Upcoming Programs & Opportunities

From ULI Colorado

- **May 31:** Deadline for Real Estate Diversity Initiative Applications
- **June 3:** New Member Coffee
- **June 3:** WLI Leadership Connection with RTD CEO Debra Johnson
- **June 9:** WLI/CREW Happy Hour at RiNo Beer Garden
- **June 15:** Wildfire Resilience Demonstration with IBHS
- **July 15:** Getting to Net Zero Energy: What You Need to Know About Building Electrification to Meet Denver's Climate Goals
- **July 21 & 22:** Diversity, Equity & Inclusion Training

See upcoming local opportunities on ULI Colorado website here: https://colorado.uli.org/events/

Check out past webinars, reports, and more on Knowledge Finder here: https://knowledge.uli.org/

Welcome!

A few logistics before we get started…

Audience will be muted throughout the session.

Submit questions using the Q&A function.

This is being recorded and will be available after the event.

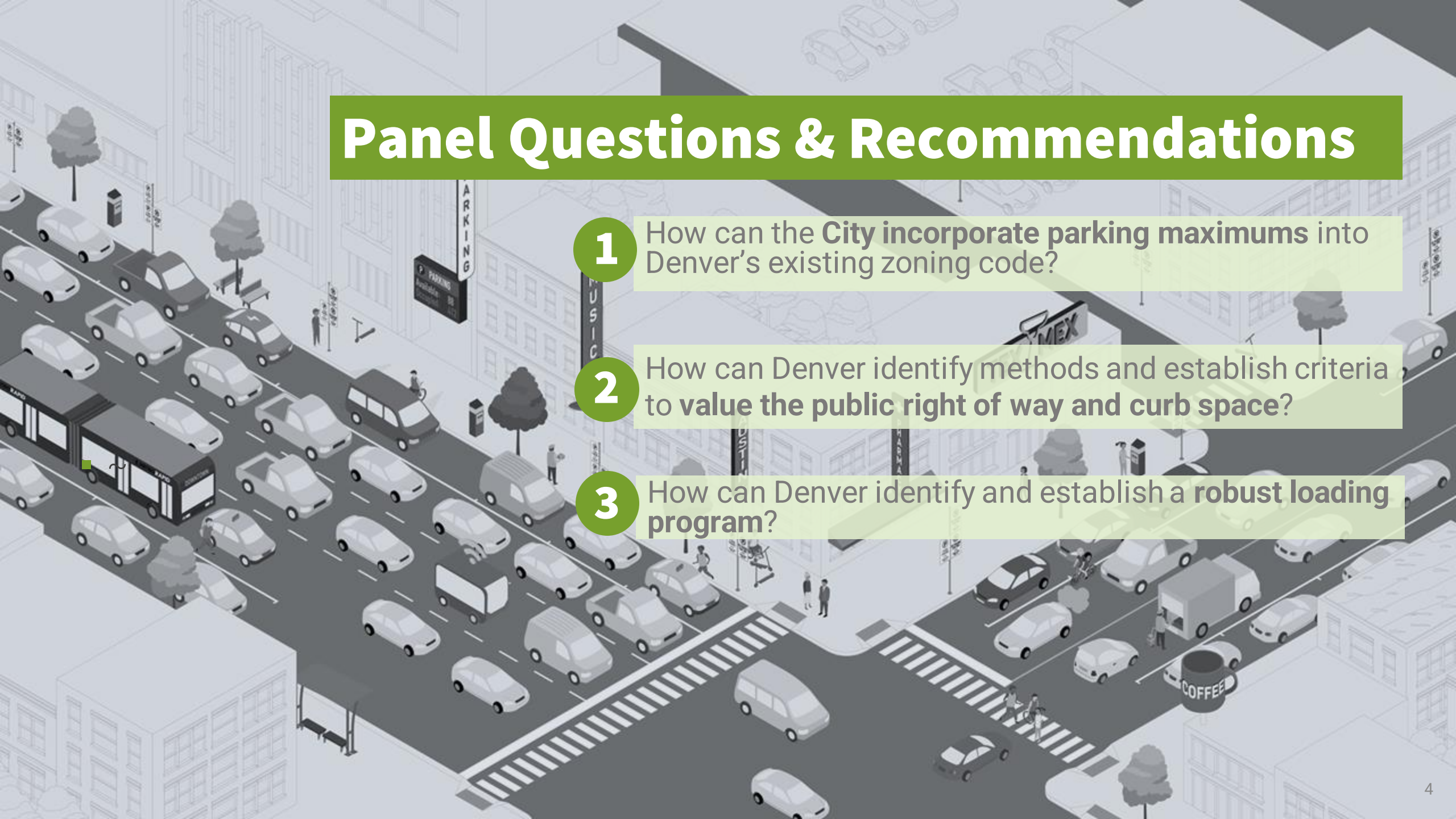
Urban Land Institute Colorado

The Agenda for Today

Ahead of the Curb: Addressing Climate Change through Parking & Curb Management

- **3:30 pm:** ULI Colorado welcome
- **3:35 pm:** Opening remarks on the status of the City by **Alyssa Alt**, Manager of Curbside & Parking, Denver Department of Transportation & Infrastructure
- **3:40 pm:** Keynote by **Lauren Mattern**, Principal, Nelson\Nygaard on key recommendations from the Denver Climate Challenge advisory services
- **3:55-4:35pm:** Panel discussion with local and national subject experts. Speakers include:
  - **Jeremiah Simpson,** Parking & Mobility Planner, Kimley-Horn on right-sizing parking and shared parking solutions
  - **Chad Holtzinger,** President, Shopworks Architecture on the link between less parking and housing affordability, and the importance of access to mobility options
  - **Mallory Baker,** Consultant, Walker Consultants on curb management solutions
  - **Mary Catherine Snyder,** Parking Strategic Advisor, City of Seattle on case studies from Seattle
- **4:35-5pm:** Q&A moderated by **Jordan Block**, Urban Design Lead, HDR

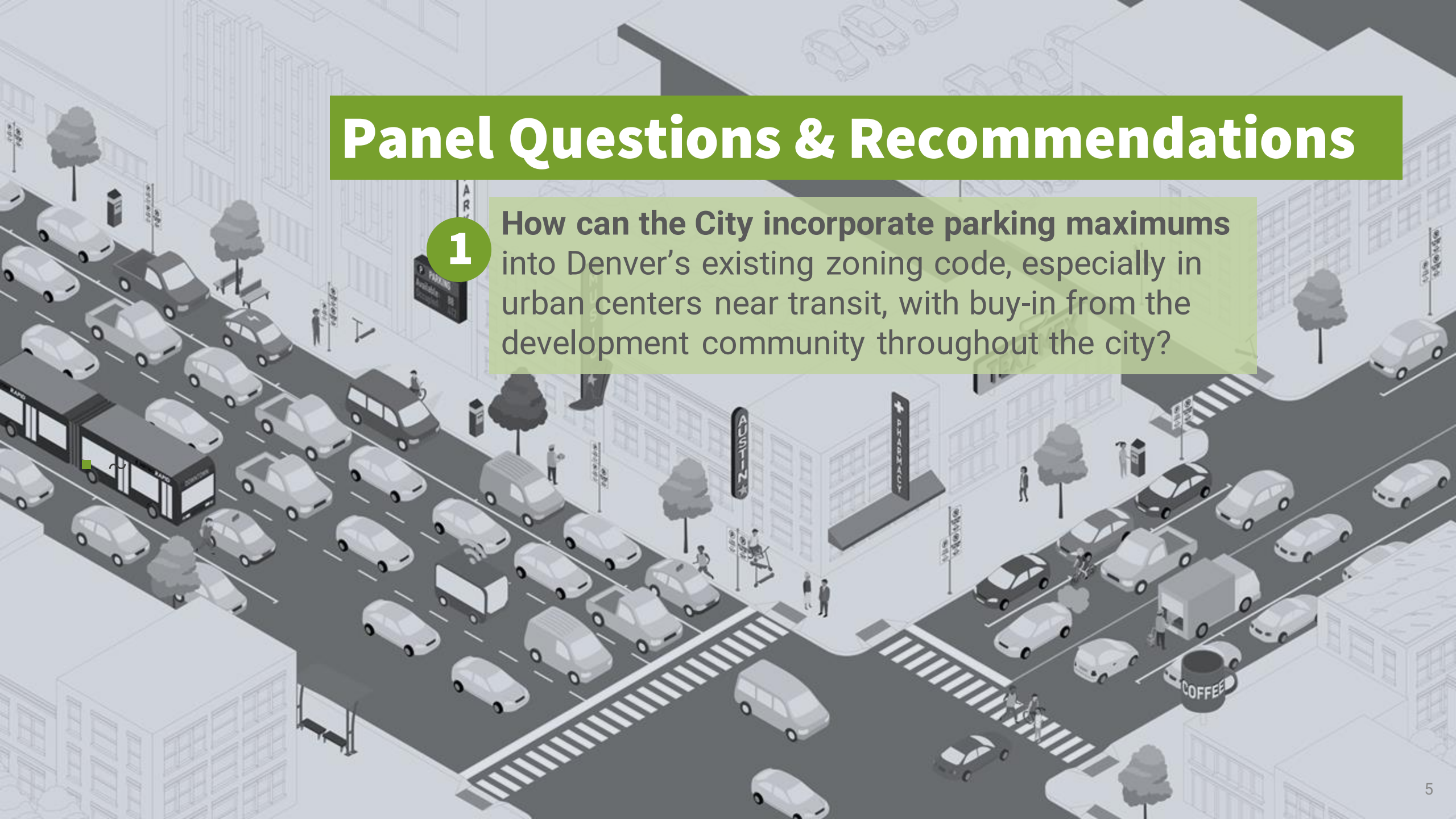
Panel Questions & Recommendations



1. How can the **City incorporate parking maximums** into Denver's existing zoning code?
2. How can Denver identify methods and establish criteria to **value the public right of way and curb space**?
3. How can Denver identify and establish a **robust loading program**?

Panel Questions & Recommendations

1 **How can the City incorporate parking maximums** into Denver's existing zoning code, especially in urban centers near transit, with buy-in from the development community throughout the city?



1 How can the City incorporate parking maximums?

Theory: Placing a cap on parking supply leads to:

- Increased development density
- Increased access via transit and multimodal
- Reduced SOVs
- Reduced GHG

Correlation between limited parking and lower VMT

Limiting Parking = 5% - 12.5% reduction *(in emissions)*

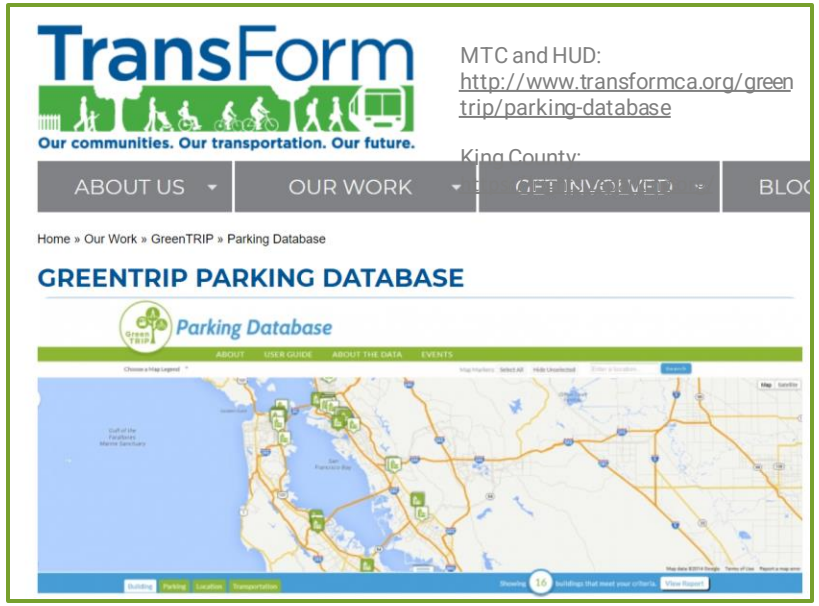
Land use Density & Diversity = up to 65% VMT reductions

Category	Measure Number	Strategy	BMP	Grouped With #	Range of Effectiveness	
					Percent Reduction in GHG Emissions	Basis
Land Use / Location	LUT-1	Increase Density			1.5-30.0%	VMT
	LUT-2	Increase Location Efficiency			10-65%	VMT
	LUT-3	Increase Diversity of Urban and Suburban Developments (Mixed Use)			9-30%	VMT
	LUT-4	Incr. Destination Accessibility			6.7-20%	VMT
	LUT-5	Increase Transit Accessibility			0.5-24.6%	VMT
	LUT-6	Integrate Affordable and Below Market Rate Housing			0.04-1.20%	VMT
	LUT-7	Orient Project Toward Non-Auto Corridor			NA	
	LUT-8	Locate Project near Bike Path/Bike Lane			NA	
	LUT-9	Improve Design of Development			3.0-21.3%	VMT
Parking Policy / Pricing	PDT-1	Limit Parking Supply			5-12.5%	
	PDT-2	Unbundle Parking Costs from Property Cost			2.6-13%	
	PDT-3	Implement Market Price Public Parking (On-Street)			2.8-5.5%	
	PDT-4	Require Residential Area Parking Permits		PDT-1, 2 & 3	NA	

CAPCOA *– California Air Pollution Control Officers Association*

Possible Tools to Support Parking Maximums

- No minimums
- Allow for parking districts
- Allow for temporary parking until transit options fully developed
- Streamlined process for entitlements
- Provide resources to “prove case” for underwriters, lenders, and tenants (possible source is TDM reporting)



MTC and HUD:
http://www.transformca.org/greentrip/parking-database

King County:

Challenges to Parking Maximums

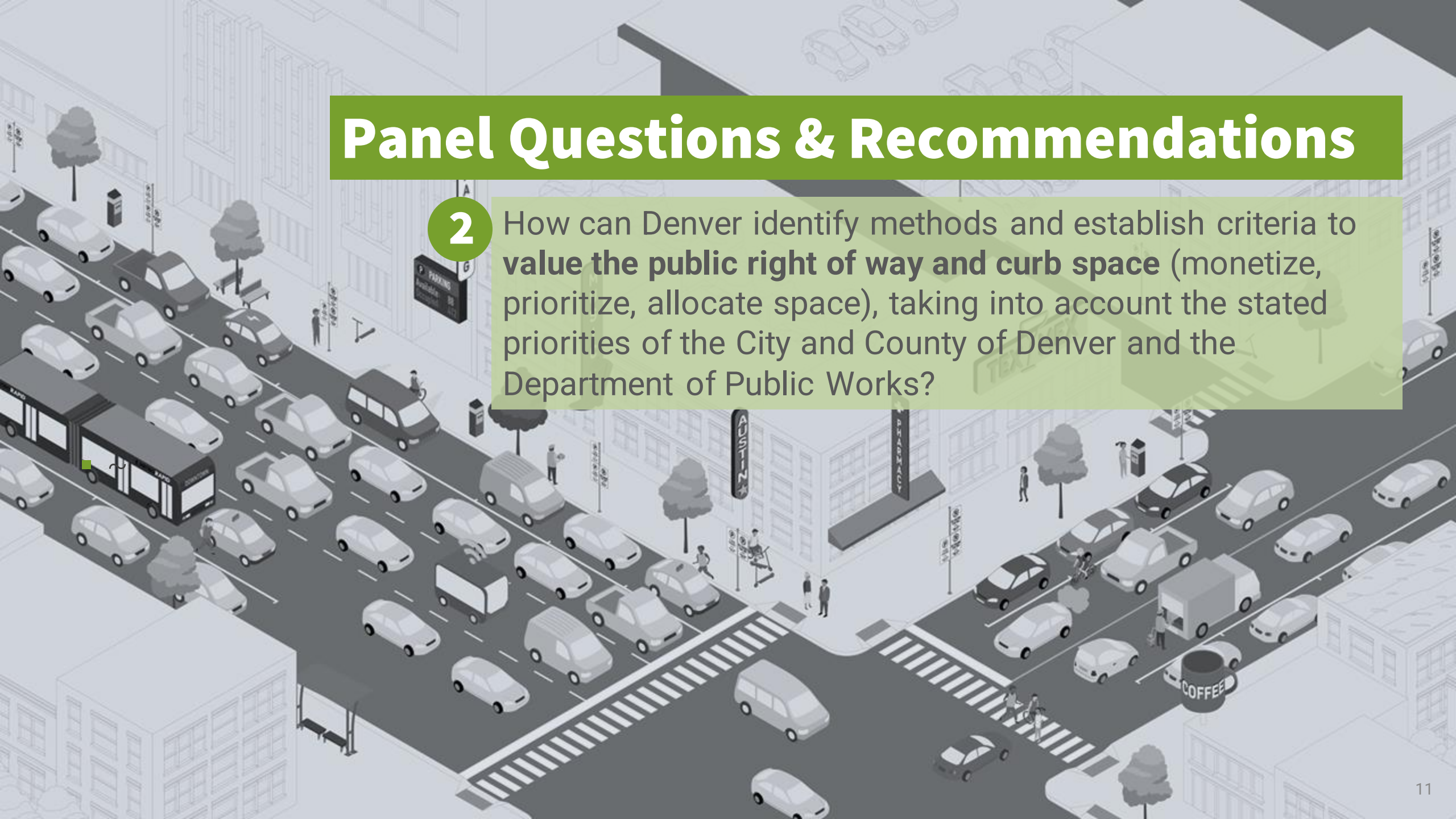
- Difficult to evaluate accurately in developing areas
- Building uses change
- Blunt instrument
- Too many different neighborhood contexts
- Significant planning department time to evaluate variances

Alternatives to Parking Maximums

- Allow developers to regulate
  - Waive parking minimums
  - Lower parking minimums
  - Increase flexibility to meet minimums
- Require higher development density
  - Increase Floor Area Requirement minimums
  - Relax height restrictions

- Require TDM programs (in process of being adopted)
- Promote effective mixed-use
- Increase transit investment
- Start with the areas with highest opportunity

Panel Questions & Recommendations

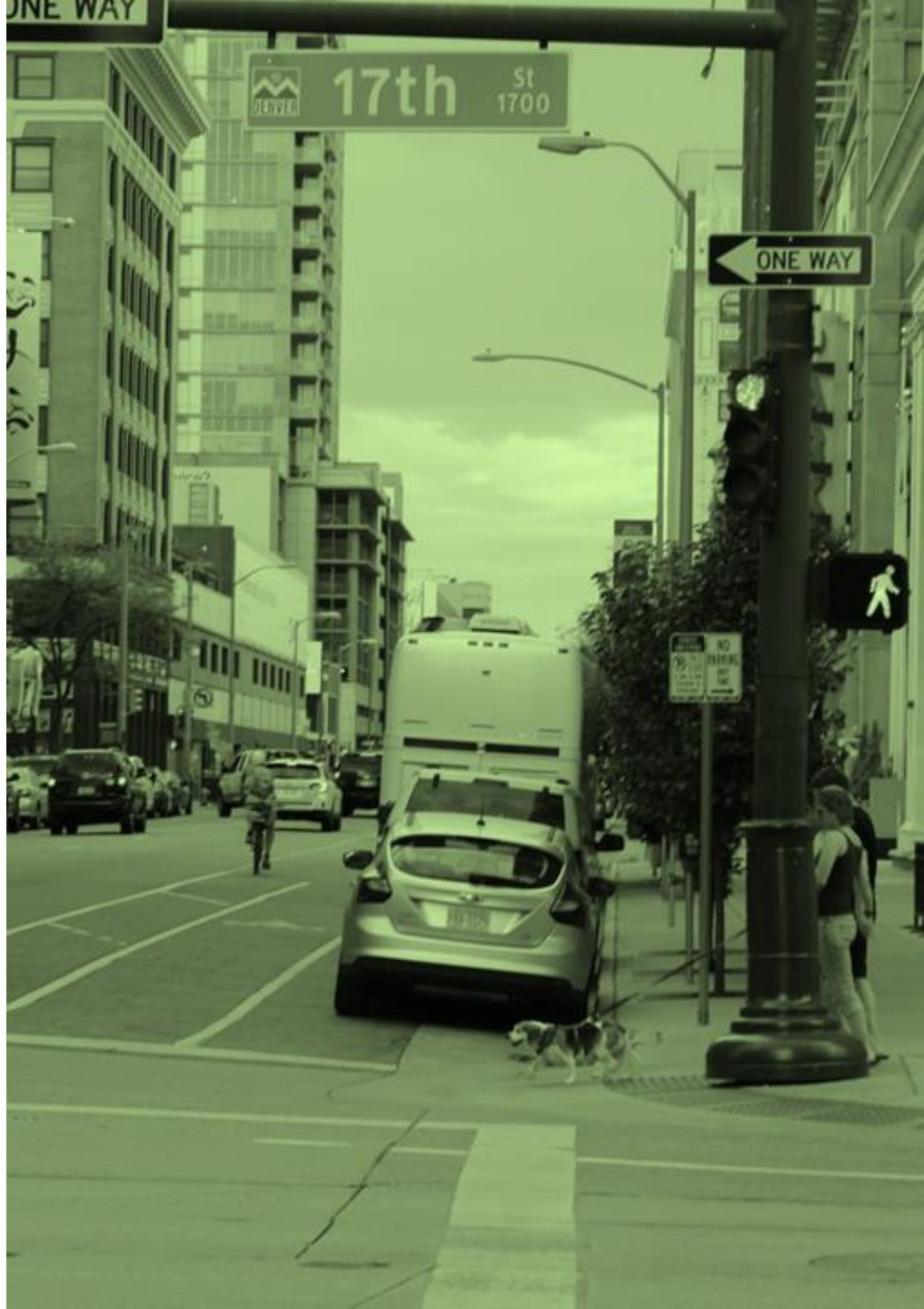


2 How can Denver identify methods and establish criteria to **value the public right of way and curb space** (monetize, prioritize, allocate space), taking into account the stated priorities of the City and County of Denver and the Department of Public Works?

2 How can Denver identify methods and establish criteria to value the public right of way and curb space?

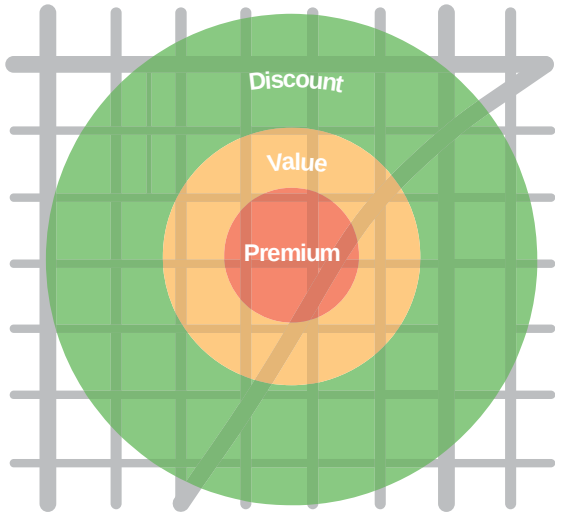
Demand responsive parking pricing of on-street spaces is critical missing gap for broader parking portfolio

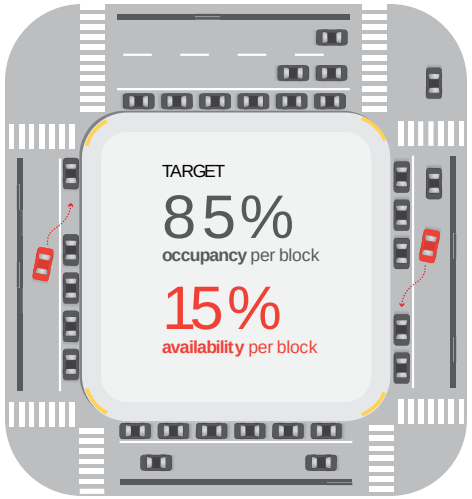
- Create available spaces
- Only charge the amount that achieves availability targets
- Acknowledge that demand factors always changing
- Over time, when prices are working
- Initial catch up adjustment on older equipment
- Longer term:
  - Demand responsive to find lowest possible prices
  - Gradual and periodic changes
  - Match demand trends



What is demand-based pricing?

- Data-driven and transparent government policies
- Lowest price that achieves availability target
- Maximizes customer experience of parking system
- Improves transit reliability and overall livability of places





Results

Seattle and San Francisco went from rarely adjusting rates to regular adjustments (annual vs. ~2 months) in a process that gets no attention

SEATTLE

- **Average hourly rate** stayed the same in 47% of neighborhoods
- **Reduced occupancy** where average rate increased
- **More zones** to optimal range

SAN FRANCISCO

- $0.11 **Reduced** average hourly rate
- 43% **Reduced** amount of time to find a space
- 22% **Increased** availability during peak

Outcomes

- Blocks too full less often
- Easier to pay and avoid citations
- Reduced circling = safer streets
- Better streets for retail
- Reduced VMT & GHG

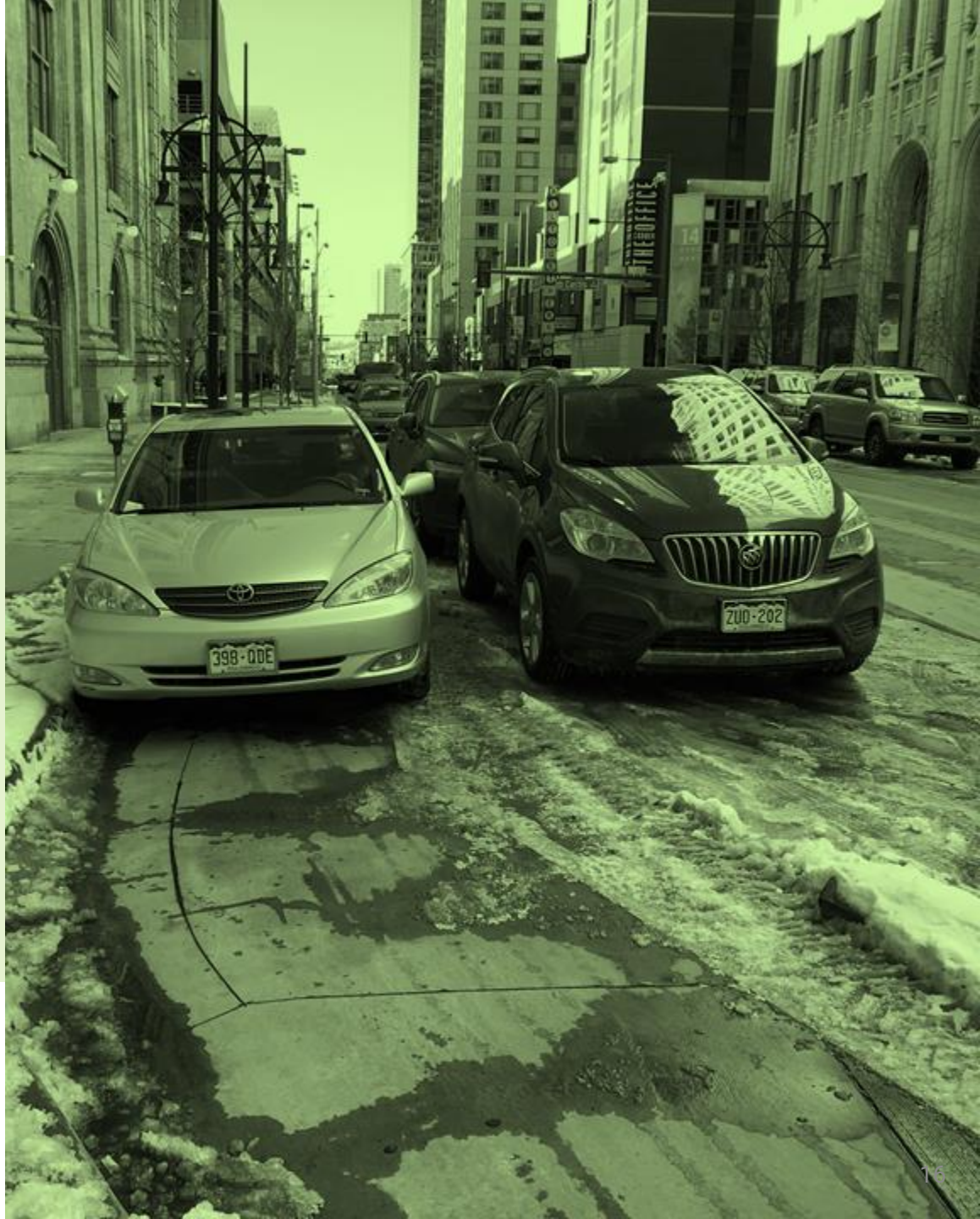
What to do with the revenue

Parking revenues must be tangible to those paying new rates

- Parking and mobility special revenue fund (not general fund)
- First, must **reinvest** in parking operations equipment and enforcement
- Options discussed (local or systemwide):
  - Transit (service, EcoPass subsidies)
  - Multimodal infrastructure
  - Transportation Demand Management
  - Curbside pilots

Violations catch up to improve resource efficiency

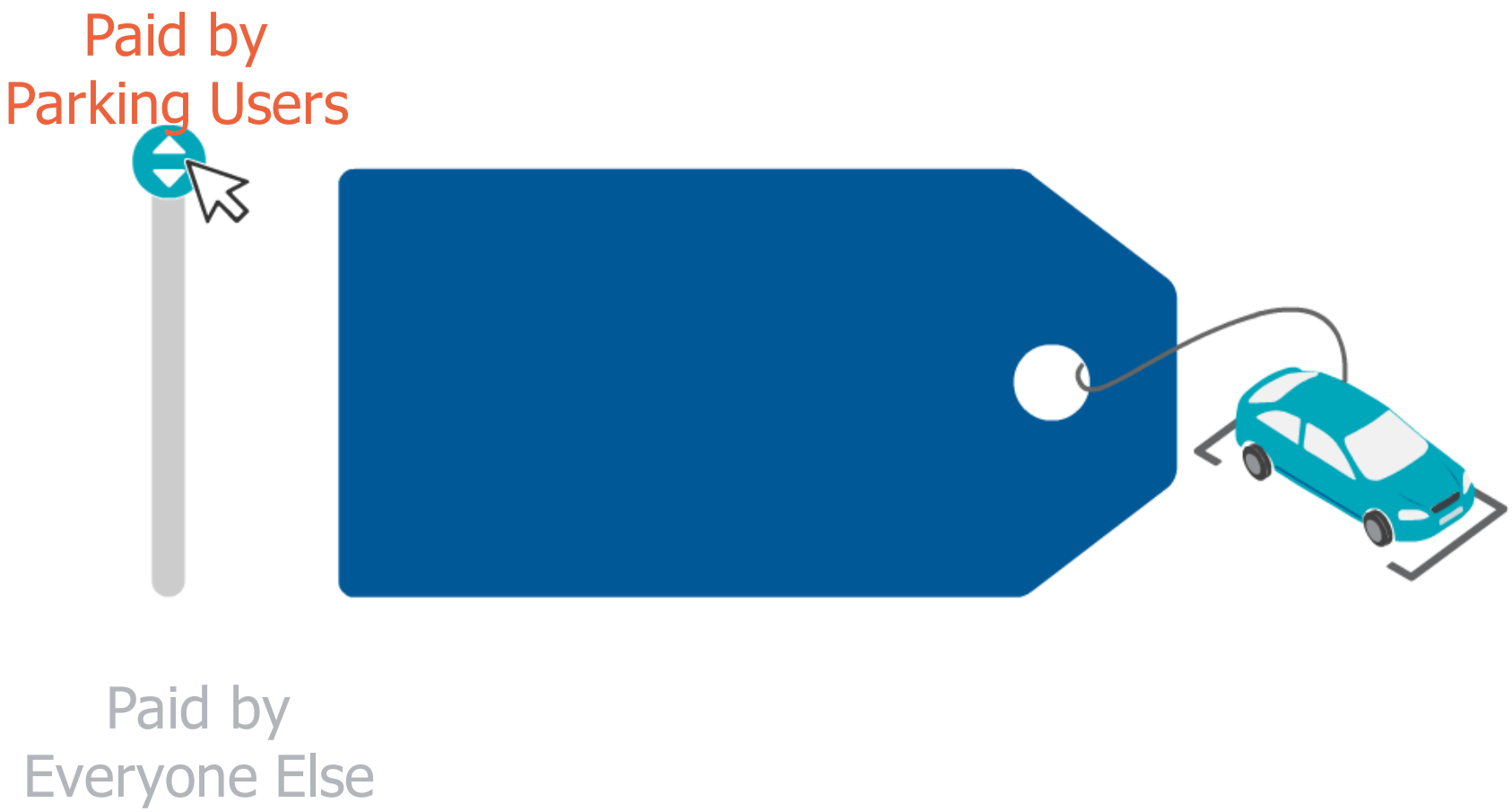
- **Current price** can be less than paying off-street at private facilities
- **Incentivizing** gaming and driving up enforcement costs
- **Violations** should not be overly punitive but must be higher than price of "following the rules"
- **Tiered, progressive fines** may be most beneficial – IF administratively feasible.



Re-evaluate goal – and price – of Residential Permit Parking

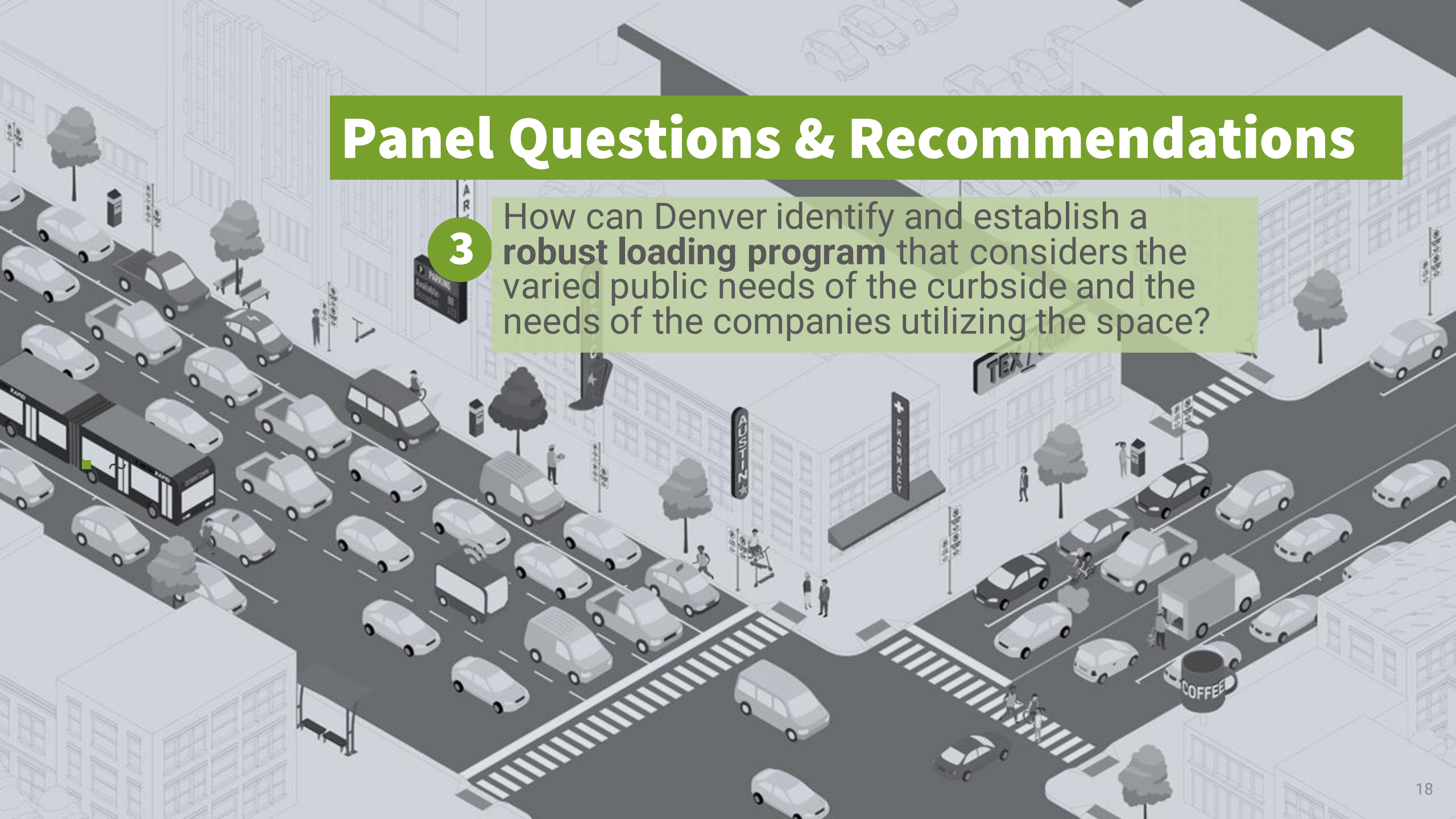
Parking is never really "free"—the costs are simply passed on to other people

- Free parking isn't free to the city
- Currently directly subsidizing
- Program encourages vehicle ownership
- Must right-size cost to at least cover administrative operations
- Evaluate effectiveness of program before significant expansions



Panel Questions & Recommendations

3 How can Denver identify and establish a **robust loading program** that considers the varied public needs of the curbside and the needs of the companies utilizing the space?

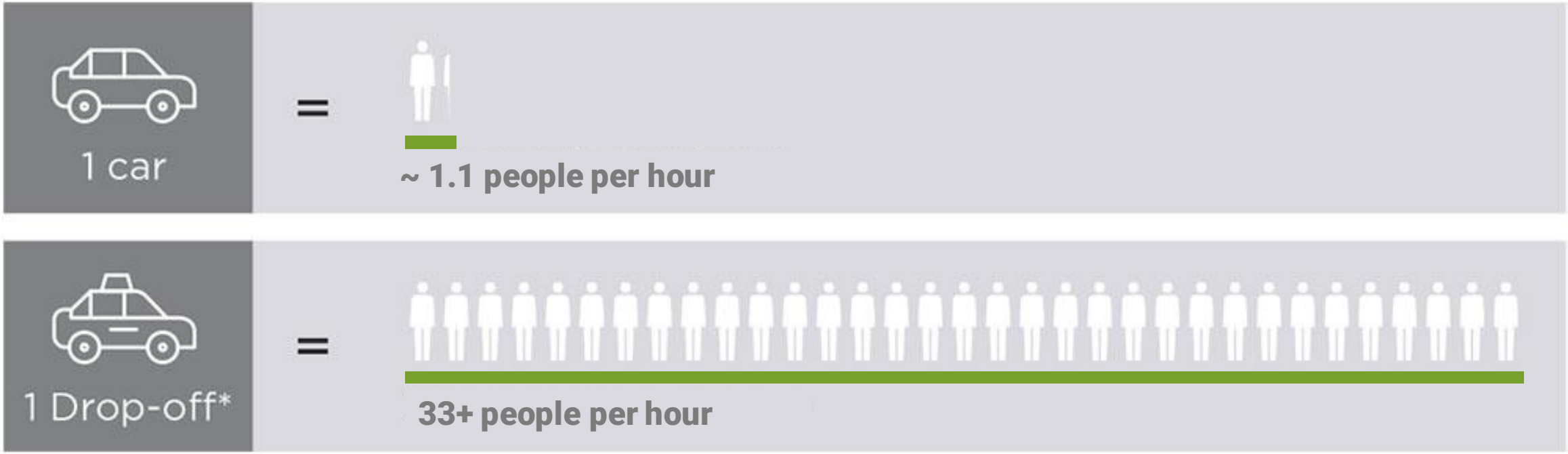


3 How can Denver identify and establish a robust loading program?

Key Issues

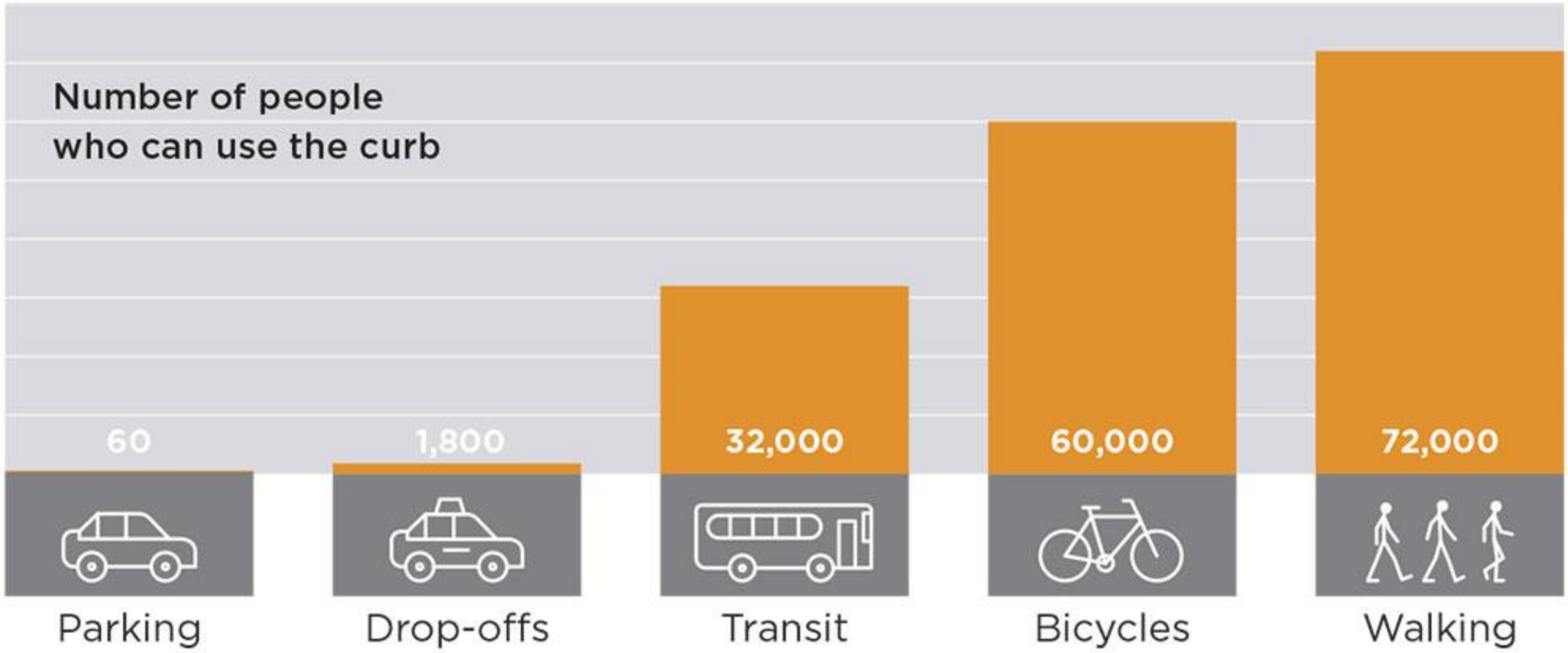
- Parking to support retail
- Organize freight
- Safer ride-hail
- Provide off-sidewalk storage for scooter and bike-share

Moving people



Source: American Planning Association

Why organize the curb?



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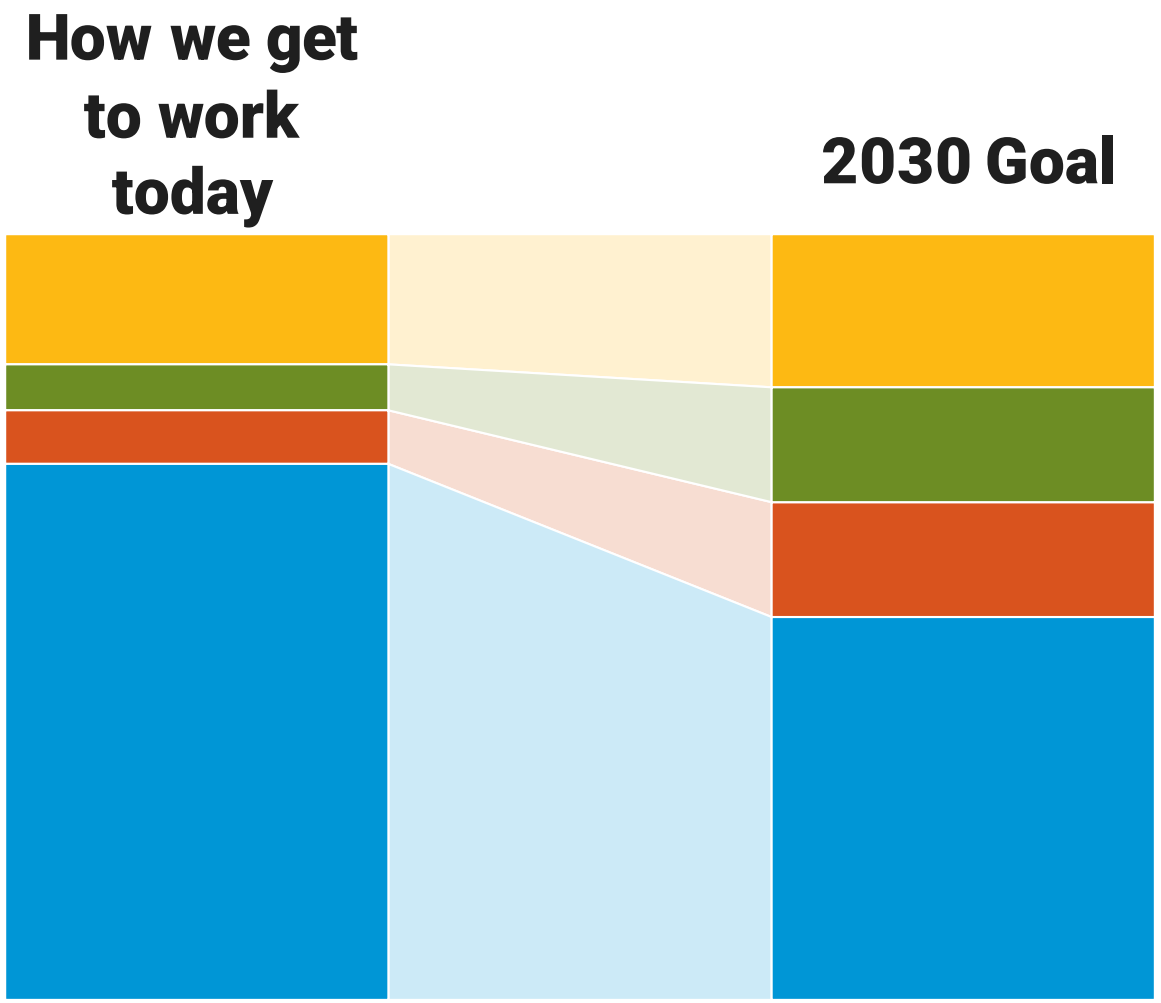


Other
Carpool, work from home, etc.

Walk,bike, roll

Transit

Drive alone
Single occupant vehicles

Organizing the Curb

1. Establish a hierarchy of curb uses
2. Provide standard template for loading zones on each block
3. Dynamic pricing for time-of-day use
4. Enforcement

Typical guidelines for curbside use on named streets

Typical street includes:

- 20 parking spaces
- 2 large loading zones
- 2 bike and scooter parking areas
- Flex meters for off peak loading

Midblock loading considerations:

- Safer away from intersections
- Use alleys/driveways for transition

As needed uses for:

- Bus stops
- Parklets
- Car share
- ADA parking

Loading zones become opportunities to experiment

- Encourage safer Uber and Lyft transitions
- Test reservation systems like Curbflow
- Geofence and charge users
- Encourage delivery services to test new (smaller) vehicles

Presented by
Lauren Mattern

NELSON NYGAARD

ULI Colorado

Right-Sized and Shared Parking

ULI Colorado - Ahead of the Curb:

Addressing Climate Change through Parking & Curb Management

May 20, 2021

Panelist

Jeremiah Simpson

Parking & Mobility Planner with Kimley-Horn

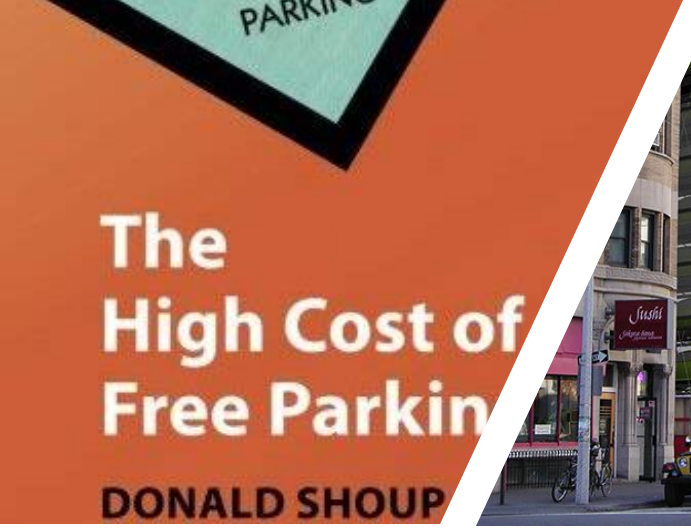
- B.A. English
- 19 years consulting experience
- Denver resident since 2004
- Passion for urban infill, multimodal, and smart growth

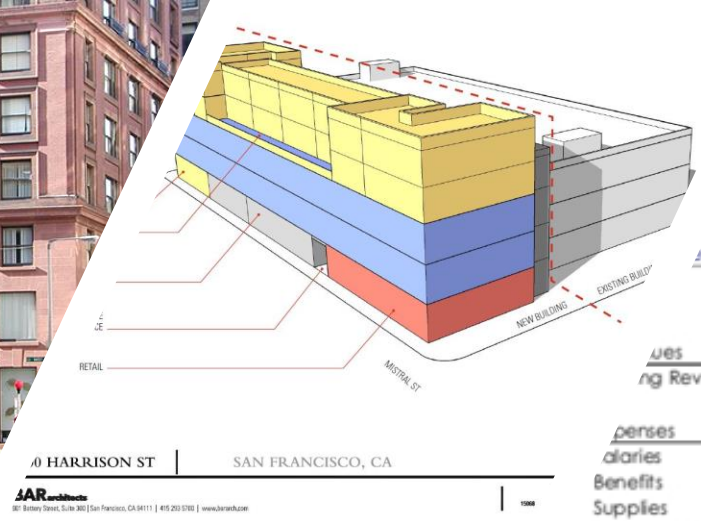
Customers may not remember a good experience….

But they WILL remember the bad!

Agenda

- Introduction
- Why Right-Sized Parking (Still) Matters
- ULI Shared Parking 3rd Edition
- Looking Forward





JRMA

ability in the pro forma is the parking revenues. The revenues presented are ast performance of the parking system. The table below shows the first five ion; projections indicate $3,731,000 in revenues, $1,283,000 in expenses, and debt service. The pro forma for parking deck indicates a positive net operating ever, when the debt service is added a net loss occurs.

liminary Parking Deck Six Pro Forma

		Year 1 2017	Year 2 2018	Year 3 2019	Year 4 2020	Year 5 2021
ues	Rate					
ng Revenues	$1,263 /Space	$656,000	$697,000	$738,000	$820,000	$820,000
penses	Rate					
alaries	$ 97 /Space	$63,000	$65,000	$67,000	$69,000	$71,000
Benefits	$ 69 /Space	$45,000	$46,000	$47,000	$48,000	$49,000
Supplies	$ 124 /Space	$80,000	$82,000	$84,000	$87,000	$90,000

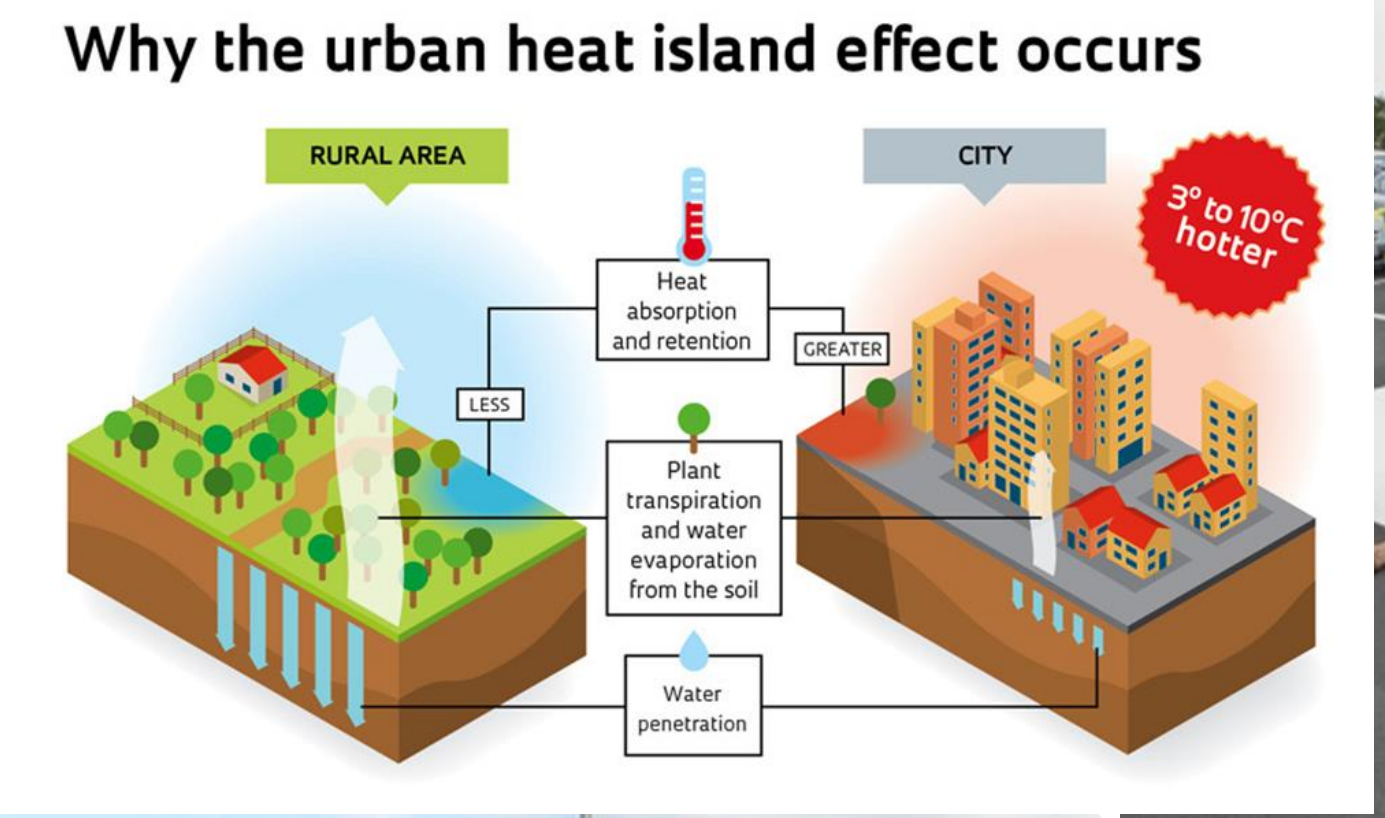
Introduction

- Significant impacts of parking infrastructure:
  - Cost (capital and operations), opportunity cost, density, financing, tenant leasing, accessibility, first & last user experience
- Effective development includes:
  - Right-sized parking footprint
  - Shared-use of parking where possible
  - Mobility choice and walkability
  - Exceptional end user experience

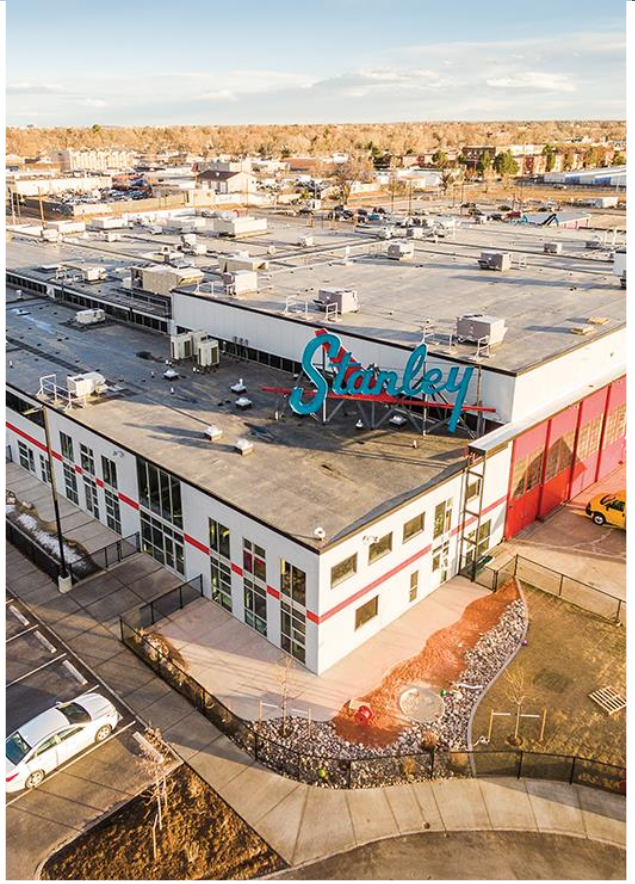
Why Right-Sized Parking (Still) Matters

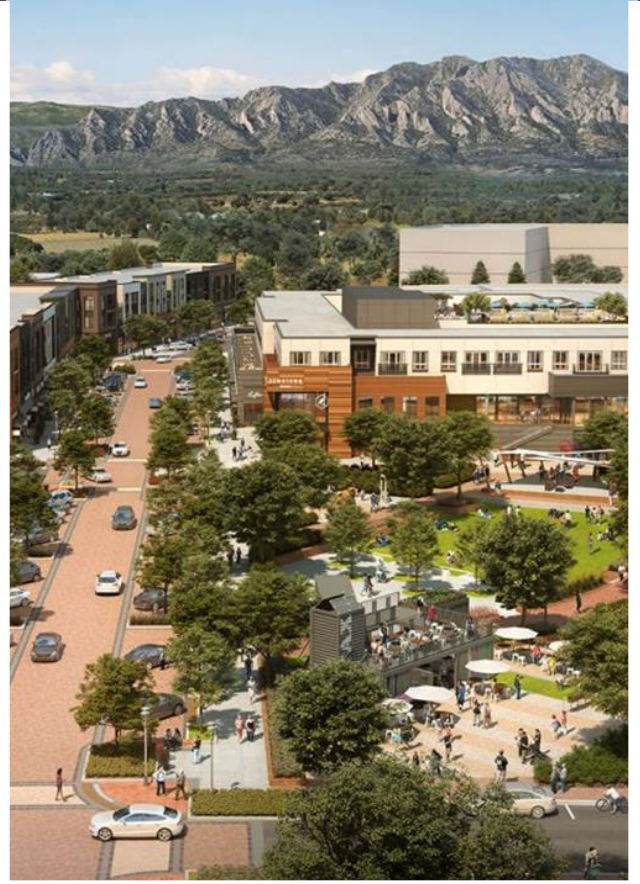
Shared Parking / Parking Needs / Mobility Planning

Environmental Impacts of Too Much (or Too Little)

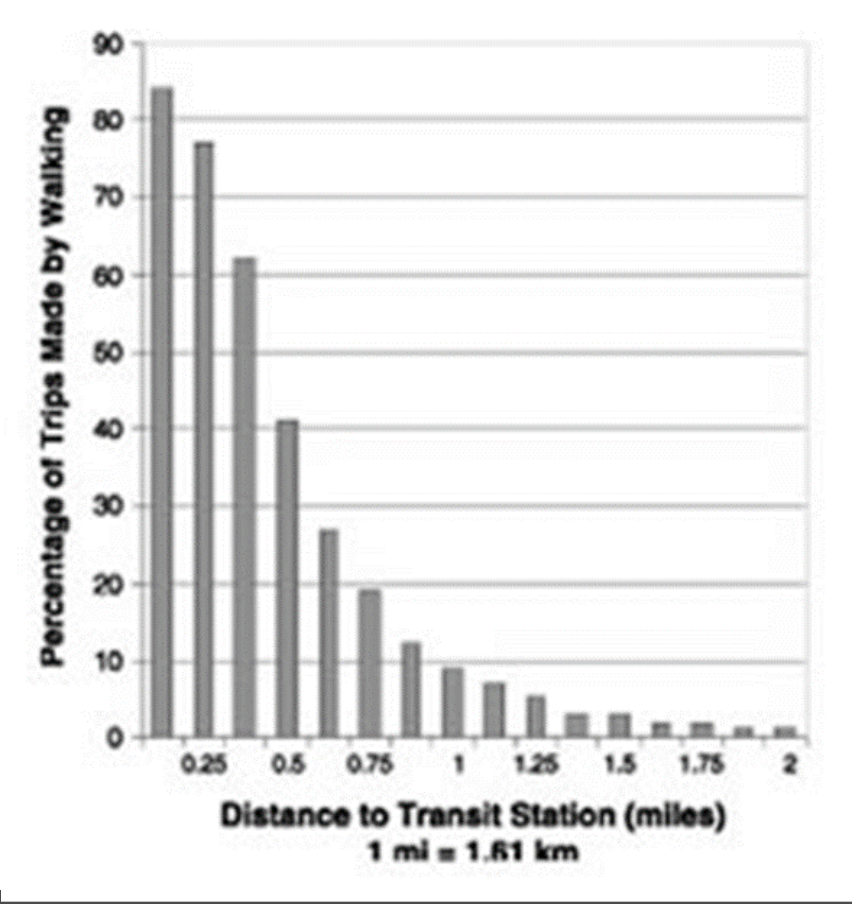


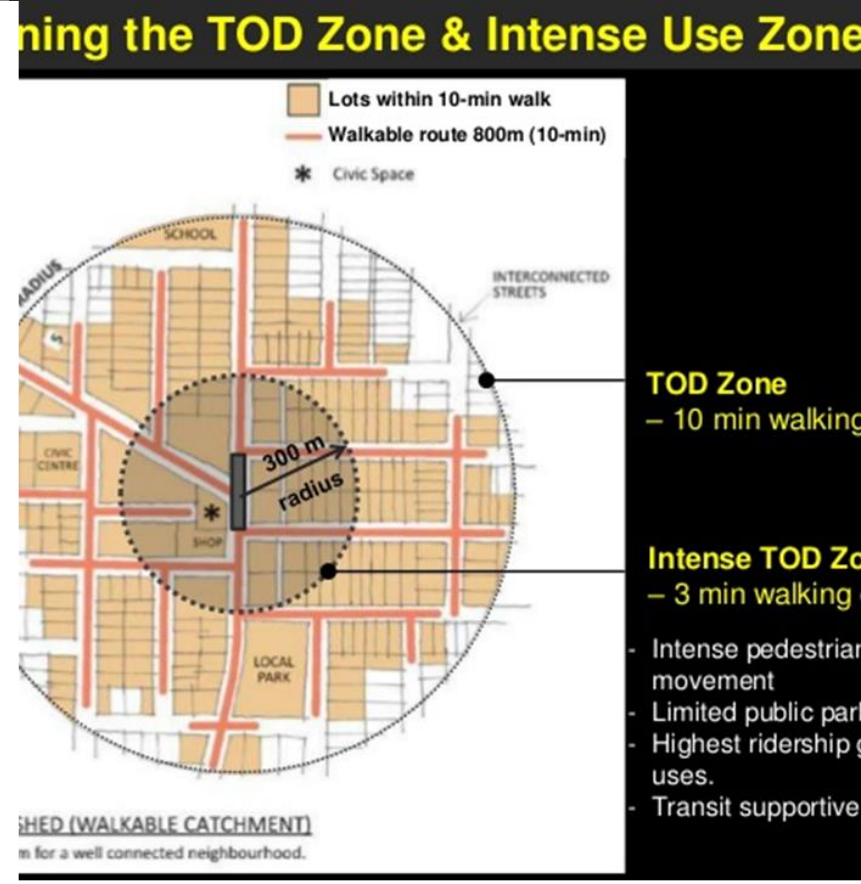
Impacts on the Urban Environment




Impacts on Mixed-Use and Redevelopment



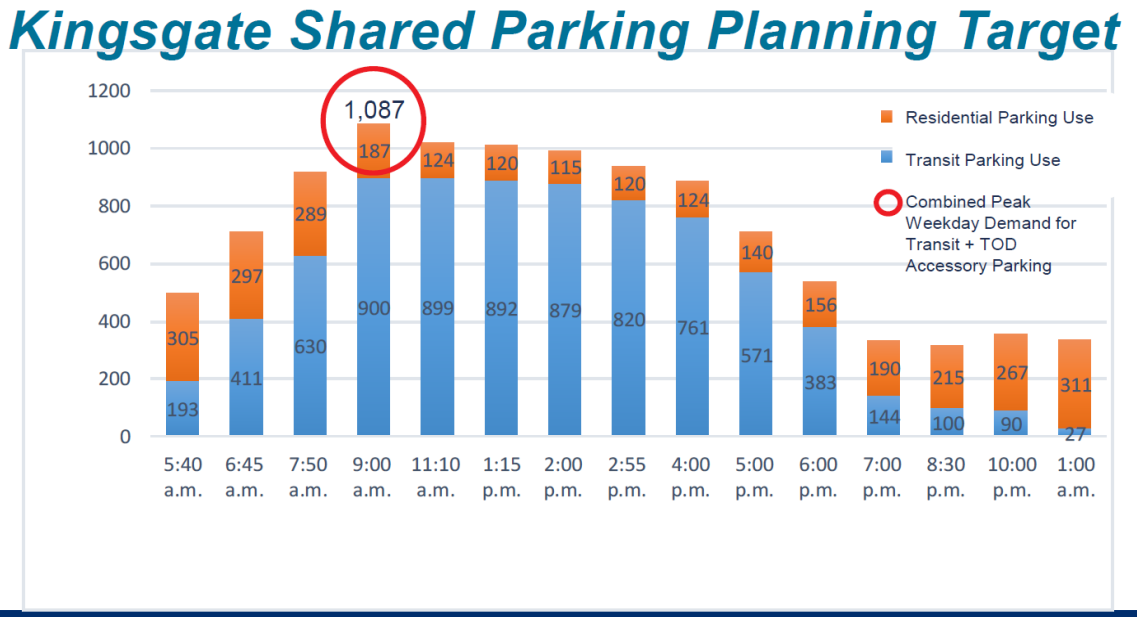


Impacts on the Transit Access & Transit-Oriented Development (TOD)

Impacts on Housing Costs and Diversity

In market-rate properties, 1.23 parking spaces per unit are provided, but only 0.74 parking spaces per unit are used.

Income-restricted properties provide 0.72 parking spaces per unit, but residents use only 0.36 parking spaces per unit.



* https://www.rtd-denver.com/sites/default/files/files/2021-01/RTD-Residential-TOD-Parking-Study_Final-R_0.pdf

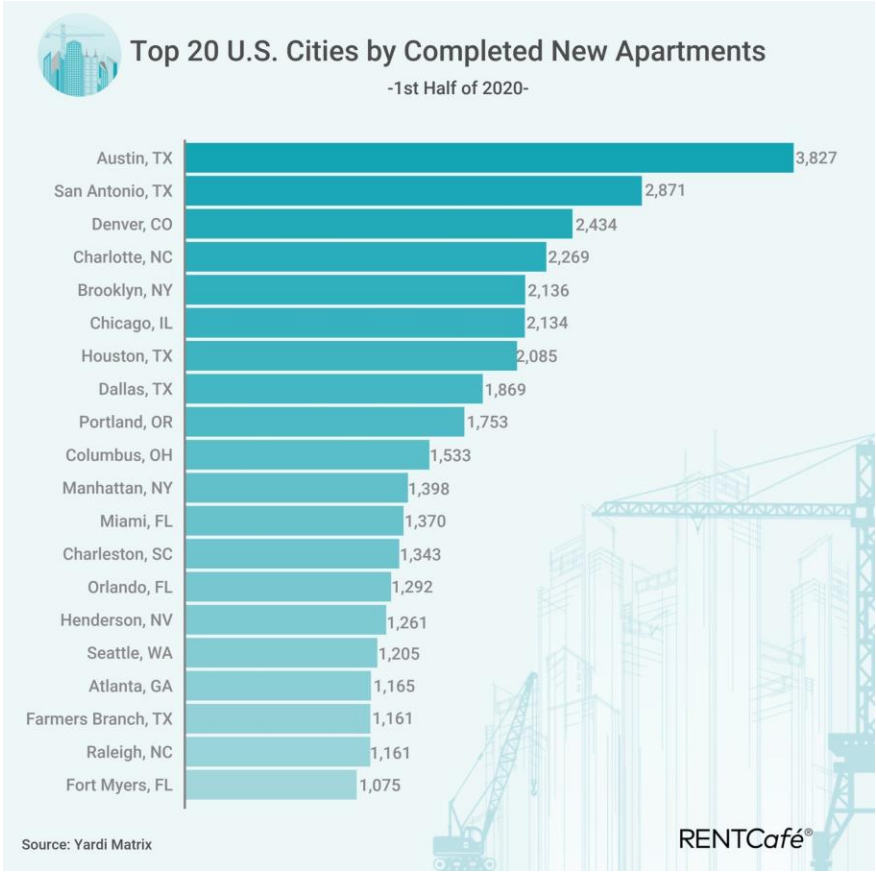
ULI Shared Parking 3rd Edition

- Land uses in proximity can utilize the same parking resource(s) without conflict or encroachment due to variations in:
  - Time of day presence
  - Weekday vs weekend demand
  - Seasonal factors
- Primary and secondary uses benefit from internal "trips" also referred to as "captive reductions"
- Transportation demand management (TDM) strategies leveraged to reduce parking demands
- Shared Parking methodology pioneered by Urban Land Institute (ULI) and International Council of Shopping Centers (ICSC)
- Base model now in its 3rd Edition (published Jan 2020)

Source: Nelson Nygaard Consulting Associates Inc

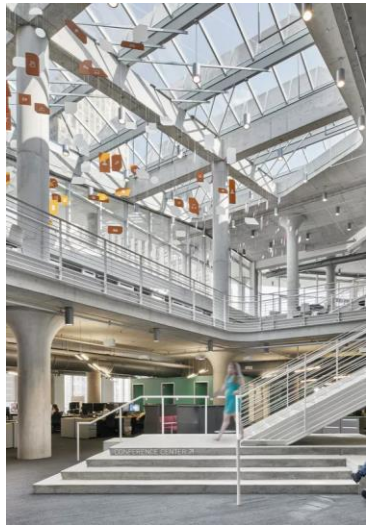
ULI Shared Parking and the Single Land Use

- ULI “base ratios” represent the most up-to-date national data
- Multi-family ratios, for example, are based on average size market-priced units, with free parking
- Adjustments considered:
  - Mode split adjustments / vehicle ownership
  - Leasing considerations
  - Management and TDM



Land Use	Weekday			Weekend			Unit
	Visitor	Employee	Total	Visitor	Employee	Total	
Residential, Suburban							
Studio Efficiency	0.10	0.85	0.95	0.15	0.85	1.00	units
1 Bedroom	0.10	0.90	1.00	0.15	0.90	1.05	units
2 Bedrooms	0.10	1.65	1.75	0.15	1.65	1.80	units
3+ Bedrooms	0.10	2.50	2.60	0.15	2.50	2.65	units

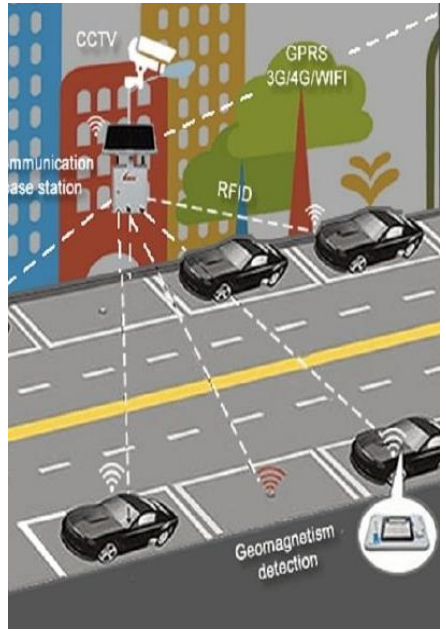
Looking Forward



Life & Arts + Add to myFT

Welcome to the 15-minute city

As the switch to home working makes us balk at the back-and-forth of commuting, a new vision of urban living is emerging

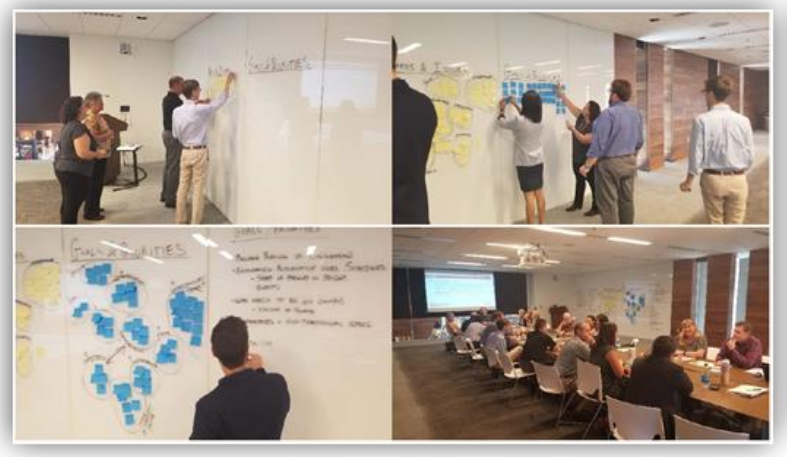


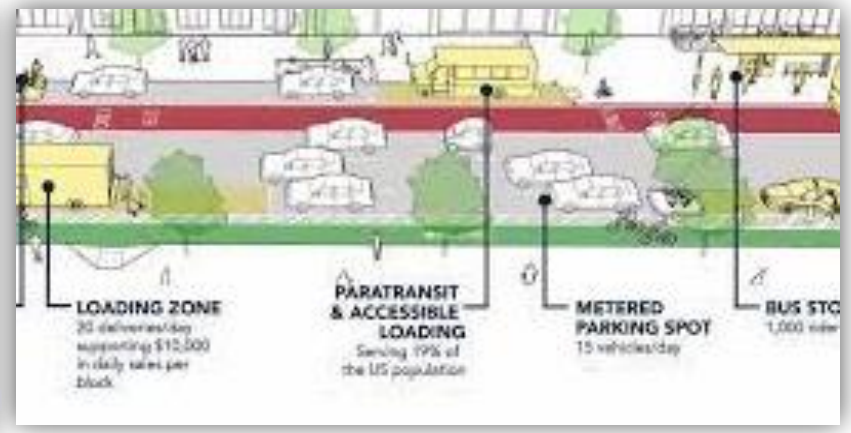
Adaptive Re-Use Opportunities

Park Central Mall (Phoenix, AZ)

Mobility / Micro-Mobility / Pedestrian Environments

The industry is evolving to embrace shared mobility





Metric*	How to Measure	F
% SOV usage	Carpool enrollment + intercept surveys	C
Peak hour demand ratio	Parking occupancy survey	A
Intersection level-of-service (LOS)	Traffic counts (key locations)	A
Peak hour ratio / total permits	Parking occupancy survey	A

Curb Management Plans & Transportation Demand Management (TDM) Plans

Options for Our Office Building Markets

Thank you!

Parking and Affordable Housing

Chad Holtzinger, Shopworks Architecture

swarc

Anecdotal Experiences

- Affordable housing demands less parking than other types of apartments – income levels have a direct correlation to auto ownership
- Proximity to alternate modes of transport (biking/walking/public transportation) reduces the need for parking
- Housing typologies have a significant impact on the parking needed

Anecdotal Experiences

- Many jurisdictions require as much as 1.25+ spaces per unit without consideration to these facts
- There is no Industry-Standard for determining appropriate parking minimums (maximums?) for low income housing – especially very low income
- Project viability often hinges on sites / zone distiricts that permit the right-sized parking solution

Parking & Affordable Housing

2020/2021 Report

shoPworks architecture

FOX TUTTLE

Fox Tuttle & Shopworks Researched:

- 19 Properties
- Average AMI ranging from 30-50%
- Across metro-Denver region

Major Findings

- Current parking requirements for affordable housing exceed the demand for that parking – we found that average vehicle ownership was 8.8% which equates to 1 vehicle per 12 units.
- Across one-bedroom supportive housing in Denver (0-30% AMI), 5.3% of residents have a car, equating to less than one vehicle per 18 units. Data shows that a property's proximity to quality walking and biking facilities and transit services deeply impacts vehicle ownership.
- These parking requirements place an undue burden on affordable housing, and limit its creation regionally, due to the land required to park those cars and the cost to build parking has on a project.

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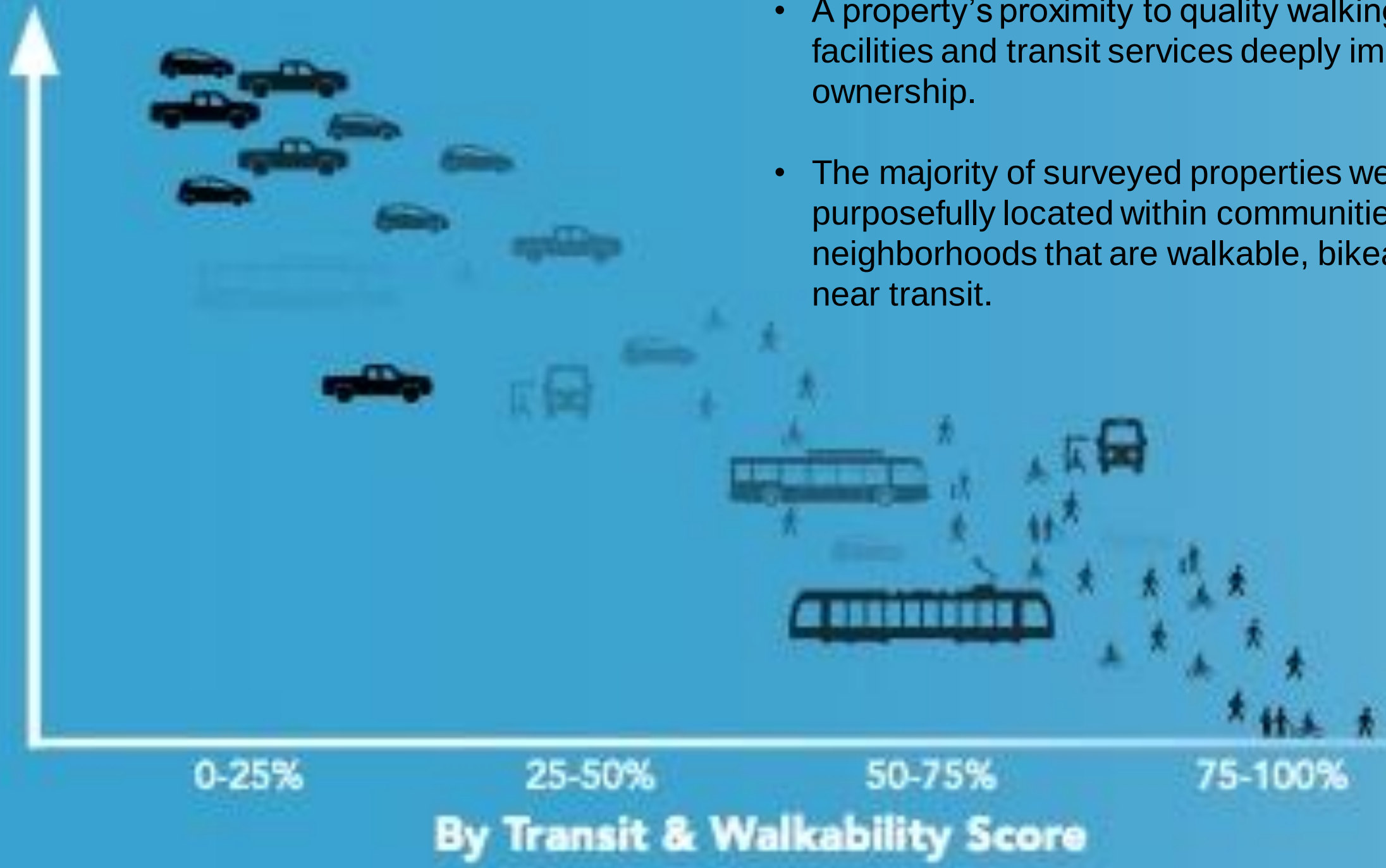
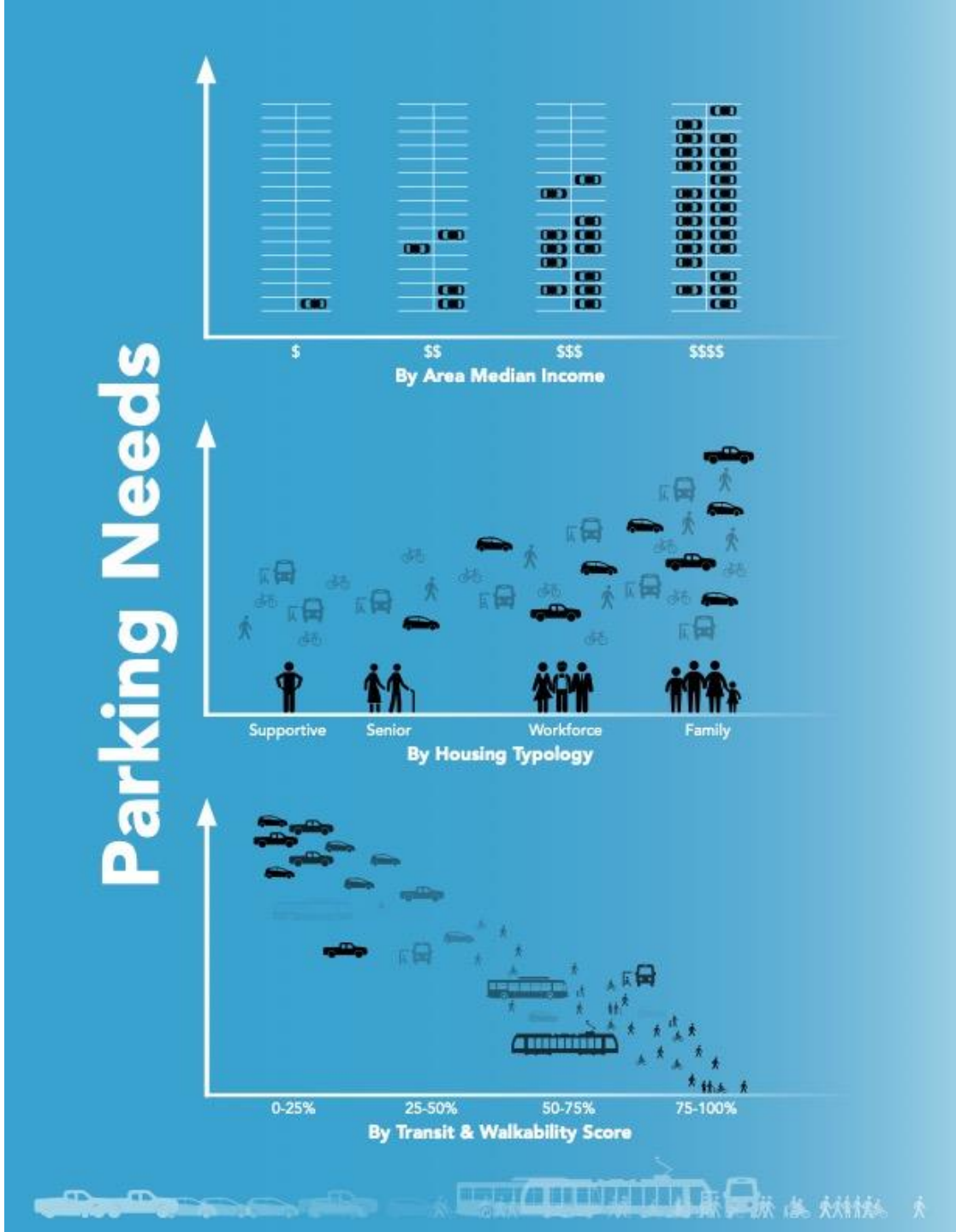
By Area Median Income

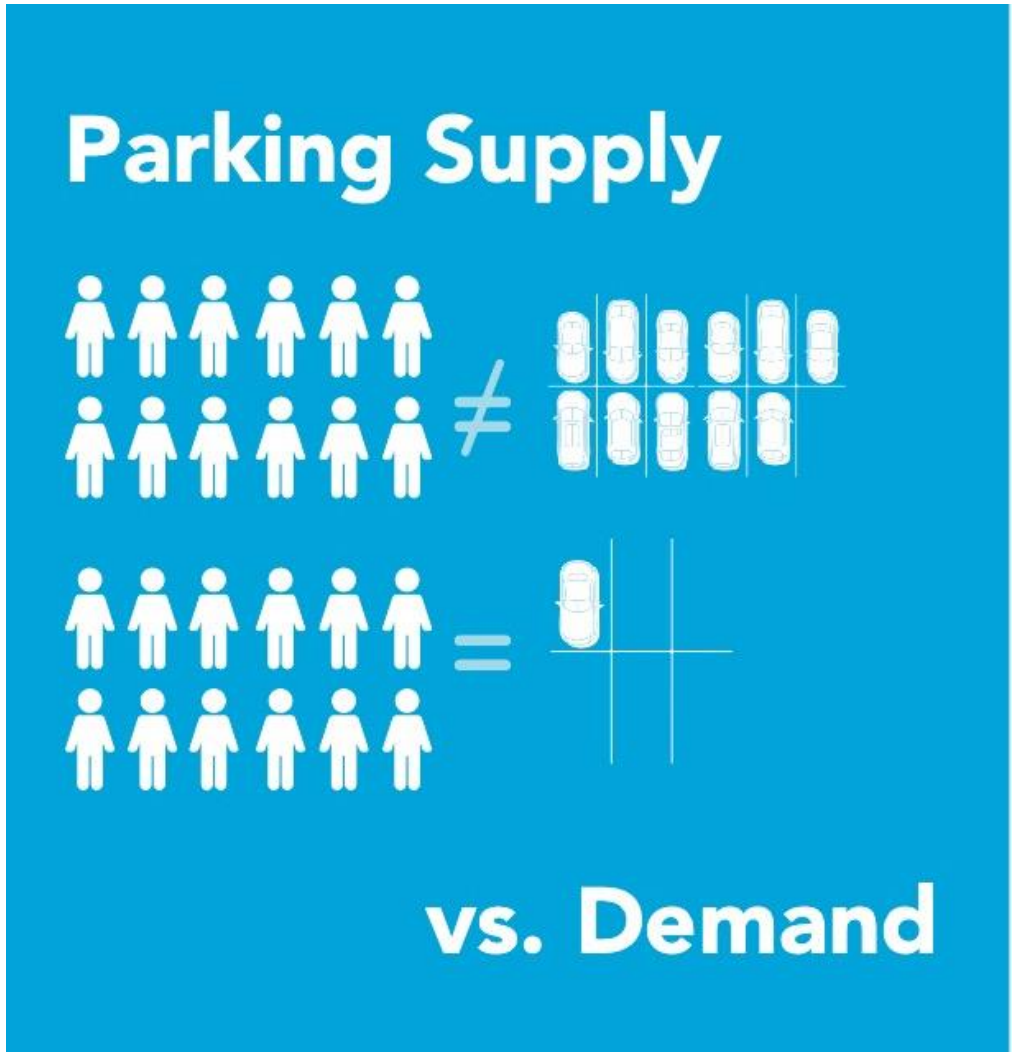
- Housing Typology Matters

- A property's proximity to quality walking and biking facilities and transit services deeply impacts vehicle ownership.
- The majority of surveyed properties were purposefully located within communities and neighborhoods that are walkable, bikeable, and near transit.



- Considered together – These 3 Fulcrums define on-site parking needs
    - AMI
    - Housing Typology
    - Transit / Bike / Walk Score





- Zoning requirements can be as much as 1.25 cars per unit.
- Zoning required 883 parking spaces be created for the 1,353 apartment units in our study.
- Only 461 are actually used

swarc

883 parking spaces

1,353 units

461 spaces

422 unused

$22,000 cost per space

$9,284,000* funds spent on unnecessary parking

*Figure is over 6 years and 19 projects

***Equates to one 40 unit affordable housing building.**

swarc

Parking policies that acknowledge the fulcrums of demand, provide opportunity to create affordability in proximity to transit and commerce

Chad Holtzinger, Shopworks Architecture
chad@shopworksarc.com

www.shopworksarc.com/parking/

swarc

Climate and the Curb

Achieving Big Climate Goals with a Managed Curb

ULI Colorado “Ahead of the Curb”
May 20, 2021

WALKER CONSULTANTS

Key Contacts

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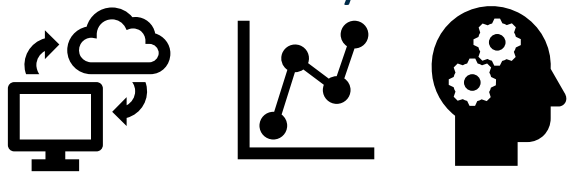
THE CURB IS PRIME REAL ESTATE

- Traditionally, the curb has focused on private vehicle parking

Changing demand requires cities to understand curb utilization to determine if private vehicle parking is the best use based on actual activity and mobility goals



The curb has potential to provide greater access to more people if options beyond private vehicle parking are considered

Curb management is:

- *Understanding how the curb is regulated and used today*
- *Implementing the tools and processes to quickly adjust curb regulations to optimize for increasingly dynamic demands placed on the curb*
- *Establishing a hierarchy of curb uses and leveraging infrastructure and policies to serve the right user groups, in the right locations, at the right times of day and days of week*
- *Monitoring, enforcing and monetizing the curb in an equitable fashion*
- *Must have curb management strategies in place with any reduction in off-street parking minimums*

FROM VEHICLE STORAGE→ COMMUNITY RESOURCE

Pedestrians | Cyclists | Micromobility | Ride Apps | Transit | Motorists | Delivery/MAAS | Vendors

Image: Adapted from NACTO


A CLIMATE-FRIENDLY CURB IS
A MANAGED CURB.

A CLIMATE-FRIENDLY CURB IS A MANAGED CURB

What you **Want**

VMT reduction
GHG reduction
“A walkable community”
“Bike-friendly”
“Park once”

vs

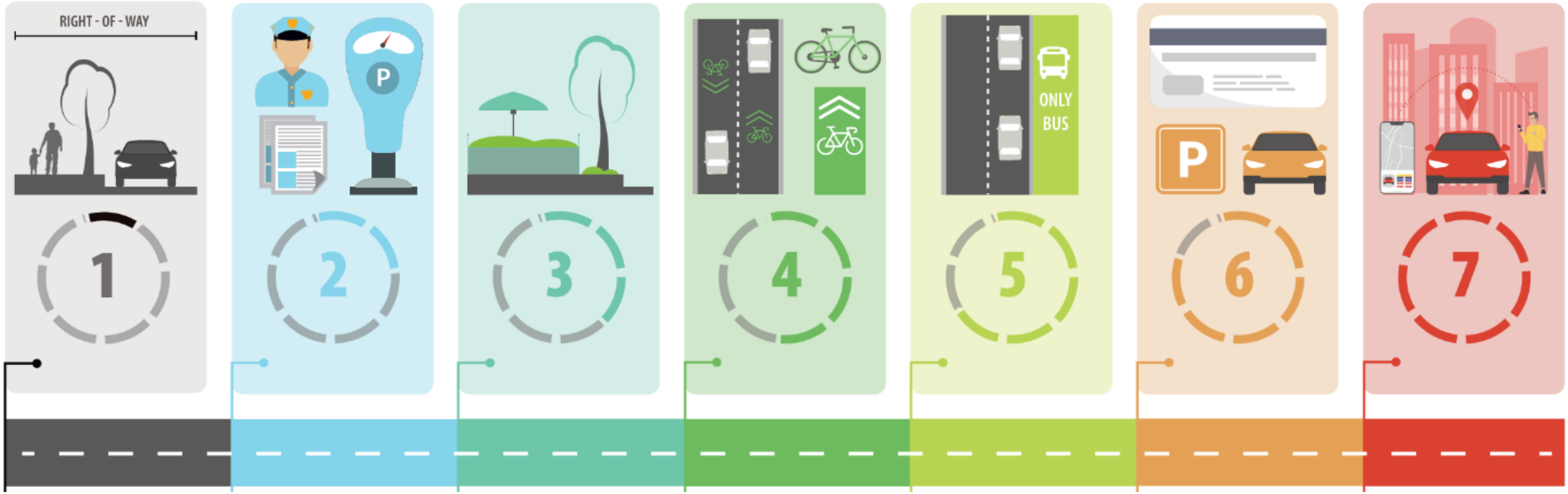
What you **Have**

Free parking
Little to no enforcement
No data collection
No other curb uses
People used to it

Image: Adapted from NACTO

FROM WHAT YOU HAVE → WHAT YOU NEED

YOU ARE HERE - THE CURB MANAGEMENT SCALE



GET ON A CLIMATE-FRIENDLY TRACK

- Set clear goals
- Prioritize with goals in mind
- Understand existing conditions
- Bring the community along

For more information:

https://walkerconsultants.com/service/planning-mobility/curb-management

Check out our Billion Dollar Curb series with the American Planning Association:

https://www.planning.org/planning/2021/spring/poor-curb-management-is-costing-cities-billions/

Seattle Curbside Management
More curb appeal, better building access

SDOT Curbside Management Team – ULI-Colorado Discussion
Mary Catherine Snyder, Parking Strategist
5/29/2021 Department of Transportation

City of Seattle

Seattle Department of Transportation's vision, mission, and core values

Vision: Seattle is a thriving equitable community powered by dependable transportation

Mission: to deliver a transportation system that provides safe and affordable access to places and opportunities

Committed to **6 core values**:

- Equity
- Safety
- Mobility
- Sustainability
- Livability
- Excellence

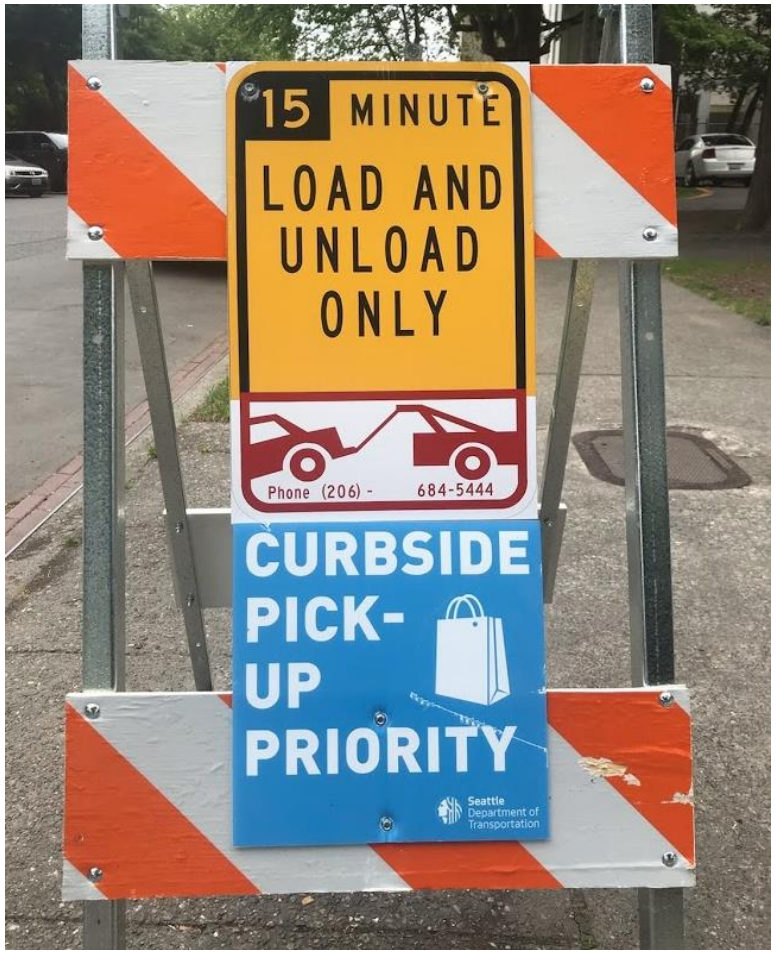
SDOT's Curbside Management Team approach

Manage finite amount of curbspace to provide reliable access for people who live, work, and play here

Strive to be rules-based and data-driven so our programs can be consistent and effective

Support businesses during COVID pandemic and recovery

Work collaboratively within SDOT to address critical building access needs as we build climate-friendly, equitable transportation



City of Seattle

Performance Parking Pricing

Policy - 1 to 2 spaces open and available throughout day; manage by rate min and max; time of day rates

- Sweet spot – 70% - 85% occupancy
- Seattle Municipal Code (law) drives work

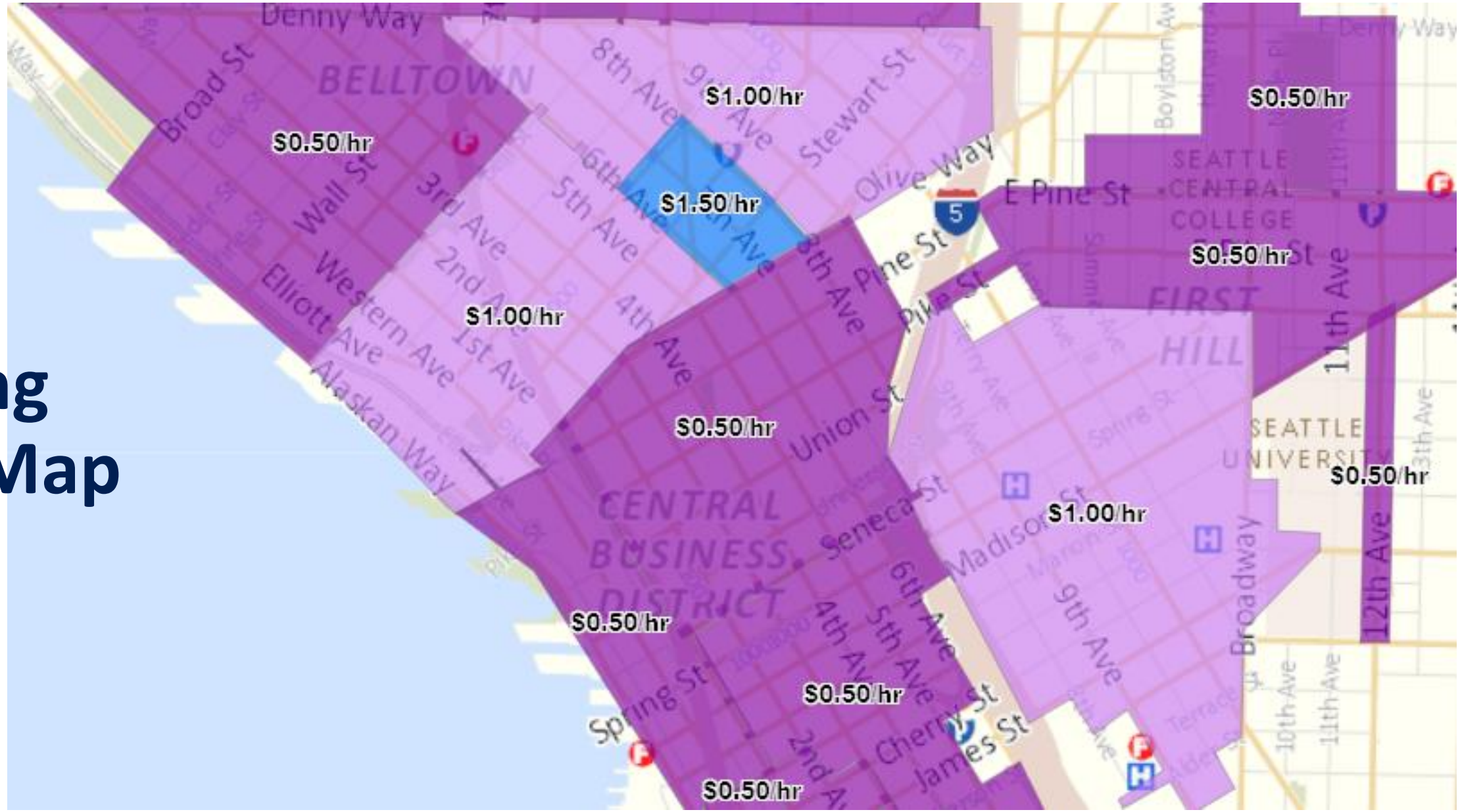
Planning – Quarterly rate changes based on data-driven technical process

- Use algorithmic model to determine occupancy

Public education – paid parking rate map, marketing

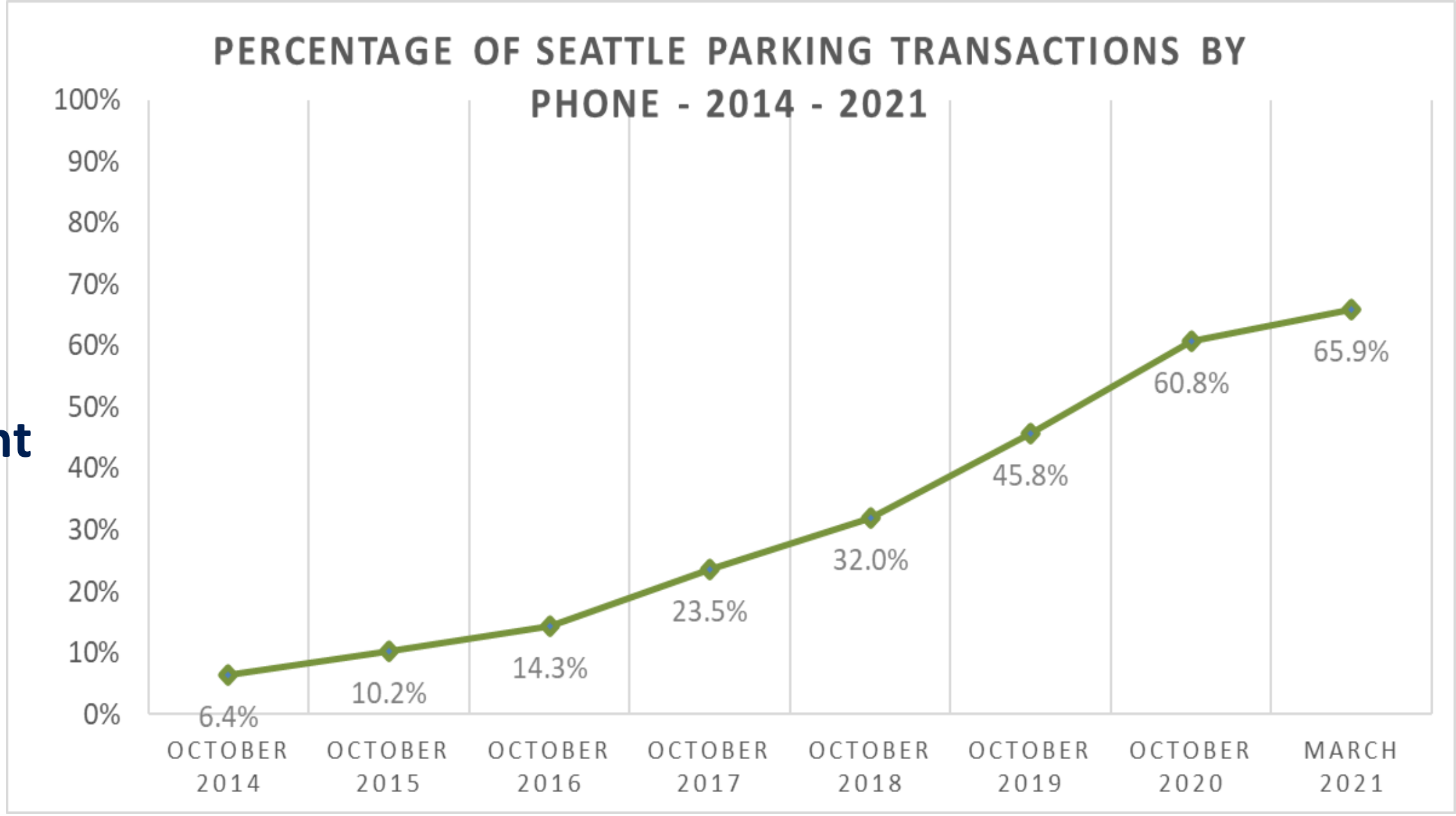
City of Seattle

Paid Parking Rate Map



City of Seattle

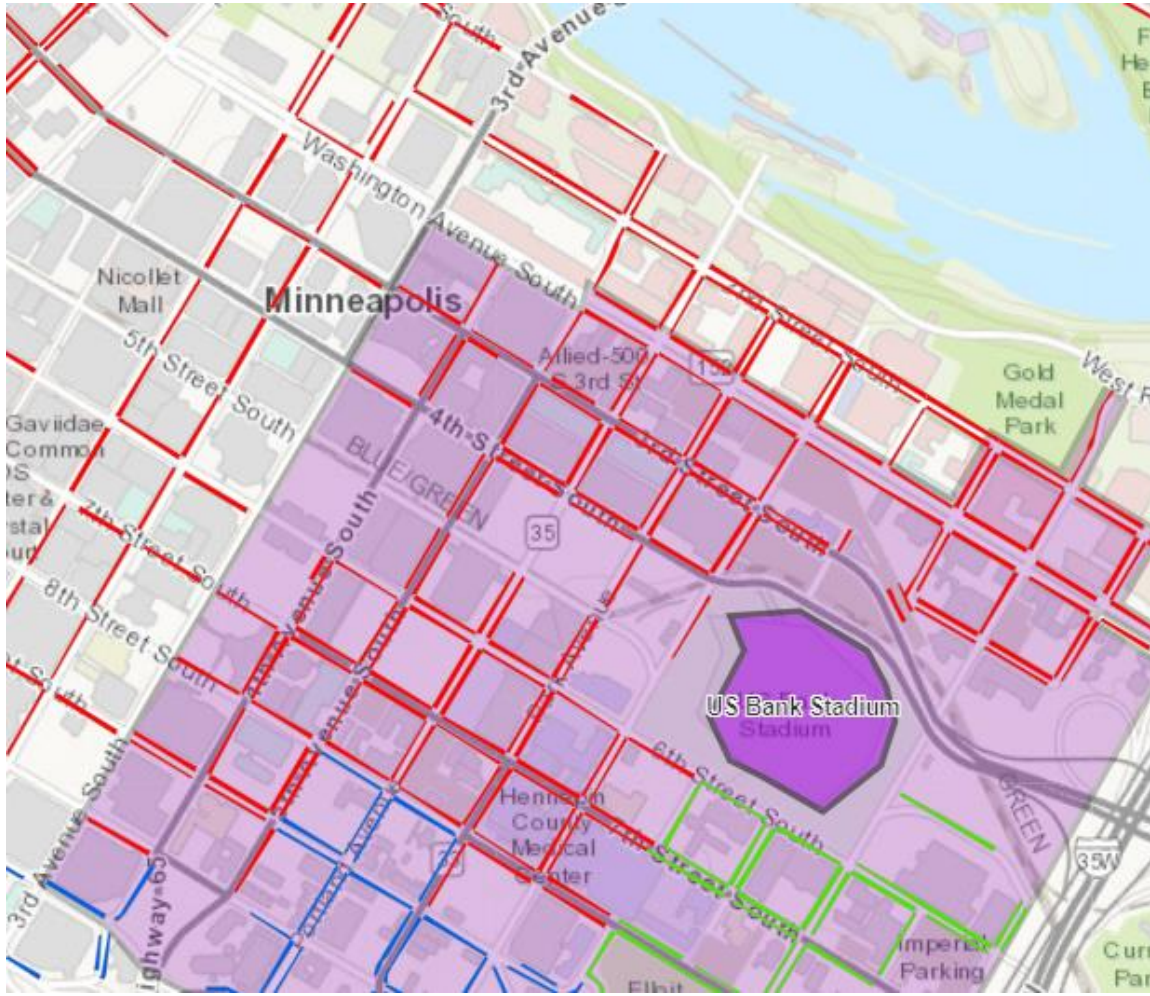
Mobile payment growth



City of Seattle

Other cities parking rates

City	Rates
Houston	$0.75 - $2.50 / hour
New York City – Outside Manhattan	$1.25 - $4.00 / hour
Boston	$2.00 - $3.75 / hour
District of Columbia	$2.30 / hour
Minneapolis	$0.25 - $3.00 / hour
Portland OR	$1.00 - $ 2.00 / hour



City of Seattle

Urban goods delivery strategy –

Program goals:

Identify and provide sufficient building access needs for Seattle's economic recovery out of COVID

Work to move urban goods delivery demand off curb/alley to private property

Work to move deliveries to zero emissions / electric, with 30% of all goods delivery being electric by 2030

Use price to help manage demand and time and duration use of zones

Other curb priority programs

- Paid parking system management
  - Performance-Based Parking Pricing
  - Pay by Phone
- Curb priority policy / implementation
- Urban goods delivery strategy
- Community Access and Parking Program – Business district curb planning
- Restricted Parking Zone program
- Carshare operations

City of Seattle

Questions?

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www.seattle.gov/parking

Moderated by Jordan Block

Urban Design Lead, HDR

Co-Chair of ULI Colorado's Urban Mobility & Development Committee

Urban Land Institute Colorado