Parks and Big Data: Fostering Public Trust in Digital Systems

Greater & Greener | CITY PARKS ALLIANCE

Support for this session is provided by:

KNIGHT FOUNDATION

Greater & Greener

CITY PARKS ALLIANCE

CONFERENCE TRACK

Inclusive Parks and Public Spaces

Greater & Greener | CITY PARKS ALLIANCE

PROFESSIONAL AND CONTINUING EDUCATION

GENERAL CEUs

- Ensure your conference badge is scanned upon entering and exiting the session.
- Request your session transcript from a City Parks Alliance staff member.
- Transcript requests will be fulfilled within 10 business days of the request date.

LA CES

- Ensure your conference badge is scanned upon entering and exiting the session.
- Complete the session evaluation in the mobile app.
- Request your session transcript from a City Parks Alliance staff member.
- Transcript requests will be fulfilled within 10 business days of the request date.

AICP

- Self-report your participation on the AICP website
- Ensure your conference badge is scanned upon entering and exiting the session.
- Complete the session evaluation in the mobile app.

Participation data is shared electronically with the accrediting agencies.

Greater & Greener CITY PARKS ALLIANCE

Charles Thomas

Director/Charlotte

John S. and James L. Knight Foundation

KNIGHT FOUNDATION

Jacqueline Lu

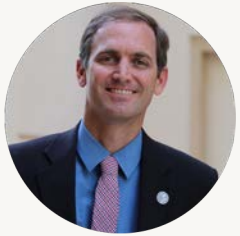
President & Co-Founder

Helpful Places

Jake Moskowitz

Chief Innovation Officer

The Underline



Christopher Roog

Executive Director, Community Redevelopment Agency

City of West Palm Beach

Ryan Kurtzman

Technology Partnerships Officer

City of Long Beach

Greater & Greener | CITY PARKS ALLIANCE

Jacqueline Lu

Helpful Places

Greater & Greener | CITY PARKS ALLIANCE

Knight Community DTPR Program

Advance community-centric technology and data in public spaces by:

- Developing capacity for responsible technology use in public spaces through the implementation of DTPR
- Enabling learning opportunities for interested Knight communities
- Fostering replication and scaling of insights and learnings from DTPR implementations

Digital technology is increasingly embedded into how our cities work

But it can be difficult for people to understand how tech can improve outcomes, as there is little transparency on how it works, what data is collected and by whom.

This can spark community concerns about privacy and questions about governance.

Communities have always engaged in discussions of how their public spaces - and the technologies within them - work

Photo credit: Imgur

NYC is getting new park benches that charge your phone

TimeOut

Written by Rebecca Fontana Tuesday May 24 2016

The benches can also count how many people visit the park by tracking your Wi-Fi usage, which totally isn't creepy or anything. The NYC Parks department is hoping to use the data to craft optimal cleaning and event schedules for the parks.

Why Are These Massive Charging Stations IN OUR BENCHES?

BY JEN CARLSON

PUBLISHED MAY 24, 2016 | MODIFIED MAY 24, 2016 | 107 COMMENTS

gothamist

NYC Parks Department Installing Phone-Tracking Smart Benches for Pilot Program in Highbridge Park

by Matt Coneybeare
on Aug. 17, 2017 at 2:30 PM

VIEWING NYC

And tech concerns are increasingly in the news

PCWorld

How ‘free’ Wi-Fi hotspots can track your location even when you aren’t connected

Simple steps can protect your privacy and location data.

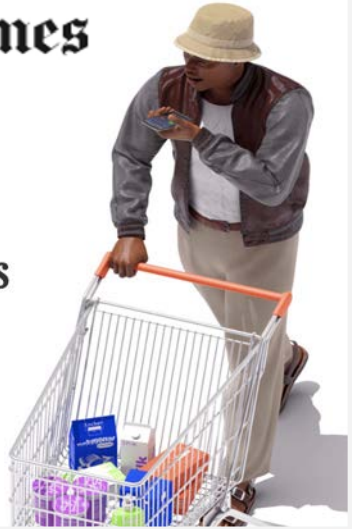
By Dieter Holger
Staff Writer, PCWorld | NOV 1, 2018 3:00 AM PDT

The New York Times

Opinion | THE PRIVACY PROJECT

In Stores, Secret Surveillance Tracks Your Every Move

As you shop, “beacons” are watching you, using hidden technology in your phone.



By Michael Kwet
Graphics by Tala Schlossberg
Illustrations by Max Guther

VICE

NURPHOTO / GETTY IMAGES

MOTHERBOARD
TECH BY VICE

The ‘Capital of Silicon Valley’ Is Ignoring Its Privacy Experts

San José created a privacy taskforce to keep ‘smart city’ technology in check. Then its members started resigning.

EG By Ethan Gregory Dodge

May 27, 2022, 9:00am

Mayor orders San Diego’s Smart Streetlights turned off until surveillance ordinance in place

Police used them to solve violent crimes, but activists raised civil liberties concerns

BY TERI FIGUEROA
SEPT. 9, 2020 7:49 PM PT

The San Diego Union-Tribune

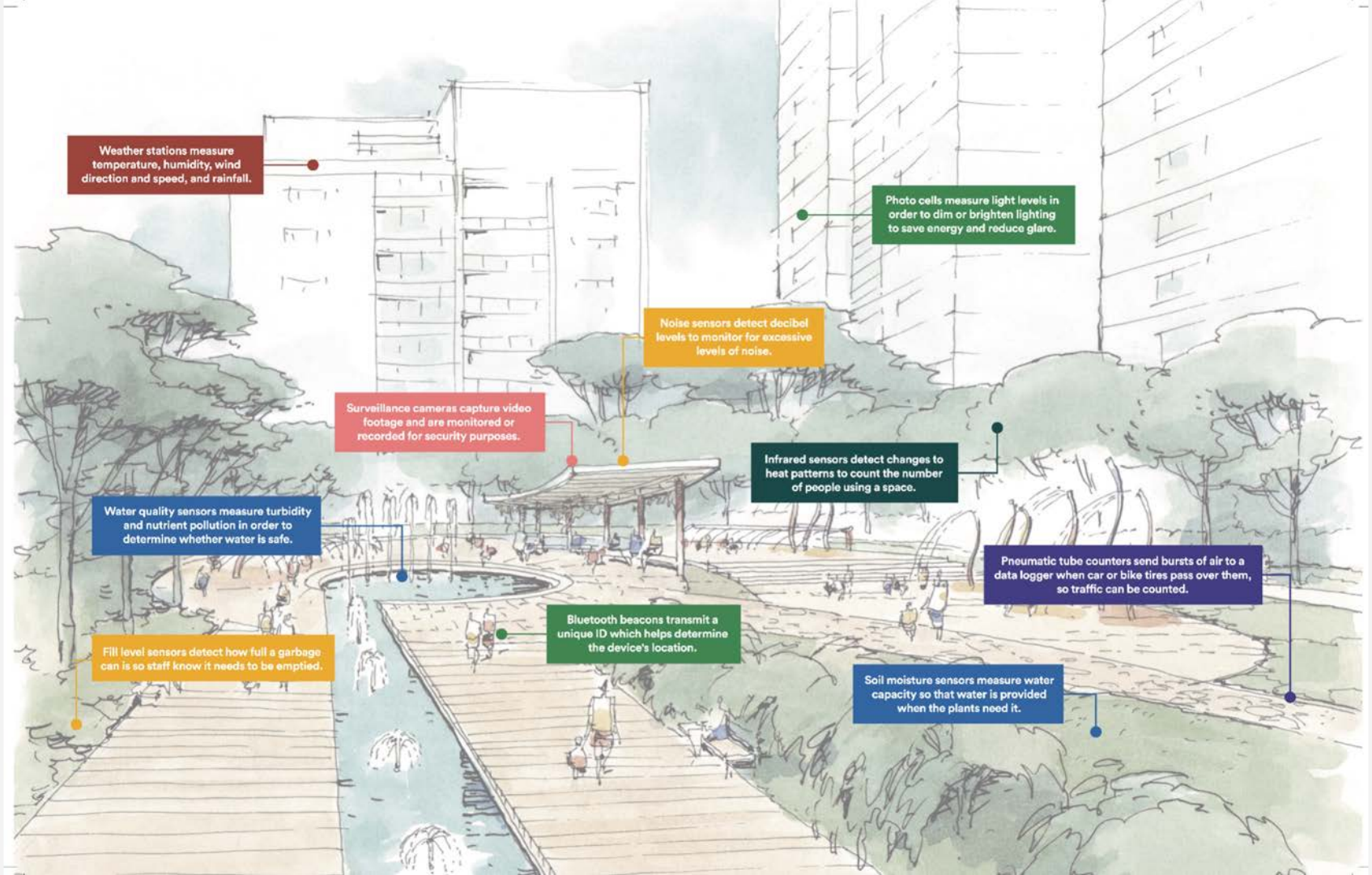
Businessweek | Technology

Scooter Rides Have Turned Into a Data Privacy Issue for Cities

The legacy of ride-hailing services has led to infighting at a consortium that tracks mobility data. Austin was the first to drop out of the effort.

By Laura Bliss
November 10, 2021 at 4:00 AM EST

Bloomberg


Weather stations measure temperature, humidity, wind direction and speed, and rainfall.
Photo cells measure light levels in order to dim or brighten lighting to save energy and reduce glare.
Noise sensors detect decibel levels to monitor for excessive levels of noise.
Surveillance cameras capture video footage and are monitored or recorded for security purposes.
Infrared sensors detect changes to heat patterns to count the number of people using a space.
Water quality sensors measure turbidity and nutrient pollution in order to determine whether water is safe.
Pneumatic tube counters send bursts of air to a data logger when car or bike tires pass over them, so traffic can be counted.
Bluetooth beacons transmit a unique ID which helps determine the device's location.
Fill level sensors detect how full a garbage can is so staff know it needs to be emptied.
Soil moisture sensors measure water capacity so that water is provided when the plants need it.

Visual languages and structured information help democratize complex concepts

Visual Languages: Conveys critical information and complex concepts

Structured Information: Detailed information in a consistent way that is easy to navigate

SMART CHARLOTTE
Empowered by Technology

Cleaner Transport for Cleaner Air in Belmont

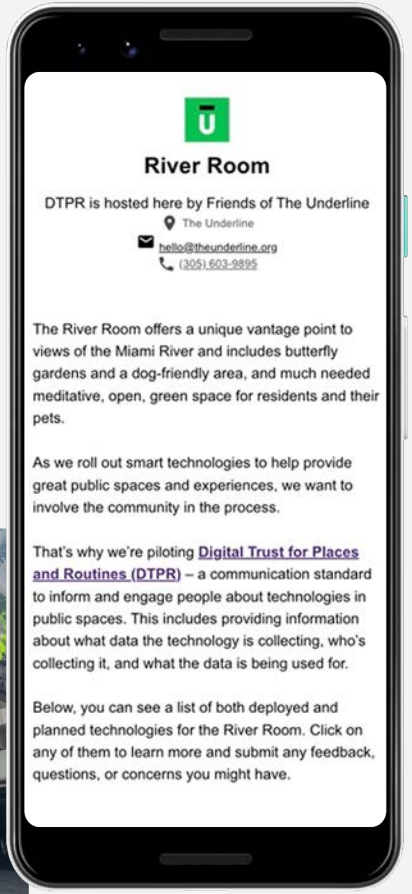
Free electric vehicle charging is coming here soon!

Join us at the launch event to learn more:

SATURDAY, SEPTEMBER 23
10AM - 2PM
INNOVATION BARN (932 SEIGLE AVE)

SCAN THE QR CODE FOR MORE DETAILS

This sign uses the Digital Trust for Places and Routines communication standard available at go.dtpr.guide/github. The Icons and Taxonomy are licensed under Creative Commons Attribution 4.0 International (CC BY 4.0).



The Underline

DTPR is increasingly recognized as a transparency tool for urban tech

ACT NOW | PREPARE | LEARN AND WATCH | THE FUTURE OF PLANNING

…ocates …gy to manage commercial agreements and contracts for street and municipal infrastructure and services (see Blockchain, Crypto, and NFTs).

Decreasing digital trust

In 2022, ISACA found that only 54 percent of people in the U.S. trust technology companies to act ethically, down 19 points since 2019. On the other hand, McKinsey found that 70 percent of consumers have at least a moderate degree of confidence in companies they choose to do business with protecting their data—despite the reality that the mitigation of risks by most organizations are unimpressive. There is a mismatch between people's understanding as well as their daily interactions with surveillance and AI technology and the level of security of digital infrastructure that they use.

Public distrust of all things digital is an underexplored dilemma in planning, especially considering the continued digitalization of everything. Trust is a collective emotion and there is a power imbalance between providers and users in the digital world. Digital trust describes the relationship between the users (those who give trust, like consumers and residents) and the providers (those who guarantee to uphold protection, like businesses and governments).

Digital technologies and digitalization have been characterized as increasingly volatile, uncertain, complex, and ambiguous (in short, "VUCA"). Meanwhile, governments are investing more than ever in internet-connection technologies (like sensors) to improve parking, streetlights, and other public services. But installation of city-owned surveillance tools in public spaces—and more private access to surveillance tools (see Political Shifts in Safety and Security)—is problematic within the context of low digital trust. Digital trust and designing public spaces in the digital age will go hand in hand.

Cities such as Washington, D.C., and Boston are piloting transparency standards (Digital Trust for Places and Routines, or DTPR) to build trust in their increasingly digitally equipped public spaces. This includes placing visual markers and providing scannable codes that inform the public of nearby technology such as sensors and cameras. Planners are simultaneously being charged with restoring community trust, experiencing the effects of low public trust in local government, and responding to digitalization (in some cases, promoting digitalization). To improve planning, these disparate efforts need to be merged.

Solving the digital divide

Over the past year, increased awareness of the impacts of the

INSIGHT FROM OUR TREND SCOUTS

"My biggest concern is that I see science and technology speeding ahead, digitalization solutions speeding ahead, but I don't see our governance and planning being able to move at that speed."

—Bill Cesanek, AICP, Water & Planning Network

Cities around the world are testing new technologies in ways that prioritize public visibility and participation. This sign in Boston uses the Digital Trust for Places and Routines (DTPR) standard to increase transparency and enable resident feedback for sensors measuring how a street reconstruction project will affect air quality in an underserved community. Photo courtesy City of Boston/Helpful Places.

16 | 2023 Trend Report | APA | Lincoln Institute of Land Policy

"Making the public aware of nearby technology and its purpose is the first step to getting people involved, allowing them to provide feedback, and making them feel like they have the power to cocreate the smart city."

DTPR highlighted in the American Planning Association's *2023 Trend Report for Planners*

Jake Moskowitz

The Underline

Greater & Greener | CITY PARKS ALLIANCE

Public-Private multi-modal transportation corridor, linear park and community destination improving first and last mile and neighborhood connections, safety, mobility, public health, resiliency, and innovation.

Solve Problems

Safety/Mobility

Multi-modal solution connecting to mass transit

Resiliency

120 acres of green space, microforests, pollinators and stormwater mitigation

Diversity/Inclusivity

Serving persons of all abilities and access

Health/Wellness

Improve safe access to active transportation and recreation

Connectivity

10 miles Downtown to Dadeland, 250,000 residents, 14,000 businesses

Innovation

Technology integration. 18 student and small business startups. Project will generate over $3 Billion in economic activity

PLUSURBIA

Tindale Oliver

Innovation on The Underline

Capacity Building:
Tech Master Plan
Advisory Council
Underline Staff

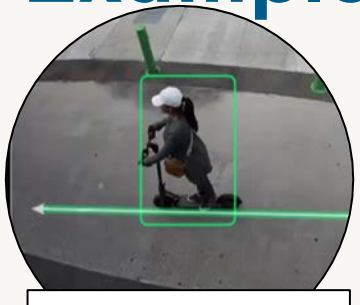
Foundational
Operational
Experiential

Categories:
Facilities & Maintenance
Interactive & Immersive
Health & Wellness
Climate & Sustainability
Mobility & Safety
Nature-Based
Revenue Generation

Greater & Greener | CITY PARKS ALLIANCE

Current Examples

Public Wifi

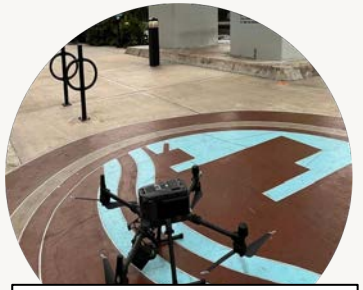


Computer Vision

Digital Bulletin

Interactive Screens

Digital Twin



LiDAR Scanning

Envm Sensors

Delivery Bots

Solar Benches

BikeShare

Greater & Greener | CITY PARKS ALLIANCE

On The Horizon

Energy & Microgrids

Interactive Experiences

Startup Accelerator

Linear Lab Deployments

Economic Development

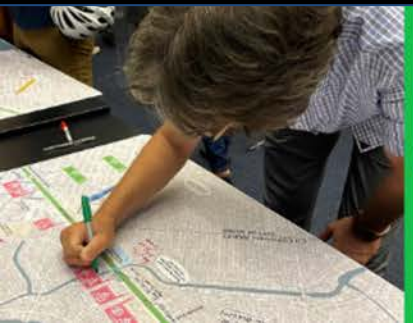
Extended Reality Applications

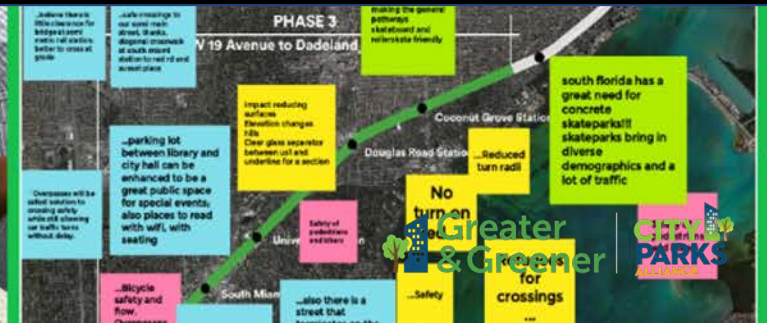
Community Co-creation

Community Meetings
Digital Surveying

Neighborhood Ambassadors
User Engagement Group

DTPR
Linear Lab





The Underline Linear Lab.

A living lab, testing ground, community engagement hub and deployment sandbox in partnership with Northeastern University, the University of Miami, local private companies, community engagement organizations, and national outreach partners. The Lab's targeted focus on **climate, sustainable mobility, first-mile/last-mile, and energy** will enhance the community's ability to address Miami's largest local issues.

ENERGY

CLIMATE

MOBILITY

In coordination with the community, we can test, iterate and scale these new technologies county-wide.

The Underline Linear Lab includes:

User Engagement & Testing Group
Committed local volunteers and visitors, with testing policies and guidelines at The Underline.

Digital Engagement Tools
Digital engagement tools and feedback (ex: survey tools, platforms, crowd analytics, sensors, etc.)

Physical Space
Leveraging The Underline's 10 mile park with dedicated spaces for deployments.

Dedicated Staff
The Underline will expand to oversee and manage the day-to-day operations of the Lab.

Christopher Roog

City of West Palm Beach

Greater & Greener | CITY PARKS ALLIANCE

WHO ARE WE?

Local government agency fostering redevelopment within CRA Districts within West Palm Beach.

Collaboration:

- Residents, property owners, businesses, developers, community organizations

Achievements:

- Nationally Recognized: Among the most innovative and effective CRAs in the State of Florida
- Setting the Standard: Leading in redevelopment practices

Vision:

- Redefining community redevelopment through collaboration and innovation

TECHNOLOGY + DATA

Core to our strategy for managing public spaces

- Helping with:
  - How spaces are being used and what people want to see
  - Maintenance
  - Sustainability
  - Better programming
- Building public open spaces that people want to be in
- Using public spaces as test beds - layering a level of tech that is sensitive to people's privacy

CRA
WEST PALM BEACH
Community Redevelopment Agency

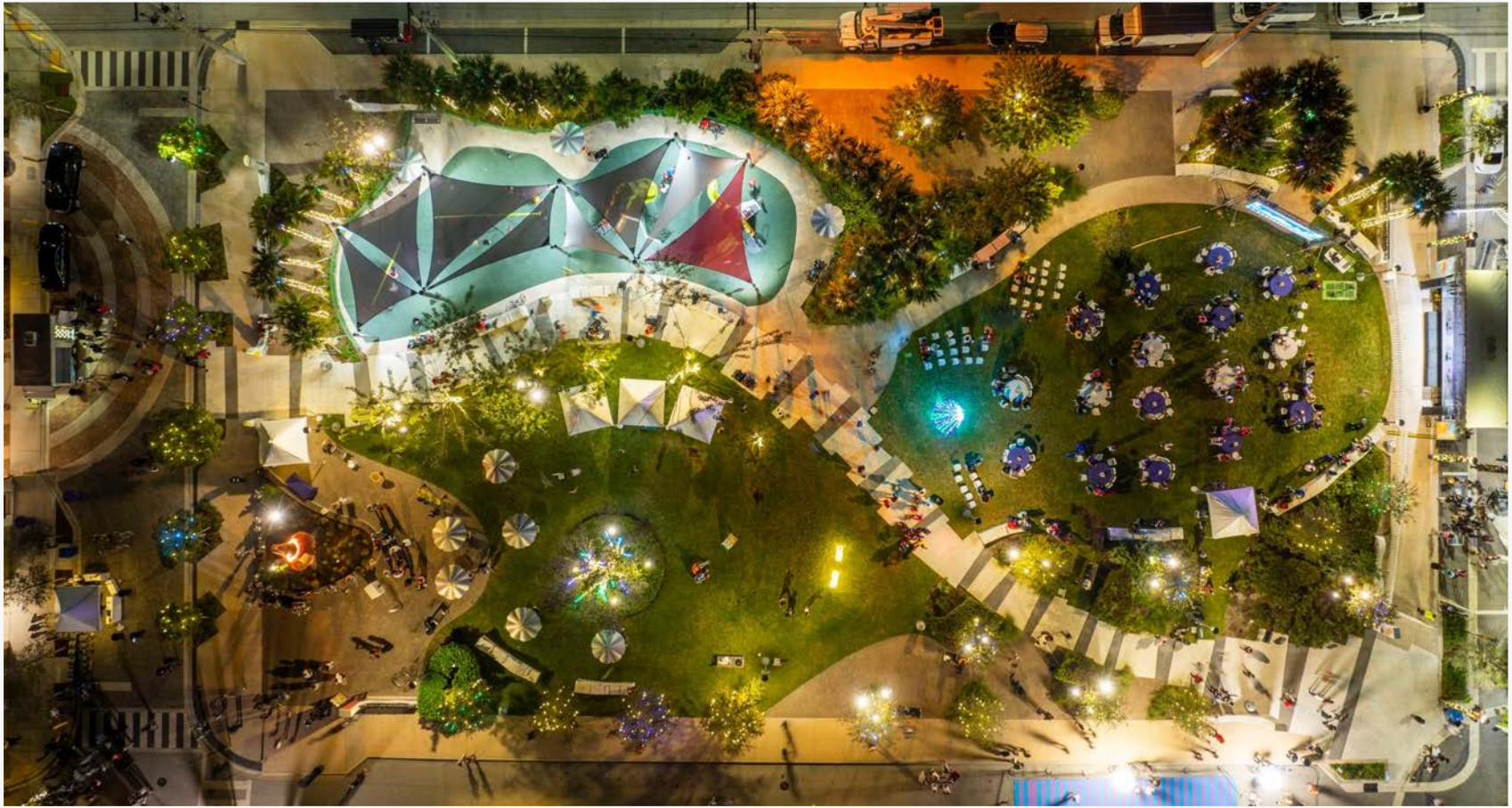
CENTER FOR SMART STREETSCAPES

Innovation built through partnerships to improve life on the streetscape for all.

The mission of the Center for Smart Streetscapes (CS3) is to forge livable, safe, and inclusive communities.

KNIGHT FOUNDATION

CRA
WEST PALM BEACH
Community Redevelopment Agency



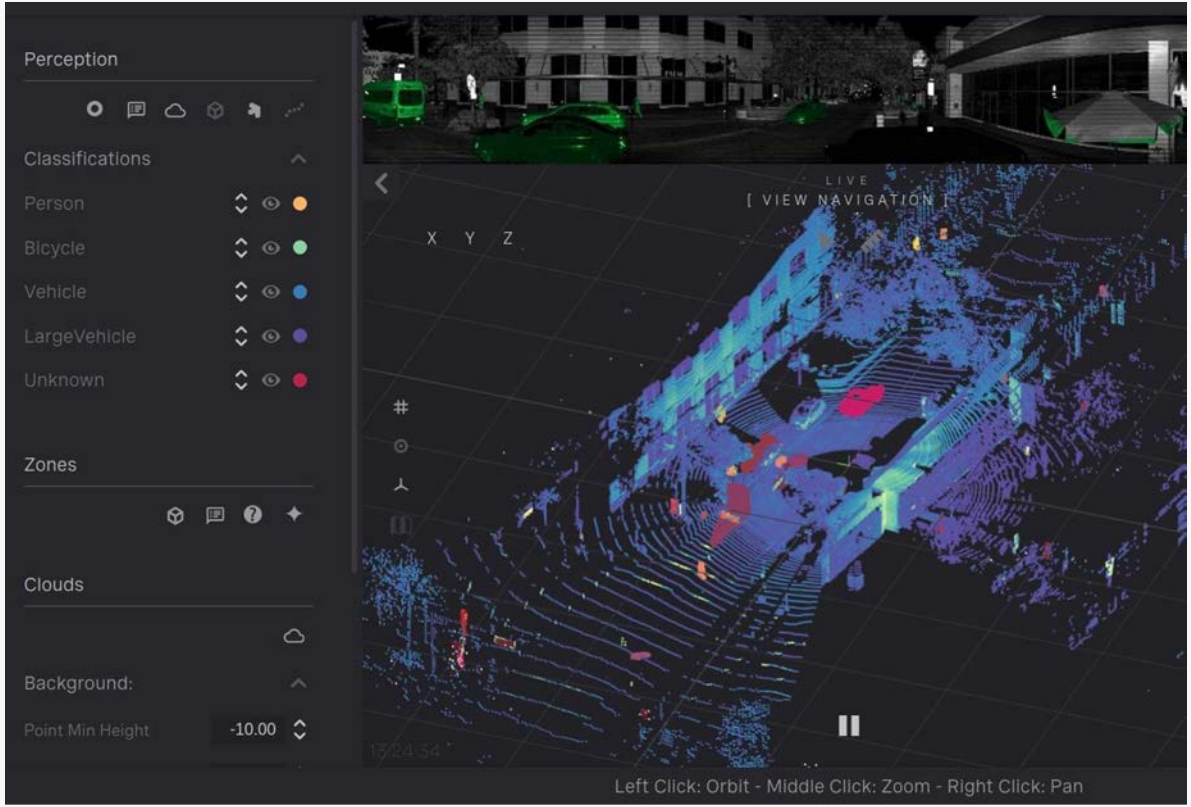
CAMERAS FOR PARK SAFETY + SECURITY

HEART AND SOUL PARK | WEST PALM BEACH

SENSORS ANALYZING HOW PEOPLE MOVE

CLEMATIS STREET | WEST PALM BEACH

THE TECHNOLOGY



CRA
WEST PALM BEACH
Community Redevelopment Agency

THE TECHNOLOGY

Real-Time LiDAR Object Tracking

ARE YOU WORKING **FOR** YOUR COMMUNITY?

OR

ARE YOU WORKING **WITH** YOUR COMMUNITY?

CRA
WEST PALM BEACH
Community Redevelopment Agency

COMMUNITY INPUT

BUILDING TRUST

- Working with communities that have a historic distrust of government
  - Quarterly meetings with Historic Northwest District
    - Taking notes on community concerns to respond to at the next meeting
  - E.g., why are rides for on-demand service getting dropped?

HISTORIC NORTHWEST

THANK YOU!

Christopher Roog
Executive Director
City of West Palm Beach
Community Redevelopment Agency

PHONE
561-822-1416

EMAIL
croog@wpb.org

ADDRESS
401 Clematis St. West Palm Beach, FL 33401

WEBSITE
wpb.org/cra

CRA
WEST PALM BEACH
Community Redevelopment Agency

Ryan Kurtzman

City of Long Beach

Greater & Greener | CITY PARKS ALLIANCE

How it started

TRANSPARENCY

… will be publicly transparent and accountable in its collection and management practices of personal data…

ACCOUNTABILITY

… will work to provide participatory feedback channels for residents to… exercise privacy complaints, and ensure the City is held accountable

DIGITAL EQUITY

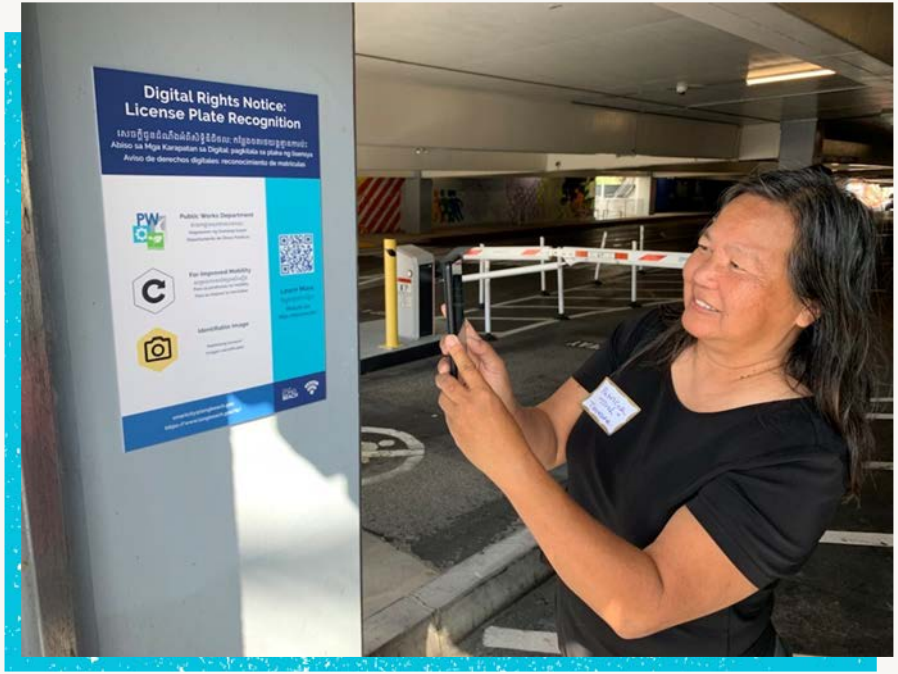
… will examine the burdens and benefits of data collection…

DATA STEWARDSHIP

… will work to ensure residents can access and correct their personal data…

Adopting DTPR

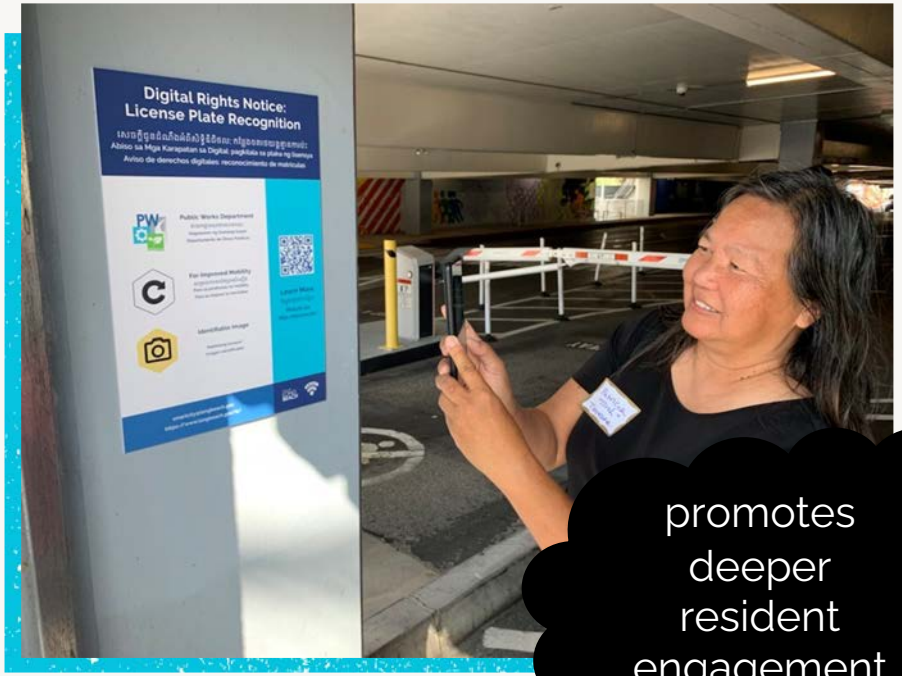
v1



v2

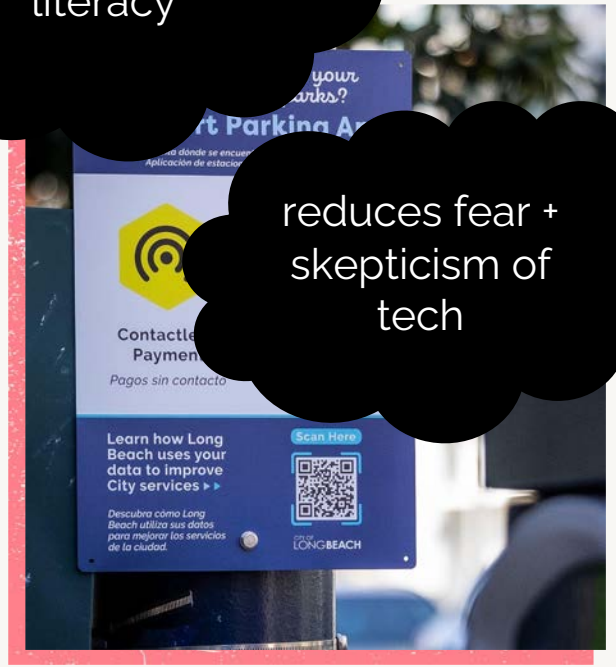
Adopting DTPR

v1



promotes deeper resident engagement

v2



increases tech literacy

reduces fear + skepticism of tech

Building trust + reducing misinformation

	Before	Post LB Co-Lab
Trust: "I feel like my input is taken into account in how the City of Long Beach develops new technology" *(% Agree or Strongly agree)*	47.3%	**95.2%**
Responsiveness: "I feel like the technologies implemented by the City of Long Beach have improved my community"	63.9%	**85.7%**

Bringing it full circle in North Long Beach

LB Co-Lab challenge

Neighborhood residents are seeking a solution to promote pedestrian safety, propel park utilization, enhance evening visibility, and encourage positive experiences at Houghton Park.

Selected solution

Smart lighting to improve brightness and energy efficiency and monitor footfall and air quality

Select technology solution → Staff + vendor complete DTPR worksheet → Create 'Digital Rights Platform' page → Install sign

Bringing it full circle in North Long Beach

Panel Discussion

Greater & Greener | CITY PARKS ALLIANCE

Submit Your Questions

go.dtpr.guide/panel

Greater & Greener | CITY PARKS ALLIANCE

Thank You!

Greater & Greener | CITY PARKS ALLIANCE

Parks and Big Data: Fostering Public Trust in Digital Systems

Greater & Greener | CITY PARKS ALLIANCE

Support for this session is provided by:

KNIGHT FOUNDATION

Greater & Greener

CITY PARKS ALLIANCE

PROFESSIONAL AND CONTINUING EDUCATION

GENERAL CEUs

- Ensure your conference badge is scanned upon entering and exiting the session.
- Request your session transcript from a City Parks Alliance staff member.
- Transcript requests will be fulfilled within 10 business days of the request date.

LA CES

- Ensure your conference badge is scanned upon entering and exiting the session.
- Complete the session evaluation in the mobile app.
- Request your session transcript from a City Parks Alliance staff member.
- Transcript requests will be fulfilled within 10 business days of the request date.

AICP

- Self-report your participation on the AICP website
- Ensure your conference badge is scanned upon entering and exiting the session.
- Complete the session evaluation in the mobile app.

Participation data is shared electronically with the accrediting agencies.

Greater & Greener CITY PARKS ALLIANCE