THE SPACE, TIME, AND ARCHITECTURE OF A FUTURE PARKING REALITY

UT System Real Estate Conference
January 23 | 1:00PM to 2:00PM
SHAPING THE FUTURE OF MOBILITY

Moving into the future we must reallocate and redesign legacy paths, and vision new paths that support a rapidly evolving spectrum of new transportation modes.
PERSONAL VEHICLE OWNERSHIP BY PEOPLE AGES 16-49 YEARS OLD HAS FALLEN 24% SINCE 2000
BEYOND THE AUTOMOBILE. Our experience is becoming multimodal as new modes and choices replace transit dependency and people are able to compose infinite trip combinations to fit preferences of time, cost, sociability, and performance.
THE EVOLUTION OF WORK: THEN & NOW

- **Then**: Conference Call, Emails, Take Kids To School
- **Now**: Work, Conference Call, Personal Appointment, Dinner At Home, Emails, Pick Up Kids From School

**Timeline**
- 6 AM
- 9 AM
- 5 PM
- 10 PM
The miniaturization of electric power sources through evolving technology allows us to offset most, if not all, petroleum-based modes of transportation in our future cities.

**ELECTRIFICATION & MICROMOBILITY**

New, smaller, lighter, more efficient modes that operate with a much smaller footprint than cars are the future.
60% of all trips in the U.S. are less than 5 miles

SOURCE: U.S. DEPARTMENT OF ENERGY
Our goal is to build urban environments supportive of safe micromobility networks and net-zero charging infrastructure.

95% of the world’s current transportation energy comes from ozone producing, petroleum-based fossil fuels.

—Environmental Protection Agency (EPA)

84 million trips were provided by micromobility in 2018, a 100% increase from the year before.

—National Association of City Transportation Officials
IDENTIFY LOW-SPEED MOBILITY ZONES

DEVELOP BACKBONE ROUTES

CONSIDER OPTIONS FOR FUTURE NETWORK EXPANSION
Online retail and remote working are cutting down on longer commutes and shopping trips, and increasing the need for new logistic and supply structures within dense and walkable communities.
3X AS MANY ONLINE FOOD ORDERS COMPARED TO 7 YEARS AGO
OUR GOAL IS TO RESHAPE THE BUILT ENVIRONMENT TO SUPPORT LIVE, WORK, AND PLAY LIFESTYLES WITHIN SAFE AND WALKABLE COMMUNITIES.

9%
OVER 76% OF AMERICANS DRIVE TO WORK EACH DAY, ONLY 9% OF WHICH CARPOOL
—READWRITE, “OVERCOMING THE LAST MILE COMMUTE CHALLENGE WITH THE IOT”

1 IN 3
PEOPLE WILL BE HIRED TO WORK ONLINE FROM ANYWHERE THEY WANT BY 2020
Roads are for cars, streets are for people.

As cities densify, streets will play a critical role in supporting health and wellness by supporting a broader range of travel modes as safe sustainable places for people.
35% MORE PEDESTRIAN DEATHS ON U.S. STREETS SINCE 2008

SOURCE: NPR
Our goal is to rebalance streets for new mobility, pedestrian welfare, water management, experience, and quality of place in our cities.

+10 Points in “Walk Score” increases commercial property values by 5 to 8 percent.

— University of Arizona & Indiana University, 2010

2x Residents who perceive their community to be walkable have on average 2x higher levels of trust and community involvement.

— Walking Builds Community Cohesion, Univ. of NH & Carsey Institute 2014
The finest places in the world are cities with entire networks of car-free streets known as pedestrian cities.

01. Copenhagen
02. Florence
03. New York
04. Marrakech
05. Paris
06. Vancouver
07. Buenos Aires
08. Dubrovnik
09. Melbourne
10. Boston

Source: New Urbanism & The Culture Trip (2017)
ACRES OF SPACE FOR PEOPLE & AMENITIES CREATED BY ELIMINATING ON-STREET PARKING & 2 TRAFFIC LANES

HOLLYWOOD WALK OF FAME STREETSCAPE // LOS ANGELES, CA
In too many cities, infrastructure is crumbling, and the costs of replacement can be tremendous. **Adaptive Infrastructure**

More than a functional requirement, it plays an outsized role in shaping the experience of cities. How can we both repurpose and create infrastructure for the future using technology and intelligent design?
$1.5T estimated cost of “infrastructure gap” by 2025
Our goal is to leverage design in the consideration of infrastructure—the bones of all cities.

6.9B
Hours were lost to U.S. drivers and bus riders sitting in delayed traffic in 2014

$3.3T
Average annual investment on infrastructure just to support currently expected rates of growth worldwide
700K residents across 7 neighborhoods are knit together.

The Bentway Strachan Gate // Toronto, Ontario
FLOATNYC // NEW YORK, NY

PHASE 1
RECLAIM

PHASE 2
ACTIVATE

150'

BLOO

10'

80'

PAVILION
CAFE & PUBLIC SPACE

FLOAT DECK
PARTY & EVENT SPACE

STRUCTURE
LIGHT WEIGHT
ALUMINUM SPACE FRAME

SKIN
ETFE FOIL PILLOWS

FLOAT TOTE
AUTONOMOUS VEHICLE

FLOAT DECK
PARTY & EVENT SPACE

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PARTY & EVENT SPACE

STRUCTURE
LIGHT WEIGHT
ALUMINUM SPACE FRAME

SKIN
ETFE FOIL PILLOWS

FLOAT TOTE
AUTONOMOUS VEHICLE
Sloping Floors
One-Way Circulation

Sloping Floors
Cross-Connected Circulation

Sloping Floors
Helical Down Ramp

Sloping Floors
Two-Way Circulation

Staggered Floors
Two-Way Center Ramp

Staggered Floors
One-Way Circulation

Flat Floors
Helical Ramps

Flat Floors
One-Way Ramps

ADAPTING INFRASTRUCTURE
CENTRALLY CARVED EXTERIOR TERRACES

REMOVAL OF EXTERIOR ENCLOSURE

BEFORE

ONE WESTSIDE GOOGLE CAMPUS - HUDSON PACIFIC PROPERTIES & MACERICH // LOS ANGELES, CA
Not just a commercial cinema, but a local, regional and national draw, a place for local filmmakers and performers to showcase their work. Flexible day time use for brand screenings and education.

Music, theatre, performances, exhibitions, talks, community gathering, innovation showcase, brand events, corporate collaborations with Excel.

A sub-divisible volume, multiple layers, moveable and adaptable. One volume, multiple uses and functions. Markets, food hall, product showcase, community table, exhibitions, internal street.

Green habitats, access to nature, outdoor, urban farming, a different vantage point, private tenant terraces, breakout space, welfare facilities, consulting rooms, meditation space.

Operator led co-living, micro-living, boutique hotel, serviced apartments, student hotels.

The centre of gravity for the development. Mixed cultural space with a focus on showcasing the culture of the Royal Docks. Permeable floor spaces are welcoming and open. Constant buzz of diverse people through day and night. Evolving display of content keeps people coming back because they know 'something will be happening at the Mills'.

A range of workspaces that can cater for different types of tenants. Start-ups, SME, progressive businesses, incubators and accelerators.

A curated, evolving display of music, performance, art and cultural events. Flexible spaces for multiple cultural and community focused uses. Sub-divisible and curatable space.

The seed of business and idea creation. Spaces for testing and prototyping without pressure or judgement. An incubator for the self-made and curation of the next generation of makers, showcasing the process as well as the product.

MILLENNIUM MILLS // LONDON, UK
Mobility solutions are shifting away from a privately owned model to a publicly shared model.

**MOBILITY AS A SERVICE**

Individuals and organizations design their specific mobility solutions to fit a vast array of preferences.
$9.5T Expected market capitalization for MaaS (mobility as a service) by 2030
Our goal is to design mobility service solutions that enhance our clients’ core principles and their ability to connect to cities.
Traffic 11 ft
Bike 5 ft
CurbFlow 9 ft
Parking 9 ft
Pedestrian

VIEW PROGRAM ELEMENTS
ELEVATION/STREET PLAN
CURBFLOW // SAN FRANCISCO, CA
Powered by curbFlow.com/DC
REGISTER FOR FREE
PULL UP
STOP HERE
GO
Facing into lane
Our cities are evolving from being shaped by monomodal to being shaped by multimodal mobility networks.

**MULTIMODAL**

The paths that form our streets and blocks designed primarily for automobiles will become diversified and inclusive of many modes. Transfer points, or mobility hubs, will become key drivers of future development.
77% of Americans think public transportation is the backbone of a multi-transit lifestyle.
Our goal is to design cities that support seamless multimodal connections and the expanding spectrum of new modes in development.

2x more job opportunities for Americans who can drive or bike to/from a transit station

—Transportation Part A Journal, USC

143 million Americans over the age of 16 commute to work every day

—ReadWrite “Overcoming the last mile commute challenge with the IOT”
EVENT LAWN
ROOF TERRACE
VIEWS
OFFICE
EXISTING
PARKING
STRUCTURE
COURTYARD ENTRY
PEDESTRIAN CONNECTION
DAYLIGHT
OFFICE
VIEWS
RIDESHARE DROP-OFF
ONE WESTSIDE GOOGLE CAMPUS - HUDSON PACIFIC PROPERTIES & MACERICH // LOS ANGELES, CA
15 MI OF UNDERUTILIZED RAIL CORRIDOR BECOMES INTERBOROUGH CONNECTOR
BQXL: BROOKLYN CROSSLINE // BROOKLYN, NY
As private sector mobility solutions proliferate in the technology age, public transportation systems are at risk of being neglected.

PUBLIC-PRIVATE INTEGRATION

The integration of backbone public rail and road networks with new modes will provide an efficient and equitable mobility construct for the broadest range of communities, providing access to all.
17 million Americans are “unbanked” and therefore don’t have access to tech-enabled mobility.
Our goal is to understand and leverage the overlap of public and private sector interests for the betterment of communities.

98 miles of protected bike lanes cover NYC, all created in the last 10 years—NYC Department of Transportation

5 billion parking spaces will be available for reuse with the adoption of autonomous vehicles globally—The New York Times
CREATING A NEW TRANSIT HUB OF CONNECTIVITY + COMMUNITY FOR THE NORTH HOLLYWOOD METRO STATION

• Improves LINKAGES to the surrounding community
• Provides a sustainable & vibrant MIXED USE community as a new heart of the San Fernando Valley
• Enhances the Metro EXPERIENCE

DISTRICT NOHO // NORTH HOLLYWOOD, CA
5.5 MI
/12 STATION CONNECTION
FOR THE NORTH-SOUTH GAP IN CENTRAL LA
METRO CRENSHAW LAX EXTENSION URBAN DESIGN STUDY // LOS ANGELES, CA
Mobility at the city, regional, and global scale is infinitely complex.

**BIG DATA**

Harnessing big data intelligently will give designers and planners new tools to find simple and elegant solutions within the complexity, and optimize systems that ultimately aim to bring people together and take them where they want to go.
150 billion devices will be connected to the IoT by 2025.

SOURCE: “THE DIGITIZATION OF THE WORLD FROM EDGE TO CORE,” IDC
Our goal is to harness big data around shared interests including efficiency, health, sustainability, and modal optimization.

30% of the IoT datasphere will be in real time by 2025
—“The Digitization of the World from Edge to Core,” IDC

49% of the world’s stored data will reside in public cloud environments by 2025
—“The Digitization of the World from Edge to Core,” IDC
THANH DA SMART CITY // HO CHI MINH CITY, VIETNAM

Smart Resilience
Smart City
Smart Sense of Place

Communities Terminal
for food and fun

Real-Time Management
of home energy
consumption

Naturally Vented
Public Spaces
reduce energy usage

District Cooling System
pumps cold air directly
to homes to save energy

North-South Building Orientation
meditates solar heat gain
and enhances wind flow

Solar Panels capture
renewable energy

Health and
wellness

Digital City
Digitizes living

100% Landscape Replacement
for more diverse greenscape

Smart Multi-Partner office
buildings reduce energy
consumption by 30%

Pedestrian-Friendly
Development via bicycle
or personal mobility devices

Pantry Sharing
Collection System
disposes waste with less
social and environmental
impact

Multi-Modal Public Transport
enhances mobility

Common Services
(medical, education, retail)
avoid common travel
and minimize road congestion

On-Demand Electric
Vehicles reduce
environmental impact

Streets with reduced
traffic means greener
living and cycling

Naturalized urban park
service must and brings
people closer to nature

Smart Logistics
management reduces
injuries and traffic
What's your plan for next weekend?

1. Choose Activity!
2. Choose Location!
3. Select Plot

FLOAT NYC // NEW YORK, NY
RIVES TAYLOR, FAIA, LEED AP BD+C
Principal | Gensler

rives_taylor@gensler.com
713.356.1403