

Parking & Traffic Reduction – Agenda

1. Introduction

- Goals
- Initial input

2. Existing Conditions

- Inventory and Occupancy
- Key Takeaways

3. A “Toolkit” of Strategies

1. Managing Curb Parking
2. Managing Off-Street Parking
3. Improving Transportation Choices

4. Questions & comments



Project Goals

Parking & transportation are not an end in themselves...
... but rather a means of achieving larger community goals

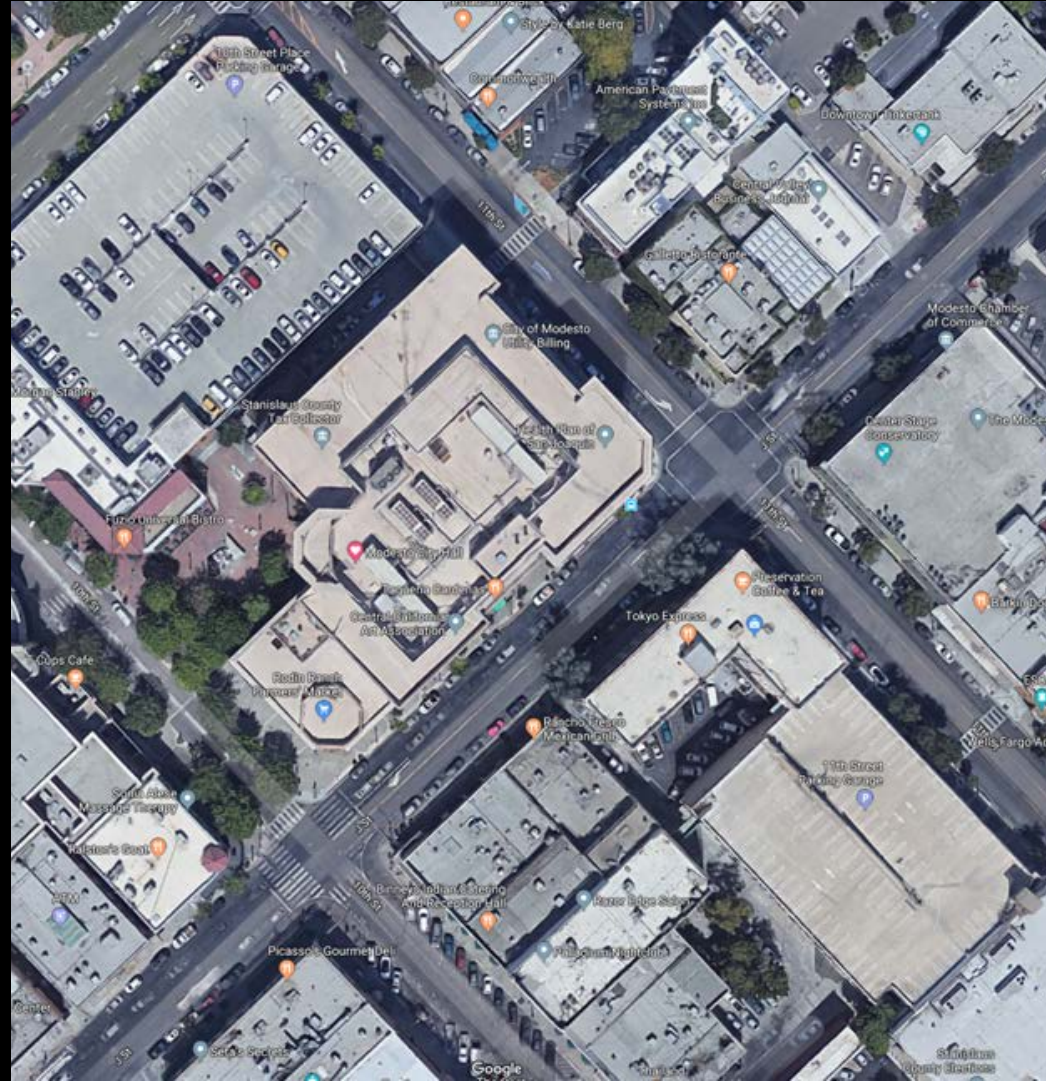


EXISTING CONDITIONS

Every parking system has two key parts:

1. Quantity (# of parking spaces)
 2. Management (policies, regulations, prices)
- Does downtown Modesto have a parking *supply* problem, or a parking *management* problem?

Siegan & Associates



First impressions: curb parking on busy blocks is mostly full



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First impressions: curb parking on busy blocks is mostly full









4

Blue sign on building



Conclusion: Building more spaces cannot solve the perceived parking shortage



\$1.25 per hour



\$0 per hour

Key Conclusions from Previous Parking Studies

- “People are encouraged to park on street because it is provided for free while off-street parking remains underutilized because it has an associated cost.”
- “...there is an adequate supply of parking overall in the Downtown Core Zone, but current policies do not effectively distribute demand.”

Source: Modesto Downtown Parking Strategy Memorandum,
Nelson\Nygaard Consulting, June 13, 2014

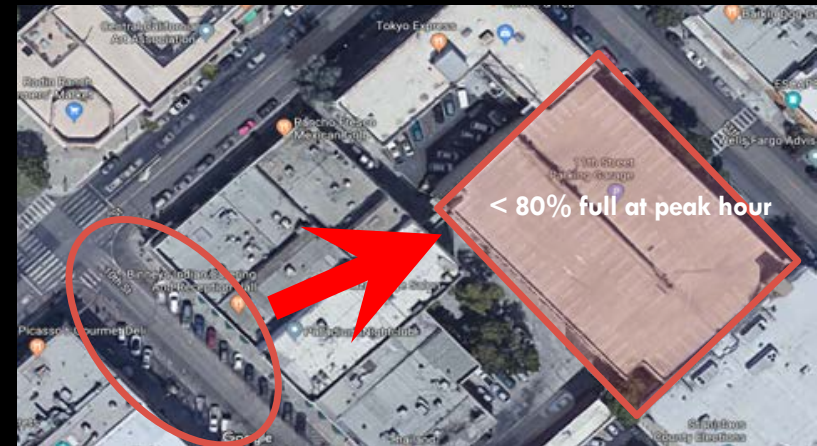
\$1.25 per hour

\$0 per hour

Key takeaways

Every parking system has two parts:

1. Quantity (# of spaces)
2. Management (policies, regulations, prices)
 - Currently, Downtown has a parking *management* problem, not a parking *supply* problem.
 - Need to shift some people from “hot spots” of high demand to underused nearby garages
 - Would need new revenue to pay for many desired improvements

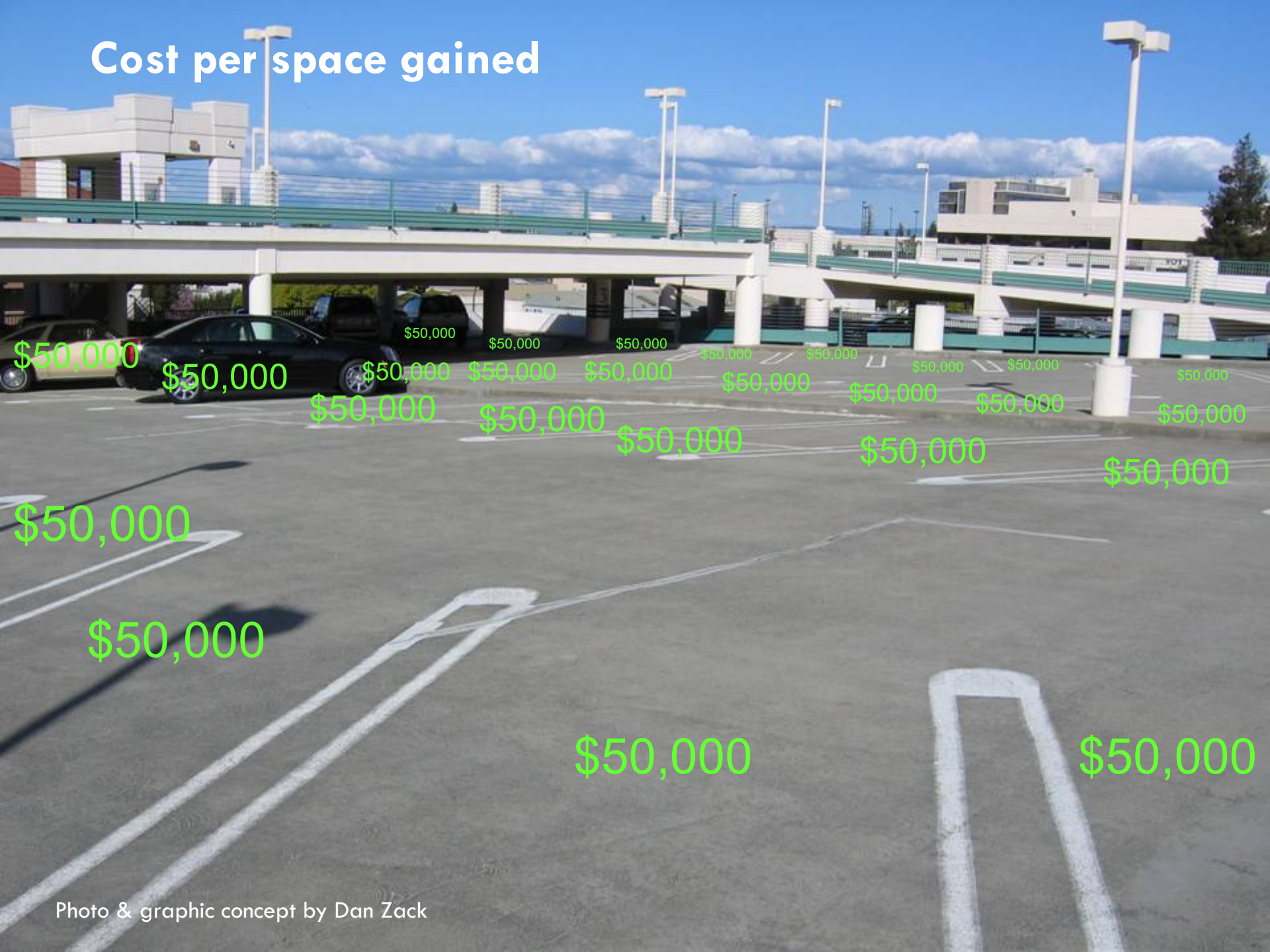


POTENTIAL PARKING & TRAFFIC REDUCTION STRATEGIES

Option: Build more public parking

What does it cost to add a parking space to downtown by building a new parking structure?

Cost per space gained



Option: Build more parking

How much revenue is needed to break even on the cost of building and operating a \$50,000 parking space?



\$335/month

\$335/month

\$335/month

\$335/month

\$335/month

\$335/month

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\$335/month

Anything a community can do to *reduce* parking demand for less than \$335/month/space is a bargain

18 Potential Parking & Traffic Reduction Strategies

Category	Parking & Transportation Demand Management Strategy
Managing Curb Parking	1. Set performance-based prices for curbside parking
	2. Return parking revenue to downtown to pay for public services
	3. Establish residential parking benefit districts, revenues pay for neighborhood improvements
	4. Improve parking enforcement & data collection using modern technologies
	5. Improve parking signage & install real-time parking wayfinding system
Managing City-Owned Lots & Garages	6. Implement short-term improvements to city-managed lots and garages
	7. Set user fees to ensure availability & make city-owned parking self-supporting (include assistance for low-income employees)
	8. Assess highest & best use of city-owned lots & garages
	9. Offer incentives for converting underused private lots into shared public lots
	10. Reserve sites for future public parking structures if and when needed
Regulating Private Developments	11. Remove minimum parking requirements
	12. Require unbundling of parking costs from the cost of other goods & services
	13. Require provision of spaces for carshare vehicles
	14. Require parking cash-out
Improving Transportation Choices	15. Establish transportation management association
	16. Establish deep-discount group transit pass program
	17. Review & expand local transit networks
	18. Continue improving bicycling facilities & programs

1. MANAGING CURB PARKING

Two strategies

1. **Charge the right prices for curbside parking**
2. **Return the parking revenue to the blocks where it is generated, to pay for public services**

Strategy: Parking Benefit District

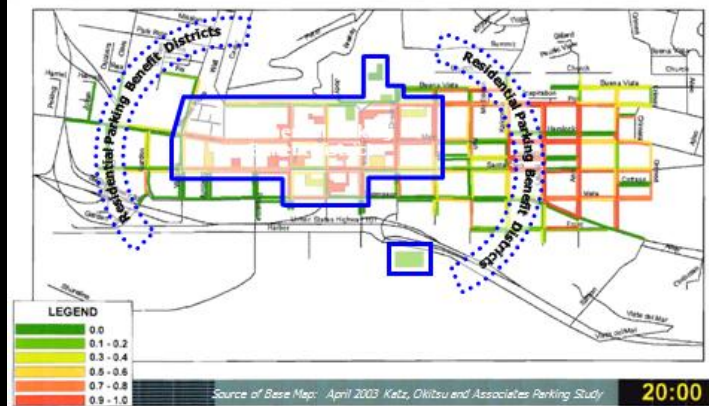
Devotes parking revenue to district where funds raised

Example: Ventura

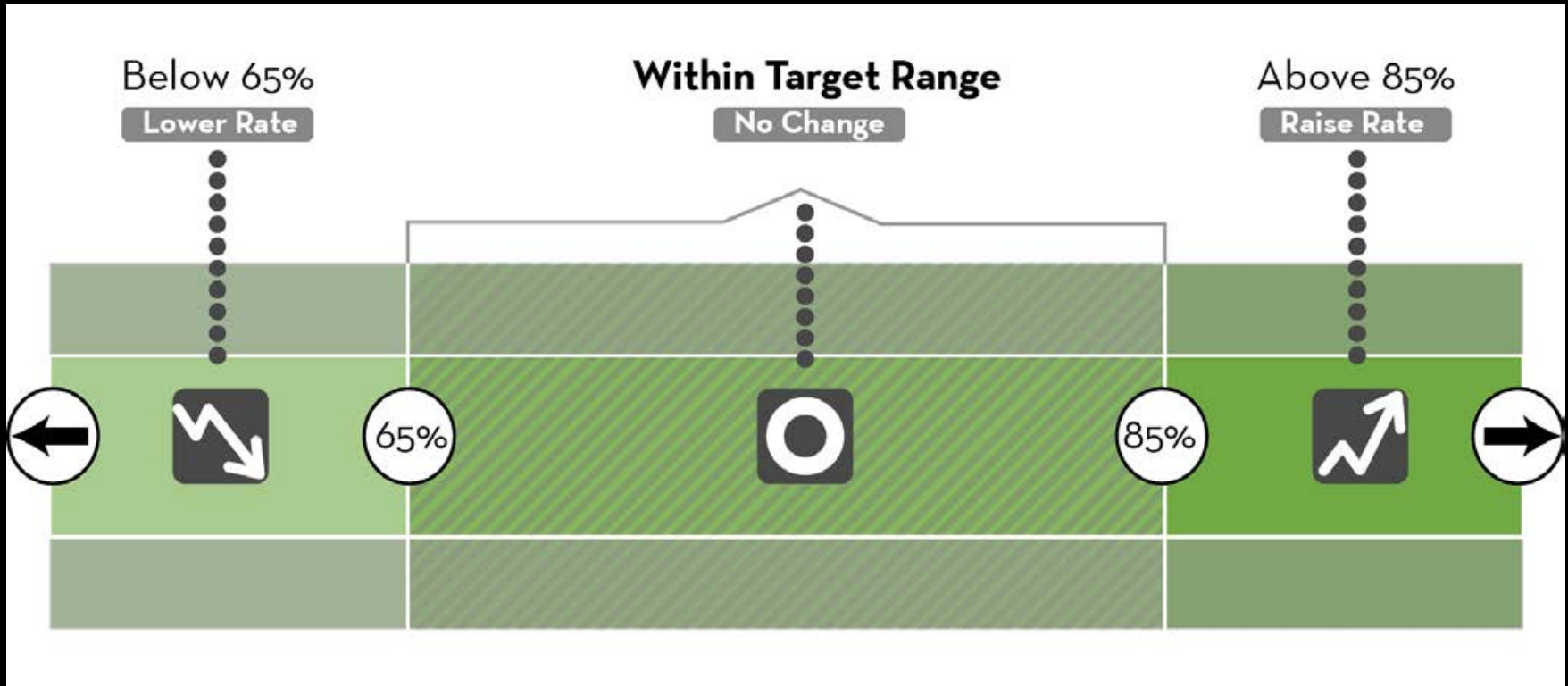
- Meters installed on premium spaces only (318 of 2500 total)
- Policy: set rates at *lowest* rate needed to achieve 1-2 available spaces on every block
- ***No time limits***



Ventura Parking Benefit District Boundaries



Performance-Based Pricing at Work



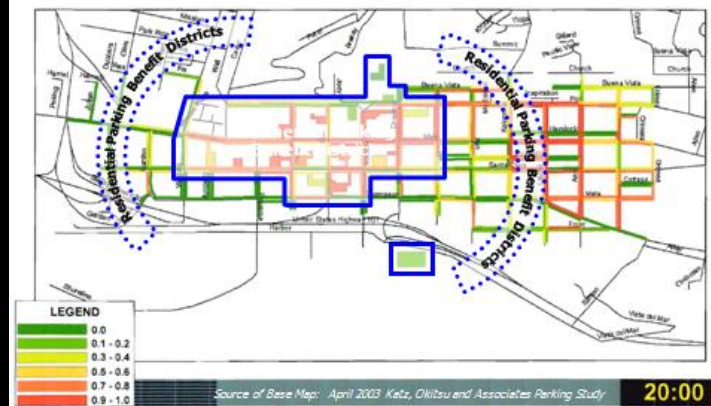
Ventura's Parking Benefit District

Results

- Current rates: \$.50 to \$1/hour
- Current hours: 10am - 9pm, daily
- Revenue: \$530,000 annually
- Funds new police officer & 9 police cadets, better lighting, free public Wi-Fi
- ***Crime down 40%***



Ventura Parking Benefit District Boundaries



Parking Management That Actually Manages Parking

TUESDAY, SEPTEMBER 14, 2010

“At about 10:30 this morning, I step out of my office...Almost immediately, I notice something different...

The paid parking portion of our downtown parking management program had gone into effect at 10 a.m., and it was already showing results. People who park all day downtown have moved into the lots and the upper levels of the parking garage. Spaces on the street are now available for shoppers, diners, and others who were running short-term errands. In other words, only 30 minutes after we instituted the parking management program, it is working.”



-- Bill Fulton, Mayor of Ventura

Technologies: measuring occupancy & adjusting rates

Meters provide real-time data



Coin &
Card
("Smart")
meters

Occupancy sensors (optional)



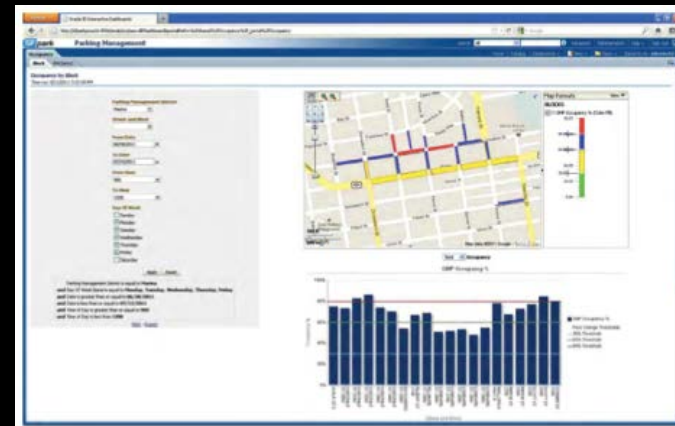
Sensors &
real-time data



Pay-by-
phone



Data
warehouse/
business
intelligence
tool



Pricing at parking meters and lots

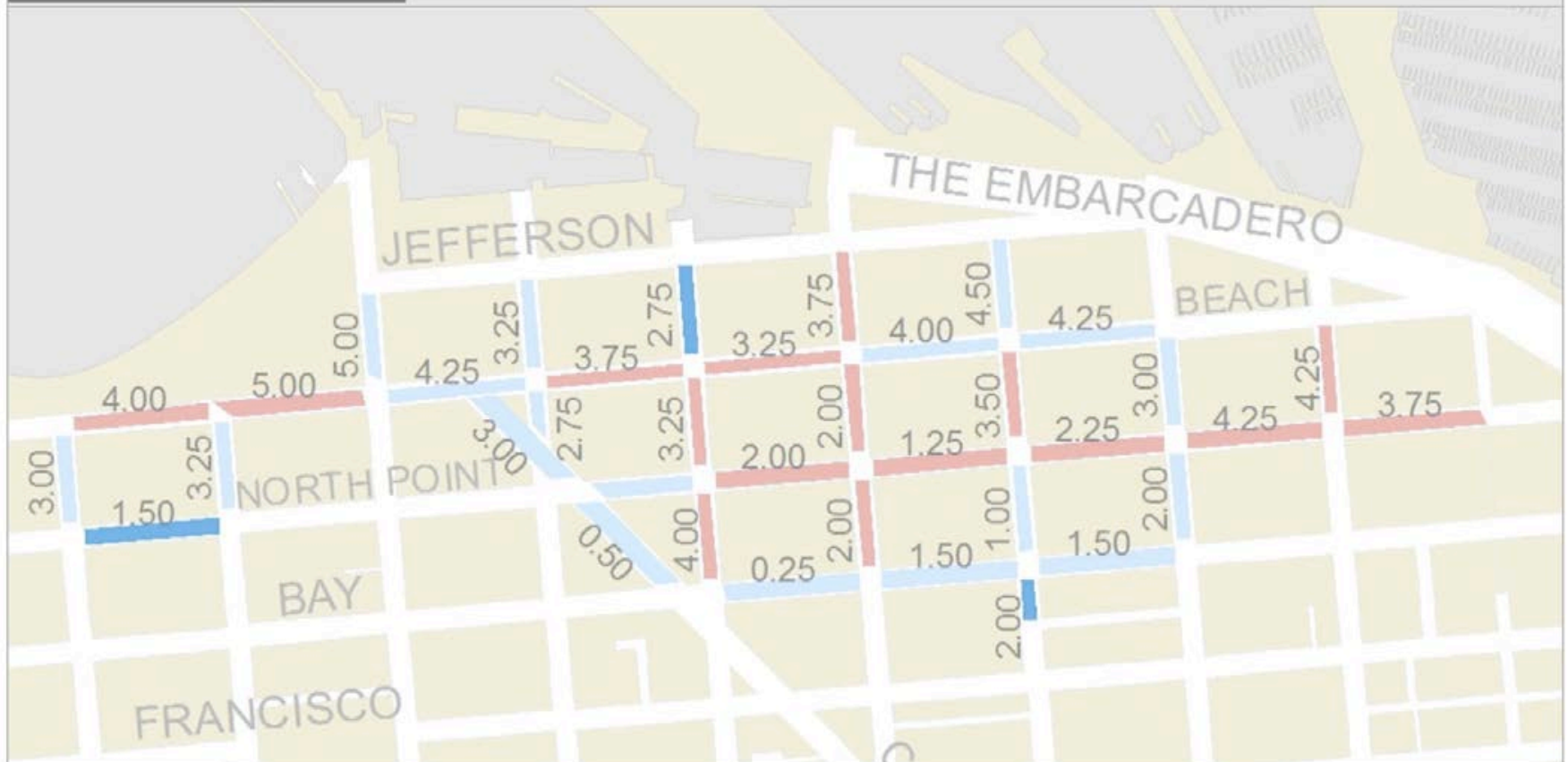
- Demand responsive to find lowest possible prices
- Gradual and periodic changes: \$0.25 up or down every 4-6 weeks
- Time of day pricing (vary by block + weekday/end)



Duration	Price Per Hour
9AM – 12AM	\$2.50
12AM – 3PM	\$3.50
3PM – 6PM	\$2.00

Demand responsive rate adjustments

Monday-Friday
Noon to 3pm



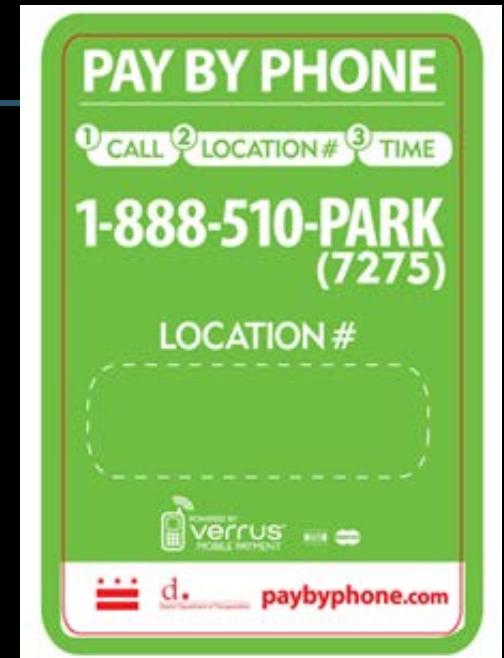
Residential Parking Benefit Districts

1. Charge **non-residents** the right prices for curb parking.
2. Return the revenue to the neighborhood to pay for public services

Example: Laguna Beach, CA

- Non-residents pay \$1-\$3/hour
- Residents pay \$40 per year

3. **Existing residents** park free or cheaply
 - Limit # of resident permits issued to # of available spaces
 - Example: Tucson



3. REGULATING PRIVATE DEVELOPMENTS



Definition: *Minimum parking requirements* are government regulations that specify the *minimum* number of parking spaces that must be provided for every land use.

They ensure that cities have *more parking spaces* than individuals would voluntarily supply.

Dana Point, CA, requires 4 spaces per 1000 square feet of built space for “multi-tenant general retail”

1.3 sq. ft. of asphalt per sq. ft. of building space

What is the *purpose* of minimum parking requirements?



According to the zoning codes:

- *Palo Alto: “to alleviate traffic congestion”*
- *Milpitas: “to relieve congestion on streets”*
- *Napa: “to reduce street congestion”*
- *San Diego: “to reduce traffic congestion & improve air quality”*
- *Generally, to prevent spillover parking problems*



Minimum parking requirements are an economically illiterate theory for addressing traffic congestion

1. Set minimum parking regulations to ensure that virtually all destinations have excess spaces, even when parking is given away free, even at isolated locations with no transit.
2. Prohibit or discourage charging for parking.
3. Prohibit curb parking.
4. Convert curb parking into more traffic lanes.

Result: nobody circles in search of curb parking, more auto capacity...but there were unintended consequences

Typical Minimum Parking Requirements (Milpitas, CA)


Research & Development: 3.33 spaces
/ 1000 square feet of built space

High-speed arterial

Hotel: 1 space / room + 2 for
manager's unit

Retail: 5 spaces / 1000 square
feet of built space





There's a light rail station just beyond the left edge of this photo.

...It's one of the worst-performing light rail systems in North America.

...And the nearby freeway is one of the most congested.

Research & Development: 3.33 spaces / 1000 square feet of built space

Hotel: 1 space / room + 2 for manager's unit

Retail: 5 spaces / 1000 square feet of built space

Unintended Consequences of Minimum Parking Regulations

Minimum parking regulations require excess spaces even when parking is free, even at isolated locations with no transit

Cost of parking is hidden in the price of other goods & services

Higher rents

Pricier goods

Higher Taxes

Parking appears free, resulting in higher parking demand, more driving, more congestion, more pollution

We all pay for more parking and bigger roads



Unintended consequences: less housing, more expensive housing & lower land values

1961: Oakland's first parking requirement

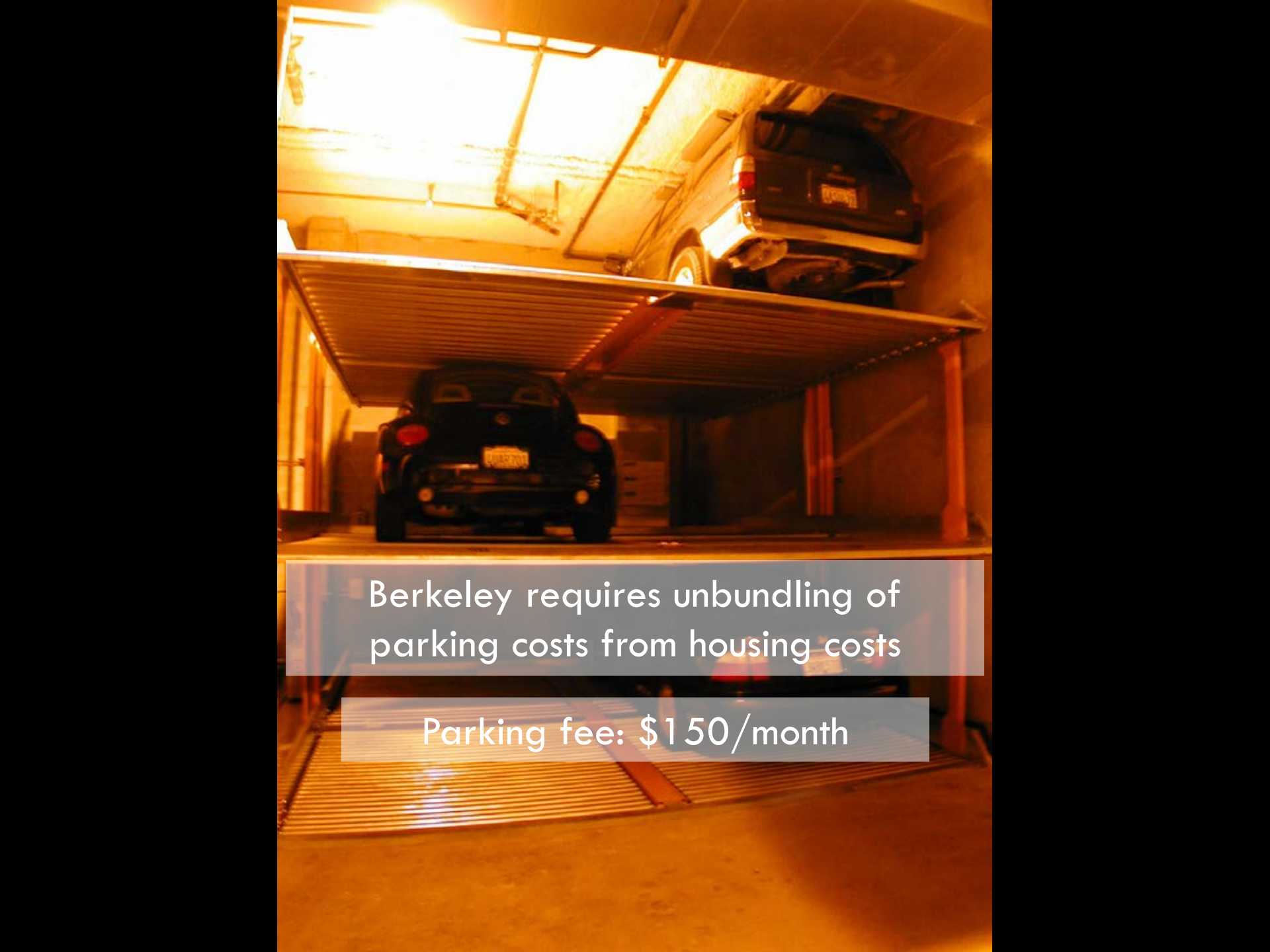
- One space per unit for apartments
- Construction cost increased 18% per unit
- Units per acre decreased by 30%
- Land value fell 33%



Managing curb parking allows removal of minimum parking requirements

Example: The Gaia Building, Berkeley, CA



A photograph of a multi-level car lift system in a garage. The lift is a metal structure with two levels. On the top level, a white SUV is parked. On the bottom level, a dark-colored car is parked. The garage has a concrete floor and a ceiling with exposed pipes and lights. The lighting is warm and yellowish.

Berkeley requires unbundling of
parking costs from housing costs

Parking fee: \$150/month



citycarshare

The Freedom of
Driving WITHOUT
The Hassles of *Ownership*



In Downtown Berkeley, new residential buildings are required to offer parking spaces to carsharing vehicles (if the building includes parking)

The Gaia Building – Parking Demand



- 91 apartments, theater, café & office space
 - 42 parking spaces supplied
- Result: 237 adult residents with just 20 cars

Require “Unbundling” of parking costs from the cost of other goods & services

Office lease example: Downtown Bellevue, WA

- Requires building owners to include parking costs as a separate line item in leases
- Minimum rate for monthly long-term parking: \geq twice the price of a bus pass
- Minimum rate in 2003: \$144/month
- *Maximum* parking requirements: 2.4 spaces / 1000 sf GLA

Results: drive alone commute rate fell 30%, from 81% driving alone to 57%

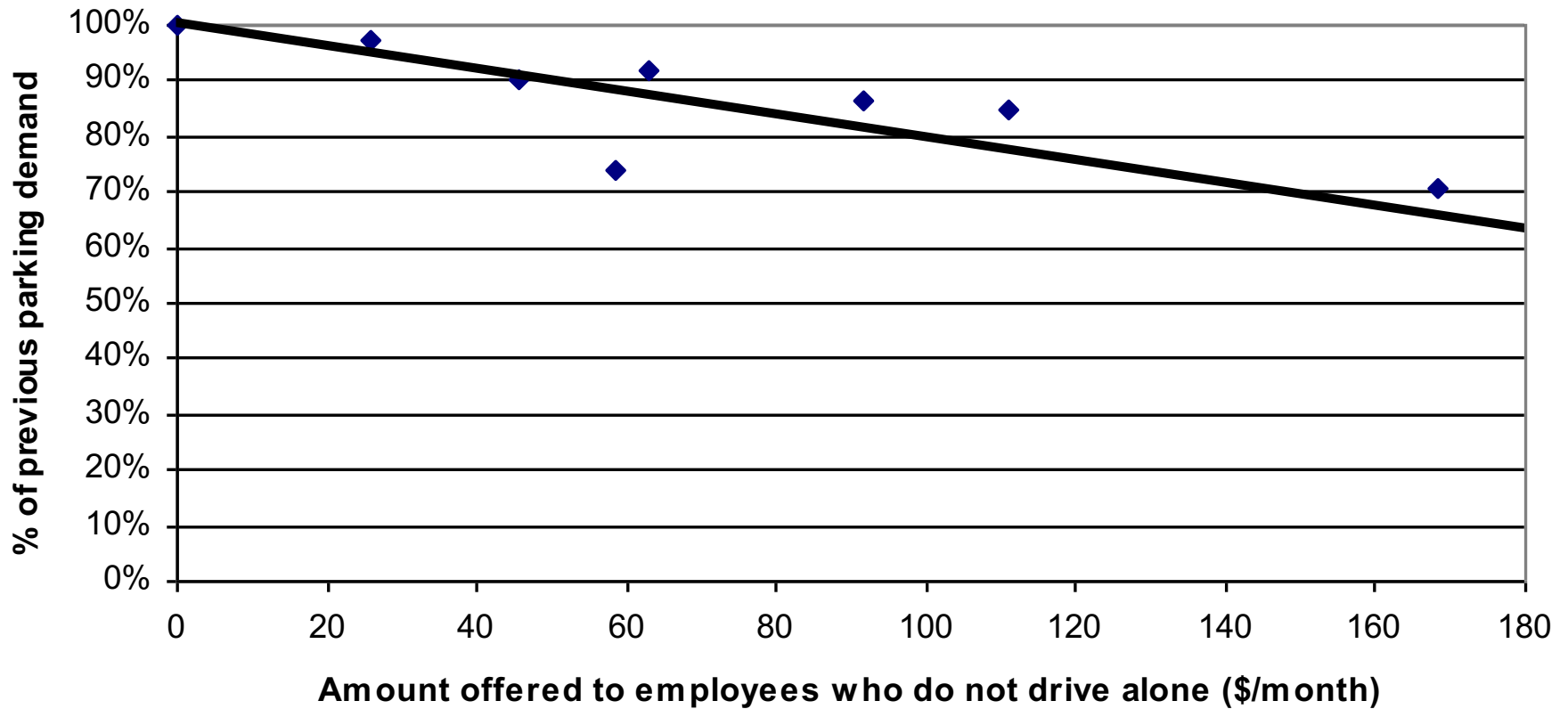


Require parking cash-out benefit for all employees

- Politically/financially not feasible to charge for parking? *Offer cash value of parking to those who don't drive*
- Consider it part of a cafeteria-style employee benefits package, like health benefit choices
- Example: Santa Monica
- Tenants must make cost of parking visible to employees
 - Full-cost parking fees, OR
 - Full parking cash-out



Parking Cash Out reduces vehicle trips



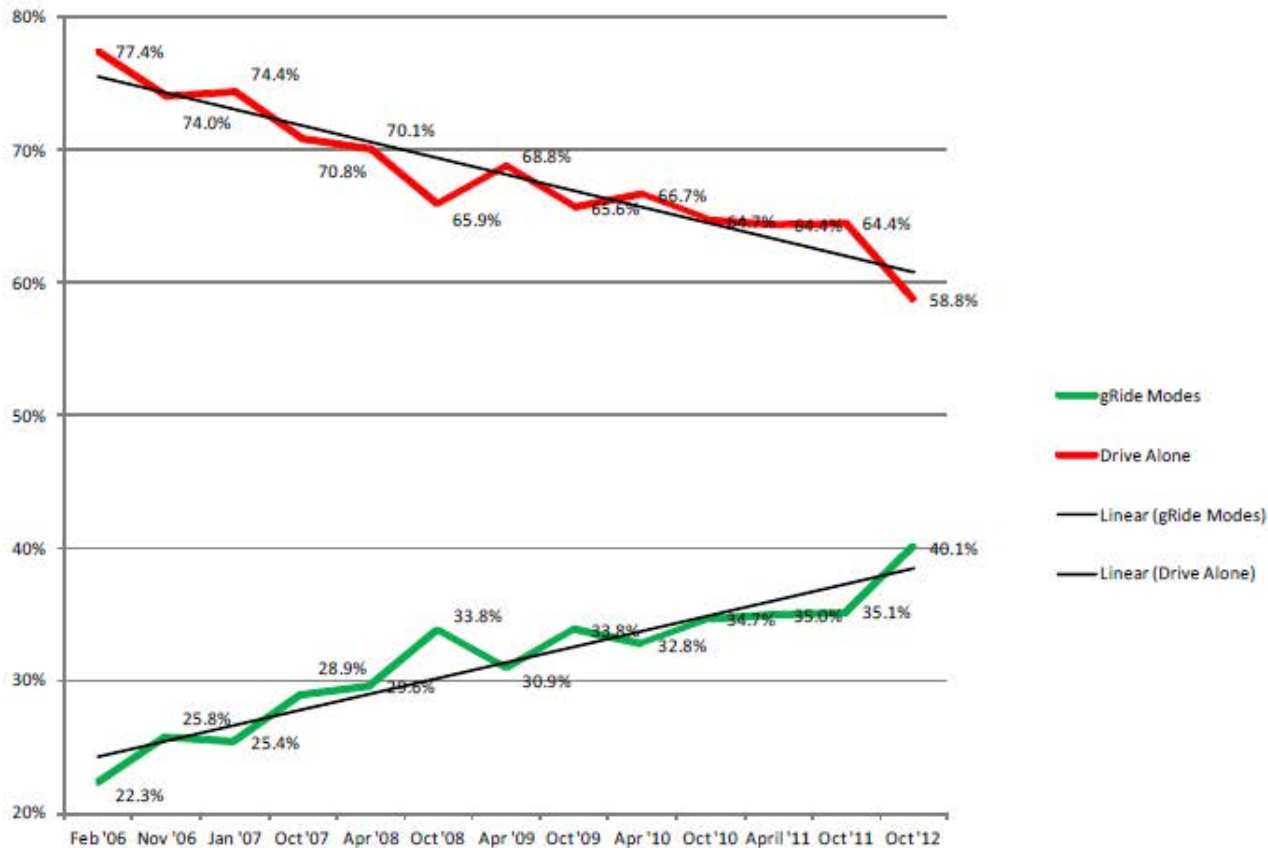
Source: adapted from Shoup, Donald. *Parking Cash Out*, 2005.



Traffic Reduction at Genentech South San Francisco



Commute Mode Shift from 2006 to 2012



Communities that have Eliminated Parking Requirements in some or all neighborhoods

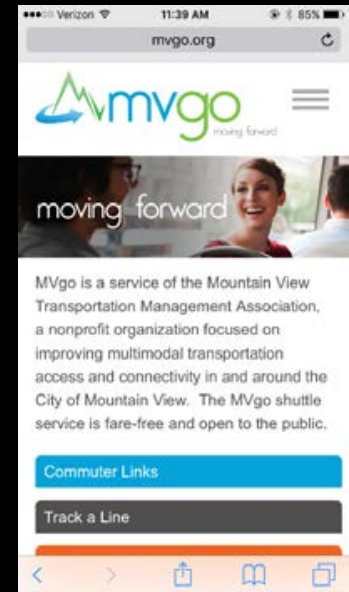
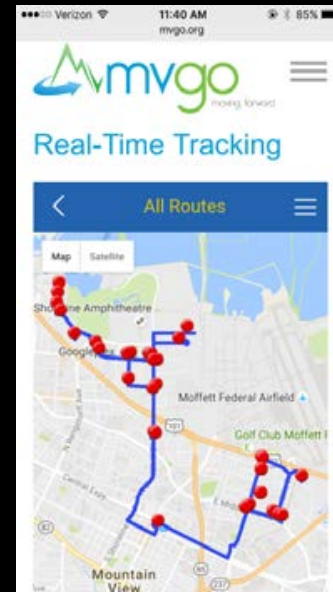
- Buffalo, NY (citywide)
- Coral Gables, FL
- Eugene, OR
- Fort Myers, FL
- Fort Pierce, FL
- Great Britain (nationwide)
- Hartford, CT (citywide)
- Hayward, CA
- Los Angeles, CA
- Mexico City (citywide)
- Milwaukee, WI
- Nashville, TN
- Oakland, CA
- Olympia, WA
- Portland, OR
- Sacramento, CA
- San Francisco, CA (citywide)
- Santa Clarita, CA
- Santa Monica, CA
- São Paulo, Brazil (citywide)
- Stuart, FL
- Seattle, WA
- Spokane, WA

4. IMPROVING TRANSPORTATION CHOICES

Strategy: Establish Transportation Management Association

Example: Emeryville Transportation Management Association

- Nonprofit agency that provides transportation services to businesses and residences
- Provides "Emery-Go-Round" shuttle
- Marketing & information about transportation options (carpool/vanpool, transit, bicycling)
- Attracts grant funding
- Cost-effectively reduces parking demand



Require provision of deep discount group transit passes to all employees & residents



Boulder, CO

Boulder's "Eco-Pass" program

- Employees ride free
 - \$83 per year per worker
 - Deep discount for group enrollment – only 6% of normal price (\$1,485)
 - 8,300+ employees at 1,200 downtown businesses
 - Funded by meter revenues
-
- Drive alone rates fell from 56% to 36%
 - Reduced commuter parking demand by 850+ spaces

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NEW TRANSPORTATION TECHNOLOGIES

Ridehailing = ~15% of intra-San Francisco vehicle trips



Ridehailing = ~9% of intra-SF person trips

Source: SFCTA. 2016 data. See <https://www.sfcta.org/tncstoday>



San Francisco Parking Tax Revenue (\$ Millions)

Fiscal Year	Revenues
FY 2014-15	\$87.2
FY 2015-16	\$86.0
FY 2016-17	\$84.3
FY 2017-18 (projected)	\$83.4



Ridehailing is cutting parking demand & revenues

Ridehailing “taking a big bite” out of the parking industry



“At San Diego hotels serviced by Ace Parking, overnight parking has declined 5% to 10%. At restaurant valet stands, business is down 25%...nightclub valets are seeing a 50% drop off...Ace Parking has seen similar declines at its 750 parking operations from Washington, D.C., to Portland, Oregon.”

Self-driving shuttles and taxis are now picking up passengers on public streets

A few examples

2016: NAVYA self-driving shuttles entered passenger service in the mainly pedestrian precincts of Sion, Switzerland



2017: NAVYA self-driving shuttles entered passenger service on public streets in Las Vegas



2017: EasyMile self-driving shuttles began shuttling passengers to Dallas Cowboys games in Arlington, Texas



2017: Waymo self-driving taxis, with no one in the driver's seat, began operating on public streets in Chandler, Arizona



2018: Waymo “has announced plans to start a driverless taxi service in Arizona this year.”

Ridehailing & self-driving vehicles are cutting parking demand



- About 80% of the cost of transit is the driver.
- Self-driving vehicles will cause the cost of transit & taxis to plummet.
- No comparable breakthrough in parking costs is foreseen.



As ridehailing services and self-driving vehicles become widespread, what will happen to parking demand?

EFFECT ON PARKING DEMAND?

Source	Estimate
Academic: Zhang et al	~90% reduction 50% of fleet shared
OECD International Transport Forum	80% reduction 100% of fleet shared
Academic: Kockelman	Each shared AV replaces 12 private vehicles
McKinsey	5.7 billion square meter reduction in parking

Questions? Comments?



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