ITS Update

Enhancing Transit Through Technology

Intelligent Transportation Systems (ITS)

<u>Primary responsibility:</u>
Manage software applications and supporting technology to improve and enhance RTA's Operations division.

<u>Summary:</u>
- Nine person team within the Operations division
- Manage majority of technology onboard buses/trains
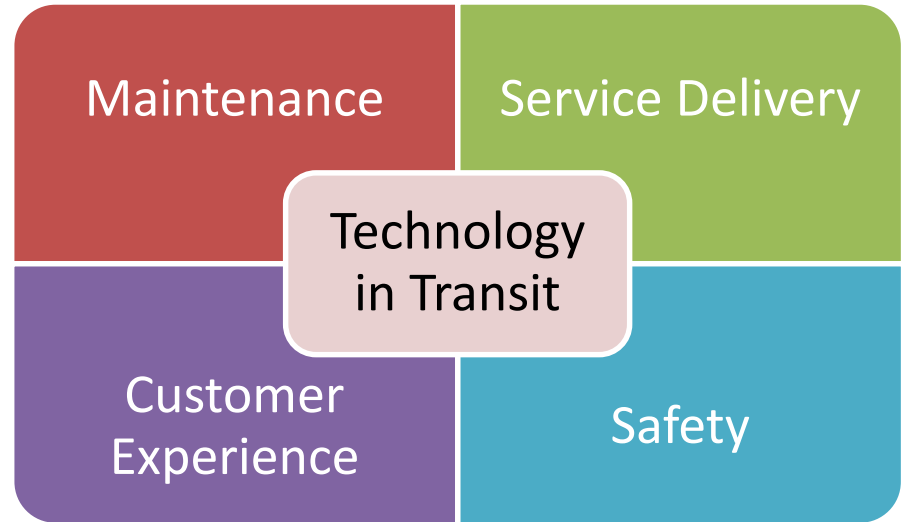- Manage software to support our daily operation

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Current ITS Applications

Current Applications	Function
MARCS Radio System	• Voice communications for buses, trains and field supervision • Voice communications for Transit Police • RTA manages 895 radios to provide service to riders
Body Cameras	• Body Worn Cameras for Transit Police
TransitMaster	• GPS tracking and management of buses and trains • Real-time information for riders
Mobile Routers	• Passenger Wi-Fi • Provides the data connection for buses, trains and Transit Police • 2 SIM cards per vehicle: FirstNet for Operations and Commercial cellular for passengers
Ultramain	• Vehicle and Facilities Maintenance • Inventory and Supply Chain Management
Hastus	• Operator Scheduling and work assignment • Route scheduling and service frequency
NICE	• Radio and Phone recorder for dispatch offices and control center
GenFare	• Fare collection and farebox monitoring
Paladin	• Red Line public address system and visual display
Spillman	• Transit Police dispatch and records systems
SenSource	• In-station people counters (Red Line Stations)

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Technology and Transit

RTA is committed to improving the rider's experience through continued technology enhancements.

Four Pillars:

1. Maintenance
2. Service Delivery
3. Customer Experience
4. Safety

Maintenance	Service Delivery
Technology in Transit	
Customer Experience	Safety

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Technology in Transit 2021

Pillar	Technology Projects	Status
Customer Experience	Improved Real-time Information More than 10% of all riders utilize real-time applications to monitor vehicle departures.	Complete
	Passenger Wi-Fi Riders utilize RTA vehicles for complimentary Wi-Fi. Riders average a total of 16 Terabytes of data per month.	Complete
Safety	Police Radios Replaced 130 radios with Motorola APX4000s. Radios include extended coverage areas, warranties and new accessories.	Complete
	Police Consoles Replaced dispatch consoles. Radios include extended coverage areas, warranties and new accessories.	Complete
	Police Body Worn Cameras Issuing 130 body worn cameras for the first time at RTA. All video is stored in a cloud based system with unlimited storage.	In-Process

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Technology in Transit 2021

Pillar	Technology Projects	Status
Maintenance	<u>Real-time Maintenance</u> All major components on fixed route vehicles are monitored in real-time. Alerts are sent to key team members prior to critical failures.	Complete
	<u>Digital Pre-trip Inspections</u> Replaced paper pre-trip cards with digital format. This format allows for tracking and saves more than 240,000 pieces of paper annually.	Complete
	<u>Maintenance Software Upgrade</u> Started the v9 Ultramain upgrade. A hosted, cloud based environment will provide disaster recovery and 24/7 support.	In-Process
Service Delivery	<u>Improved Vehicle Location</u> On-time performance is at its highest level due to improved vehicle location data. More than 500 vehicles are tracked every 15 seconds.	Complete
	<u>Headway Management</u> Improving the way the HealthLine vehicles are monitored. Transitioning from time to spacing based system.	In-Process
	<u>Scheduling Software Upgrade</u> Started the Hastus 2021 upgrade. A hosted, cloud based environment will provide disaster recovery and 24/7 support.	In-Process

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Technology in Transit 2022

Pillar	Technology Projects	Status
Maintenance	Maintenance Software Upgrade	In-Process
Service Delivery	Mobile Routers for Service Quality and Electronic Repair	Not Started
	Headway Management	In-Process
	Scheduling Software Upgrade	In-Process
	TransitMaster Upgrade	Not Started
Customer Experience	Contactless Payment/Trip Planning	Not Started
Safety	Police Cruiser Routers and Consoles	In-Process
	Police Cruiser Dash Cams	Not Started

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Fare Collection Vision

Short Term:

- Replace RTA's current mobile payment app

- Purchase and Install ticket validators on vehicles

- Keep the current fareboxes

- Begin to incorporate fare capping and smart cards

- Create a connected, regional fare system

Long Term:

- While implementing the short term objections
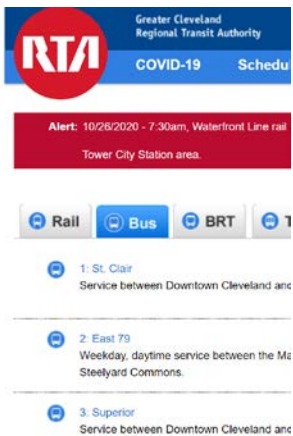 - Evaluate the replacement of TVMs, CSKs and fareboxes

Current Trip Planning Methods

Information Source	Scheduled Service	Real-time Service	Fare Payment
RTA Website	✚	✚	✖
Trip Planner	✚	✚	✖
Transit App	✚	✚	✖
CLE App	✚	✖	✚
NextConnect	✚	✚	✖

*Customers can also use timetables and contact customer service

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Current Trip Planning Methods
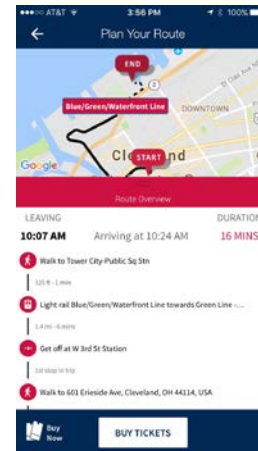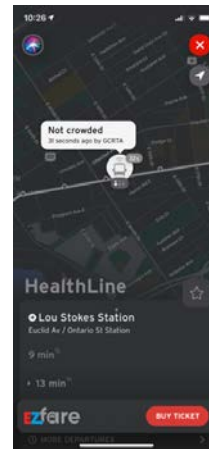
NEORide and EZFare

- Group of local transit agencies (most of Ohio) that have fixed pricing for a shared software licensing fee.

- Partnered with Masabi to incorporate a cashless, contactless payment method

- NEORide and Masabi launched Ezfare utilization
  - Provides riders with an ability to load a mobile wallet, purchase tickets and board vehicles through a contactless system
  - Real-time Apps utilize EZFare

- Creates a more regional fare collection system
  - LakeTran, SARTA, METRO

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NEORide and EZFare
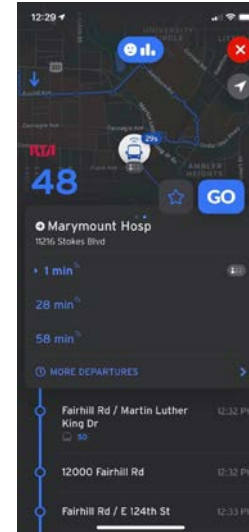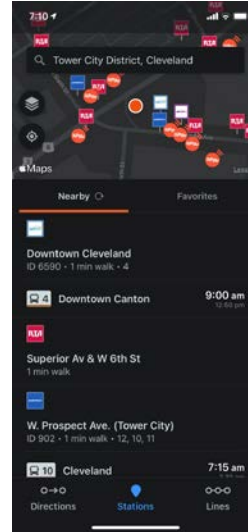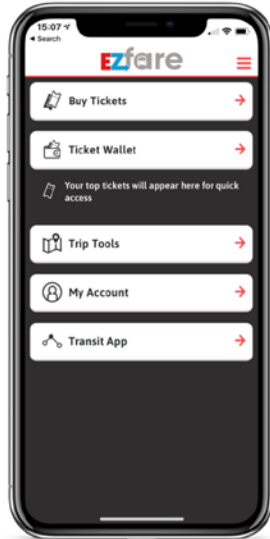
Information Source	Scheduled Service	Real-time Service	Fare Payment
NEORide/EZFare	➕	➕	➕

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Tentative Timeline

Task	Completion Date
Contractual and Procurement Documents	December 2021
Receiving Initial Validators (HL vehicles)	December 2021
Training	January - February 2022
Marketing/Rider Outreach	December – May 2022
Installation of Validators	April 2022
Launch of Validators and Visual Inspection	May 2022
Sunset of Passport App	May 2022

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