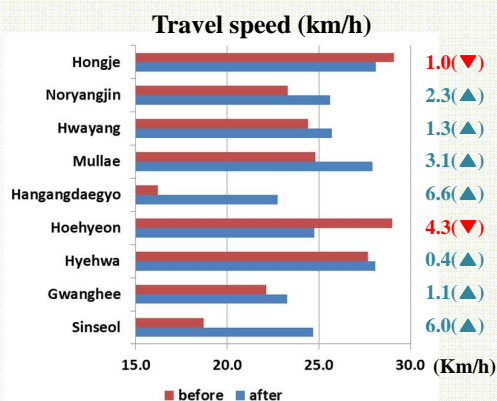
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3. Implementation

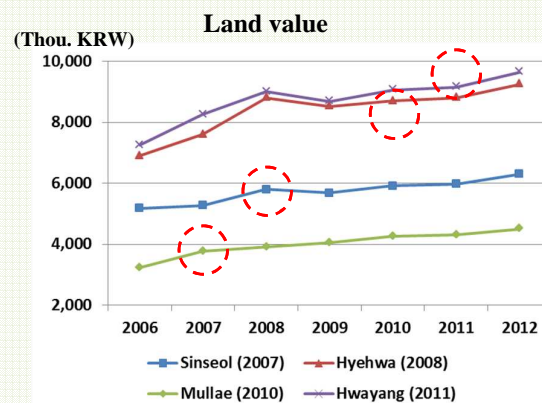
03 Removal of overpass

Increase in travel speed and rise in land value

Travel speed before and after
removal of overpass



Land value before and after
removal of overpasses



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3. Implementation

04 Road diet

Widening sidewalks by eliminating lanes on several downtown roads



Seoul Downtown and road diet target roads (yellow lines)

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Thank you!!

Questions?: jko@si.re.kr