



# downtown parking workshop

Columbia, Missouri

September 23, 2015

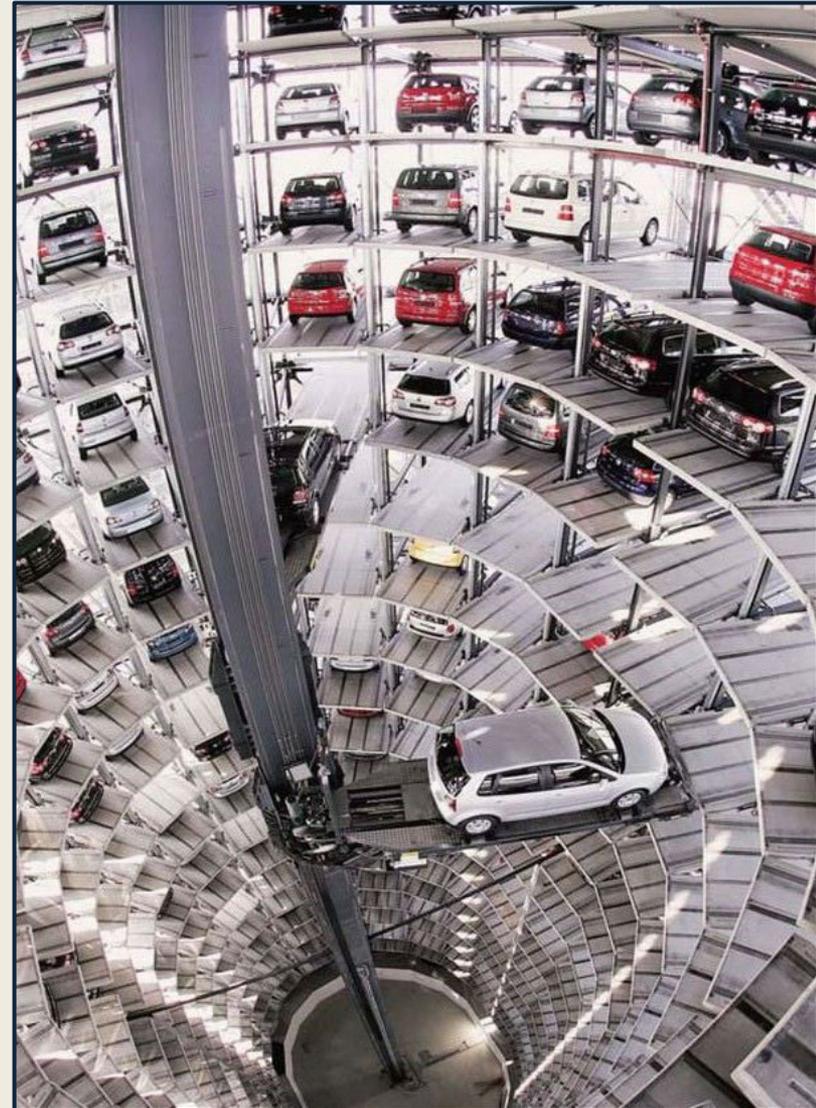


# last night

1. mobility trends

2. parking challenges

3. parking management

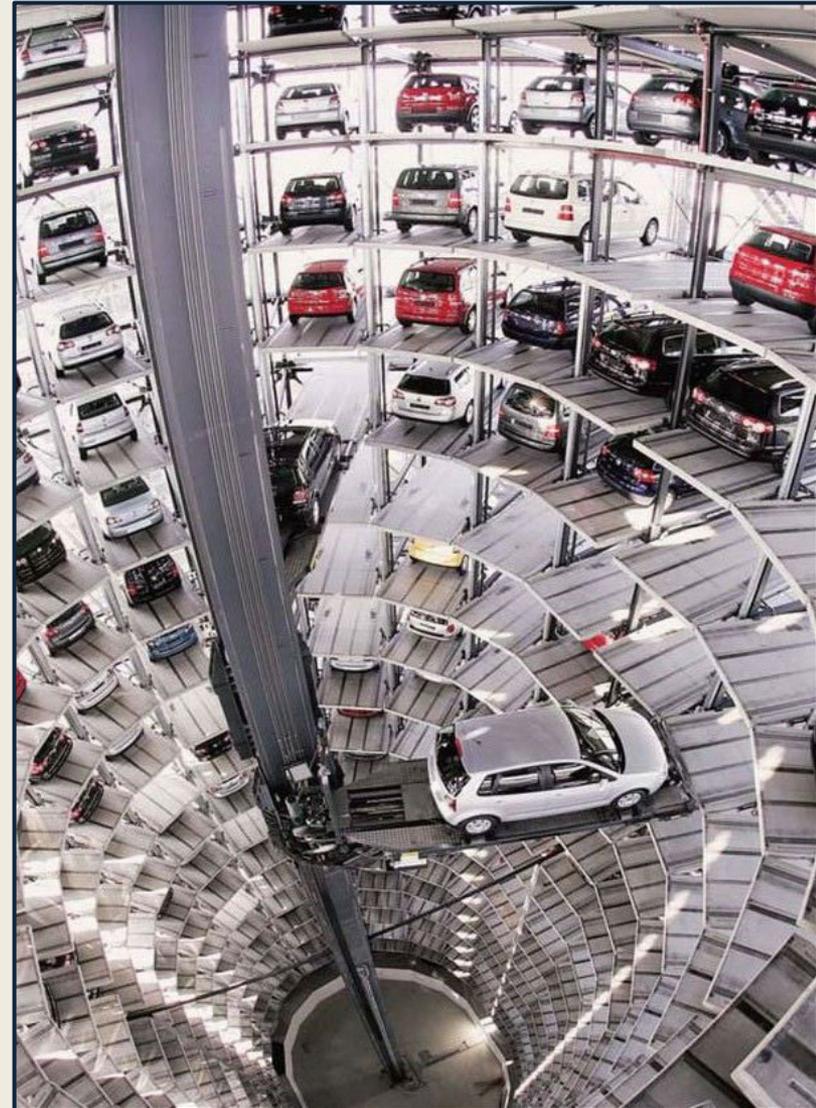


# today

1. parking basics

2. parking strategies

3. parking metrics





# 1. parking basics



# 1. basics

- ✓ parking types/roles
- ✓ utilization data
- ✓ how full is “full”
- ✓ turnover/duration



# on-street

- ✓ storefront parking
- ✓ customer access
- ✓ short duration
- ✓ high turnover
- ✓ highly valuable



# surface lots

- ✓ employee parking
- ✓ customer parking
- ✓ destination parking
- ✓ longer duration
- ✓ lower turnover

*land banking*

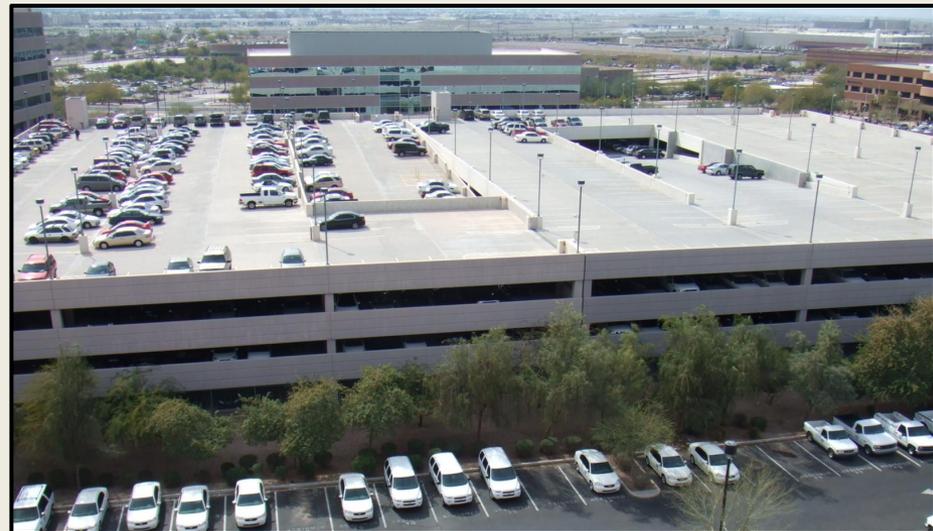


# parking garages

- ✓ employee parking
- ✓ customer parking
- ✓ residential parking
- ✓ destination parking
- ✓ weather-protected
- ✓ longer duration
- ✓ lower turnover

*should be  
paid parking*

*(except hospitals)*



# utilization studies

supply

occupancy (% full)

turnover/duration

- ✓ *time of day*
- ✓ *day of week*



how full is “full”

great access, visibility

95%

rule of thumb

85%

poor access, visibility

75%

turnover

(average duration - hours)

on-street

0.5 – 2.0

surface lot

1.0 – 4.0

garage

2.0 – 8.0

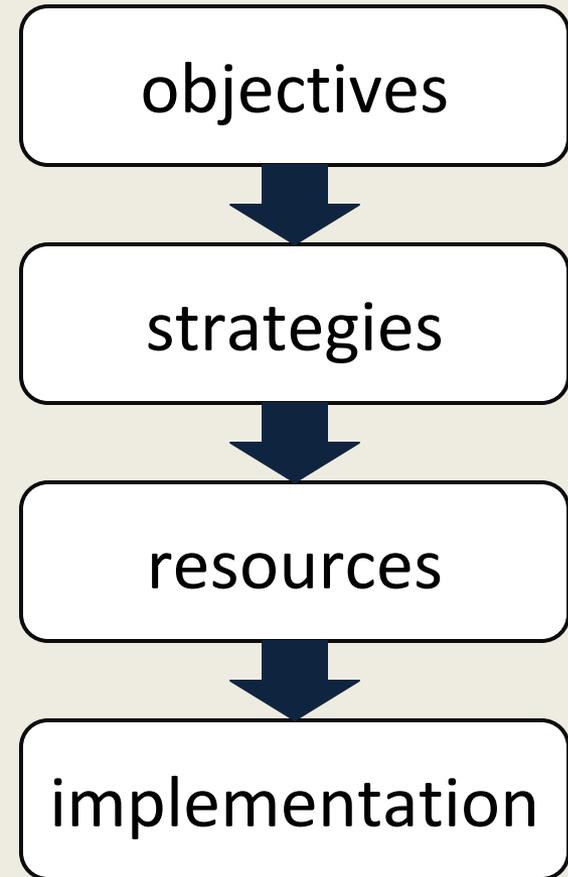


## 2. parking strategies



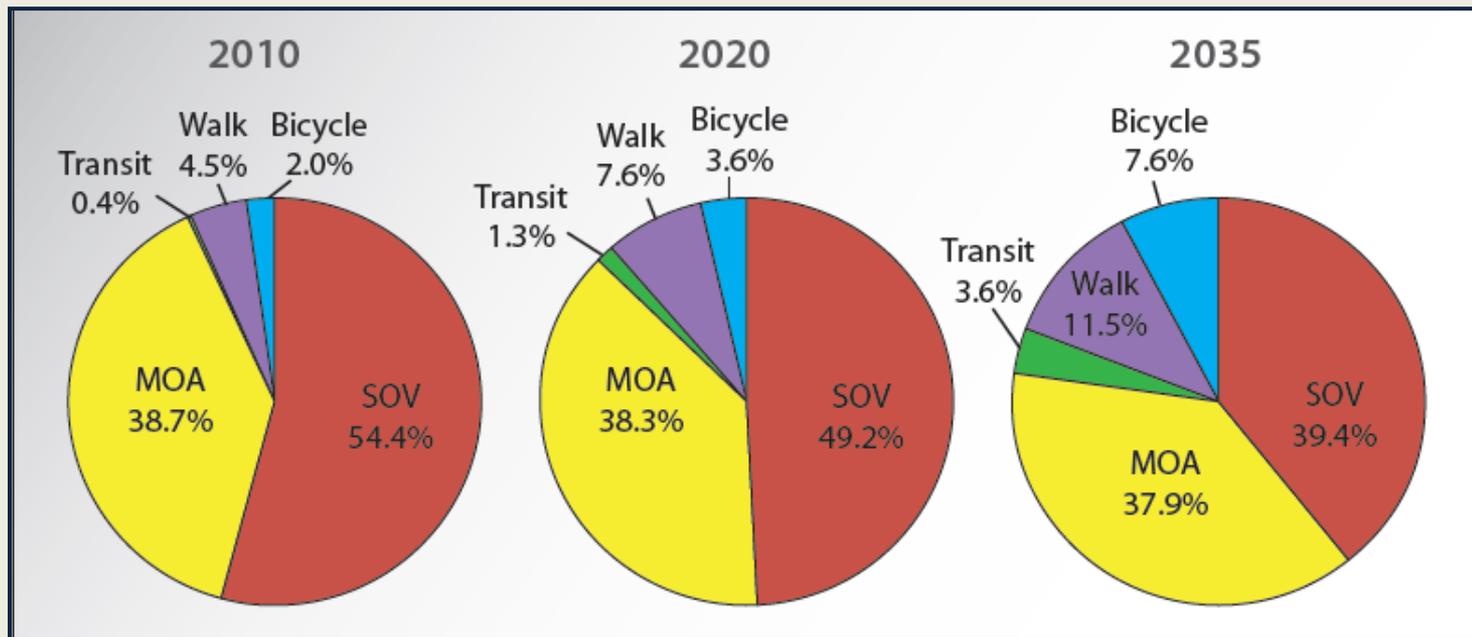
## 2. strategies

- ✓ mode share
- ✓ shared parking
- ✓ unbundling
- ✓ fee in lieu
- ✓ grandfathering
- ✓ enforcement
- ✓ technology
- ✓ design
- ✓ permit parking
- ✓ time limits
- ✓ paid parking
- ✓ parking district



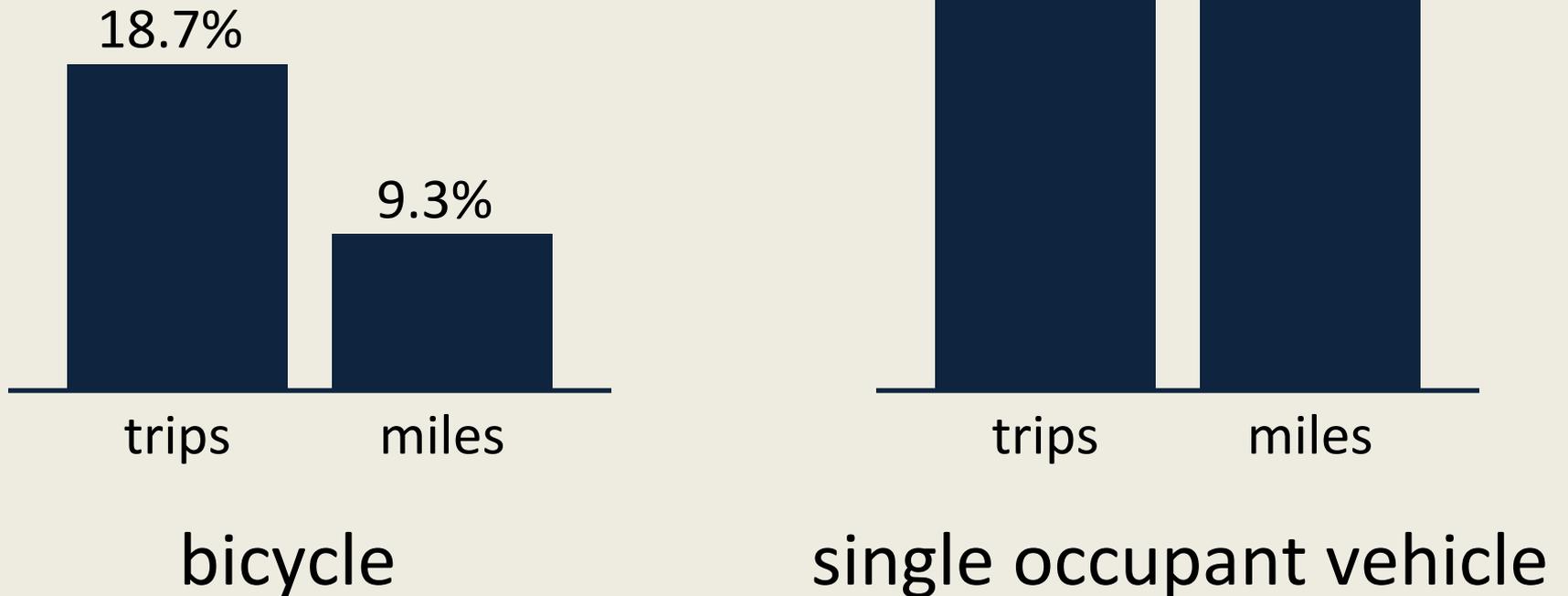
# mode share

- ✓ expensive
- ✓ technological
- ✓ other benefits

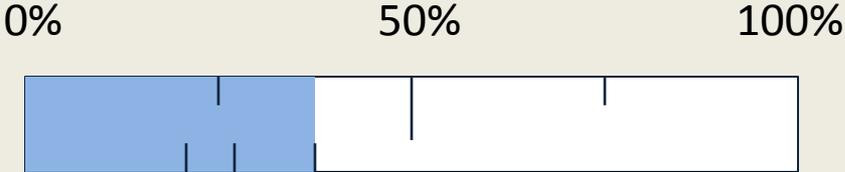


# trips vs. miles

(Boulder resident data)



# bicycle mode share

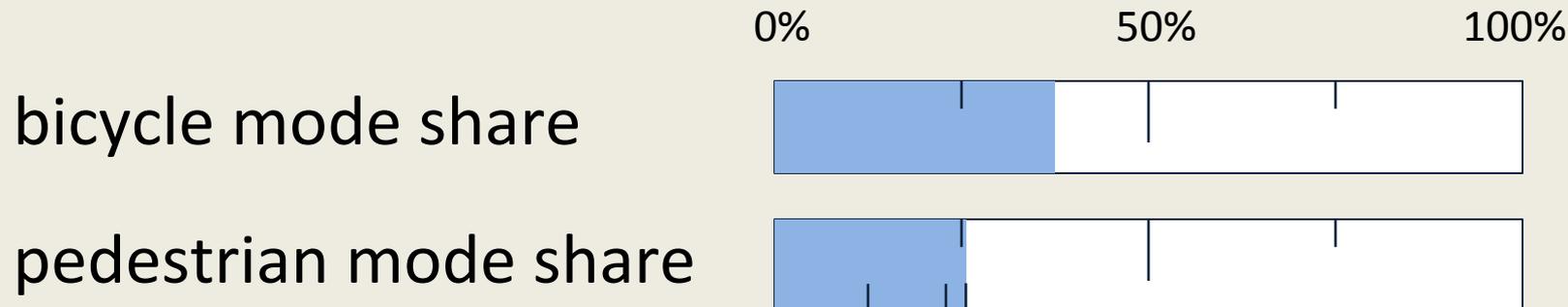


18.7%  
Boulder all trips

26.5%  
Boulder commute trips

37%  
Copenhagen all trips

reasonable mode share ranges  
(trip mode share)

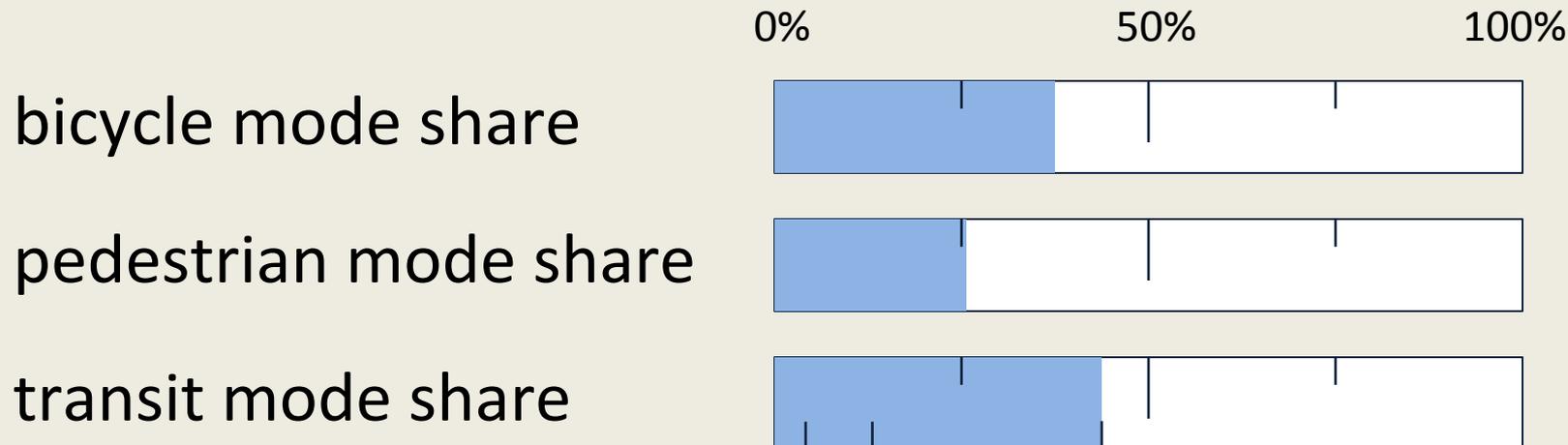


9.3%  
Boulder commute trips

20.3%  
Boulder all trips

25.8%  
Cambridge MA commute trips

reasonable mode share ranges  
(trip mode share)

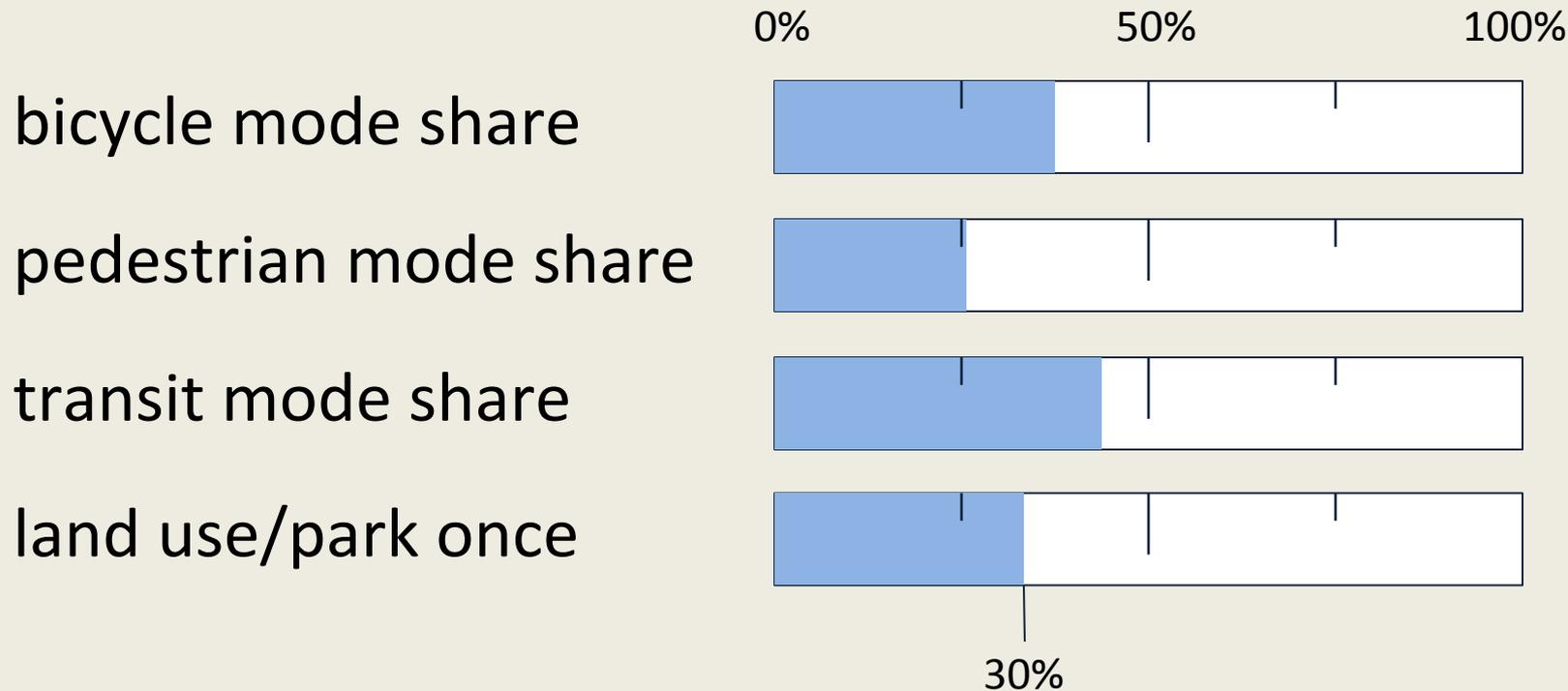


4.9%  
Boulder all trips

10.1%  
Boulder commute trips

44.4%  
Downtown Denver commute trips

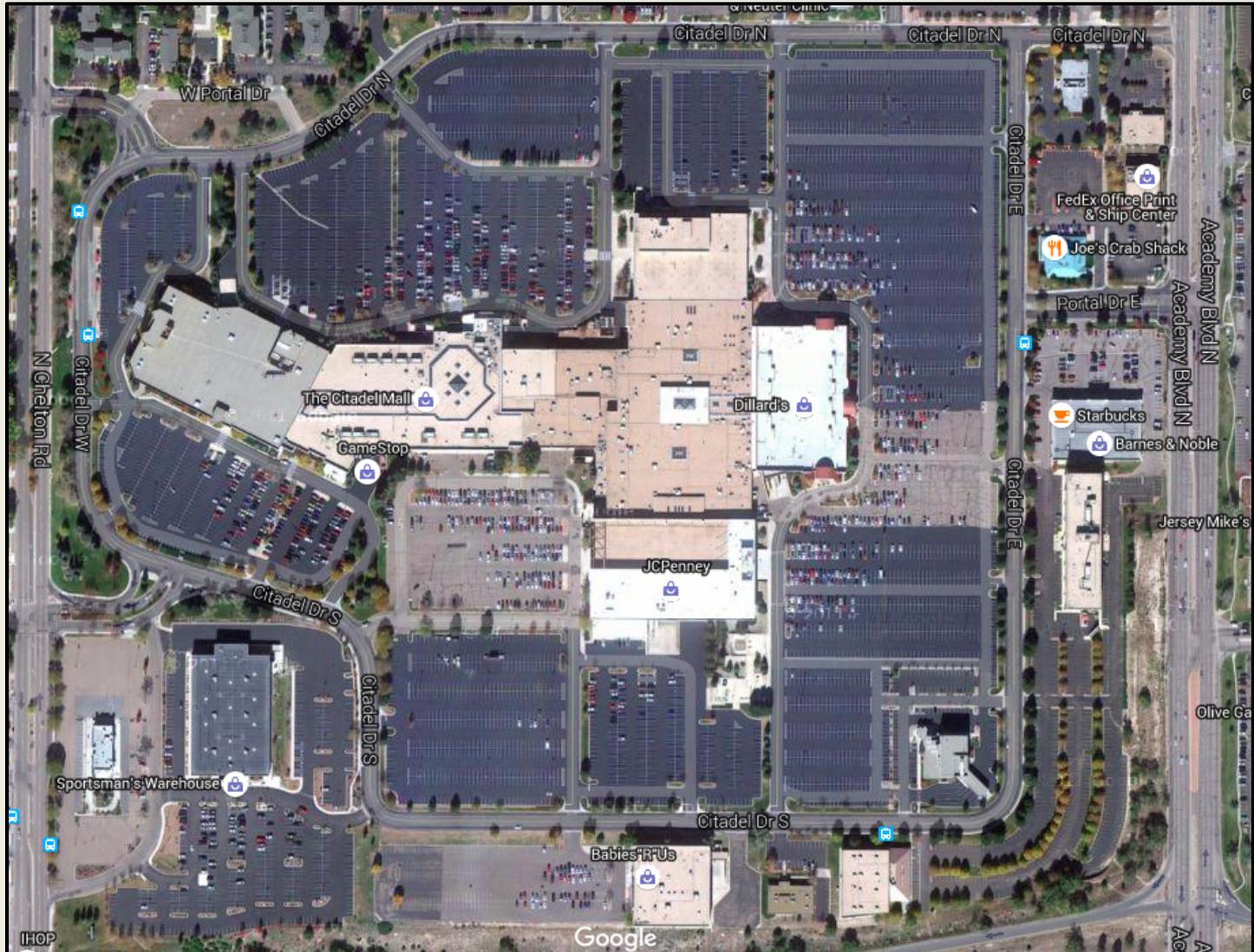
reasonable mode share ranges  
(trip mode share)



*combined total reduction in demand: > 50%*

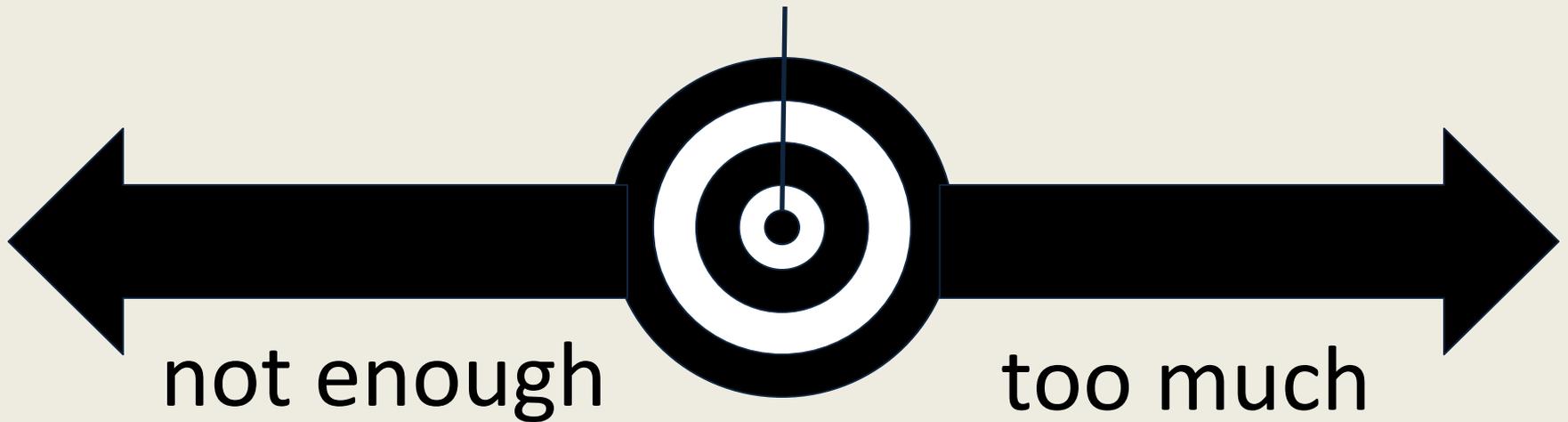
reasonable mode share ranges  
(trip mode share)

# strategic approach to supply

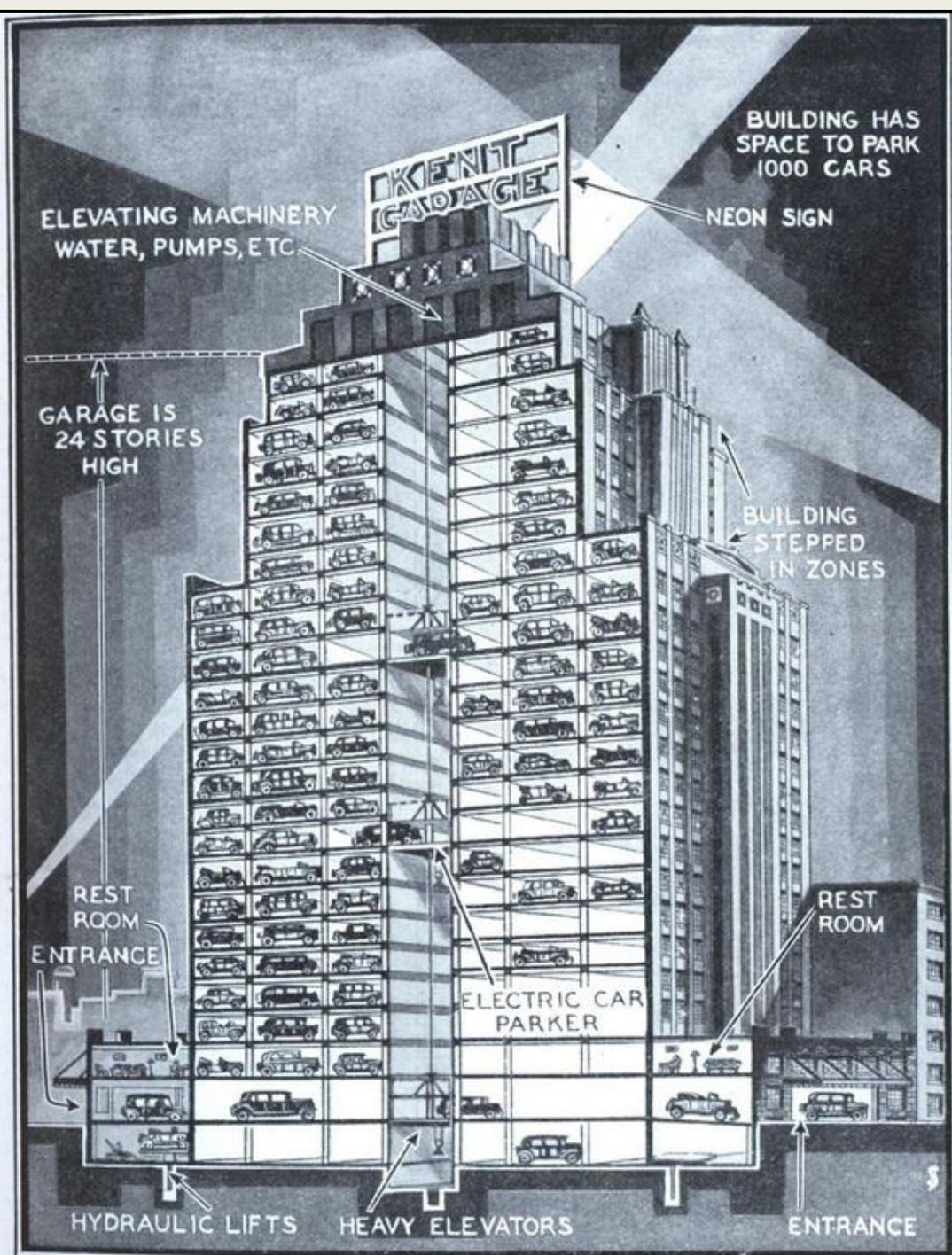


# the supply dilemma

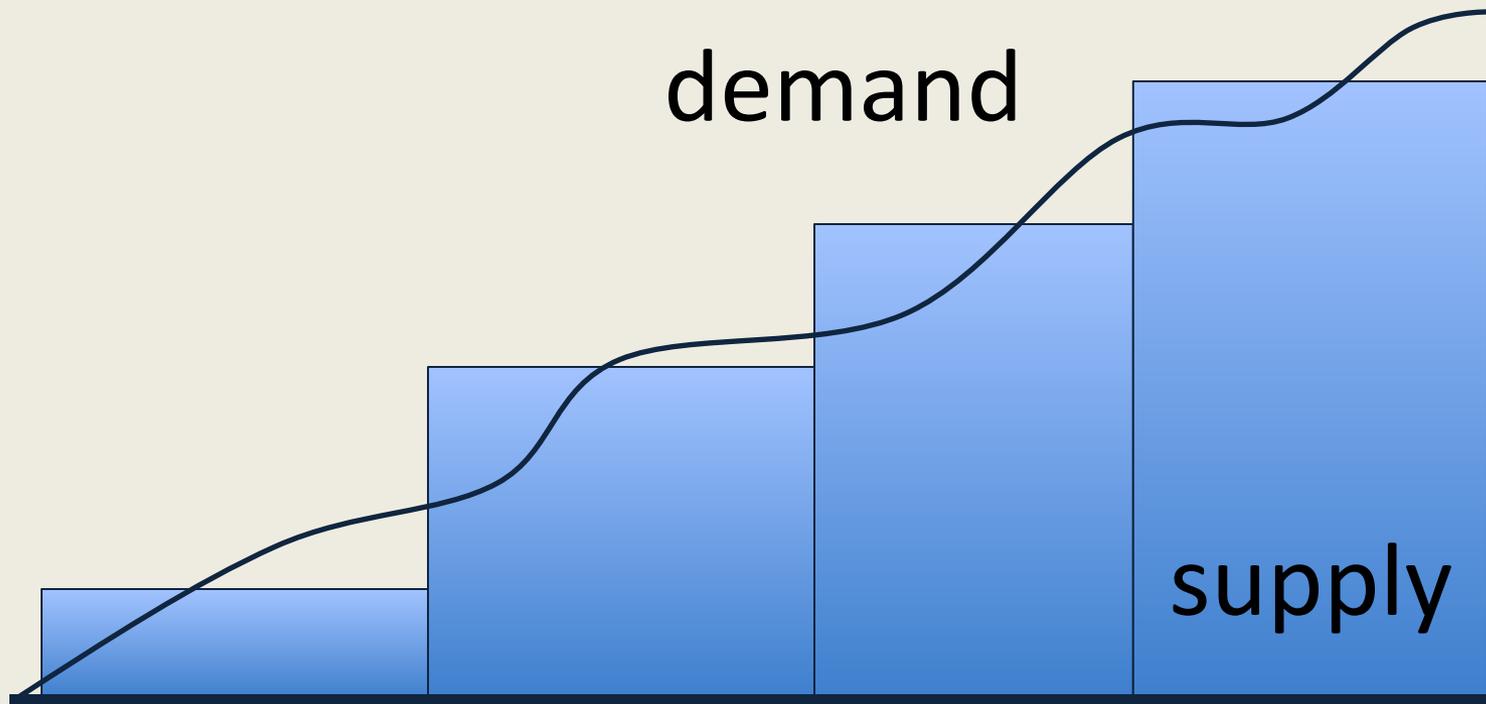
the right  
amount



strategic  
timing



# supply timing



# shared parking

- ✓ private – joint parking
- ✓ public – shared parking



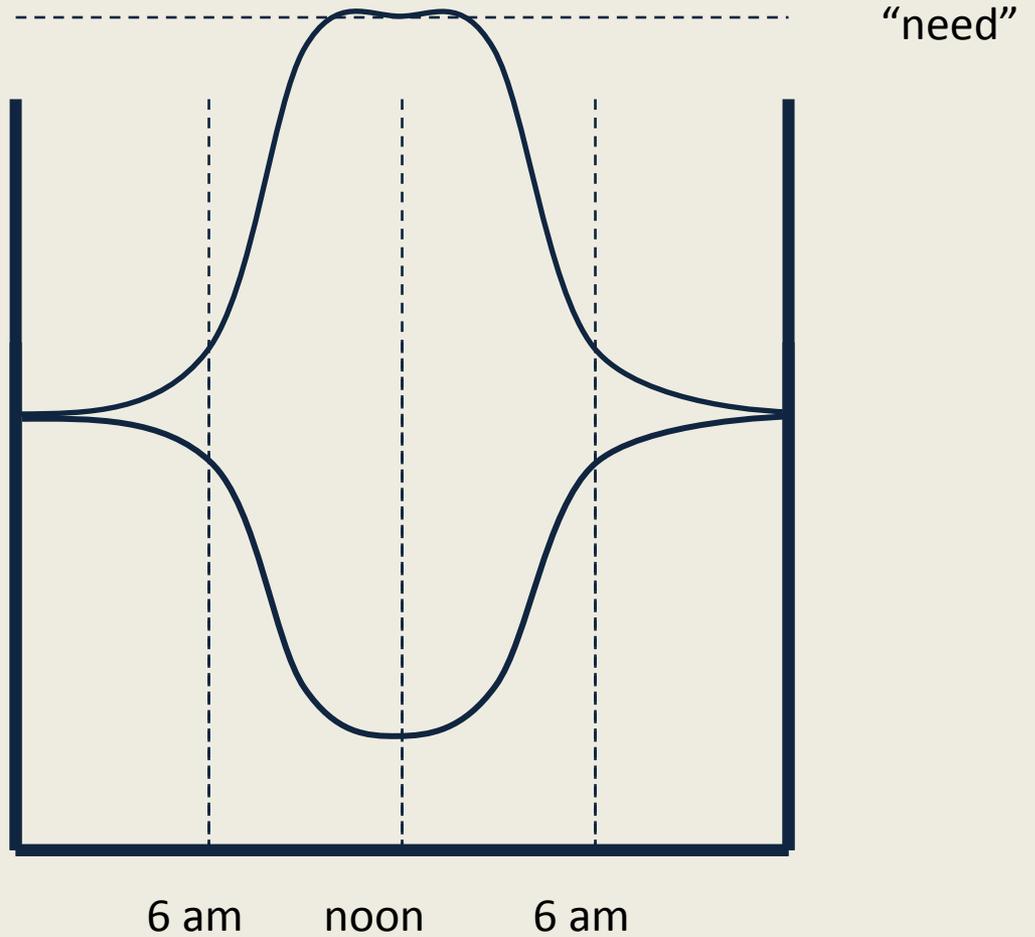
# joint parking

- ✓ private sector agreements
- ✓ between property owners and businesses



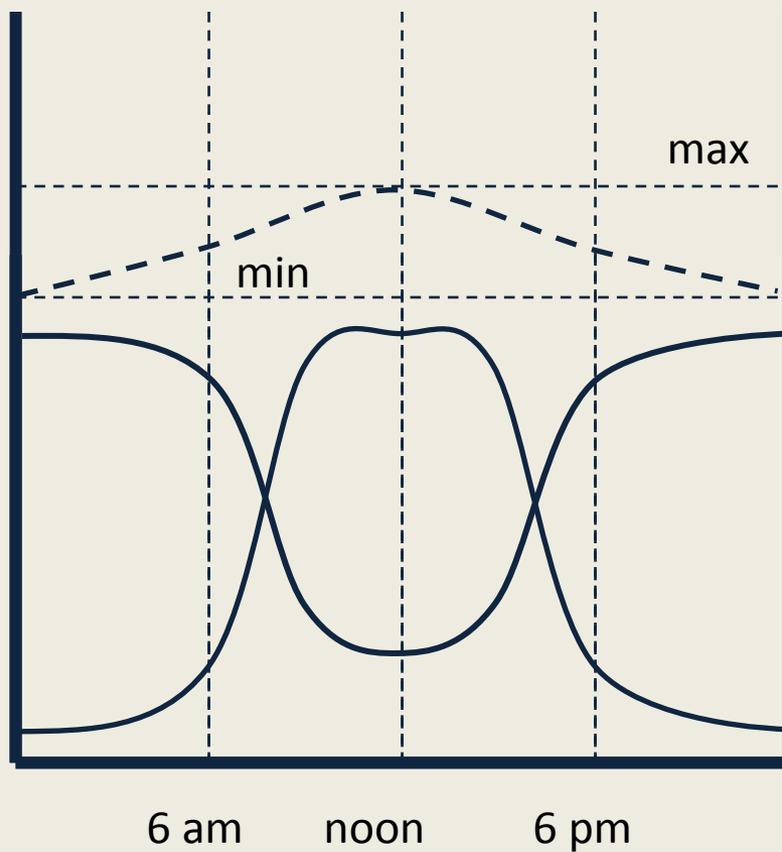
traditional

residential + office



# shared parking

residential + office



# shared parking

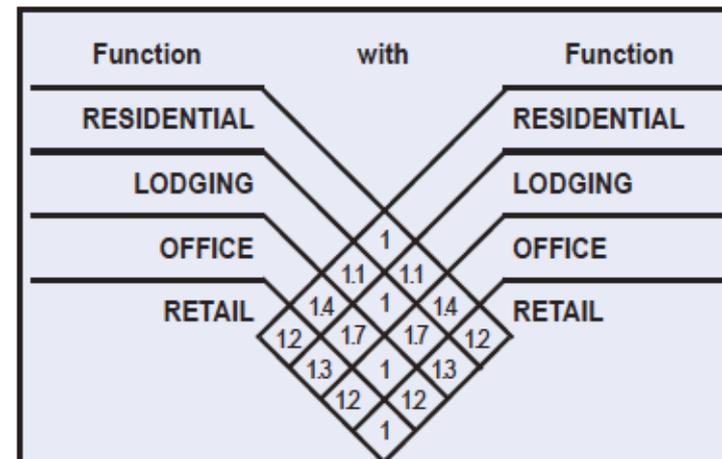
- ✓ based on underlying requirements
- ✓ reduced by a specific percentage
- ✓ requires on-site management

*smart code example (v 9.2)*

REQUIRED PARKING (See Table 10)

	T2   T3	T4	T5   T6
RESIDENTIAL	2.0 / dwelling	1.5 / dwelling	1.0 / dwelling
LODGING	1.0 / bedroom	1.0 / bedroom	1.0 / bedroom
OFFICE	3.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.	2.0 / 1000 sq. ft.
RETAIL	4.0 / 1000 sq. ft.	4.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.
CIVIC	To be determined by Warrant		
OTHER	To be determined by Warrant		

SHARED PARKING FACTOR

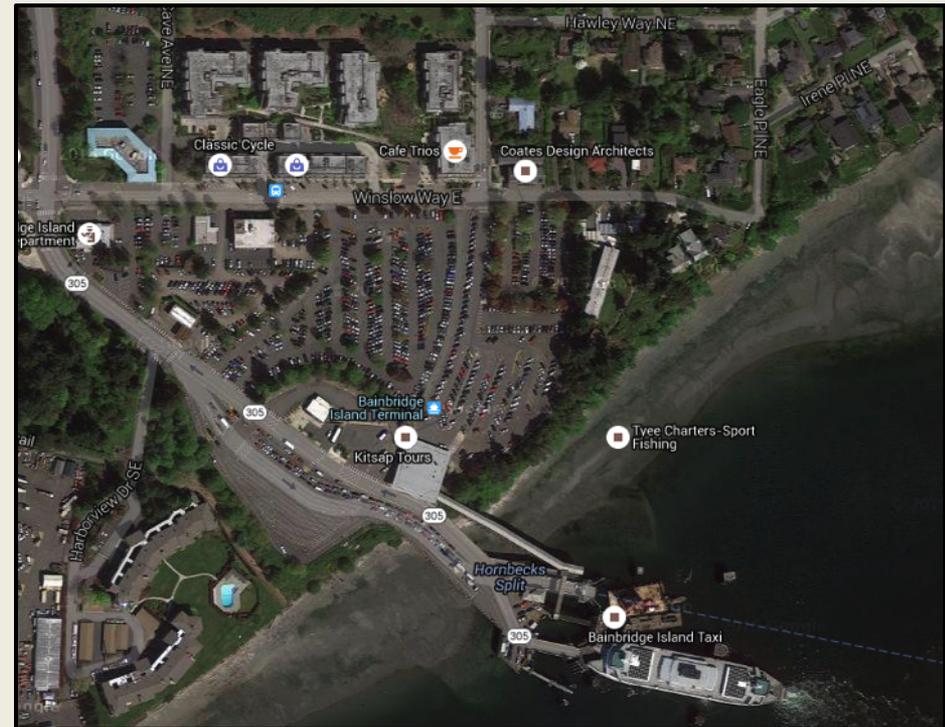


# unbundling

- ✓ residential land uses
- ✓ supply parking
- ✓ allow sale



Harbor Square, Bainbridge Island



# fee in lieu

- ✓ minimum supply still required
- ✓ pay fee to city, city provides
- ✓ reduced or no on-site parking

Downtown Orlando, FL



# grandfathering

- ✓ redevelopment projects
- ✓ retail, commercial land uses
- ✓ credit for pre-existing situation



Jackson, WY

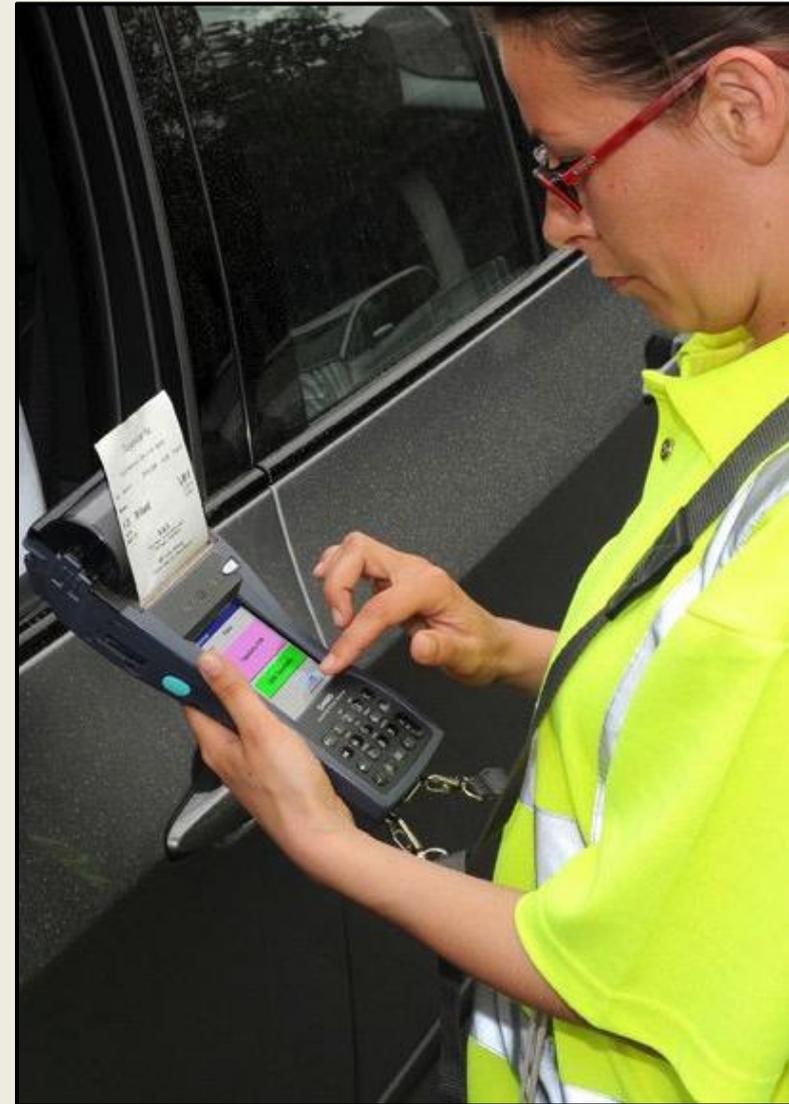


Bainbridge Is.



# enforcement

- ✓ friendly but inevitable
- ✓ use technology



ideological



strategic



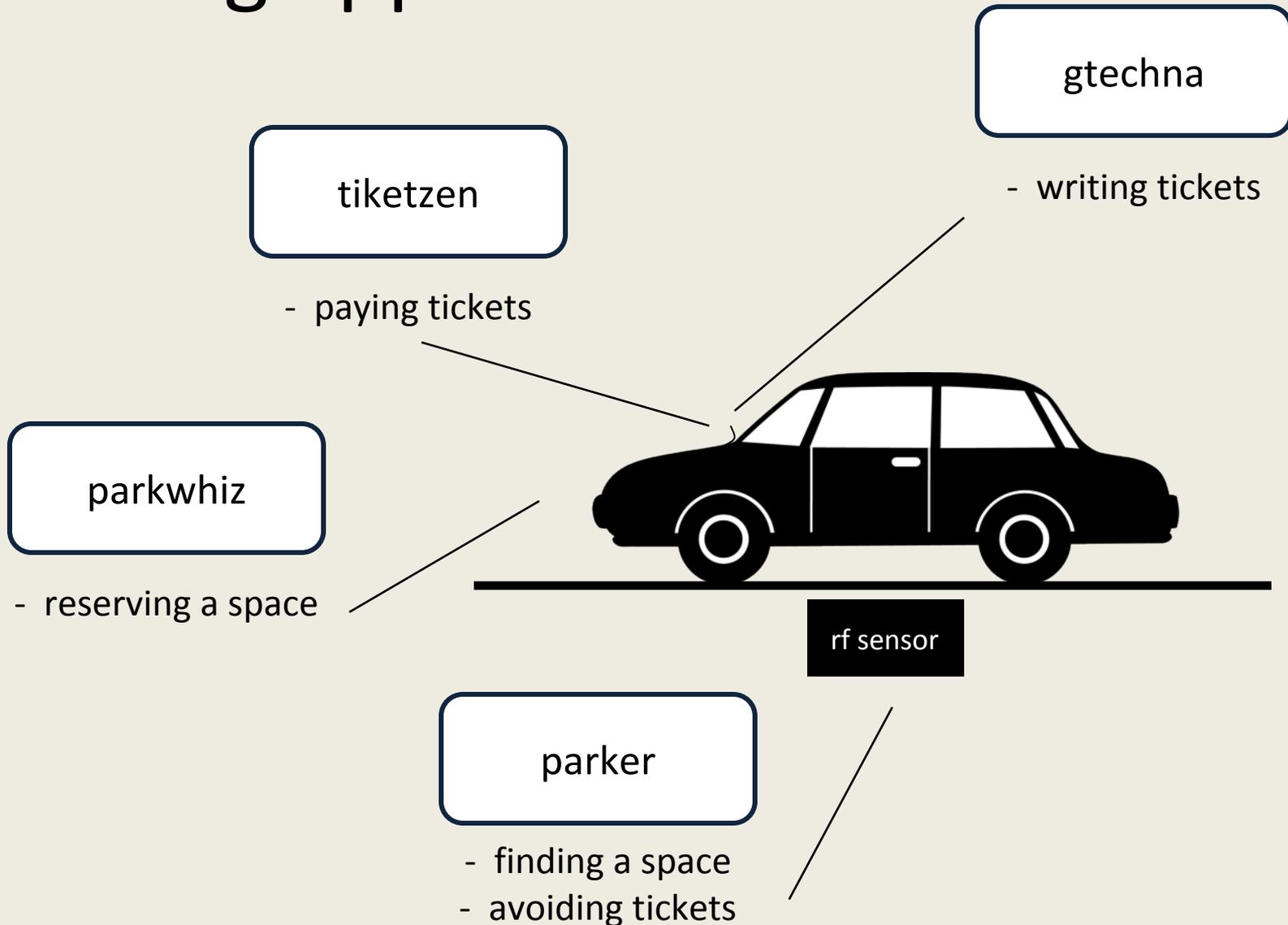
enforcement business models

# technology

- ✓ be tech-cool
- ✓ provide convenient user interface
- ✓ adequately funded



# parking apps



design matters

*suburban*



# design matters

*urban*



design matters



*neither*

# commercial district on-street permit parking

use sparingly

- ✓ commuters
- ✓ students
- ✓ event attendees



# residential district on-street permit parking

- ✓ residents
  - ✓ daytime commuters
  - ✓ daytime students
- 
- ✓ city-wide ordinance
  - ✓ neighborhood application process
  - ✓ utilization studies



# time limits – on street

- ✓ 10 min – delivery
- ✓ 2 hour – retail
- ✓ 3 hour – restaurant and retail

too  
simple



too  
complex

# time limits – off street surface lot

- ✓ 3 hour – restaurant and retail
- ✓ 4 hour – office, restaurant, retail, medical
- ✓ all day – commuter, student

too  
simple



too  
complex

# pricing

- ✓ fundamentally necessary
- ✓ use technology



# parking district

- ✓ management
- ✓ enforcement
- ✓ shared parking
- ✓ mode share
- ✓ demand management
- ✓ supply





*downtown utilities*

water

solid waste

sidewalks

storm sewer

sanitary sewer

parking



## parking as a utility

- ✓ shared resources
- ✓ reduced costs
- ✓ fair-share funding
- ✓ management and operations

*“park once”*



mixed use,  
walkable district with multimodal access

# integrated approach

*land use*

land use inventory

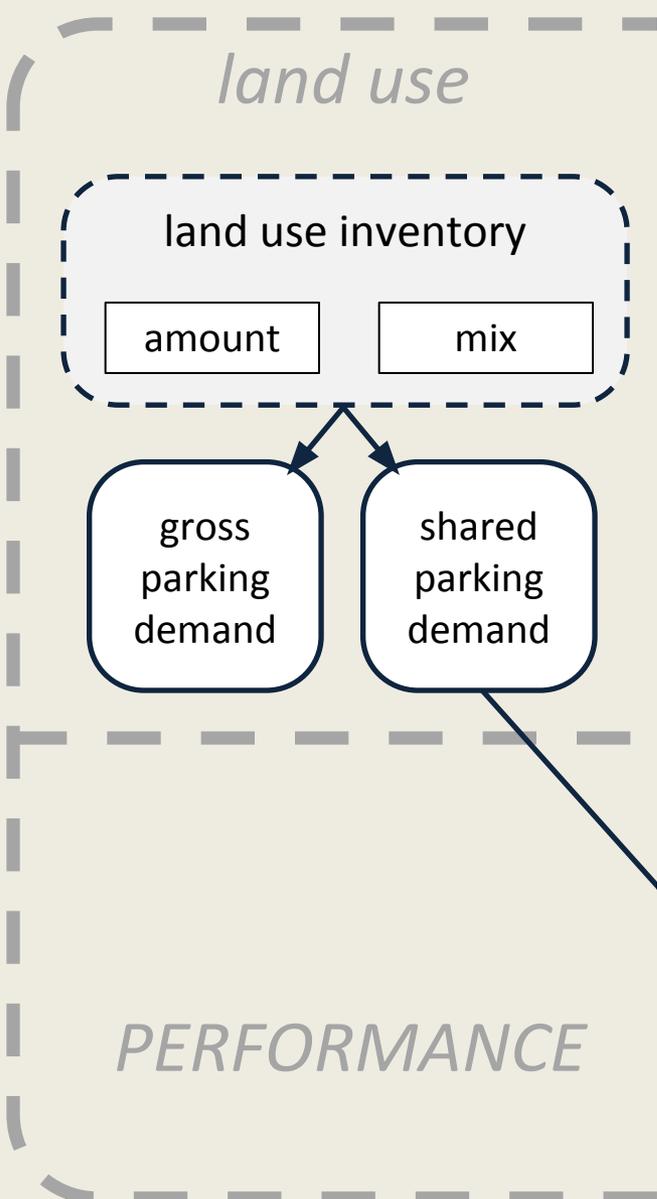
amount

mix

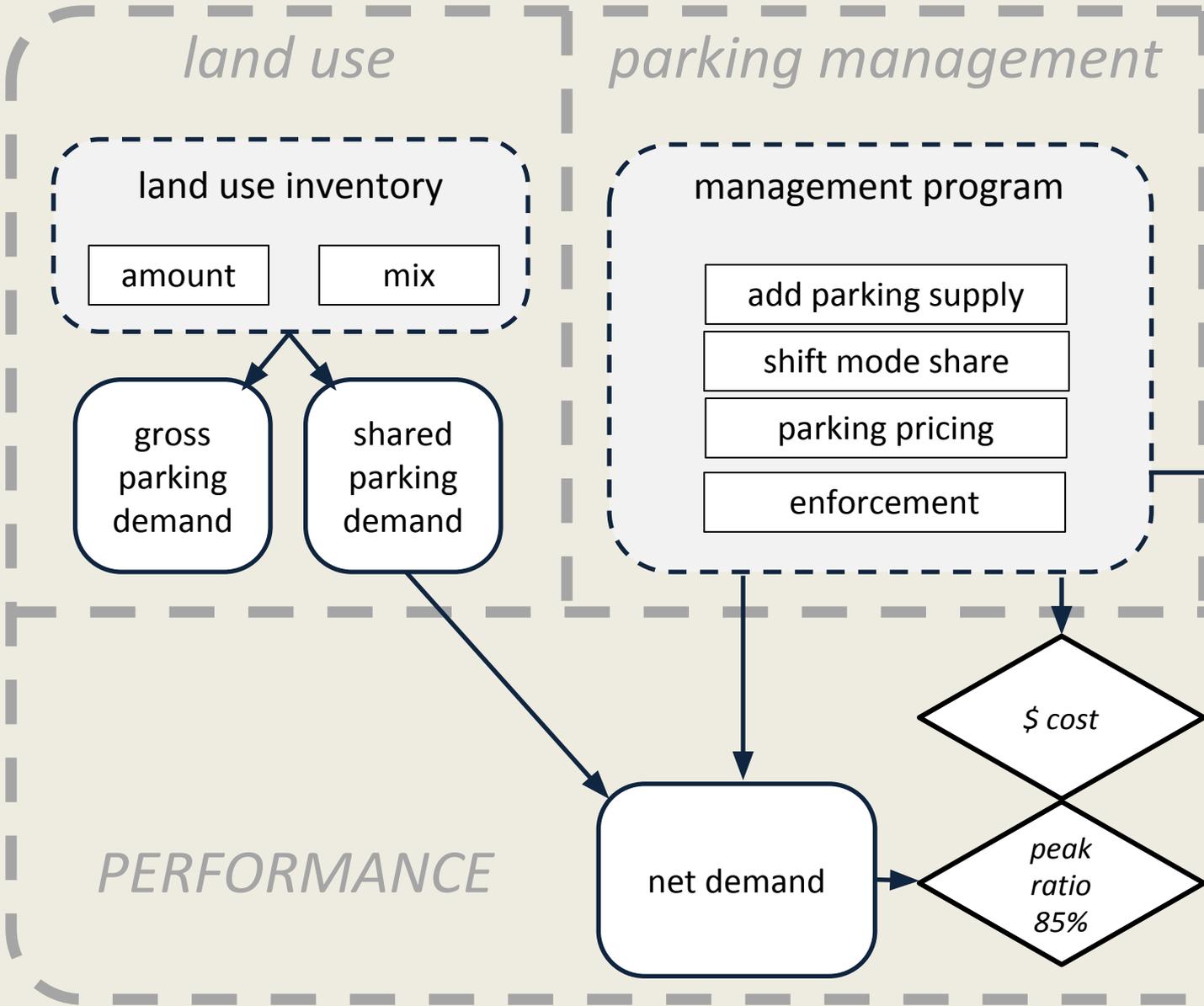
gross  
parking  
demand

shared  
parking  
demand

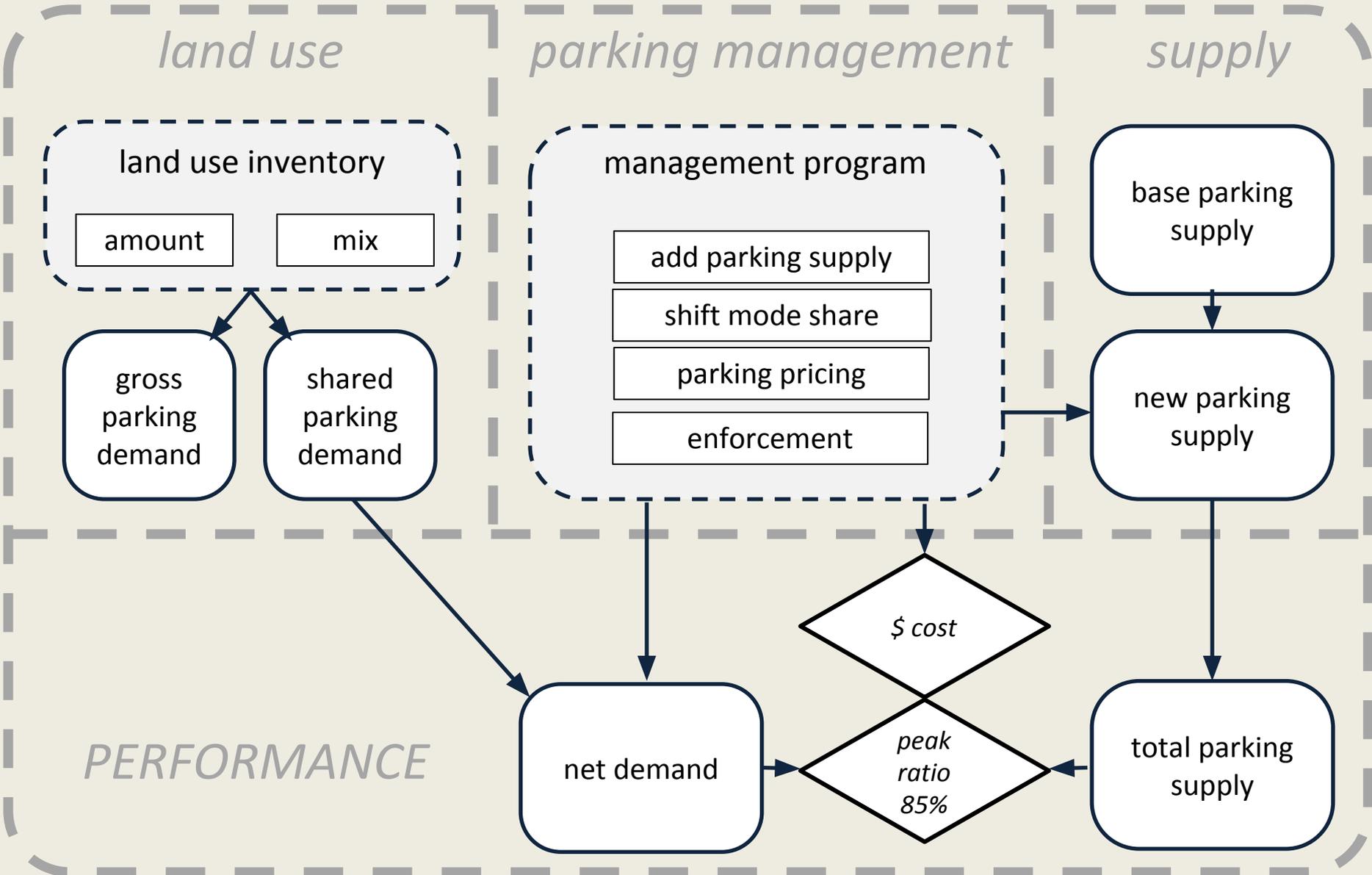
*PERFORMANCE*

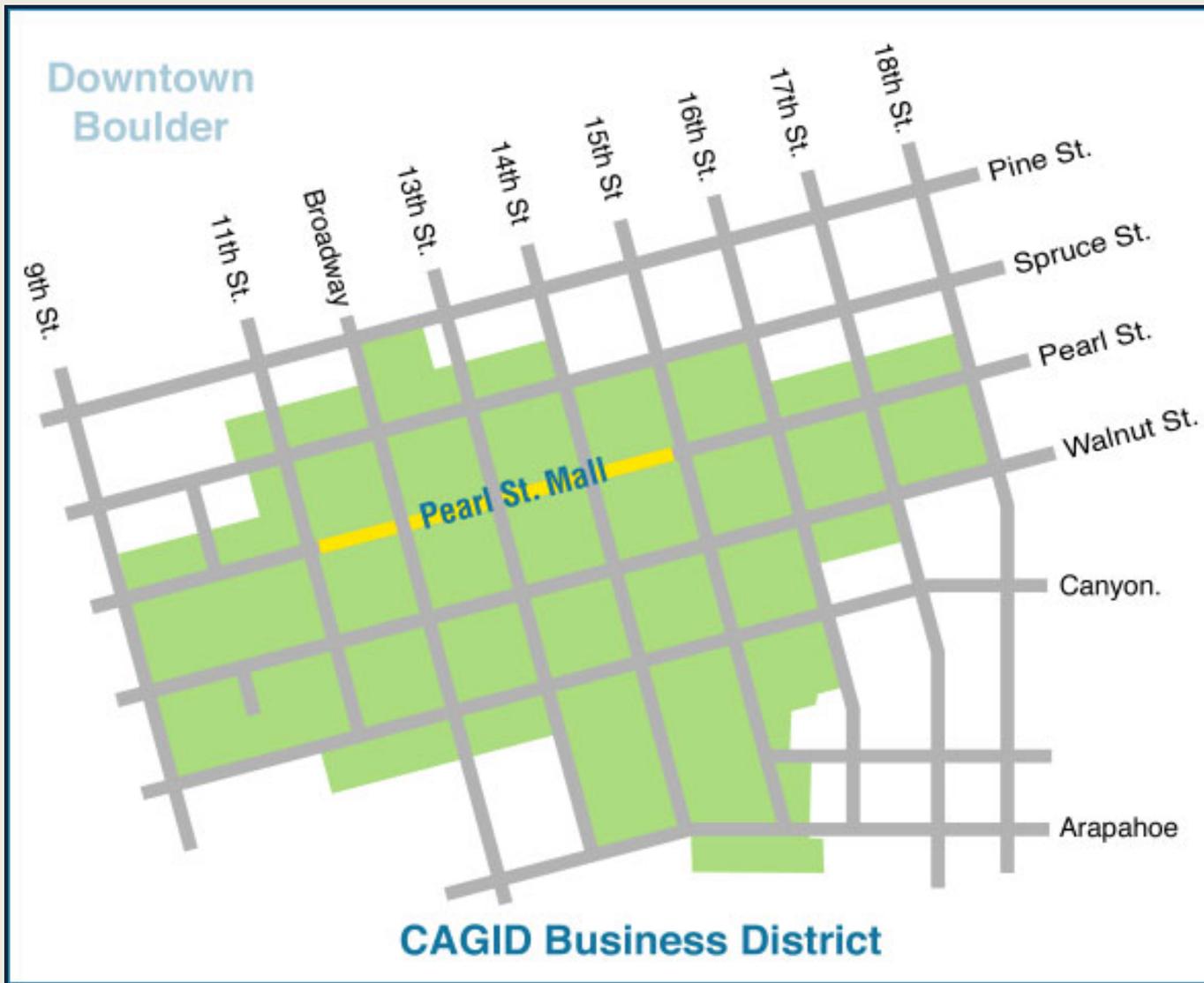


# integrated approach



# integrated approach





example:

Boulder central area general improvement district (cagid)

5 mil property tax +  
parking revenues

ecopasses

bike parking

sidewalks

demand management

parking supply

developer parking  
requirement: 0

Boulder example: cagid

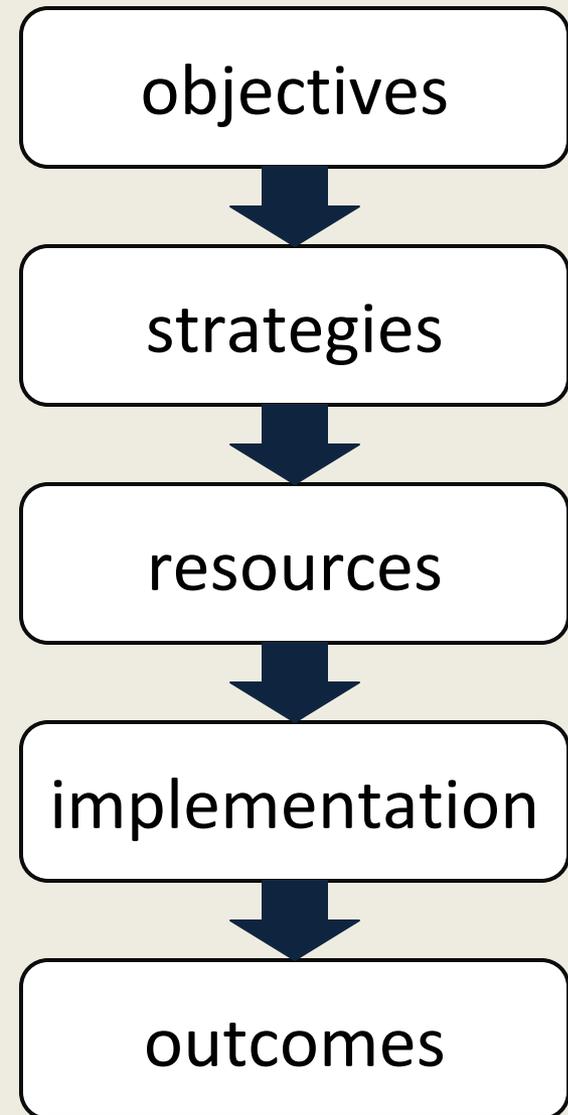


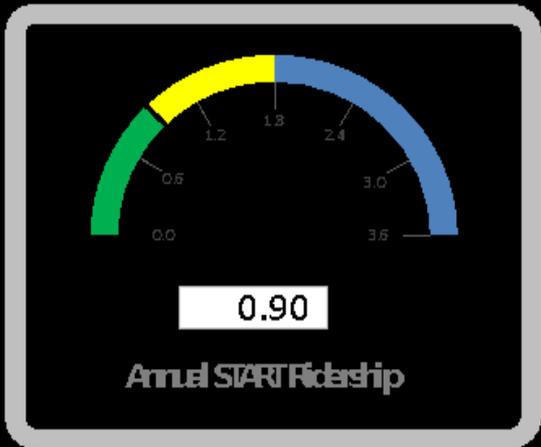
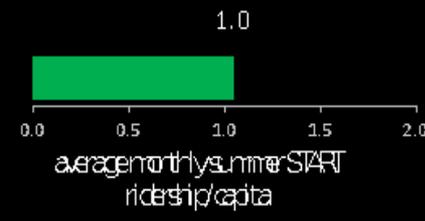
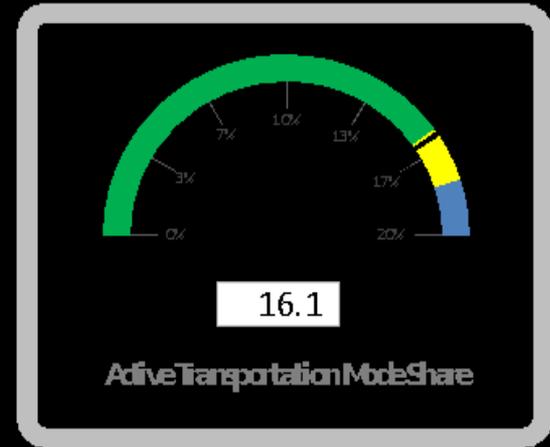
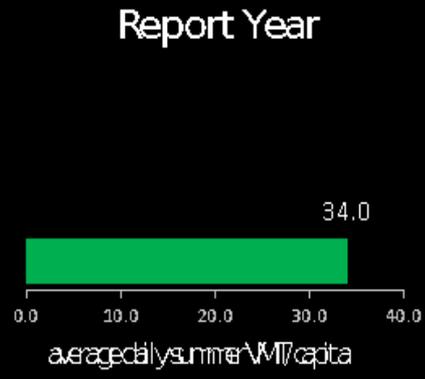
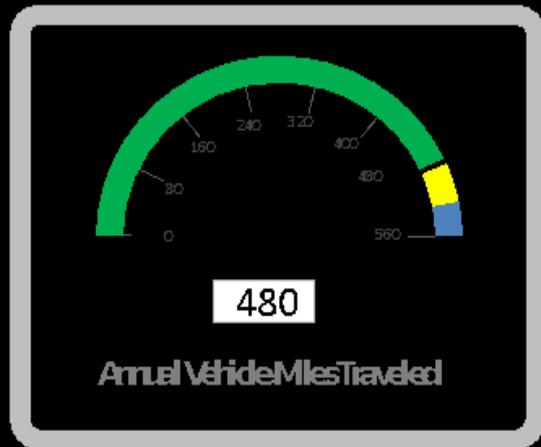
### 3. parking metrics



## 3. metrics

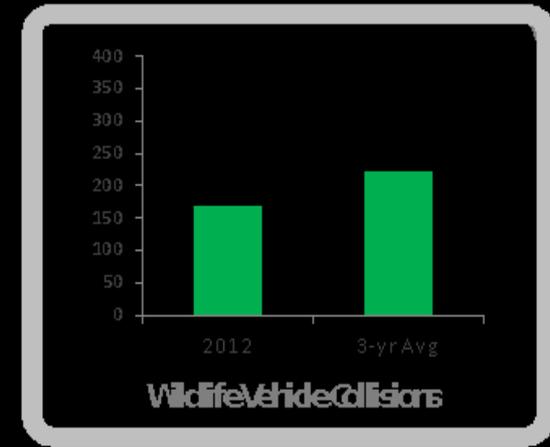
- ✓ accountability
- ✓ routine, transparent
- ✓ analysis





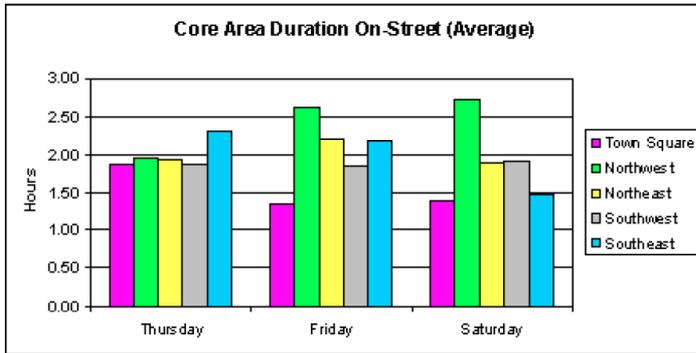
2013 Base

2035 Plan

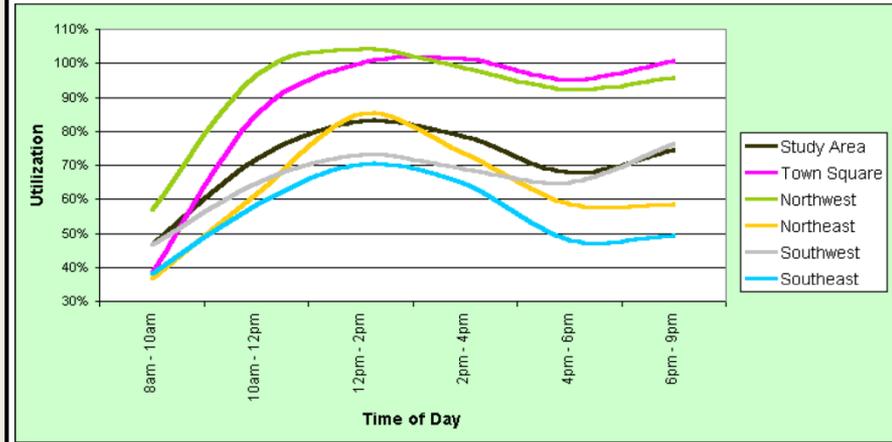


*“what gets measured gets done”*

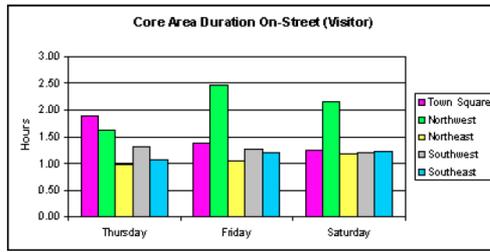
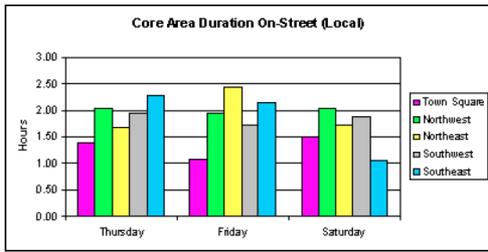
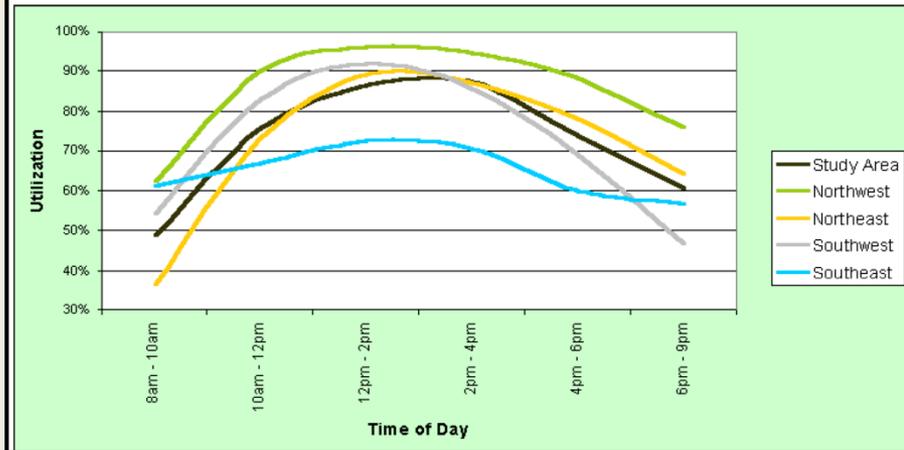
### Core Area Parking Duration Average of Thursday - Saturday



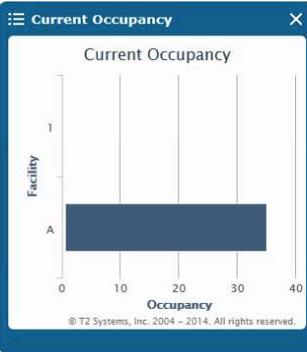
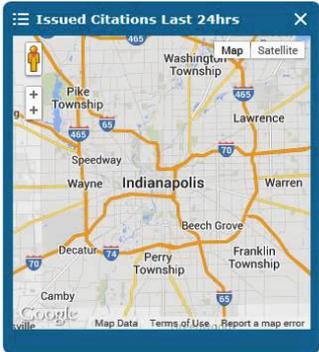
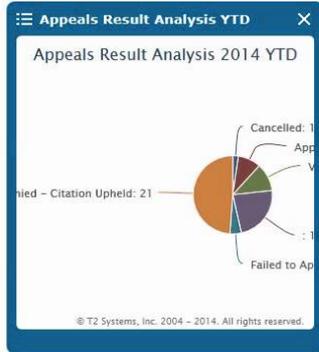
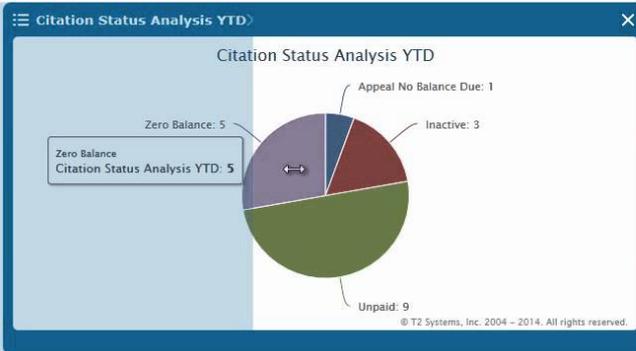
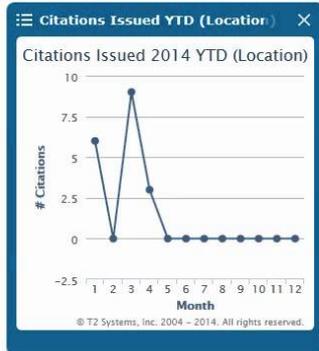
### On-Street Utilization by District Average of Thursday - Saturday



### Off-Street Utilization by District Average of Thursday - Saturday



routine monitoring and reporting



supply

turnover

revenue

% full

citations

project status



wrap up

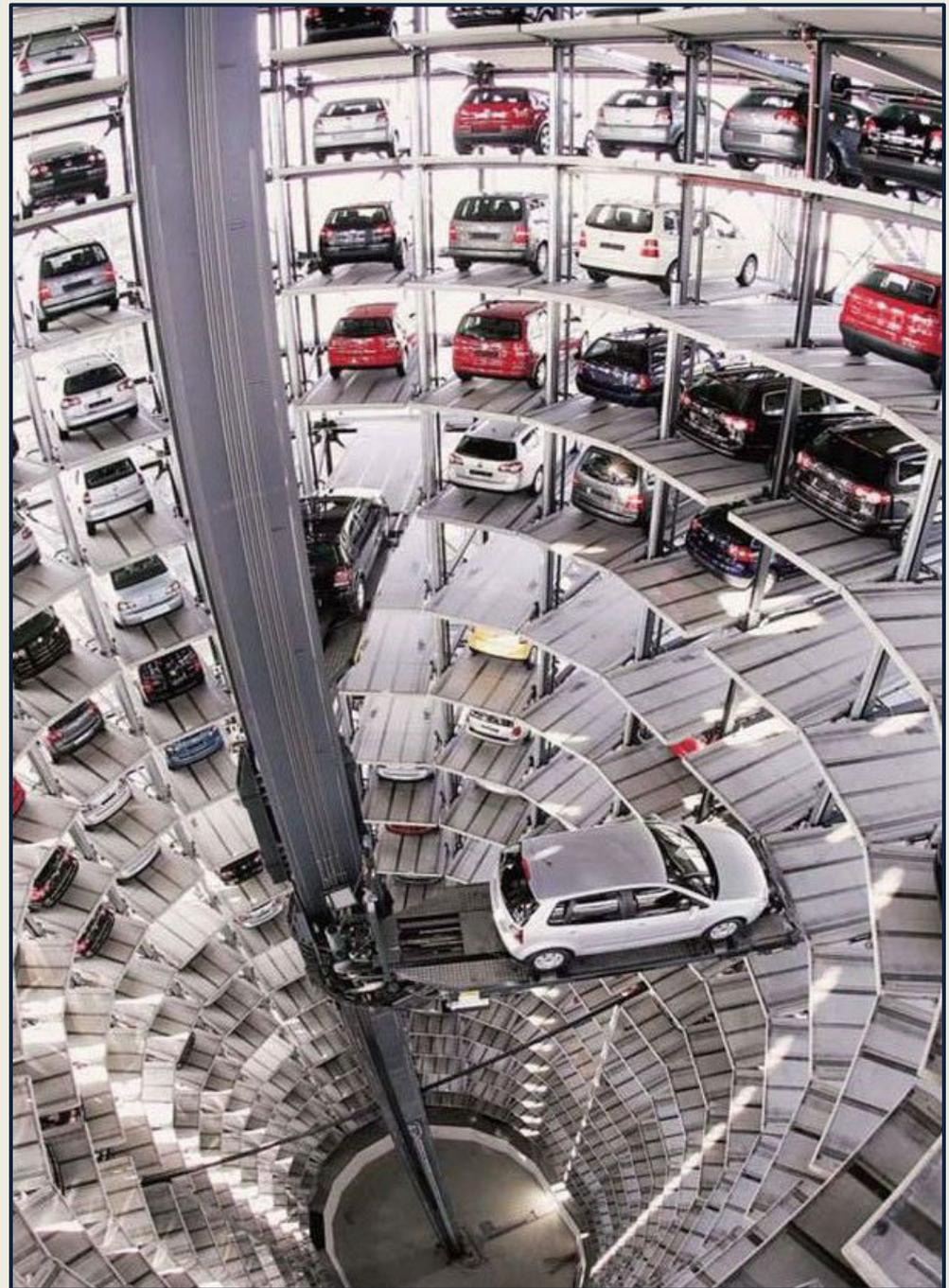


# today

1. basics

2. strategies

3. metrics





discussion

