

Colorado Smart Cities Alliance

Creating Technology Partnerships to Improve Colorado





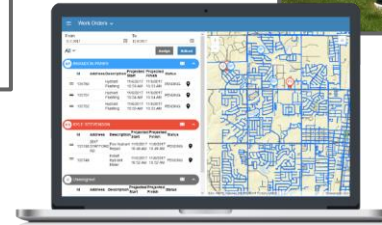
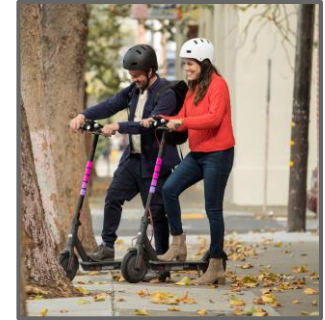
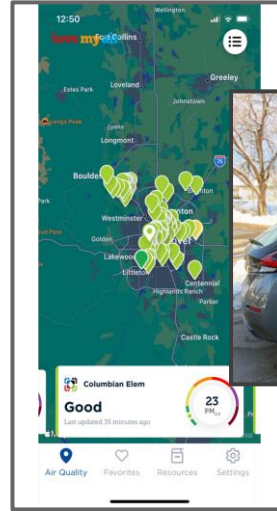
CITIES AND INFRASTRUCTURE

The technologies of today are changing the infrastructure of tomorrow



Governments are at the center of massive change

- 5G + broadband
- IoT
- Artificial intelligence
- Automation
- Electrification
- Sharing Economy

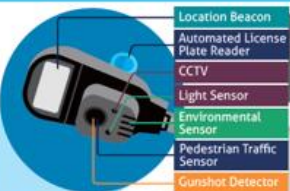


SHEDDING LIGHT ON SMART CITY PRIVACY

Cities generate data through a vast and growing network of connected technologies that power new and innovative services ranging from finding a parking spot to improving water quality. Smart cities can raise privacy concerns tied to the collection and use of individuals' data. Sophisticated data privacy programs can mitigate these concerns while preserving the benefits of cities that are faster, safer, more efficient, and sustainable.

NOT JUST A STREET LIGHT

City street lights are so ubiquitous they often go unnoticed. Today, street lights do more than just illuminate urban spaces. Fitted with multiple sensors and beacons, street light infrastructure becomes a hub for capabilities ranging from environmental to public safety to transportation and more.



- Location Beacon
- Automated License Plate Reader
- CCTV
- Light Sensor
- Environmental Sensor
- Pedestrian Traffic Sensor
- Gunshot Detector

Trucks adjust route in real-time based on need

Air quality sensors warn of high pollution levels

Water analytics improve water quality

Buses adjust route based on demand

Water networks minimize and remediate leakage

Automated tolling tracks traffic patterns and congestion

URBAN SECTORS

- TRANSPORTATION
- UTILITIES
- TELECOM
- GOVERNMENT SERVICES
- ENVIRONMENTAL

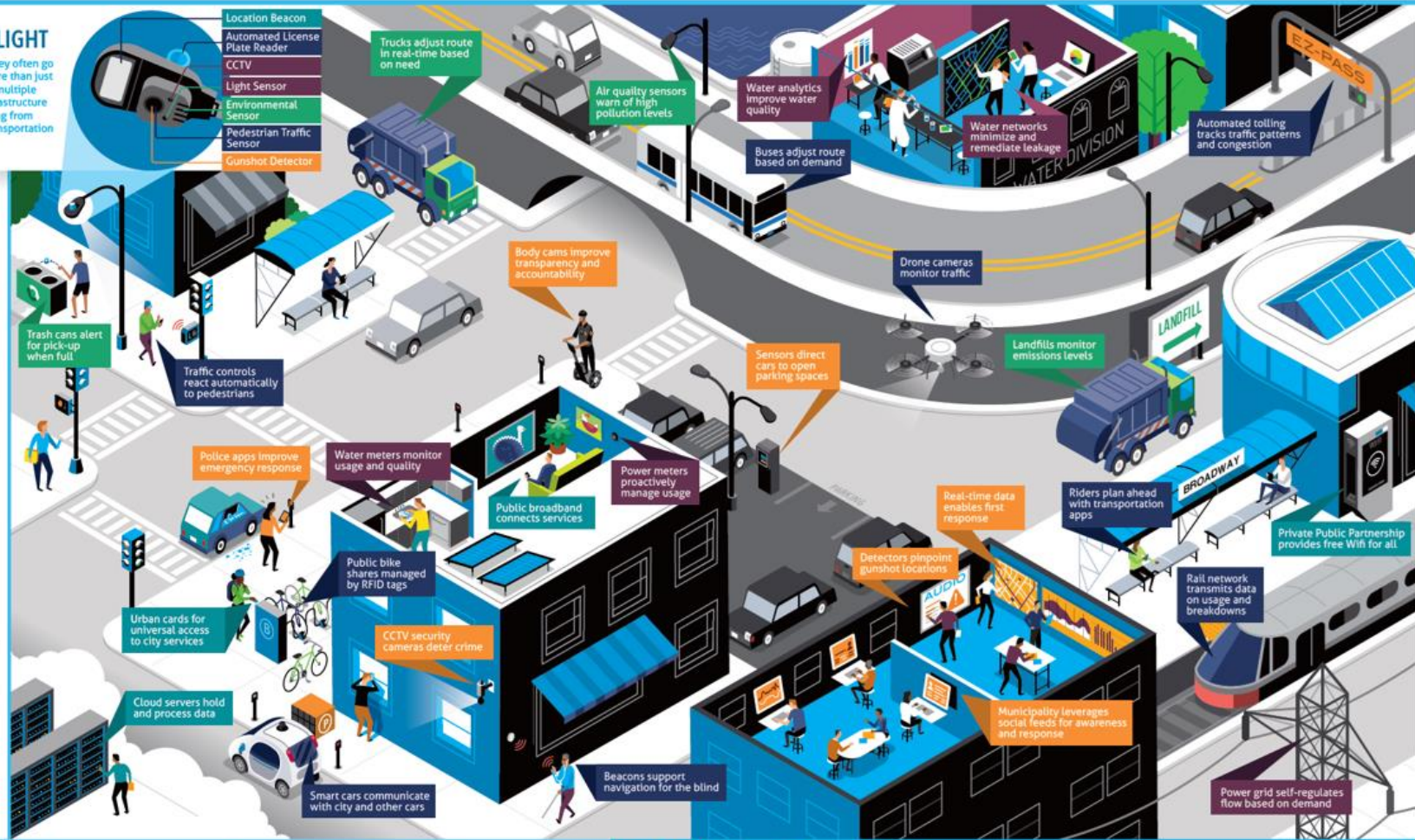
STAKEHOLDERS

INDIVIDUAL
Citizens and visitors enjoy improved quality of life, including safer, more efficient services, seamless interfaces, and responsive institutions. Individuals' data fuels smart services and infrastructure.

GOVERNMENT
Local governments become more transparent, inclusive, responsive, efficient, and innovative. Data from connected sensors fuels a plethora of infrastructure, services, and activities.

BUSINESSES
Companies and civic organizations explore new business opportunities, improve products and services, and promote research and innovation based on access to new, real-time, reliable urban data flows.

PUBLIC-PRIVATE PARTNERSHIPS
Partners improve the quality, reliability, speed, diversity, and sustainability of city services and solutions. Technologies and data flows enable individuals, governments, and businesses collaborate in real time.



WHAT vs HOW

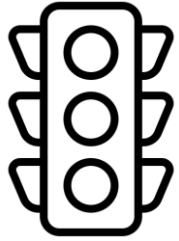
How are communities approaching a problem without obvious solutions?

The process by which cities discover and implement better solutions is what makes them smart, not the individual solutions themselves

- ◆ *What processes are common in smart cities?*
- ◆ *Why?*
- ◆ *How are they implemented?*



Challenges in need of solutions - not the other way around



1

Mobility



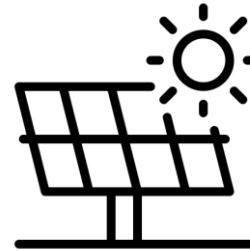
4

Data



2

Civic Engagement +
Connectivity



5

Utilities
(Energy, Water)



3

Public Safety



6

Housing

WHAT IS THE ALLIANCE?



MISSION | A 501(c)3 non-profit founded to **create technology partnerships** that prove next-generation solutions to improve Colorado's quality of life

VALUES | Equity, Sustainability, Resilience, Humanism

Nation's first and largest statewide coalition dedicated to advancing smarter communities



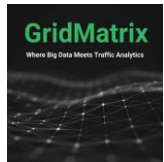
GOVERNMENT MEMBERS



BUSINESS MEMBERS



Kaizen Labs



STRATEGIC PARTNERS



Government
of Canada



PROJECT PARTNERSHIPS

50+ smart cities projects created
16 replications
\$6M attracted



*AvCo - Mines Rover
Autonomous, electric transit*



Air Quality Monitoring

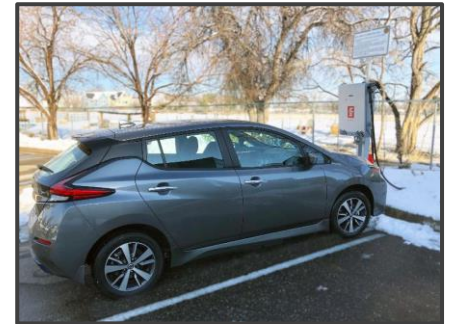
Private LTE fills coverage gaps for communication emergencies



Emergency Communications



*Asset Management
Cities of Centennial, Greeley*



*V2G EV Charging
City of Boulder
2021' IDC Smart Building Award*



PROGRAMS





Smart Futures Lab

UNIVERSITY OF COLORADO **DENVER**

Supporting a New Majority in Smart Cities

- **Build 5G living lab** downtown for development and testing of new solutions
- Begin **business incubator** program for early-stage entrepreneurs
- Begin **accelerator program** for growth-stage companies
- Develop **smart cities education certificate** to educate workforce



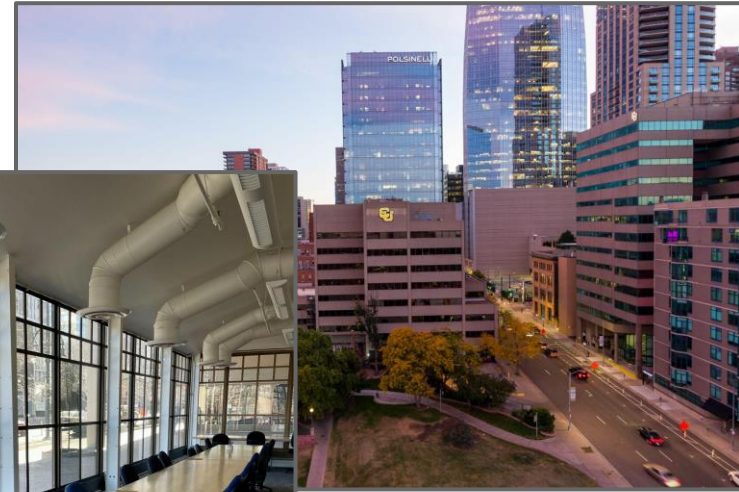
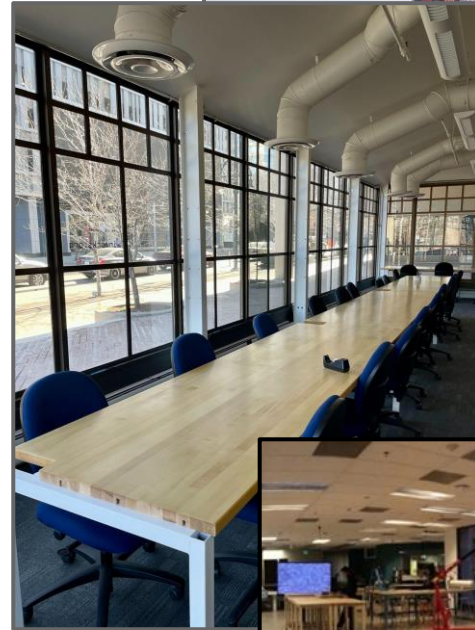
LAB ASSETS



Smart Futures Lab
UNIVERSITY OF COLORADO **DENVER**

Business accelerator dedicated to smart cities with existing assets:

- *Co-working space*
- *5G network for R&D*
- *Living Lab demonstration space*
- *Makerspace*
- *Meeting and Event Space*



100% New Majority Led

BIPOC, Women, People w/disabilities

Issues

- Climate
- Transportation
- Urban Development
- Accessibility
- Water
- Energy

Technologies

- 5G
- Robotics
- Augmented Reality
- AI/ML
- IoT
- Drones



INNOVATION CHALLENGES



CONNECTED COLORADO (C²) CHALLENGE 2023 PROBLEM STATEMENTS



ACCESSIBILITY

Increase the accessibility and inclusivity of public spaces and platforms.



SAFE STREETS

Improve the safety, convenience or comfort of active mobility within a community.



PUBLIC SAFETY

Increase the safety of public spaces through preventative and protective measures.



CONNECTED COLORADO (C²) CHALLENGE

2023 PARTICIPATING COMMUNITIES



ARAPAHOE COUNTY



ARAPAHOE
LIBRARIES



CITY OF
ASPEN



COLORADO
SPRINGS
OLYMPIC CITY USA



Commerce
CITY



DENVER
THE MILE HIGH CITY



City of
Greeley
Colorado



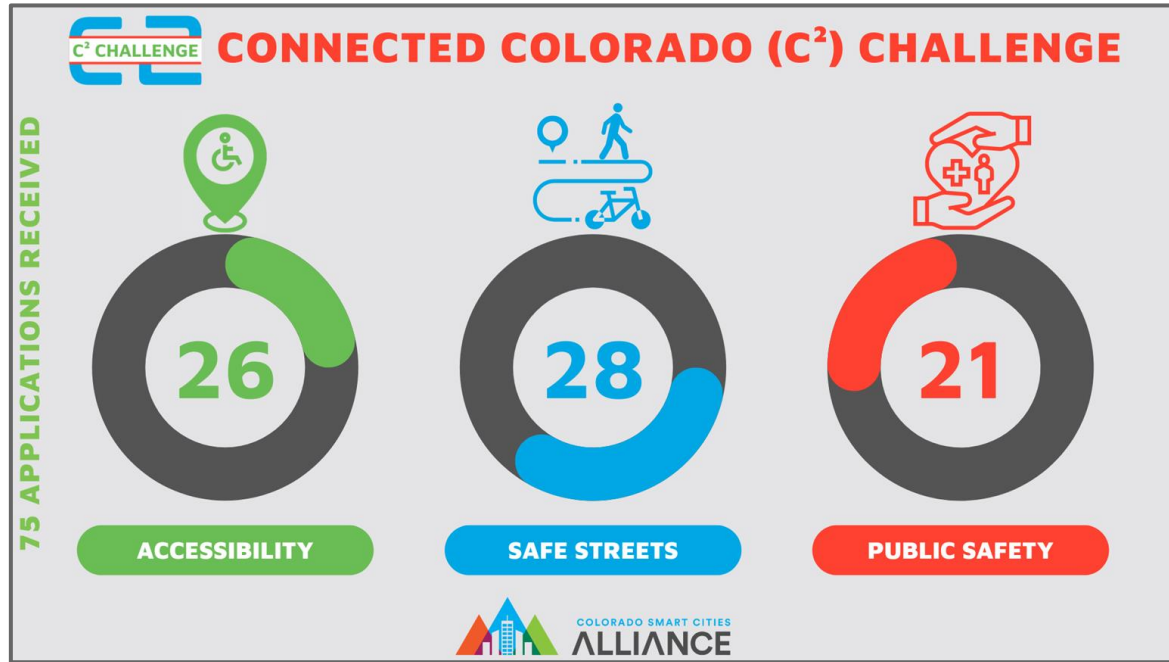
JEFFERSON
COUNTY COLORADO



CITY OF
LONE TREE



COLORADO SMART CITIES
ALLIANCE



35 Finalists Selected

SUBMISSIONS

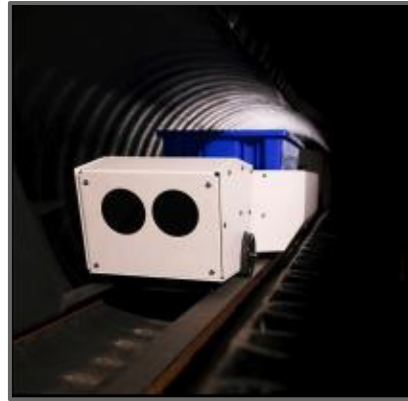
Seeding curiosity and “Art of the Possible”

Augmented Reality (AR)



***Accessibility
Disasters***

Robotics



***Underground Package
Delivery***

Portable Private
Networks



***Wildfire
Emergency Response***

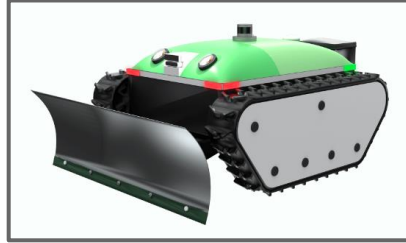




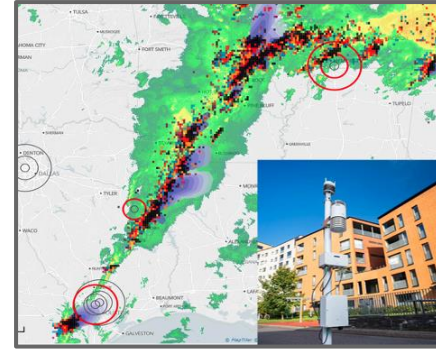
2022 Winners

11 Projects

Robotic Snowplows



Weather Monitoring and Alerting System



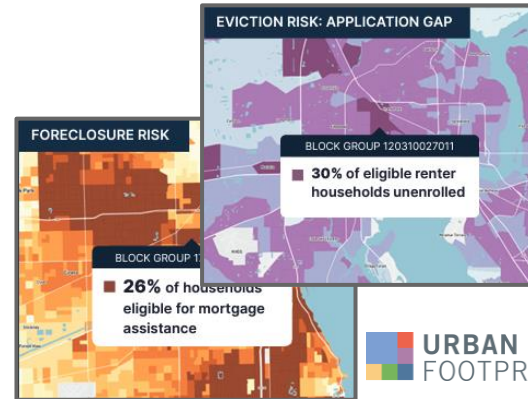
VAISALA

Road Safety Detection



Velodyne Lidar

Housing Risk Data



URBAN FOOTPRINT



QUESTIONS TO CONSIDER

Should governments have technical expertise?

How should this impact workforce?

What responsibility does government have to change?

To partner on testing new solutions?





Thank you!

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