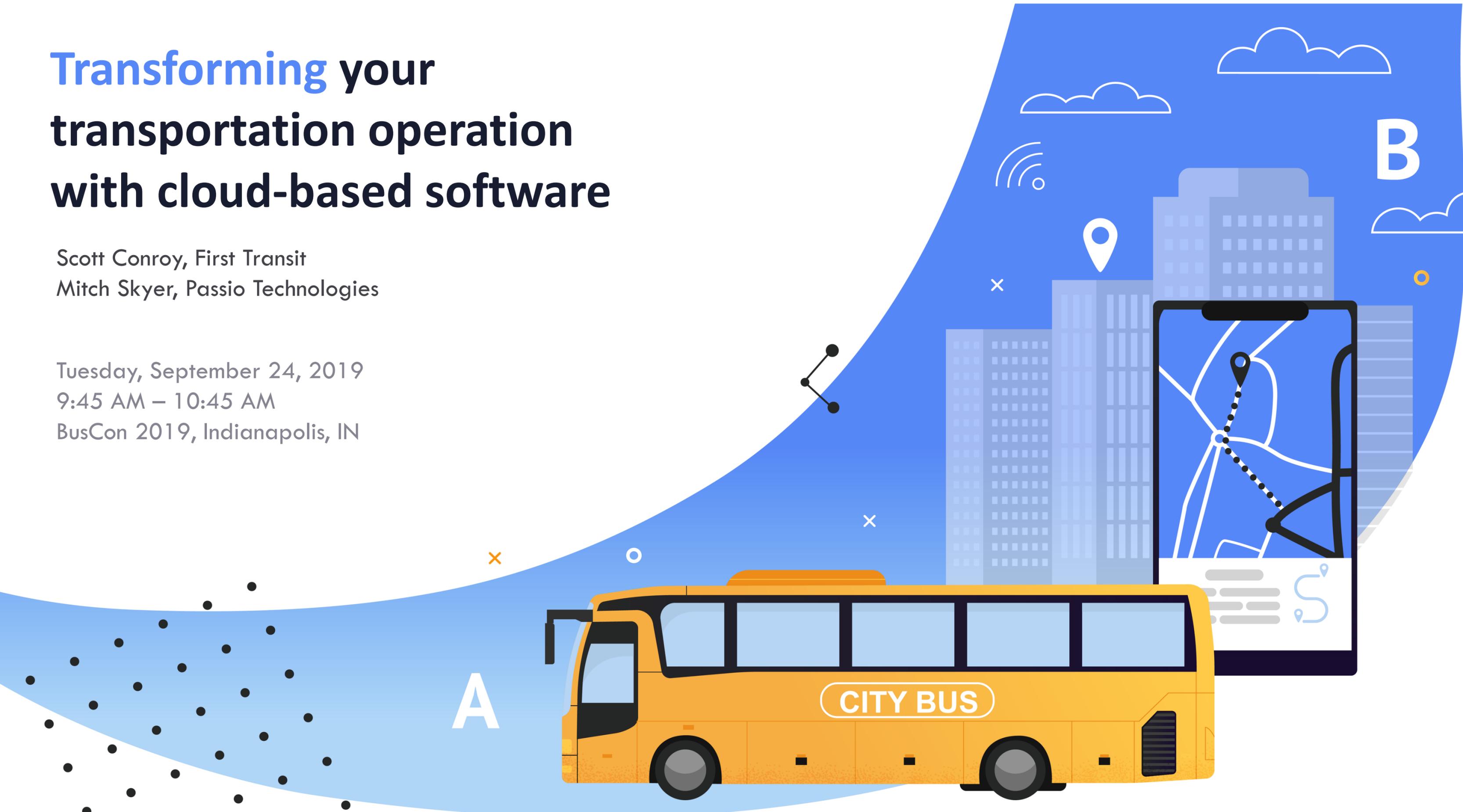


# Transforming your transportation operation with cloud-based software

Scott Conroy, First Transit  
Mitch Skyer, Passio Technologies

Tuesday, September 24, 2019  
9:45 AM – 10:45 AM  
BusCon 2019, Indianapolis, IN





*Change can be hard. It requires no extra effort to settle for the same old thing. Auto-pilot keeps us locked into past patterns. But transforming your life? That requires courage, commitment, and effort. It's tempting to stay camped in the zone of That's-Just-How-It-Is. But to get to the really good stuff in life, you have to be willing to become an explorer and adventurer.*

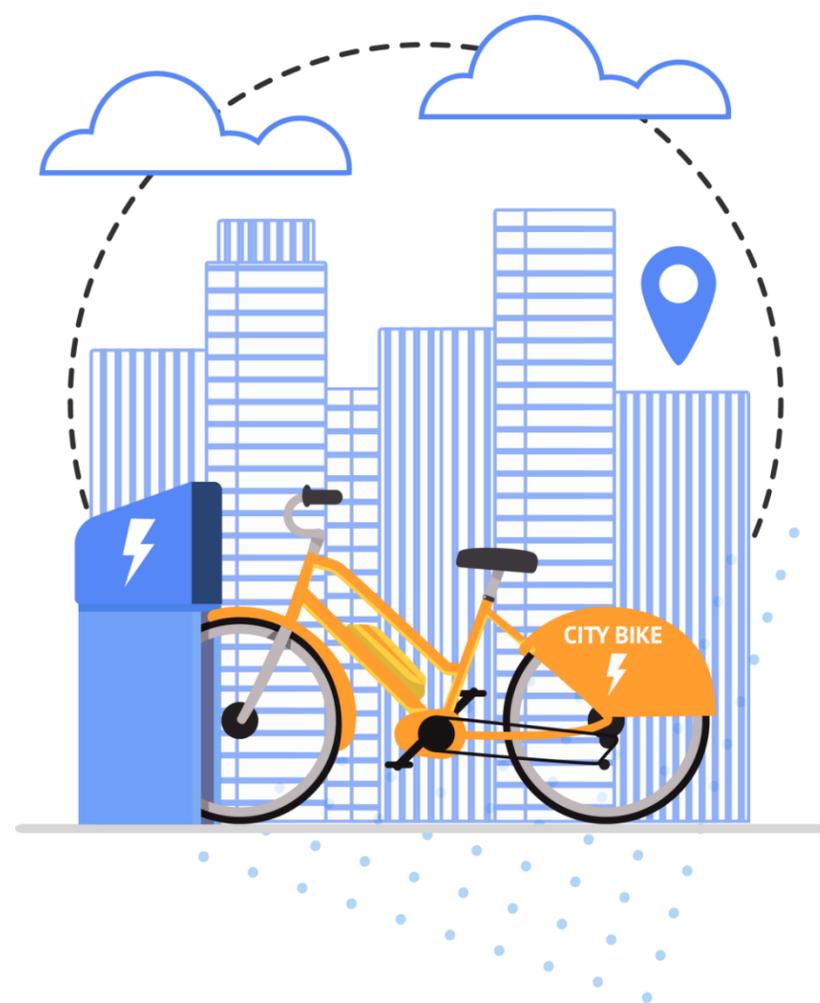
*-John Mark Green, IT Geek & Author*

- Considering a move to an updated software system?
- Wondering how to use technology to get the most out of your bus operation?
- This session will discuss how transit resources are used and destination decisions are made in a data driven transit technology world.

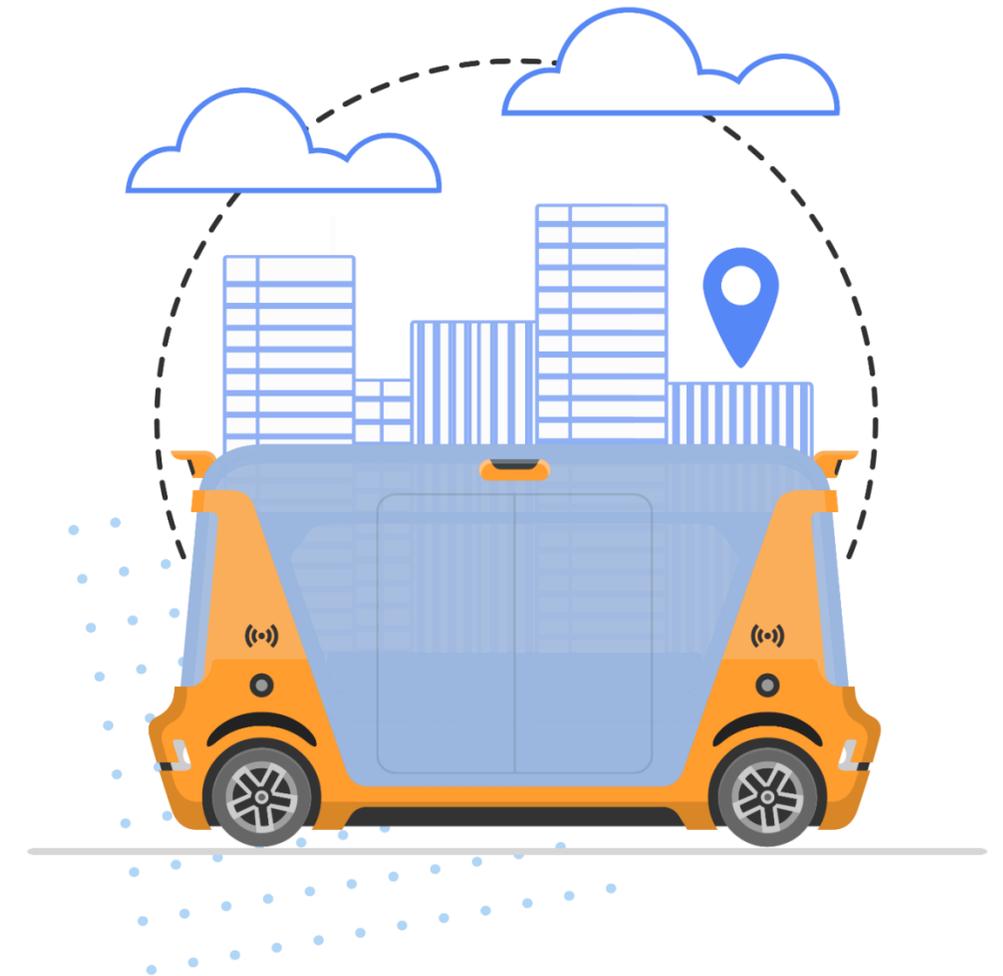
# The transit landscape is rapidly changing



- Electric buses
- Ride hailing - Uber & Lyft



- Bike, car & scooter shares
- Mobility as a Service (MaaS)

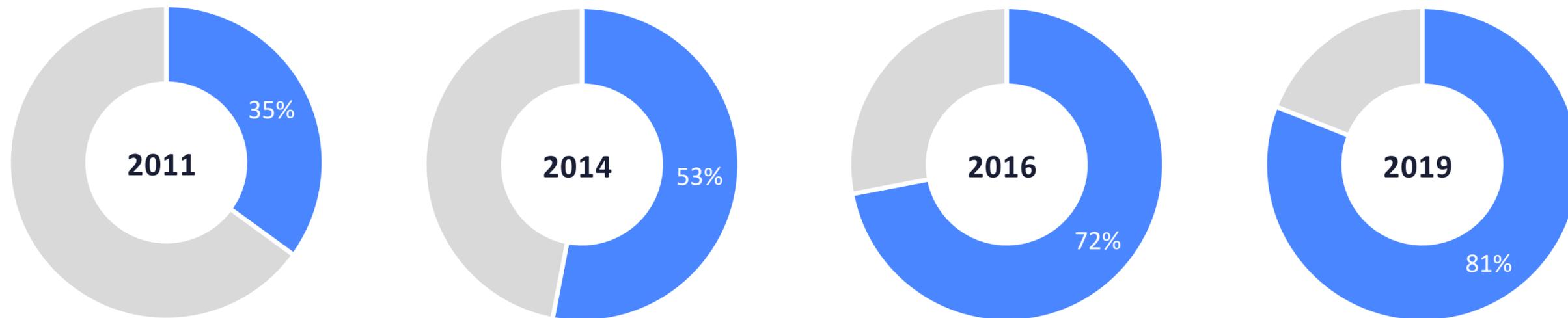


- Autonomous buses
- Demand based routing

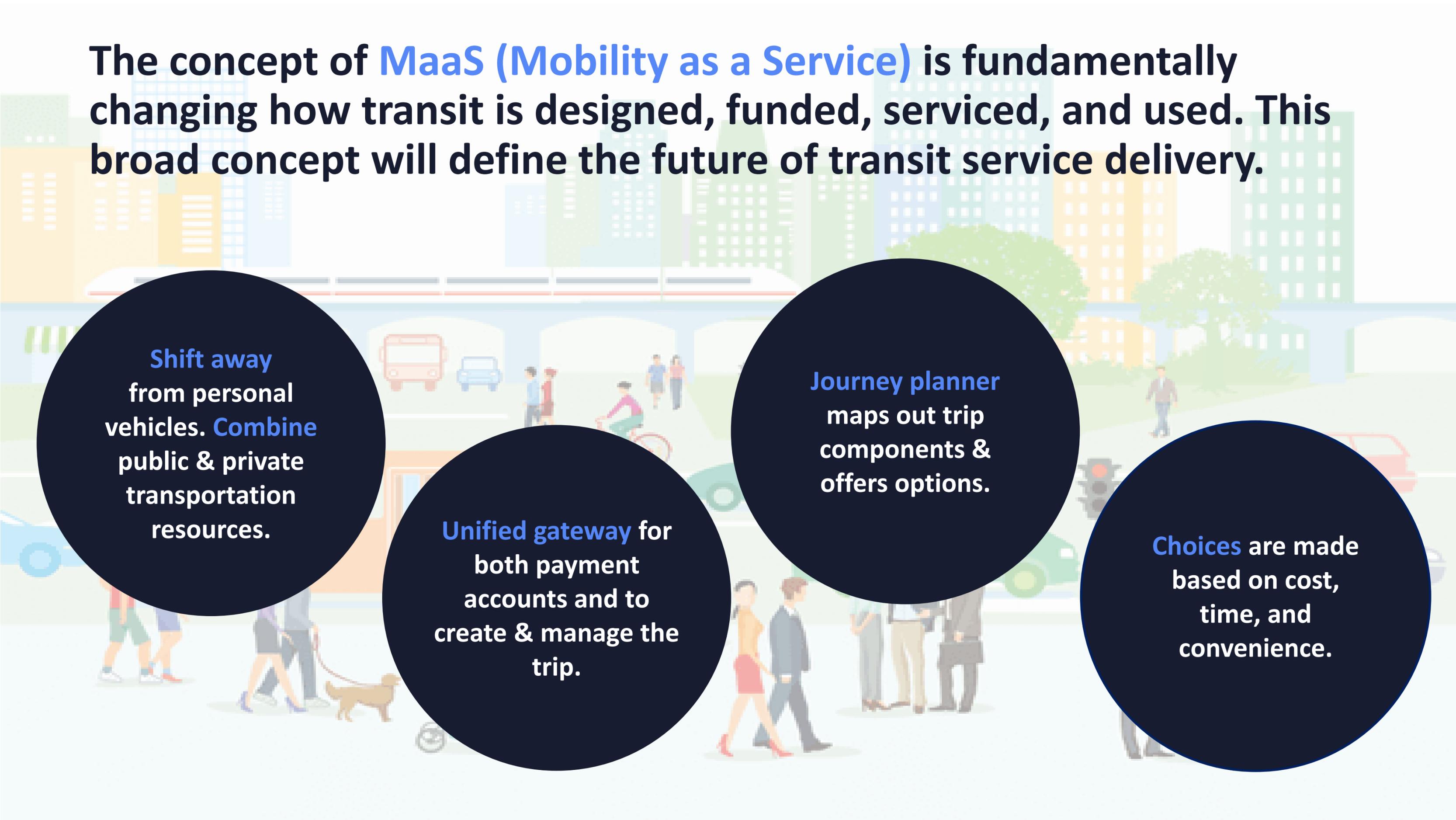
# The impact of smartphones

Percentage of US adults who own a smartphone

*Source: Pew Research surveys*



- 81% of US adults now own a smartphone
- People expect they can summon anything from a sandwich to a ride with the quick touch of a button
- Ride hailing companies like Lyft and Uber have given riders a sense of control
- Riders have grown to expect real-time information and their patience for delays has drastically declined



The concept of **MaaS (Mobility as a Service)** is fundamentally changing how transit is designed, funded, serviced, and used. This broad concept will define the future of transit service delivery.

**Shift away** from personal vehicles. **Combine** public & private transportation resources.

**Unified gateway** for both payment accounts and to create & manage the trip.

**Journey planner** maps out trip components & offers options.

**Choices** are made based on cost, time, and convenience.



# How does technology help increase **efficiency**?

- ✓ Utilize technology to reduce manual data collection
- ✓ Maximize transit availability through proactive and preventative maintenance
- ✓ Use the data collected to properly allocate resources for current demand

- 
- ✓ Identify & optimize inefficient routes to reduce costs and delays
  - ✓ Predict needs, anticipate problems, suggest transit options to riders
  - ✓ Create demand based fixed route & efficiently offer requested transportation services

# How does cloud based technology help improve the **rider experience**?



Provide riders with user-friendly apps to plan their trips in real-time and push information directly to them

Keep riders informed with access to real-time bus location data

Give riders mobile ticketing options, eliminating the hassle of paper tickets

Empower riders by connecting them with last-mile solutions which make public transit more attractive & increase ridership

# Preparing for the future of smart mobility

## Today (Gather)

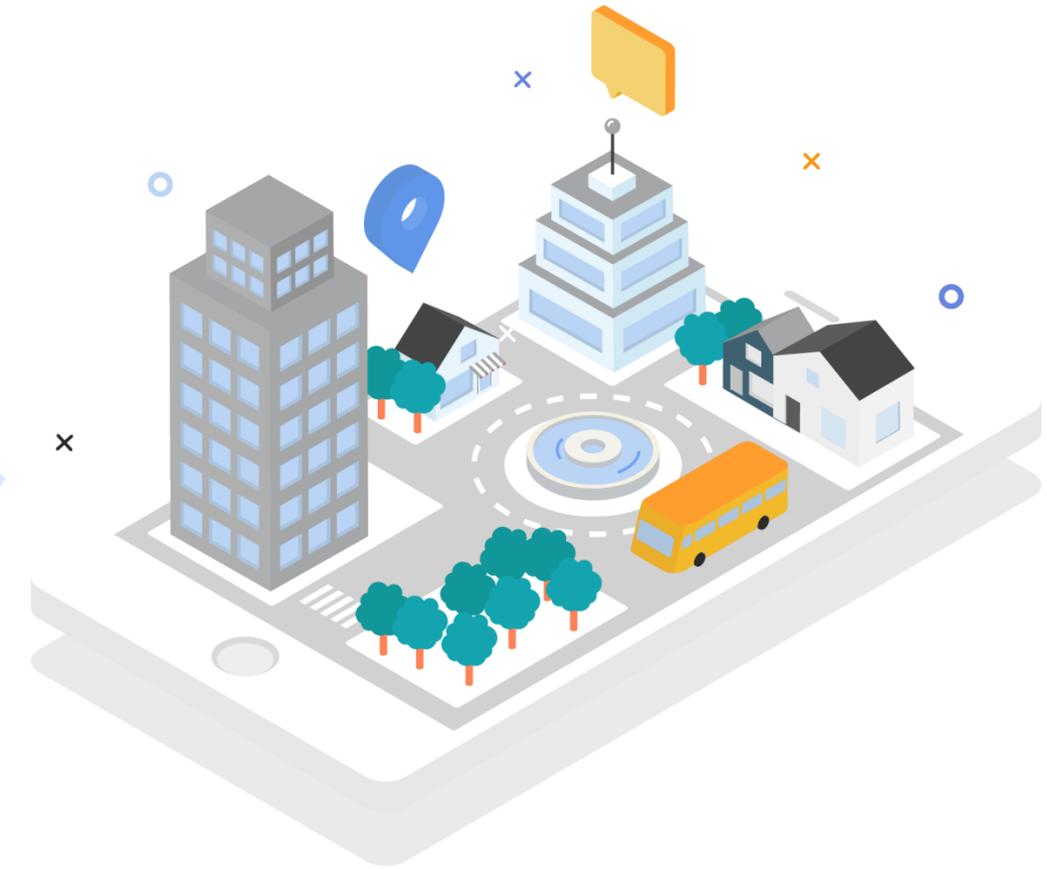
- Gathering data
- Define important questions

## Soon (Process)

- Process massive data
- Correlation of data sources
- Build historical trends

## Next (Act)

- Active decisions
- Resource reallocation
- Use data to predict future



# Data, Analytics, and the Internet of Everything enabling next-gen transit

## Connect

- with passengers based on location, time, and travel mode

## Interact...

- with the environment, congestion, weather, construction, etc.

## Plan...

- for real time resource allocation – passenger location, bus capacity, coordinate alternative transport options

## Control...

- actions and direct individuals to voluntarily/involuntarily change behavior
- communicate with automobiles, change fee and pricing models on the fly

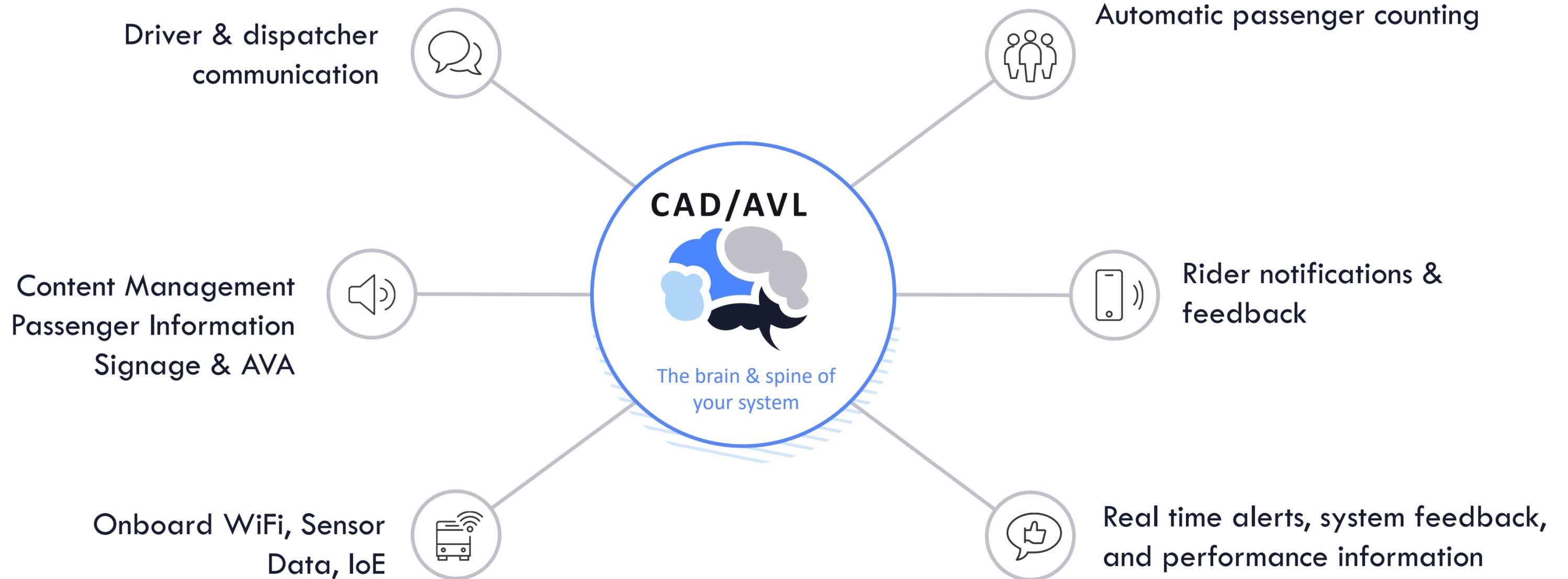
## Anticipate...

- maintenance, prediction/prevention of downtime

## Incorporate...

- autonomous vehicle activity and planning
- direct resources from historical and real-time interaction

# How can **modules & integrations** help your bus operation?





## Technology is a **tool**, not a solution

The right technology has the potential to positively impact every aspect of a transit system. You wouldn't use a hammer on a screw, nor should an agency waste money on software that is lacking in functionality needed to address an agency's core problem. Without proper consideration, planning and implementation, it can highlight existing problems rather than solve them.

# Choosing your new transit **technology**



## Core Issues

Identify core issues your agency currently faces



## Software Goals

Set goals your agency hopes to achieve once implemented



## Main Objectives

Consider the most important objectives  
for your operation



## Route Complexity

Determine the complexity of  
your routes

# Choosing your software vendor



## Vendor offerings

Consider what elements of a transit operation are included in each vendor's offerings - reservations/scheduling, dispatching, maintenance, reporting & analytics, customer feedback, rider app and more.



## Differentiators

In addition to traditional vendor elements, identify differentiators like customer support, industry experience, existing clients, integration options.

# Setting **realistic** expectations during implementation

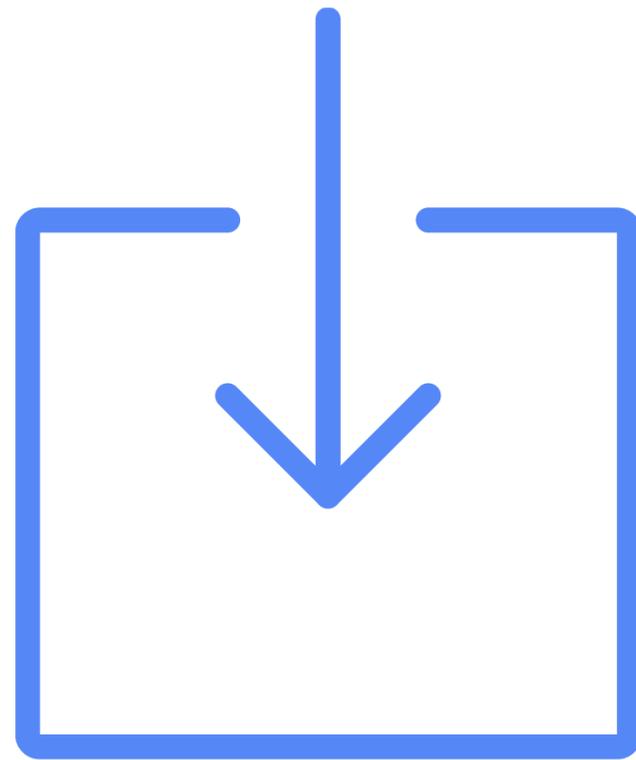


Implementation of new software is a complex and important process. Work with your software vendor to come up with an implementation plan that is well-designed and realistic.

Deployment of technology and tools should take 3-6 months from installation to smoother operations.

Initially, it may highlight your problems.

# The implementation process

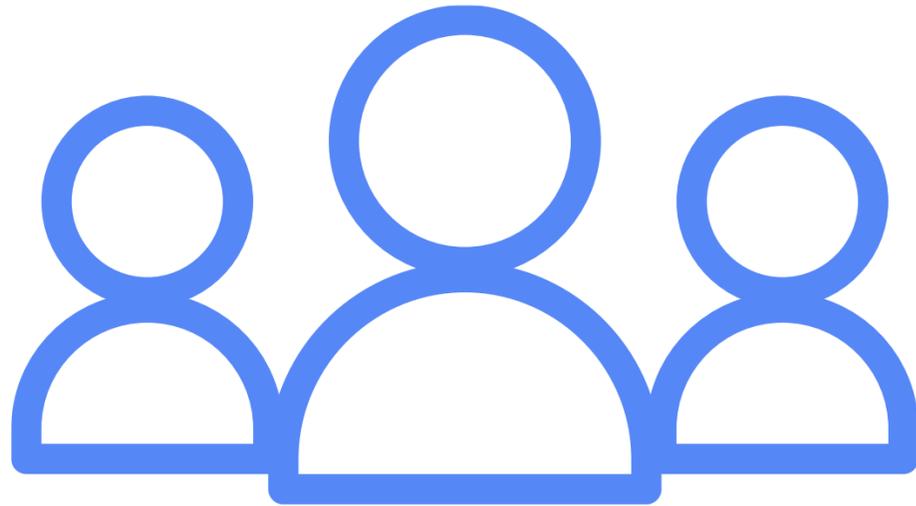


## Data import

Use this opportunity to clean up your data rather than import as-is from another system.



# The implementation **process**



## **Employee buy-in**

Make sure your dispatchers and drivers understand how this new system will benefit them. Having your whole staff on-board will make the transition much easier.



# The implementation **process**

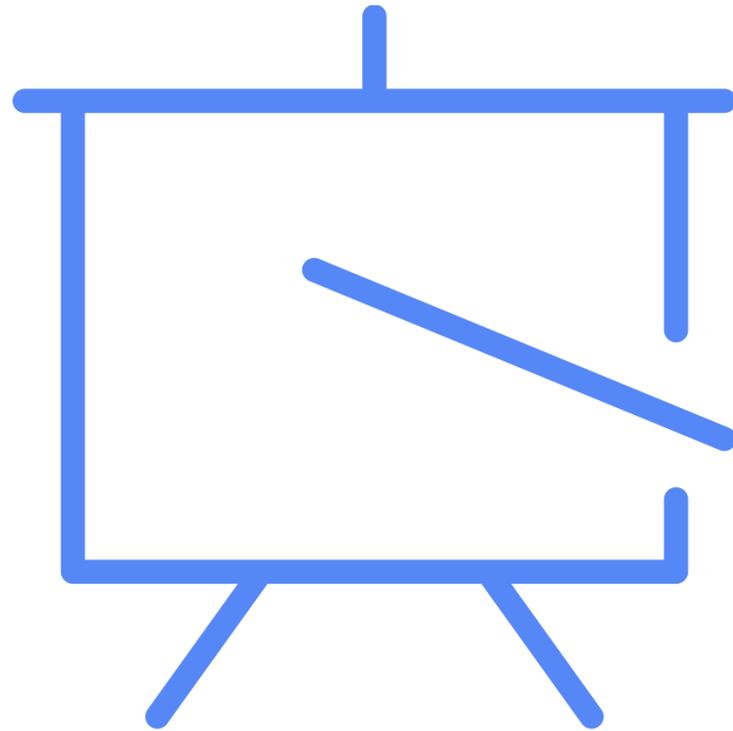


## **Communication**

Stay in communication with your employees and your riders throughout the process so that everyone knows what to expect.



# The implementation process



## Training

As with any software, there is a learning curve. Proper training can make or break a new software implementation. Ensure people from all levels of your organization are thoroughly trained in the new software system.



# The implementation process

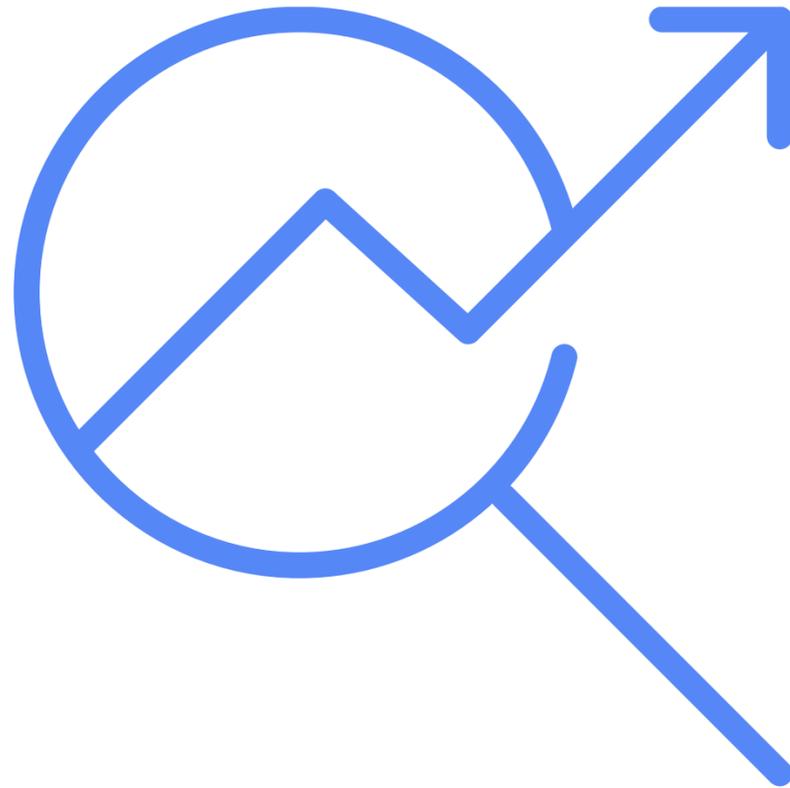


## Go live

Once you've completed the previous steps, it's time to go live. Make sure you are fully staffed and can rely on your software vendor to assist with any hiccups in this process.



# The implementation **process**



## Post-implementation

Over the next 3-6 months post-implementation, you can expect ongoing training and support, analytics monitoring and experimentations and more. Measure improvements in key goals set before implementation to determine how well your new technology tools are working for your operations.



## In summary



### Dynamic Transit Resource Allocation

This is the future...starting now



### Technology is the Key

Today's cloud-based technology and tomorrow's autonomous world



### TransTech is a Tool

Tools are only effective when used properly and managed effectively

**Thank you!**

**Scott Conroy**

---

First Transit

Area Vice President

[scott.conroy@firstgroup.com](mailto:scott.conroy@firstgroup.com)

201-538-2505

**Mitch Skyer**

---

Passio Technologies

President & Co Founder

[mitch@passiotech.com](mailto:mitch@passiotech.com)

678-825-3456 x106