



# Prenatal Trip Assistance Concept of Operations



# SPEAKERS



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# TODAY'S AGENDA

## 01 | PURPOSE OF THIS WEBINAR

- Share concept development activities from Smart Columbus with stakeholders

## 02 | WEBINAR CONTENT

- Smart City Challenge Overview
- Smart Columbus Program Overview
- Prenatal Trip Assistance Project Overview
- Smart Columbus Prenatal Trip Assistance Project Concept of Operations
- How to Stay Connected
- Stakeholder Q&A

## 03 | WEBINAR PROTOCOL

- All participant lines have been muted during the webinar in order to reduce background noise
- Questions are welcome via chatbox during the Q&A Section
- The webinar recording and presentation materials will be posted on the Smart Columbus website



# \$40 MILLION

78 APPLIED • COLUMBUS WON



SMART CITY  
CHALLENGE

THE CITY OF  
**COLUMBUS**  
ANDREW J. GINTHER, MAYOR



U.S. Department of Transportation



# SMART COLUMBUS OVERVIEW



COLUMBUS



SM  
RT





# **VISION**

**To empower our residents to live their best lives through responsive, innovative and safe mobility solutions.**



# MISSION

**To demonstrate how an intelligent transportation system and equitable access to transportation can have positive impacts on every day challenges faced by cities.**



# OUTCOMES



**SAFETY**



**MOBILITY**



**OPPORTUNITY**



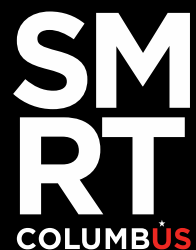
**ENVIRONMENT**



**AGENCY  
EFFICIENCY**

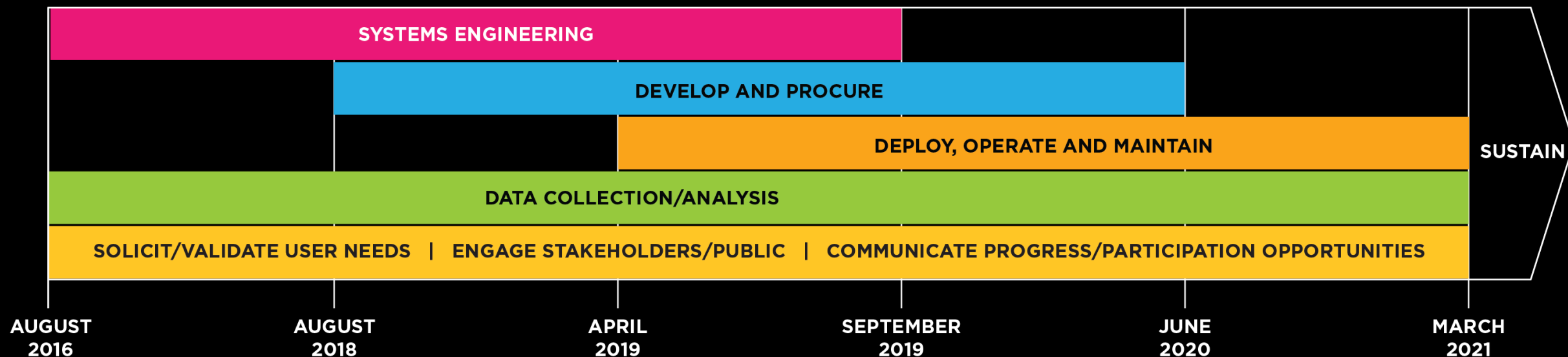


**CUSTOMER  
SATISFACTION**



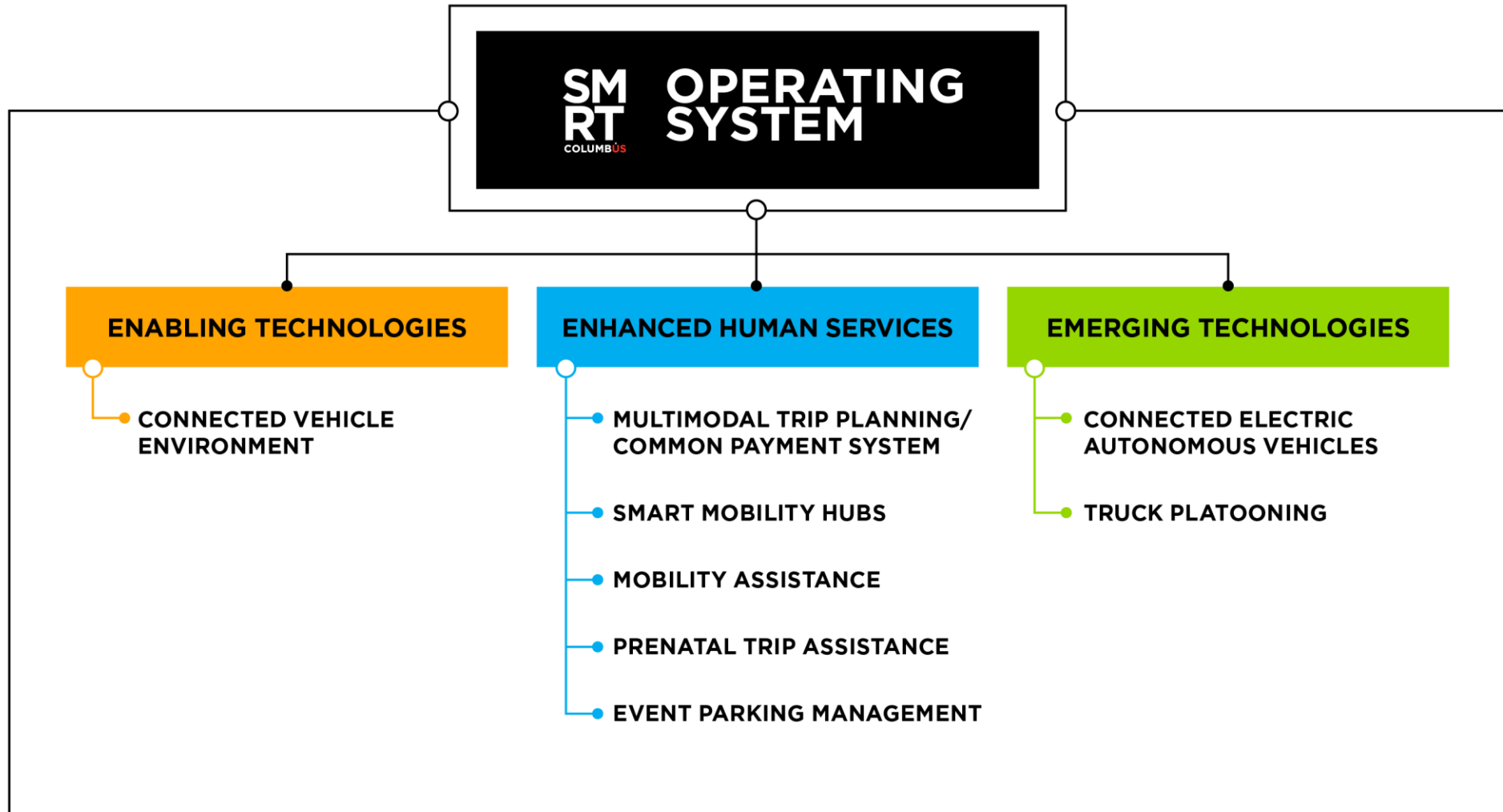
# PROJECT PHASES AND TIMELINE

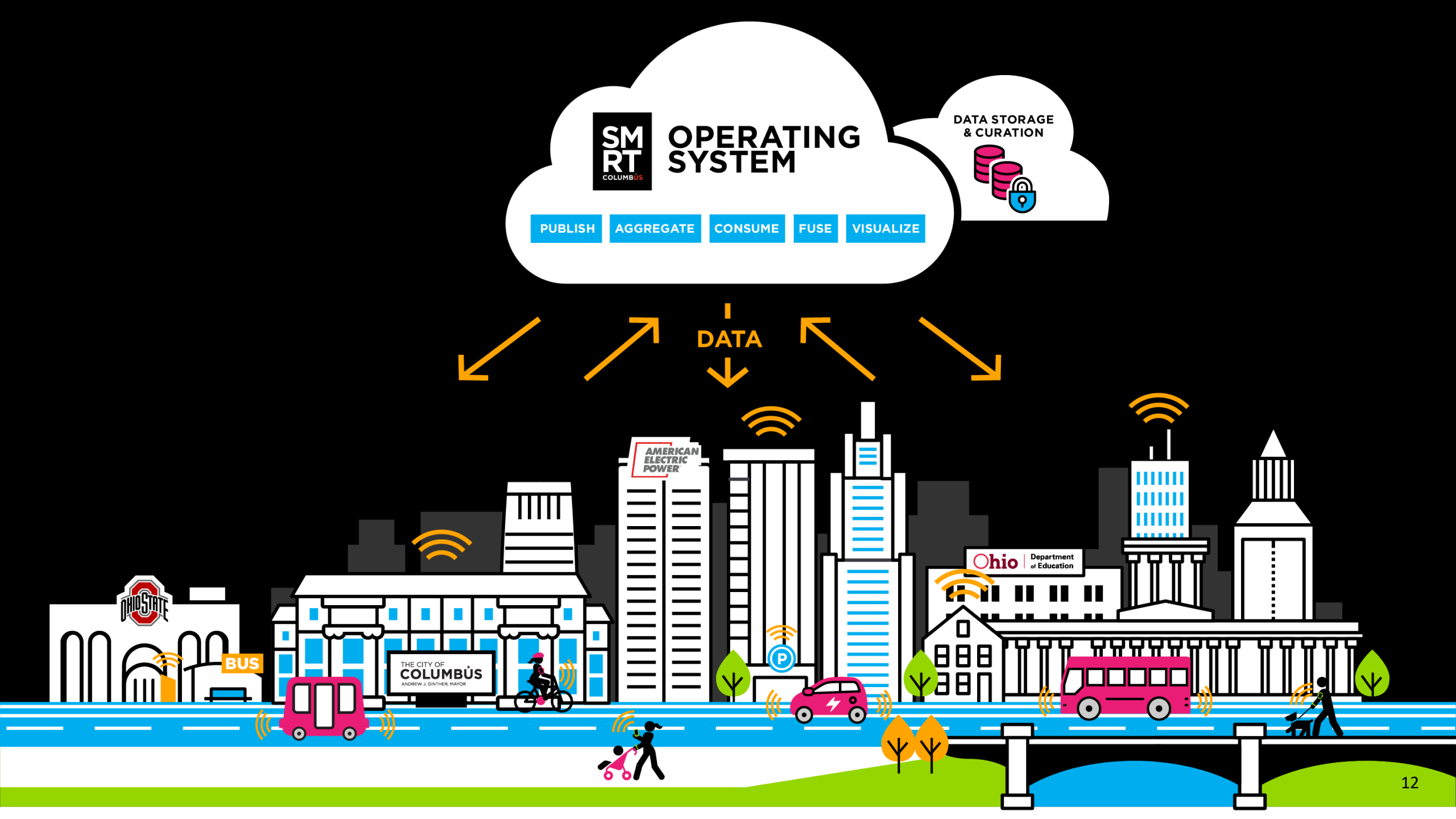
## WHERE WE ARE GOING





# USDOT PORTFOLIO







# OPERATING SYSTEM BIG PICTURE

## Data Inputs



Workers



Citizens



Public & Private  
Systems

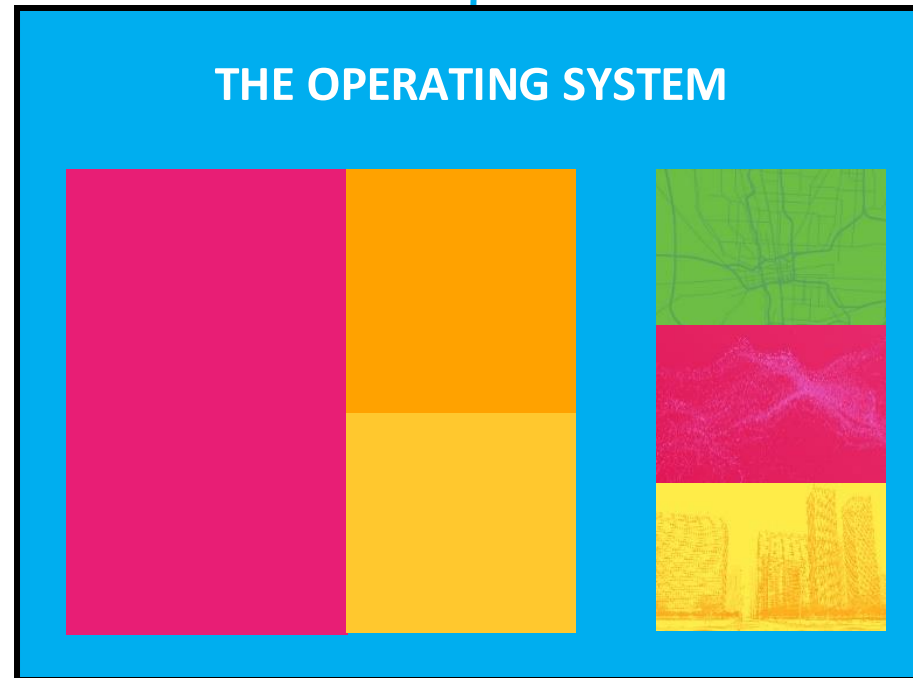


Devices & Things

## Data Capture & Analysis



Data Scientist & Researchers



Application hosting and connectors to  
other systems

## Data Consumption



Public



Entrepreneur



Universities



Commercial  
Partners



City



USDOT



Independent  
Evaluators

# PRENATAL TRIP ASSISTANCE



ARRIVE AT DR.  
APPOINTMENT  
@4:45 PM







# CELEBRATEONE



**Erika Clark Jones**  
**Executive Director**

*Every baby deserves to celebrate his or her first birthday, regardless of race, address or family income*



# CELEBRATEONE

Every baby deserves to celebrate his or her first birthday, regardless of race, address or family income

## 2017 Infant Mortality Rates

Communities with high infant mortality rates may have higher medical care, education and workforce costs.

**18,800**

babies were born in Franklin County

**155**

babies died in Franklin County

**6,658**

babies or 35% were born in CelebrateOne neighborhoods

**79**

babies or 51% died in CelebrateOne neighborhoods

## Goals

**40%**

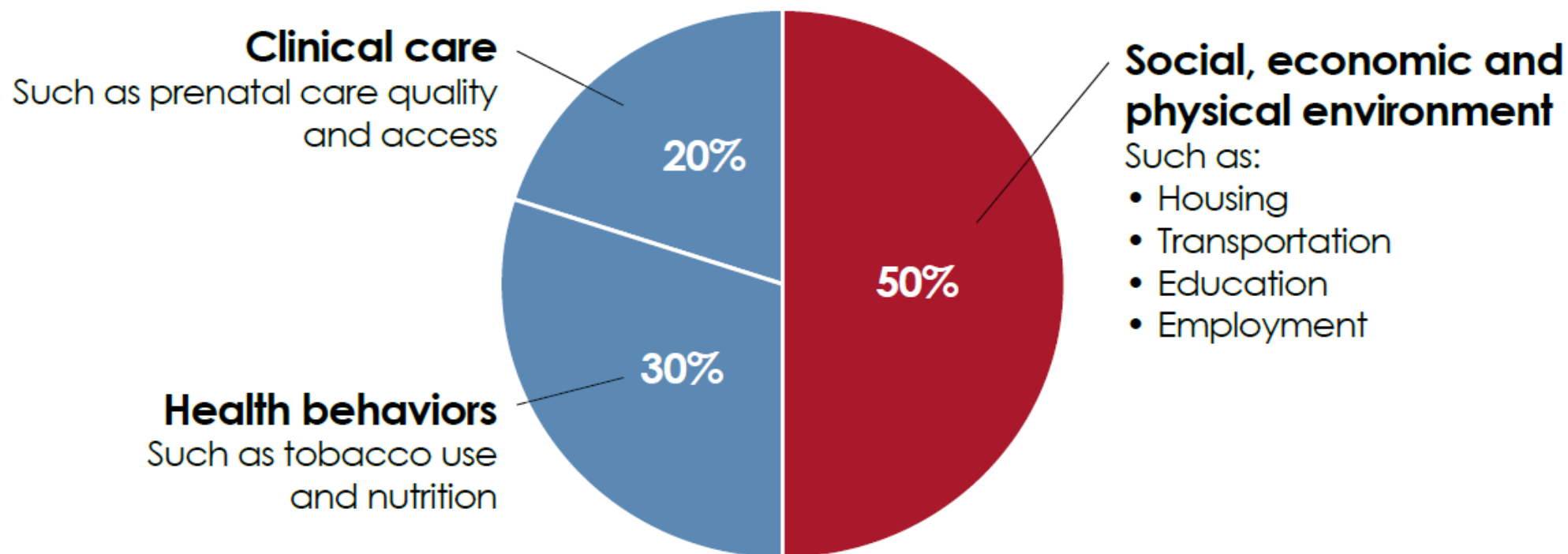
Reduction in Infant Mortality Rate by December 2020

**50%**

Decrease in Racial Disparity Between African American and White Babies by December 2020



# PRENATAL HEALTH FACTORS

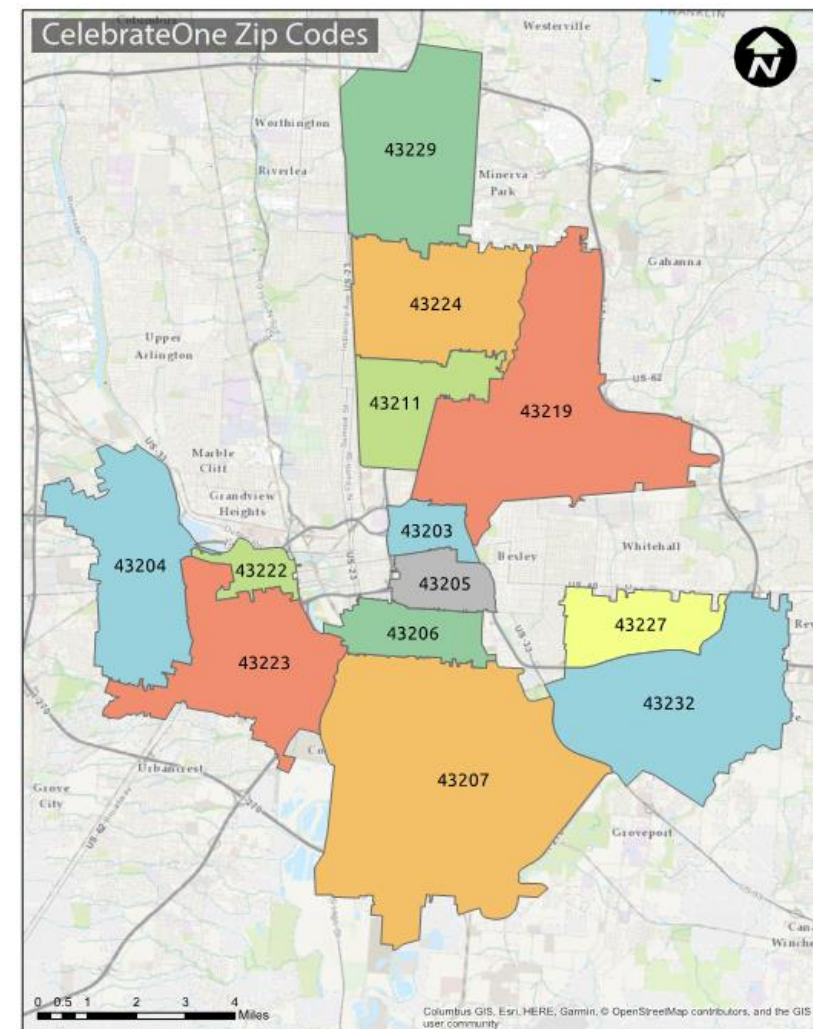


**Underlying drivers of inequity:** Poverty, racism, discrimination, trauma, violence and toxic stress

*Source: Health Policy Institute of Ohio, December 2017*

# PROJECT SCOPE

- Increase prenatal trips to the doctor for women living in these CelebrateOne target zip codes, where Franklin County infant mortality rates are persistently high



# STAKEHOLDER ENGAGEMENT

- Focus groups with expectant women
- CelebrateOne
- Managed Care Organizations (MCOs)
- Ohio Department of Medicaid
- Franklin County Department of Job and Family Services
- The Ohio State University
- Major medical doctors/facilities
- Technology Vendors/Transportation Brokers
- Moms2B
- StepOne
- COTA



## THE PROBLEM TODAY\*

- Communication challenges between all parties
- Arrival time of ride
- There are no car seats for her kids
- The woman is frustrated and decides it's not worth the hassle of going to the doctor

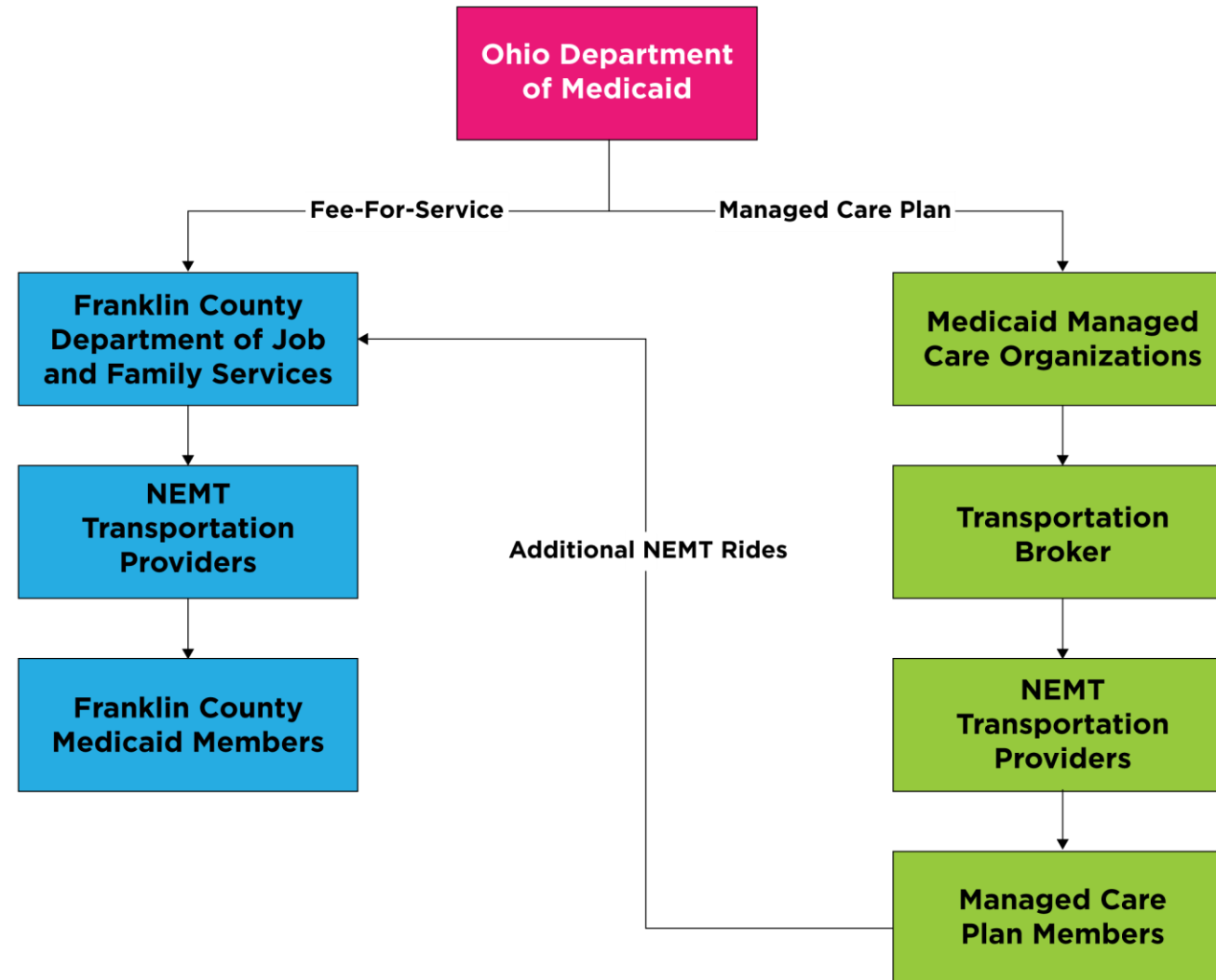


\*Based on interviews, focus groups, partner conversations and prior research





# CURRENT SYSTEM



## GAPS

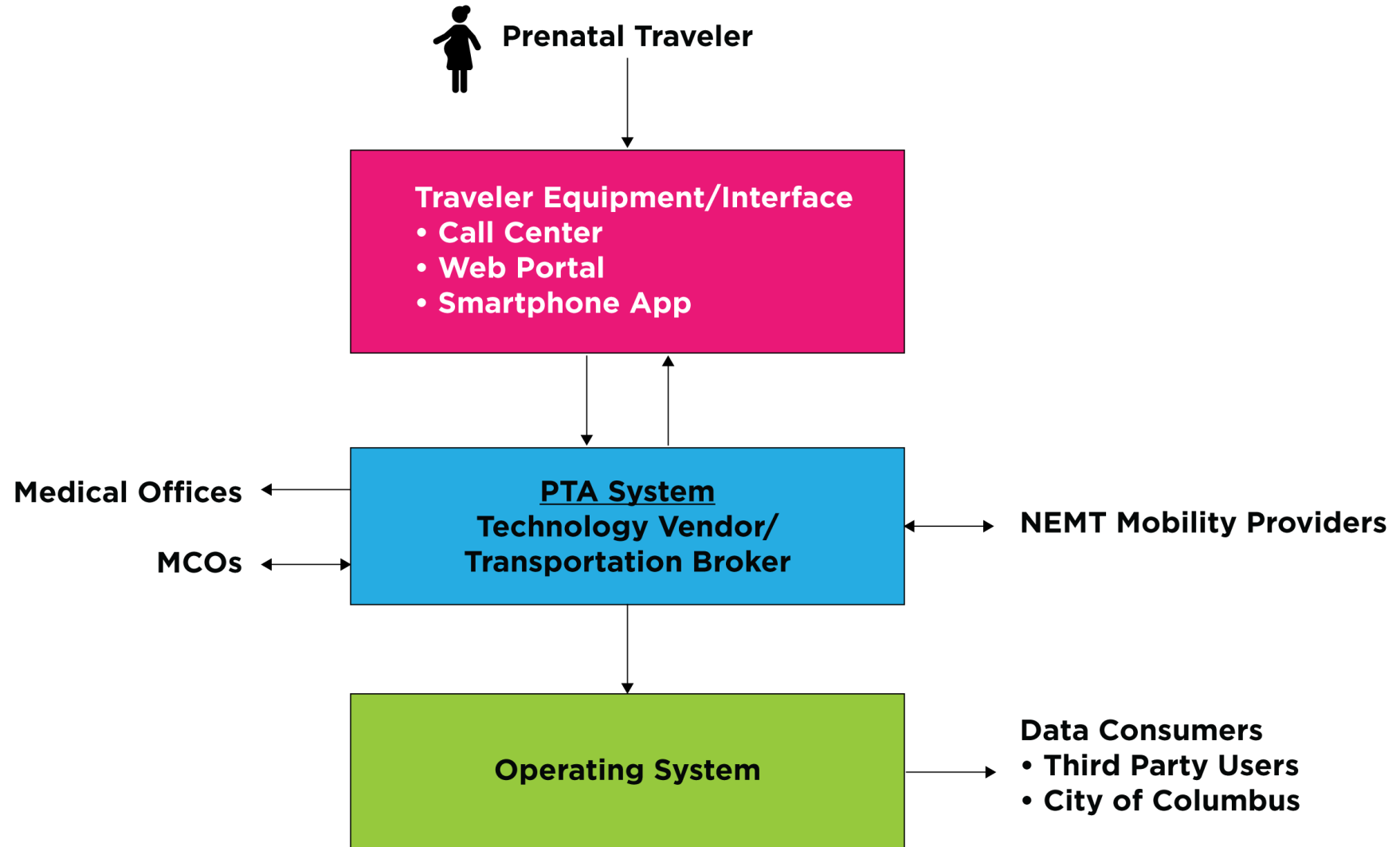
- NEMT trip scheduling only available through call center
- On-demand transportation is limited
- Real-time trip optimization not available for all NEMT
- Lack of communication between players
- B-trip return time difficult to estimate
- Driver information unavailable to the Prenatal Traveler
  - Vehicle
  - Real-time location
- Feedback options need to be more reliable and immediate for all parties

# THE VISION

1. Pregnant woman sets doctor appointment
2. She schedules a trip via call center, smartphone app or website
3. Services are available on-demand
4. She receives multiple notifications via her preferred communication method
5. Notifications via text and email have easy trip confirmation, cancellation or change options
6. Driver location is available in real-time before pick-up
7. Doctor's office is notified if the trip running late
8. On-demand return trips can also be set via call, smartphone app or website
9. Pregnant woman and driver have feedback options available immediately via app, website or by calling a designated number provided by MCOs
10. Driver performance and member usage data is immediately available to MCOs

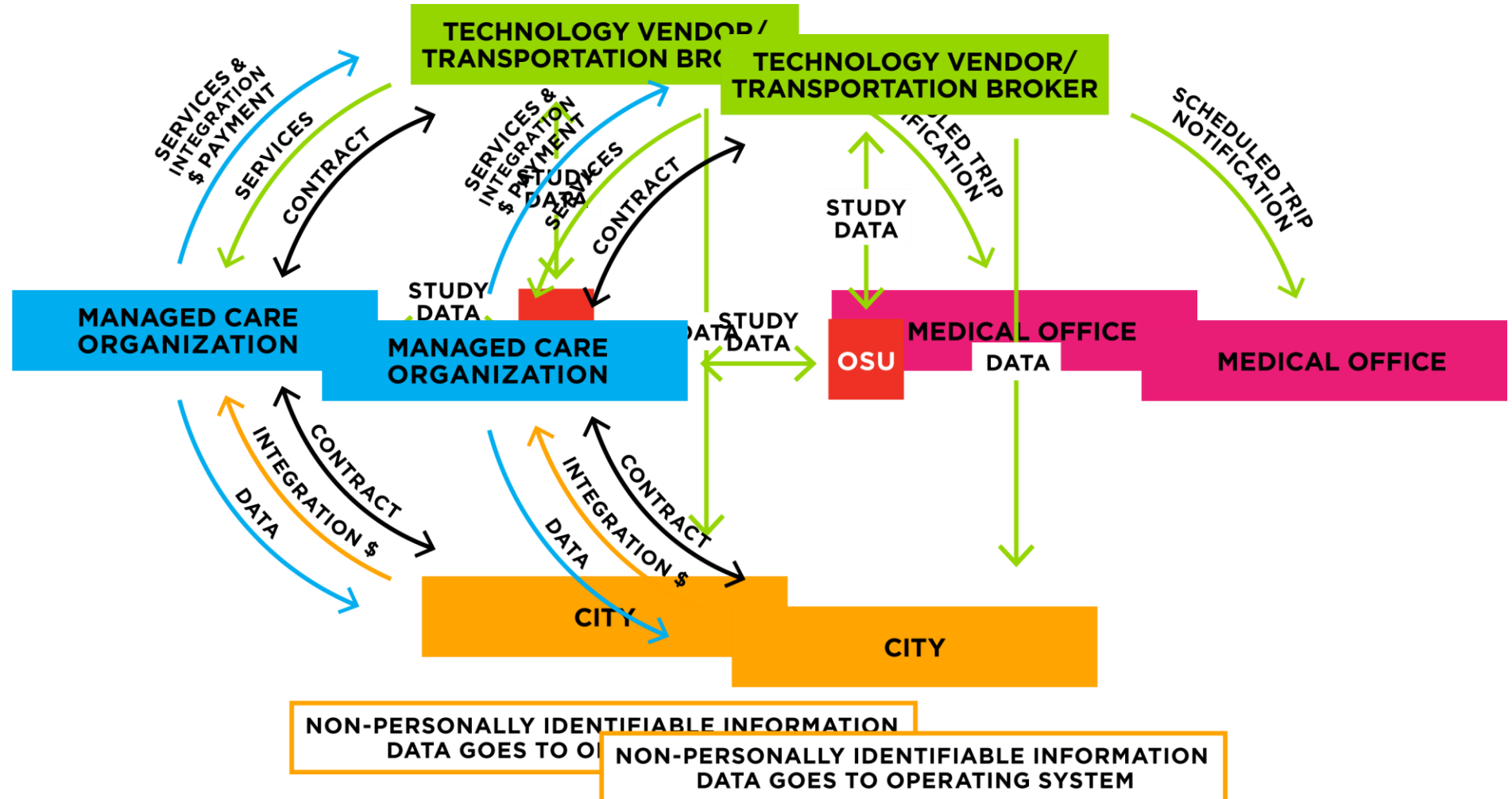


# PROPOSED SYSTEM





# HOW DOES THIS WORK WITH CORE PARTNERS?



# STUDY PROTOCOL

- Study Aims
- Study Design
- Study Outcomes
- Data Collection
- Analytic Plan
- Timeline



**Courtney D. Lynch, PhD, MPH**  
Associate Professor  
OBGYN and Epidemiology



**Erinn M. Hade, PhD**  
Assistant Professor  
Biomedical Informatics  
and OBGYN



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF MEDICINE

## STUDY DESIGN

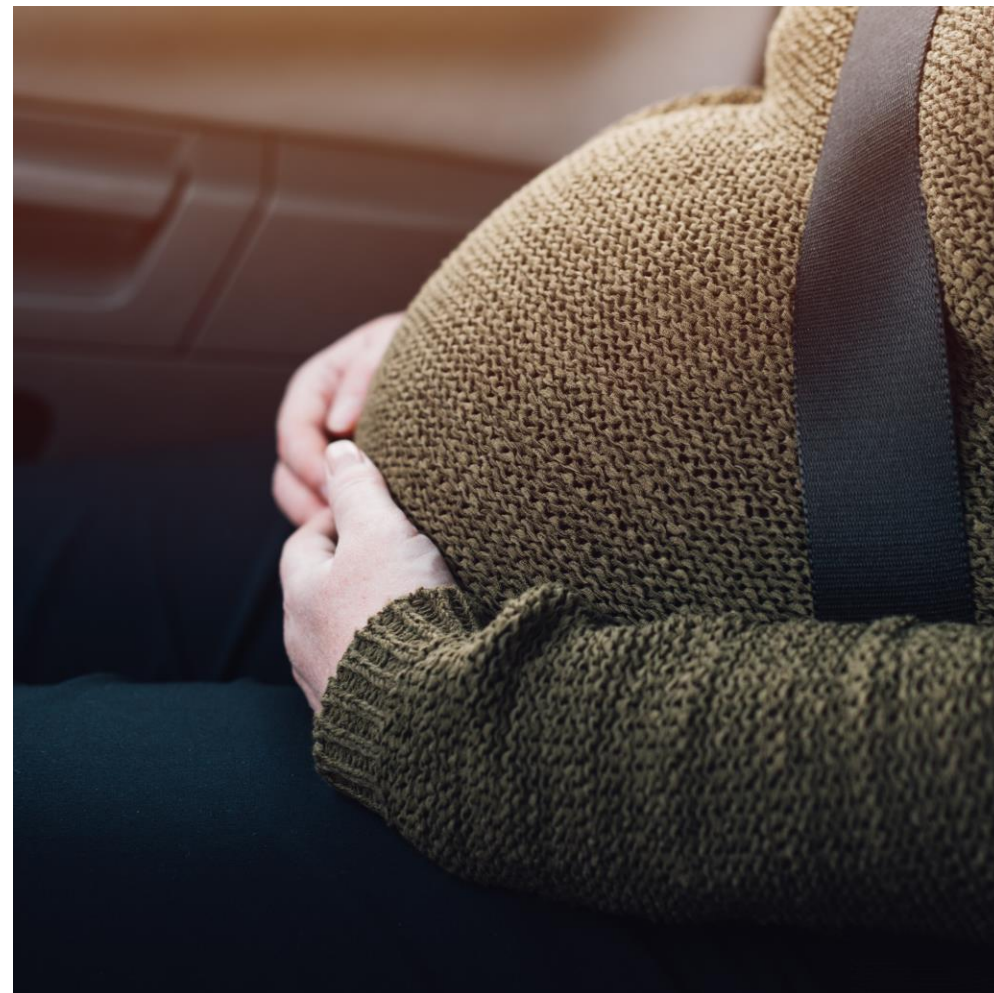
- Randomized controlled trial
- Randomly assign 500 women to:
  - Existing transportation services from their MCO  
or
  - Expanded “smart” transportation services (the intervention)

Expanded “smart” trips include standard NEMT trips provided by MCOs, with the addition of:

1. Freestanding pharmacy trips
2. Trips to the food bank/grocery store

## PRIMARY AIM

- To examine women's satisfaction with transportation services in those assigned to expanded "smart" transportation compared to those assigned to existing transportation services



## SECONDARY AIMS

- To examine adequacy of prenatal care as measured by the Kotelchuck Index between groups
- To examine rates of preterm delivery (<37 weeks) between groups
- To examine rates of infant mortality between groups







# ELIGIBILITY CRITERIA

- Pregnant women aged 18+ years
- Less than 32 weeks of gestation
- Enrolled in a participating Medicaid managed care plan
- Needs non-emergency medical transportation (NEMT)
- Lives in a CelebrateOne zip code at the time of enrollment
- Ambulatory at enrollment
- No plans to move out of Franklin County prior to delivery
- Able to speak and understand English



# INFORMED CONSENT & ENROLLMENT

- Enrollment targets
- Informed consent for participation
- Stratified permuted block randomization
- Follow-up through pregnancy and two months following delivery

Race/ethnicity of mother	% of target area births	Enrollment target
Non-Hispanic black	54%	270
Non-Hispanic white	32%	160
Other race/ethnicity	14%	70
Total	100%	500

# DATA COLLECTION

- Study staff will administer a baseline questionnaire
- Follow-up questionnaires every 30 days to assess interim satisfaction with transportation services
- Final (exit) questionnaire at two months after delivery to more thoroughly assess satisfaction with transportation
- Pregnancy and Infant outcomes

# PARTICIPANT RETENTION

- Cash (gift card) incentives
  - \$20 at enrollment following the baseline questionnaire
  - \$10 per trimester of follow-up questionnaire completion
  - \$20 delivery notification
  - \$30 final (exit) questionnaire
- Non-cash incentives
  - Magnets with study logo
  - Water bottle with study logo
  - Delivery baskets (focused on items for mom)

# DATA MANAGEMENT AND ANALYSIS

- Data will be collected in a secure HIPAA-compliant REDCap database
- Data transfer between partners (e.g., enrollment status) will occur via secure FTP
- Primary analyses comparing satisfaction, adequacy of prenatal care and rates of PTB will be under an 'intent to treat' principle.
- Secondary analyses will explore how results may differ by treatment received.





# STUDY TIMELINE AND MILESTONES

- Nov 2018 – Identification of project vendor
- Nov-Dec 2018 – Questionnaire development and review
- Jan 2019 – Institutional Review Board application submitted
- Mar-Apr 2019 – Staff training
- Jun 2019 – Enrollment begins
- Oct-Nov 2019 – Enrollment ends
- Nov 2020 – Follow-up ends
- Dec 2020 – Analysis and report preparation

# PROJECT LESSONS LEARNED

- Bring Primary Stakeholders Together Early
- Project Scope Growth
- Health Care is a Complex System... Rely on the Experts!





# PUBLIC COMMENTS NEEDED

## Public comment period open for the PTA Concept of Operations:

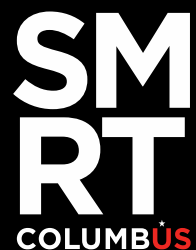
- November 7th to November 21<sup>st</sup>

## Where to find it:

1. View the ConOps at: <https://smart.columbus.gov/projects>
2. Click PRENATAL TRIP ASSISTANCE
3. Direct link to file:  
[https://smart.columbus.gov/uploadedFiles/Projects/SCC-B-ConOps\\_PTA\\_FINAL%2020180911.pdf](https://smart.columbus.gov/uploadedFiles/Projects/SCC-B-ConOps_PTA_FINAL%2020180911.pdf)

## How to comment:

1. Please email comments to: [kldepenhart@columbus.gov](mailto:kldepenhart@columbus.gov)
2. Subject line: PTA Comments
3. Include your contact information
4. State whether or not you represent a vendor interest



# HOW TO STAY CONNECTED

## **USDOT SMART CITY CHALLENGE PROGRAM INQUIRIES:**

Kate Hartman, Chief - Research, Evaluation  
and Program Management  
Intelligent Transportation Systems  
Joint Program Office

[Kate.Hartman@dot.gov](mailto:Kate.Hartman@dot.gov)

## **SMART COLUMBUS INQUIRIES:**

Alyssa Chenault,  
Communications Project Manager

[anchenault@columbus.gov](mailto:anchenault@columbus.gov)

## **Upcoming Smart Columbus Webinars:**

- Event Parking Management System Requirements
- Common Payment System System Requirements
- Overview of Emerging Technologies:  
Connected Electric Autonomous Vehicles and  
Truck Platooning

**Webinar recording and materials will be available at [itsa.org](https://itsa.org) and [smart.columbus.gov](https://smart.columbus.gov)**



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**QUESTIONS?**