

ONCE MORE.

INTO THE FUTURE

DEAR FRIENDS



SMART

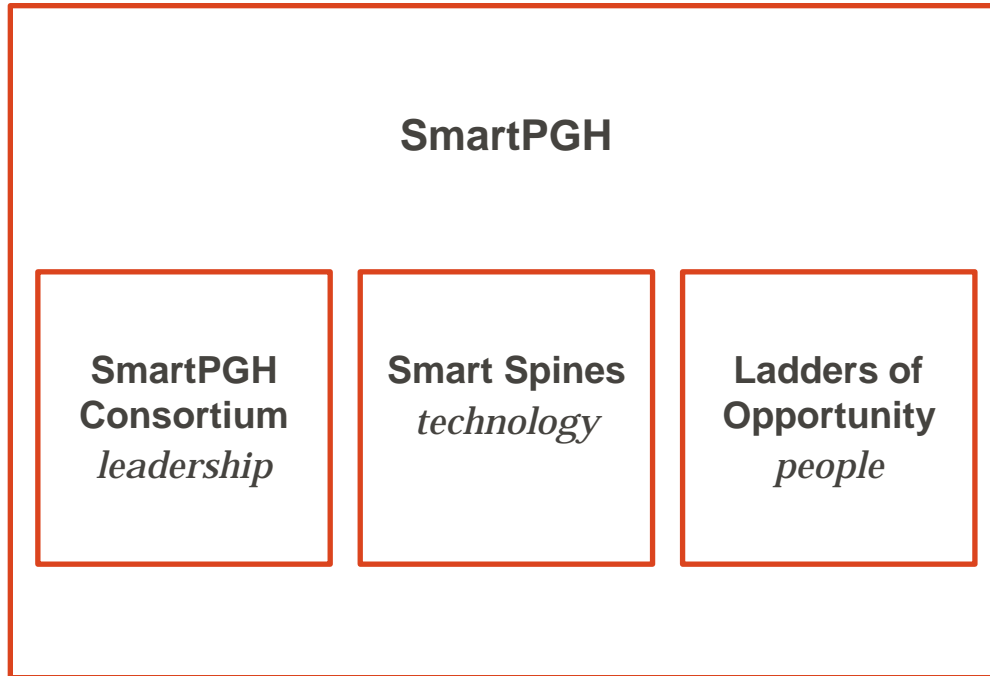
PGH





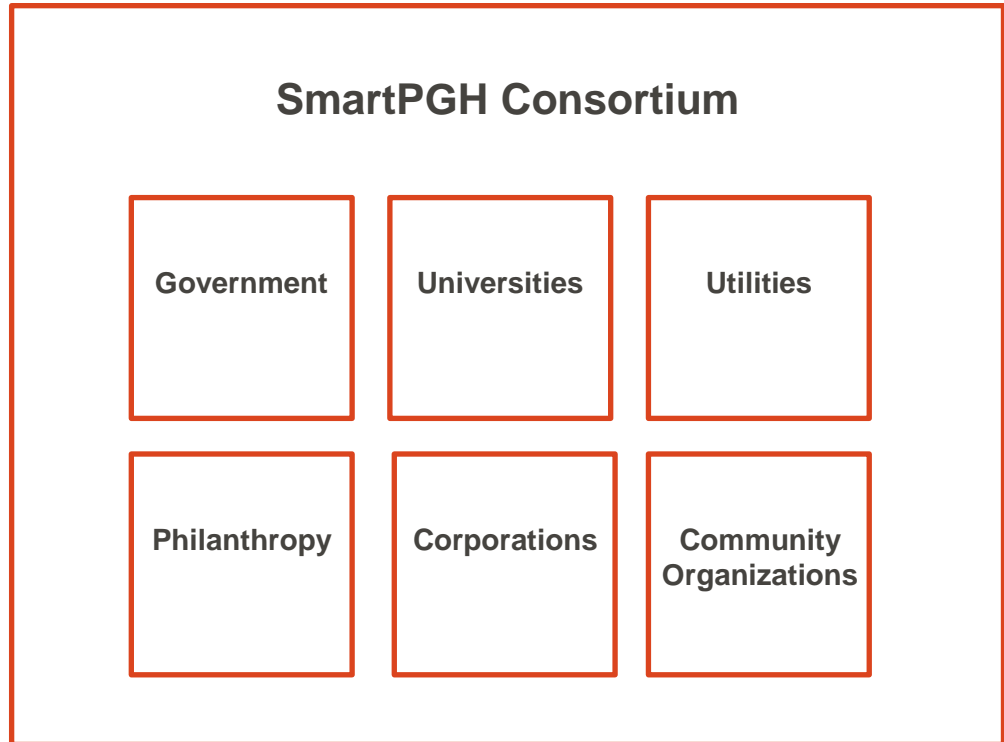
Pittsburgh's p4 framework
prioritizes what we value
most — people, planet, place,
and performance.

The Elements of SmartPGH



The SmartPGH Consortium

Leadership



The SmartPGH Consortium

Members



URA



PortAuthority



Carnegie Mellon University



CCAC

Almono



NEIGHBORHOOD ALLIES

UBER



HILLMAN FOUNDATION



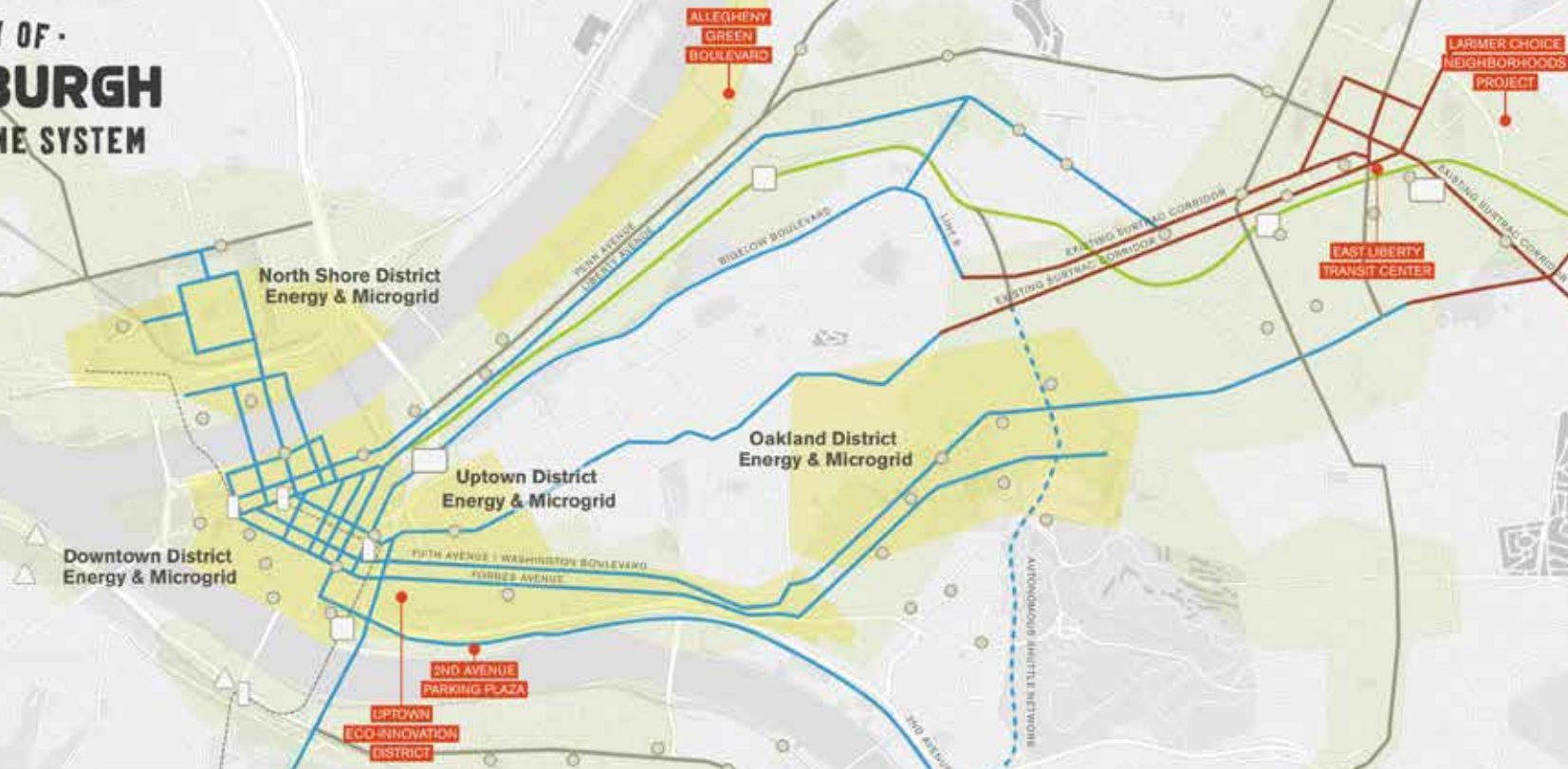
The SmartPGH Consortium

Member Roles & Commitments

Consortium members must meet as a condition of full participation:

- **Open data standards & participation in the our data utility**
- **Meet or exceed the City of Pittsburgh's Minority, Women, Disadvantages Business Enterprise contracting requirements**
- **Open book capital planning coordination**
- **Participation in workforce development pipeline**
- **Participation in the City's Climate Action Plan.**

CITY OF
PITTSBURGH
 SMART SPINE SYSTEM



PROPOSED INFRASTRUCTURE	EXISTING INFRASTRUCTURE	
Proposed Smart Spines	Frequent Transit Service Areas	Multi-Modal Station
Future Smart Spines	Existing District Energy / 2030 District	Busway Station
Existing Smart Spines	Light Rail	Light Rail Station
	Busway	Incline Station
	Bike Share Station	

Mobility Optimization Along Smart Spines

Optimizing
Transportation
Along
Our Major
Corridors

50% of our region's employment
is along Smart Spine corridors.

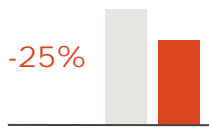
Deployments along our Smart Spines

- Surtrac
- Smart Streetlights
- Autonomous Shuttle Network
- Electric Avenue
- Data Utility

Mobility Optimization Along Smart Spines

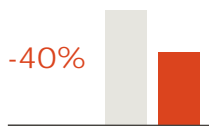
What is Surtrac?

Intelligent Traffic Signal Control



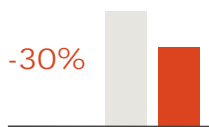
Travel Time

Reduced 25% by eliminating stops and reducing wait time, not by increasing travel speeds.



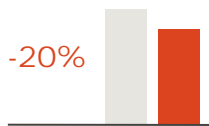
Delay

Over 40% less time waiting at intersections leads to less delay.



Stops

30–40% fewer stops — means less wear and tear on roads and tires.



Emissions

By reducing stops and idling, vehicles produce fewer harmful emissions and improve air quality.

Mobility Optimization Along Smart Spines

Existing Surtrac Deployment & Results

Reduced travel time, idle time, and air emissions.



Autonomous Shuttle Network

Proposed Shuttle Loop



SHUTTLE ROUTE & STOP LOCATION	AVERAGE TIME (MINUTES)
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Shuttle Route Travel Time

Junction Hollow Loop	8
PTC Loop	7
ALMONO Loop	12

**Total Shuttle Route Travel Time:
ALMONO - Junction Hollow - PTC**

SHUTTLE STOP BOARDING & ALIGHTING TIME	AVERAGE TIME (MINUTES)
--	------------------------

Shuttle Route Travel Time

A ALMONO	1
B Hazelwood Ave. / 2nd Ave.	1
C CMU / Boudary St.	1
D 4 Mile Run / Boundary St.	1
E Pittsburgh Technology Center	1

**Total Boarding & Alighting Time,
All Stops**

**Total Travel Time:
Shuttle Travel & Stops**

32

Autonomous Shuttle Network

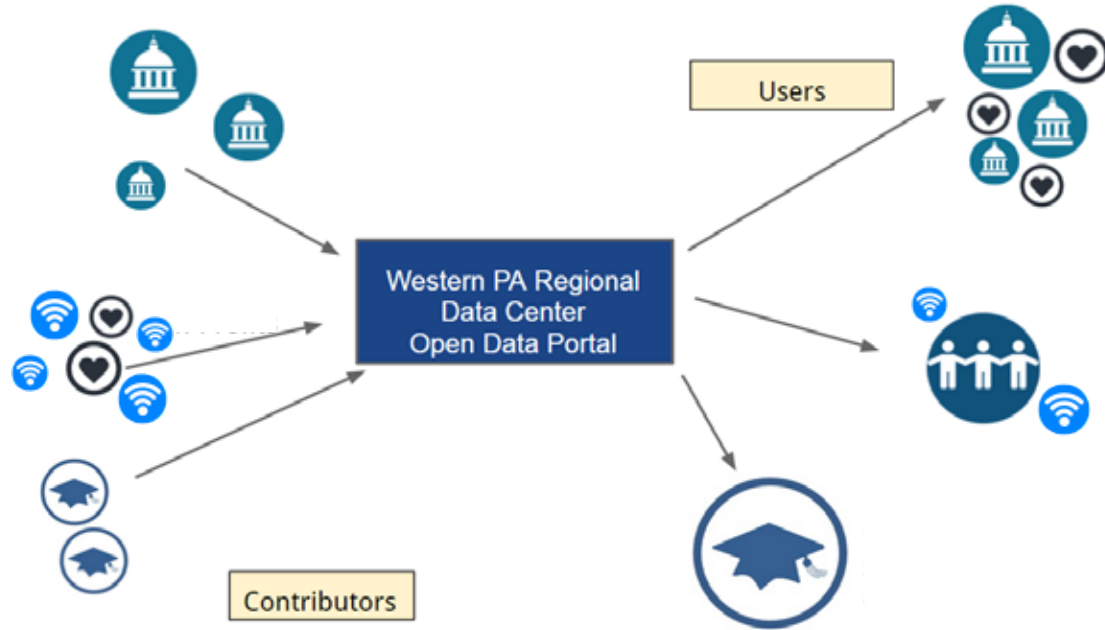
Safety & Know-how
at CMU

History and Success
of Autonomous Work
at CMU



The SmartPGH Data Utility

Collecting,
Sharing, and
Analyzing
Sensored Data



The SmartPGH Data Utility

Transportation Data Sets

City of Pittsburgh	Pittsburgh Parking Authority	Allegheny County Port Authority	Pittsburgh Downtown Partnership	Southwestern Pennsylvania Commission	Bike Pittsburgh
<ul style="list-style-type: none">• Bicycle Lane Usage Counts• Paving Schedules• Scheduled Closings	<ul style="list-style-type: none">• Parking Utilization by Zone• Garages & Lot Capacity• Garage Capacity & Real-Time Usage• Permit Parking Areas & Schedules	<ul style="list-style-type: none">• Real-Time Bus Locations• Bus Routes• Bus Stops / Schedules• Ridership Statistics	<ul style="list-style-type: none">• Commuter Survey• Events	<ul style="list-style-type: none">• Traffic Counts• Population & Employment Forecasts• Traffic Models & Outputs	<ul style="list-style-type: none">• Recommended Routes• Bike Racks• Recommended Service Areas



WE CAN.

EXPAND OPPORTUNITY

— FOR ALL —

Workforce Development Pipeline

Existing
Resources to
Build Upon

- **CCAC / CMU / Pitt programs**
- **TechHire**
- **Investing in Manufacturing Communities Partnership**
- **Three Rivers Workforce Investment Board (3RWIB)**

SmartPGH Community Census

Community Census

- **Iterative door-to-door community engagement process**
- **Tracking quality-of-life measures**
- **Ability to be proactive and make changes based on community needs**

SmartPGH Community Census

Sustainable
Return on
Investment

The team has developed a clear and systematic approach to understanding social and environmental change in urban contexts, culminating in the creation of evidenced reports containing the monetized value of these changes.

Performance Measurements and Outcomes

SmartPGH

**Enhanced
Mobility**

**Improved
Safety**

**Addressing
Climate
Change**

**Building
Ladders of
Opportunity**



. IF IT'S NOT.

FOR ALL

IT'S NOT



FOR US

· INTRODUCING ·



SMART

· PGH ·