

SMART COLUMBUS OVERVIEW



QUALITY OF LIFE

- **Connect people to employment and opportunity:** including improving access to healthcare and fresh food
- **Increase personal mobility efficiency**
- **Attract and retain talent** with a desirable lifestyle
- **Alleviate the daily stresses** of traffic and congestion

WHY?

- The industry change is coming
- Expected population growth of 1 million people
- One of the most economically segregated cities in the nation
- Regional sprawl

ECONOMIC GROWTH

- **Future-proof our economy** by attracting and creating **new jobs** in emerging industries
- **Prepare our existing workforce** for the future
- **Pivot** existing industries to own the future.
- Incorporate “smart thinking” into real estate development



**\$40 Million
Cash**

**Led by
City of Columbus**

**Four Years
August 2016 -
August 2020**



**\$10 Million
Cash**

**Jointly Executed by
City of Columbus &
Columbus Partnership**

**Three Years
April 2017 -
April 2020**

**Columbus
Acceleration
Fund**

**\$12 Million
Cash
\$500 Million
Program
Investments**

**Coordinated by
Columbus Partnership**

**Ongoing
\$1 Billion Goal by
December 2020**

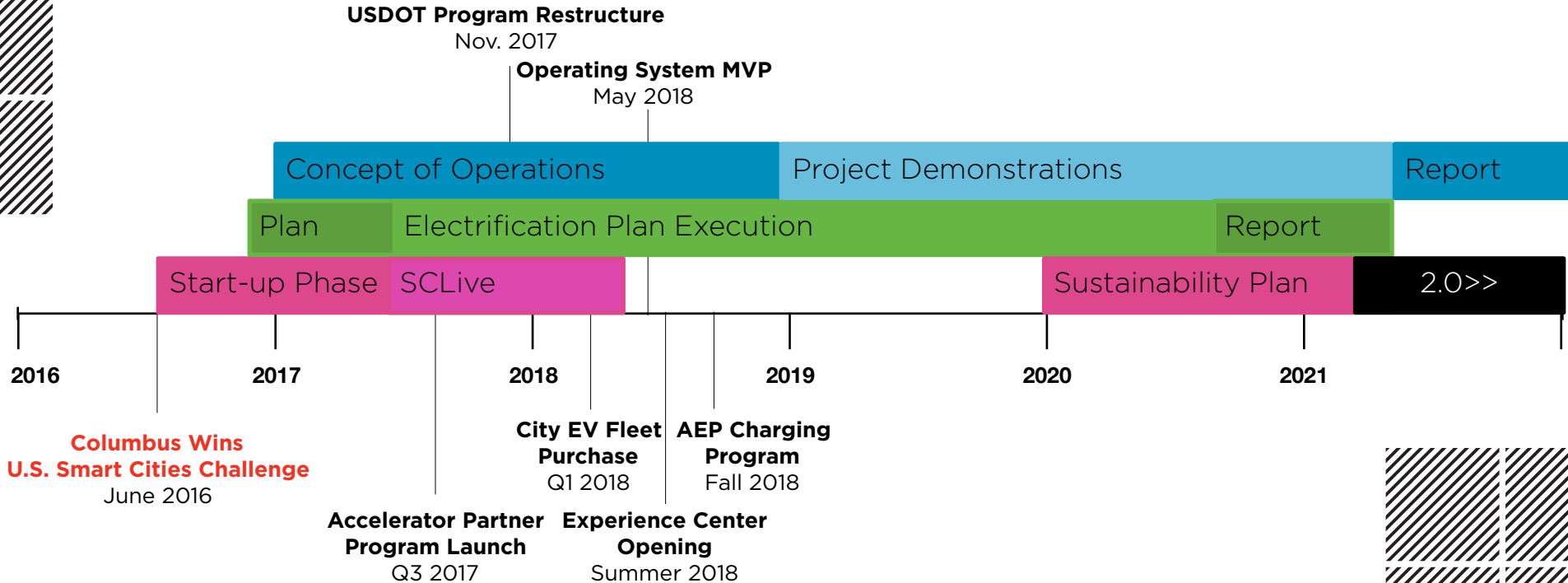
THE BASICS: IT'S COMPLEX

- Awarded 2 different grants, each with different timelines, reporting structures, and objectives
- 3 pots of money

- Top priority for Mayor and Business Community
- Grants end in 2020/2021
- Everything is new
- Program is regional in scope
- Smart starts with Mobility
- More than 20 unique projects



TIMELINE



Blue indicates USDOT

Green indicates Paul G. Allen Foundation

Pink Indicates Central Initiative

2 YEARS DOWN...
2 YEARS TO GO

\$90 MILLION
HAS TURNED INTO
\$522 MILLION

+1,000
STAKEHOLDERS
DIRECTLY ENGAGED

46 LOCAL
PARTNERS
ACTIVE IN PROGRAM
DEPLOYMENT

CO-LOCATED
50 TEAM MEMBERS
TO **1 Location**
FROM **6**
ORGANIZATIONS

C.A.S.E.

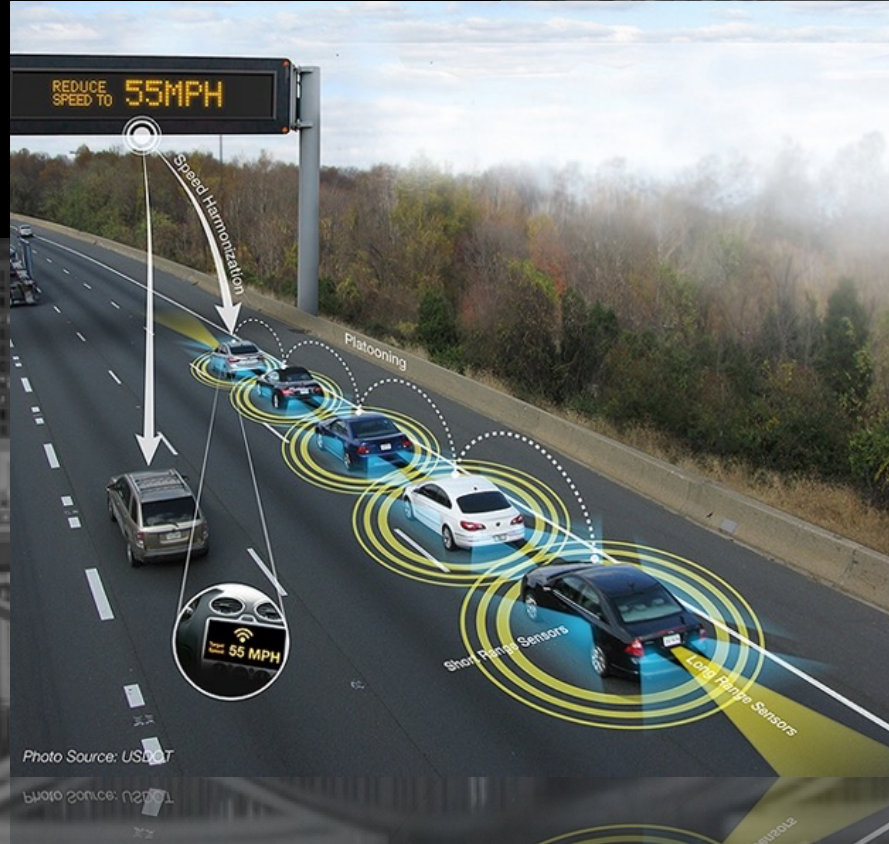
Connected

Autonomous

Shared

Electric

CONNECTED



CONNECTED VEHICLE ENVIRONMENT

Regional CVE Pilots Total

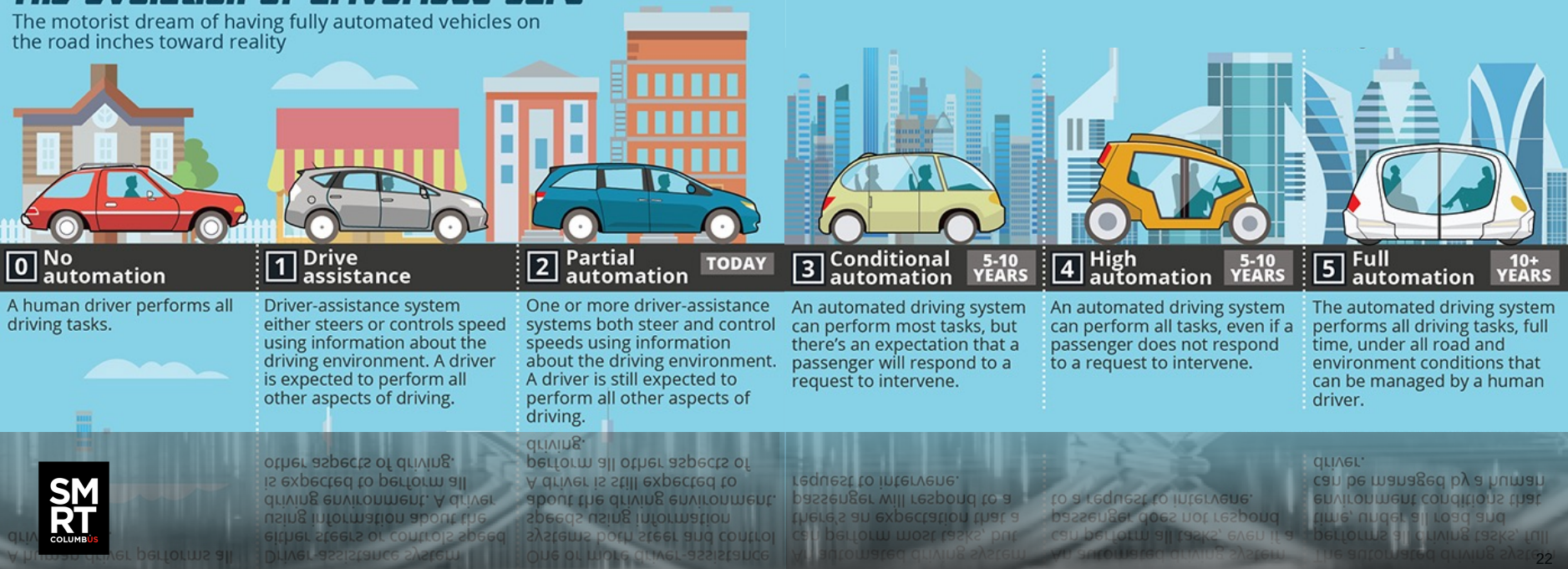
- **179 Intersections**
 - 147 City of Columbus
 - 27 City of Marysville
 - 5 City of Dublin
- **4,200 cars, trucks and buses** connected in the Columbus Region by 2020
 - 3,000 City of Columbus
 - 1,200 Marysville/US 33

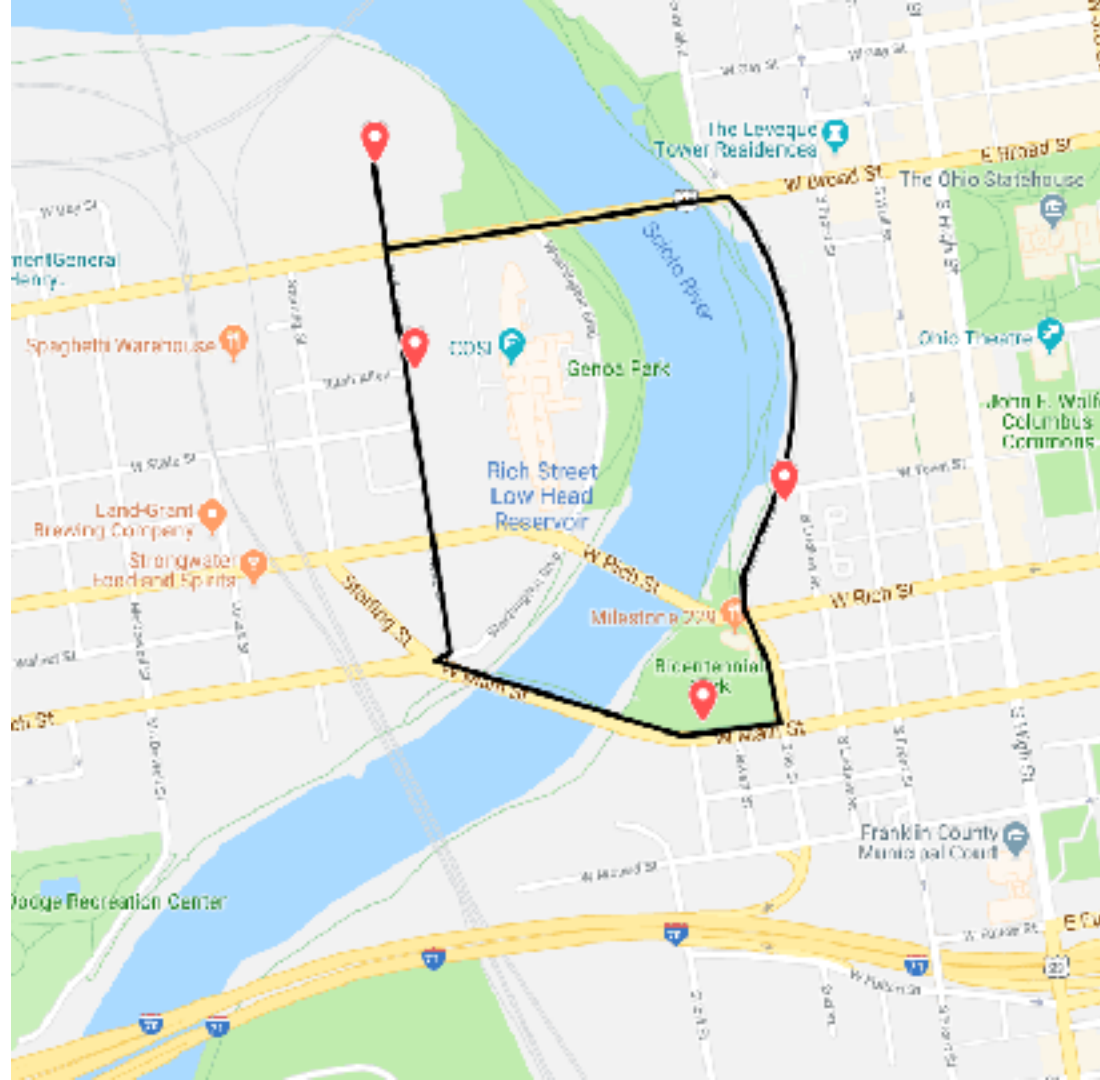


AUTONOMOUS

The evolution of driverless cars

The motorist dream of having fully automated vehicles on the road inches toward reality





SHARED

shared-use mobility MODES



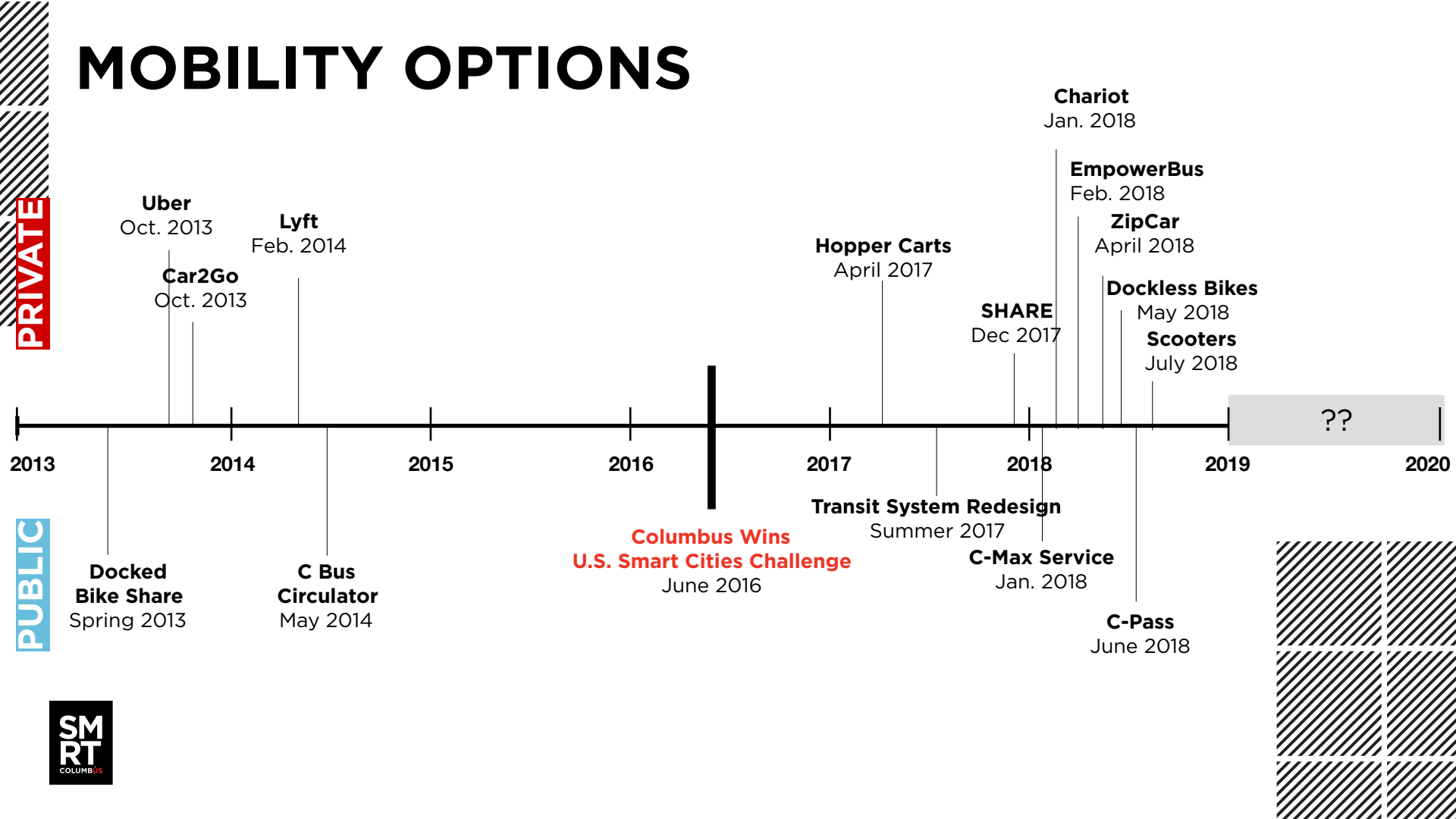
SHARED

Results From Larry Burns
Study On Ann Arbor

18,000 driverless/shared/tailored vehicles
can provide same mobility as
120,000 conventional vehicles

- ▶ Reduce out-of-pocket cost by 75%
- ▶ Respond to trip requests in < 2 Minutes
- ▶ Minimize empty miles to 0.02/loaded mile
- ▶ Eliminate parking cost, inconvenience and land use

MOBILITY OPTIONS



ELECTRIC



2017 Chevy Bolt

\$36,000 | 238 miles



2017 Tesla Model 3

\$35,000 | 220 miles



2018 Nissan Leaf

\$30,000 | 150 miles

ELECTRIFICATION PROGRAM

1

**DECARBONIZATION
& GRID
MODERNIZATION**

2

**FLEET
ELECTRIFICATION**

3

**TRANSIT,
AUTONOMOUS,
MULTIMODAL
MOBILITY OPTIONS**

4

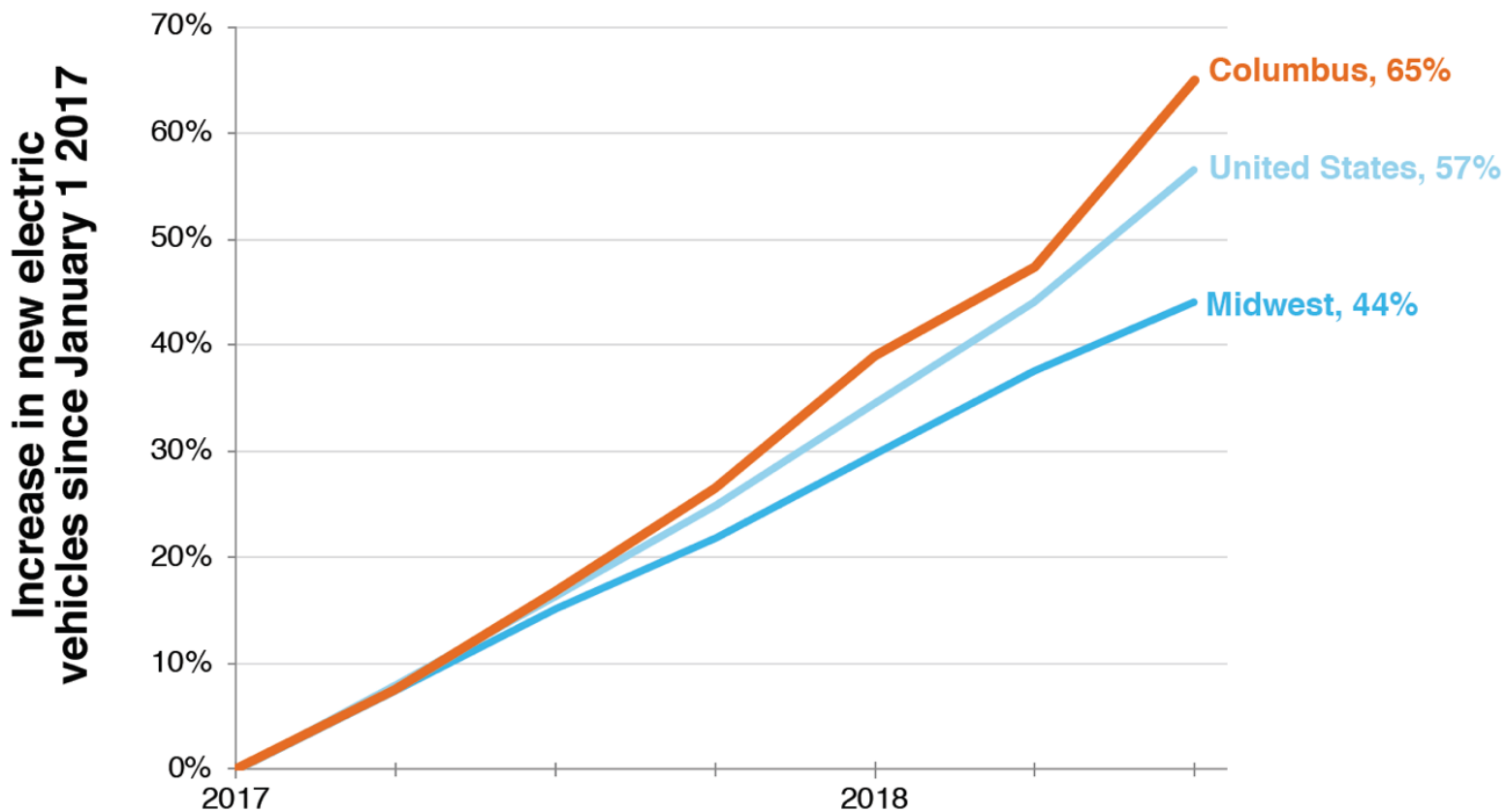
**CONSUMER
ADOPTION OF
ELECTRIC VEHICLES**

5

**CHARGING
INFRASTRUCTURE**



COLUMBUS' EV ADOPTION RATE IS HIGHER THAN THE NATIONAL AVERAGE



SMART COLUMBUS ACCELERATION PARTNERS

// FIRST FIVE COMMITMENTS

1

**EMPOWERED
LEADER**

GOAL

→ 100 Active
Companies

2

**BUY
ELECTRIC**

GOAL

→ 50 Executives
Driving Electric

→ 450 Private
Fleet Vehicles
are Electric

3

**INSTALL CHARGING
INFRASTRUCTURE**

GOAL

→ 100 new
workplace
charging sites

4

**SMART MOBILITY
EDUCATION**

GOAL

→ 120 Ride and
Drive Events
Hosted

5

**INCENTIVIZE
BEHAVIOR
CHANGE**

GOAL

→ 10% SoV
Reduction

→ 5x increase in EV
Adoption

→ 50 new Mobility
Benefit
Packages

WHAT DOES SUCCESS LOOK LIKE?

- **COMPANIES KNOW THEIR DATA**
 - Actively tracking commuting behavior and vehicle ownership/Charging
- **EMPLOYEES ARE AWARE & INFORMED ABOUT TRANSPORTATION OPTIONS**
 - Host a Ride and Drive
 - Post information on intranet
- **COMPANIES ARE INCENTIVIZING BEHAVIOR CHANGE**
 - Deploy benefits
- **EXECUTIVES ARE ENGAGED**
 - CEO Communications
 - Fireside Chats
- **COMPANIES ARE SHARING BEST PRACTICES**

 **5X**
EV ADOPTION

 **10%**
SoV REDUCTION

**30 EXECUTIVES ARE
DRIVING ELECTRIC
TODAY!**

**THAT'S MORE THAN
HALF WAY TO OUR GOAL**

**23 WORKPLACES HAVE
CHARGING TODAY**

**AEP REBATE PROGRAM
RELEASED**

**8 ACCELERATION
COMPANIES APPLYING
FOR FIRST ROUND**

CONSUMER ADOPTION STRATEGY

TEST DRIVES

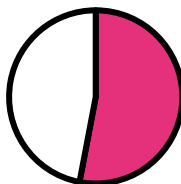


OVER 7,000 TEST DRIVES GIVEN IN NINE MONTHS

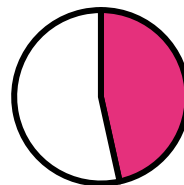
RIDE & DRIVE ROADSHOW

Launched in October 2017

GOAL: 12,000 Drives from
120 Events; 15% Dealer Opt-In



6,380 (53%)
Drives
Completed
To Date



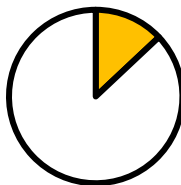
56 (47%)
Events
Completed
To Date

12%
Opt-in Rate
Overall

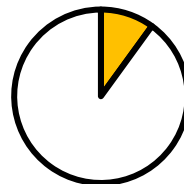
EXPERIENCE CENTER

Started July 5, 2018

GOAL: 400 Drives in
21 Months; 15% Dealer Opt-In



51 (13%)
Drives
Completed
To Date



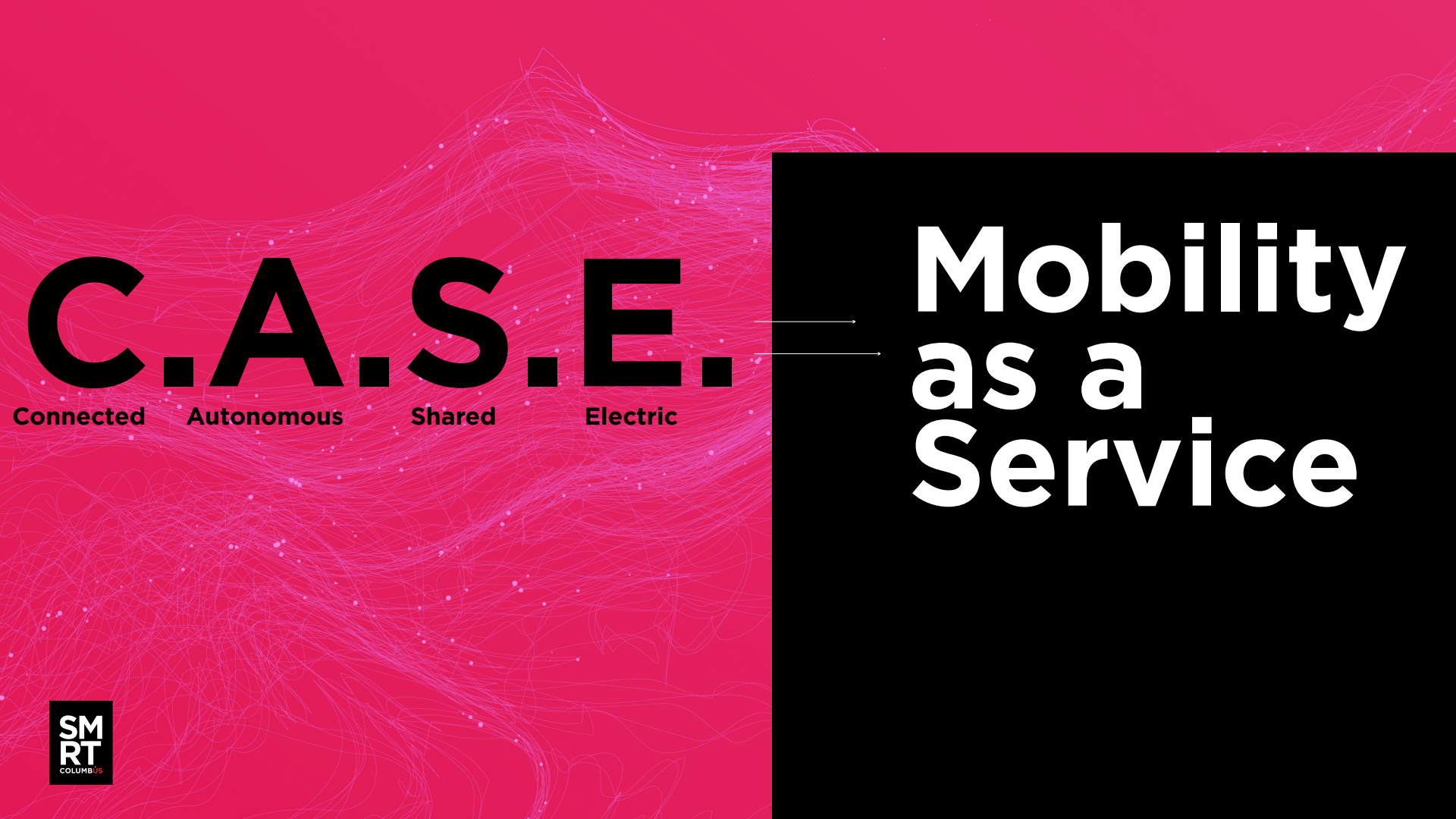
2 (10%)
Months
Open
To Date

16%
Opt-in Rate
Overall



SMART COLUMBUS EXPERIENCE CENTER

- **Open 7 Days a Week**
- **Test Drive Any Day on 1 of 6 EV Models**
- **Touchscreen educational displays on Future of Mobility**
- **Our offices**
 - **5 Organizations Co-Located**
 - **45 People**



C.A.S.E.

Connected

Autonomous

Shared

Electric

**Mobility
as a
Service**

LADDERS OF OPPORTUNITY

- Underpinning theme of our application and projects is that ***Mobility is the great equalizer of the twenty-first century***
- Open, equitable access to transportation can give our residents access to ladders of opportunity; empowering them to better their lives
- Will allow for access to healthcare, school, job training and jobs
- Will help solve for many of the challenges we are facing as the 14th largest city in the US





SMART COLUMBUS OPERATING SYSTEM





OPERATING SYSTEM

PUBLISH AGGREGATE CONSUME FUSE VISUALIZE

DATA STORAGE & CURATION



THINK BEYOND

**WHAT COULD COLUMBUS
LOOK LIKE BASED ON THE
TRANSFORMATIONAL
POTENTIAL OF DATA?**



THANK YOU

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JLD@ColumbusPartnership.com

OUR FOUNDATION. BUILDING BLOCKS FOR OUR FUTURE.

OPEN DATA PLATFORM

Shared data will power applications and solutions for multimodal trip planning, mobile fare payment, parking location, and more – all working to make life easier.



GRID MODERNIZATION

Modernize the electric grid through utility scale renewables. Improve efficiencies and deploy smart meters. A joint effort of AEP and the city.

CHARGING STATIONS

Install new charging stations on corporate campuses, public streets, and in residential developments, to help make electric vehicles the easy choice for individuals and businesses in Columbus.

CONNECTED VEHICLE ENVIRONMENT

179 intersections and 4,200 cars, trucks, and buses will be connected in the Columbus Region by 2020.

→ SMART → COLUMBUS OPERATING SYSTEM

The **Smart Columbus Operating System** aims to solve urban mobility and transportation challenges by efficiently matching supply with demand, catering to individual preferences, and ensuring adherence to regulatory guidelines

Progress Highlights

- Operating System vision articulated with Deloitte through Integrated Roadmap process
- Smart Columbus Sandbox developed
- Annual Smart City Hackathons
- 90 Experts on the Data Technical Working Group
- Minimum Viable Product to Launched with initial use cases:
 - Oversize Truck Routing
 - Truck Parking Availability
 - Permit Coordination

OUR CITY AS LIVING LABORATORY. TEST, LEARN, ITERATE.

AUTONOMOUS VEHICLES

We will be demonstrating connected, autonomous, shared electric shuttles at Easton to help people move within the retail corridor. This will also extend our public transit services, taking people who work there directly to their jobs.

TRUCK PLATOONING

Columbus will demonstrate what the future of logistics could look like by electronically coupling long-haul trucks with sensors.

LADDERS OF OPPORTUNITY

Linden will be the first neighborhood where we will reverse the mistakes of the past by using technology, new mobility services, and smart urban planning to create ladders of opportunity, ensuring all Columbus residents have a place in our future.

LADDERS OF OPPORTUNITY

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- Will allow for access to healthcare, school, job training and jobs
- Will help solve for many of the challenges we are facing as the 14th largest city in the US



OUR NEW WAY OF LIFE. EMBRACE THE CHANGE.

ELECTRIC VEHICLE ADOPTION

We will aggressively grow the electric market in Columbus: add them to public and private fleets, secure a supply of new and used models, prepare dealers and service people, and educate consumers.

INTEGRATED SOLUTIONS & SEAMLESS USER EXPERIENCE

Simple, integrated solutions will create a much friendlier user experience: to navigate, plan routes, and pay fares with different modes of transport, from pick up to parking.

MULTIMODAL OPTIONS

To decrease our high dependency on personal ownership, we'll bring people on board to grow our ecosystem with more options, including improving existing services and adding new services that address more needs throughout the region.

SMART COLUMBUS **THE MOVEMENT**

DRIVE ELECTRIC & DRIVE LESS

DRIVE ELECTRIC

Increase number of electric vehicles on the road by residents in the Columbus Region. Create conditions in the business community to support EV adoption.

- **1.8% New Car Sales are Electric in 2020**
- **50 Executives Driving Electric in 2020**
- **20,000 Residents exposed to Electric Vehicles first hand by 2020**
- **800 Electric Fleet Vehicles**

Progress Highlights

- **New Car Sales increased from 0.37% in 2015 to 0.77% in 2017**
- **Ride and Drive Roadshow Launched in October 2017, facilitating over 6,000 test drives to date**
- **Daimler selected Columbus and Sacramento for Dealer Training Pilot**
- **Honda committed to distribute the new 2018 Clarity in Columbus**
- **Over 30 Executives Currently Driving Electric**
- **City of Columbus purchased it's first 90 Electric Fleet Vehicles**

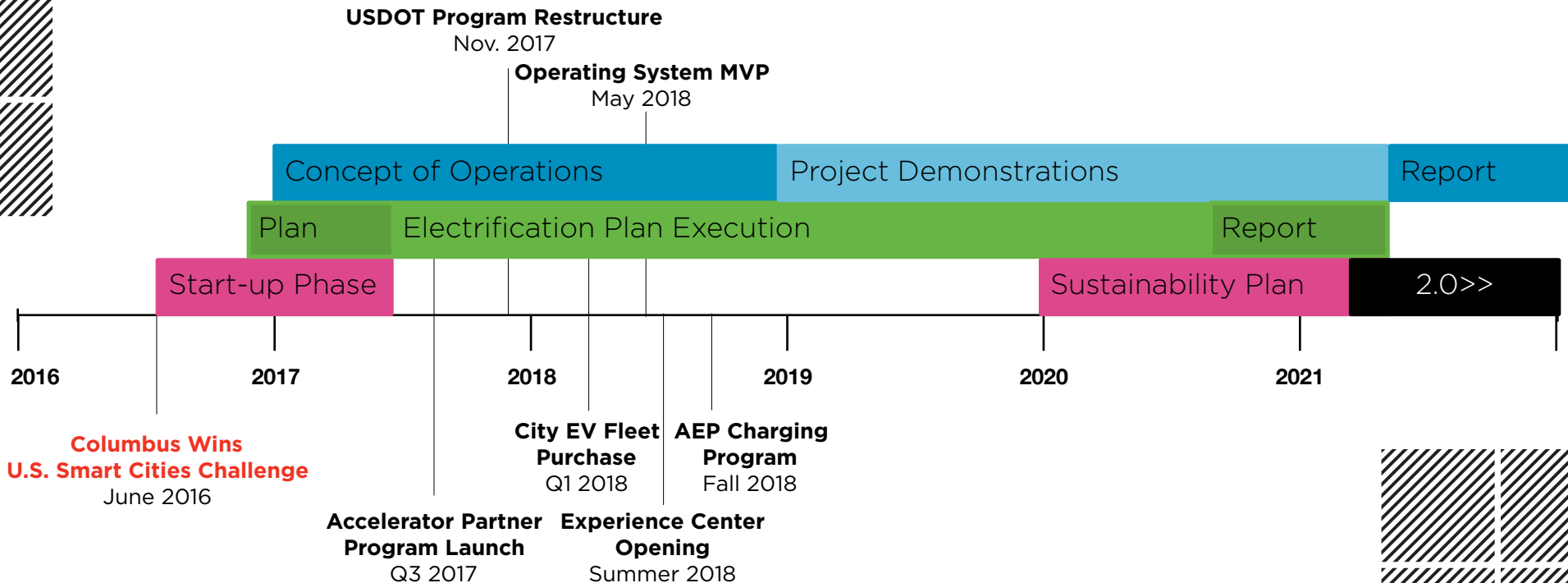
DRIVE LESS

- **Decrease single occupant vehicle commuter traffic to large campuses by 10%**
- **50 companies offer Mobility Benefit Packages by 2020**
- **Increase number of Shared Transportation Providers**
- **Introduce new multi-modal/integrated mobile applications**

Progress Highlights

- 45,000 downtown workers will receive free bus fare starting in June 2018 as part of a first of its kind pilot program funded by MORPC, COTA, and Downtown businesses.
- Chariot service launched in Columbus in January 2018
- COTA enabled all buses with public wi-fi in 2017.
- COTA moving to mobile fare payment in all buses by end of 2018
- New COTA CEO Hired
- Dockless bike share launching in May 2018

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SM
RT
COLUMBUS

EARLY ADOPTERS \ +48 COMPANIES

VORYS

DMIG DISPATCH
MEDIA
GROUP
a GateHouse Media group

PNC

Nationwide®

AMERICAN
ELECTRIC
POWER

at&t

IBM iX

THE OHIO STATE UNIVERSITY

CardinalHeath

Huntington

CAMERON MITCHELL
RESTAURANTS

BATTELLE

Lbrands

OhioHealth

IGS

COLUMBUS STATE
COMMUNITY COLLEGE

White
Castle

CAS®

COLUMBUS
SEMI-ANNUAL MEETING

Columbus College
of Art & Design

kaufman
DEVELOPMENT

NATIONWIDE CHILDREN'S
Where your child needs a hospital, we're there.

ScottsMiracleGro

the Memorial Tournament®

COLUMBUS
200
THE ASSOCIATION

covermymeds®

Deloitte.

JONES
DAY

i INNOVATION

EY

DENISON

FIFTH THIRD BANK

Grange
Insurance

niSource

STEINER



STATE AUTO
Insurance Companies

The Dispatch Printing Company

SQUIRE
PATTON BOGGS



Motorists
Insurance Group.

SM
RT
COLUMBUS

→ PELOTONIA

CHASE

AllianceData

Ruscilli
CONSTRUCTION CO., INC.

SMART COLUMBUS ACCELERATION PARTNERS

// FIVE COMMITMENTS

1

**EMPOWERED
LEADER**

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→ 100 Active
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**BUY
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