



Fare Collection System Visioning Exercise

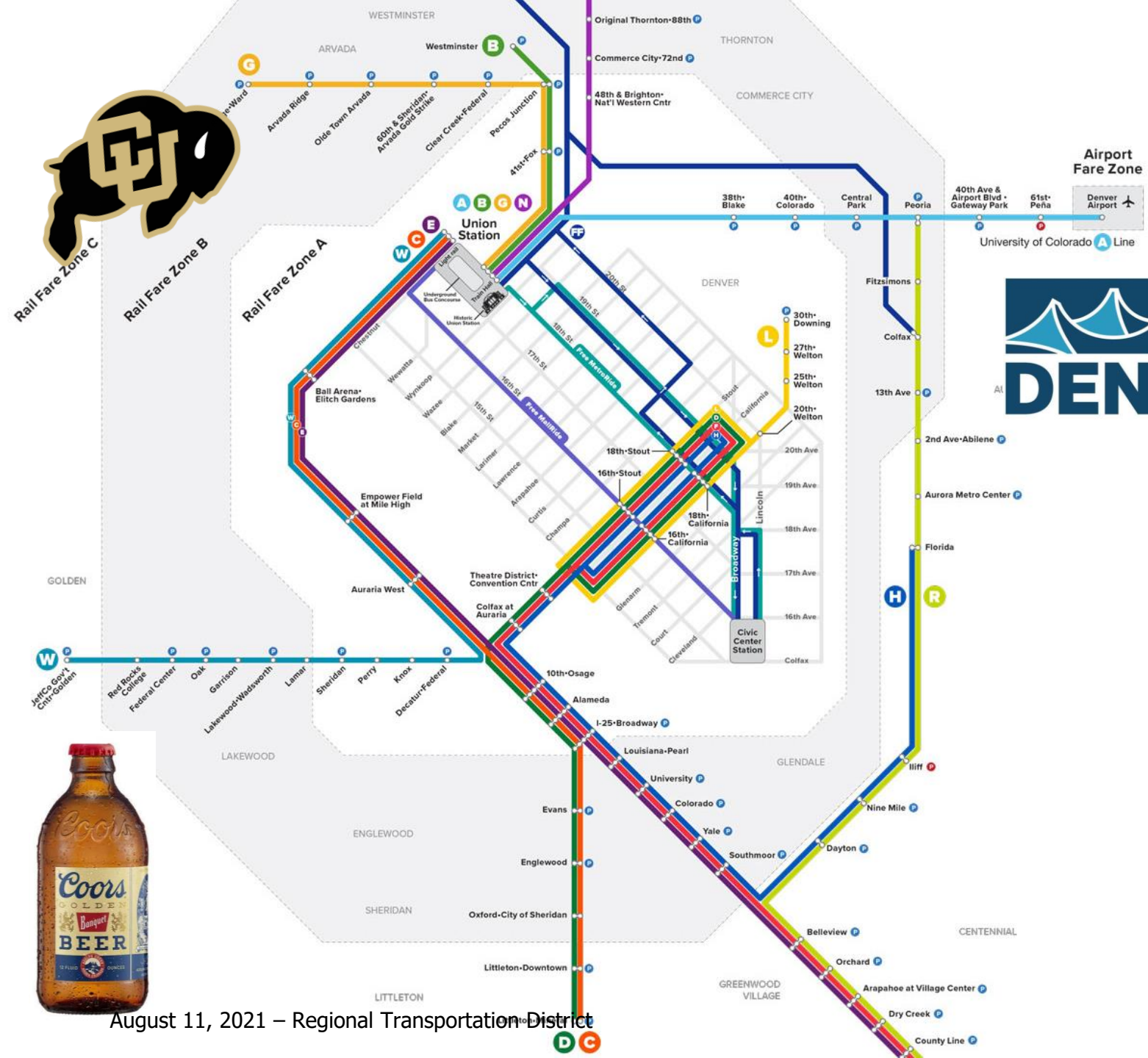
MDOT Tech Talk on August 11, 2021

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Hi! I'm Tonya Anderson

- I've been with RTD in Program Manager, Product Operations Manager roles for 7 years.
- Manager of the Electronic Fare Operations Department.
- Responsible for product launch and business operations of digital fare collection.
- Electronic Fare Operations Department
 - Card-Based Smart Media Technology
 - Mobile Ticketing Platform





Regional Transportation District

Created in 1969, nearly 3,000 employees serve a region of 3 million people with bus, light rail, commuter rail and paratransit service across a 2,400-square mile service area across 40 cities in 8 counties with 97 million annual ridership*.

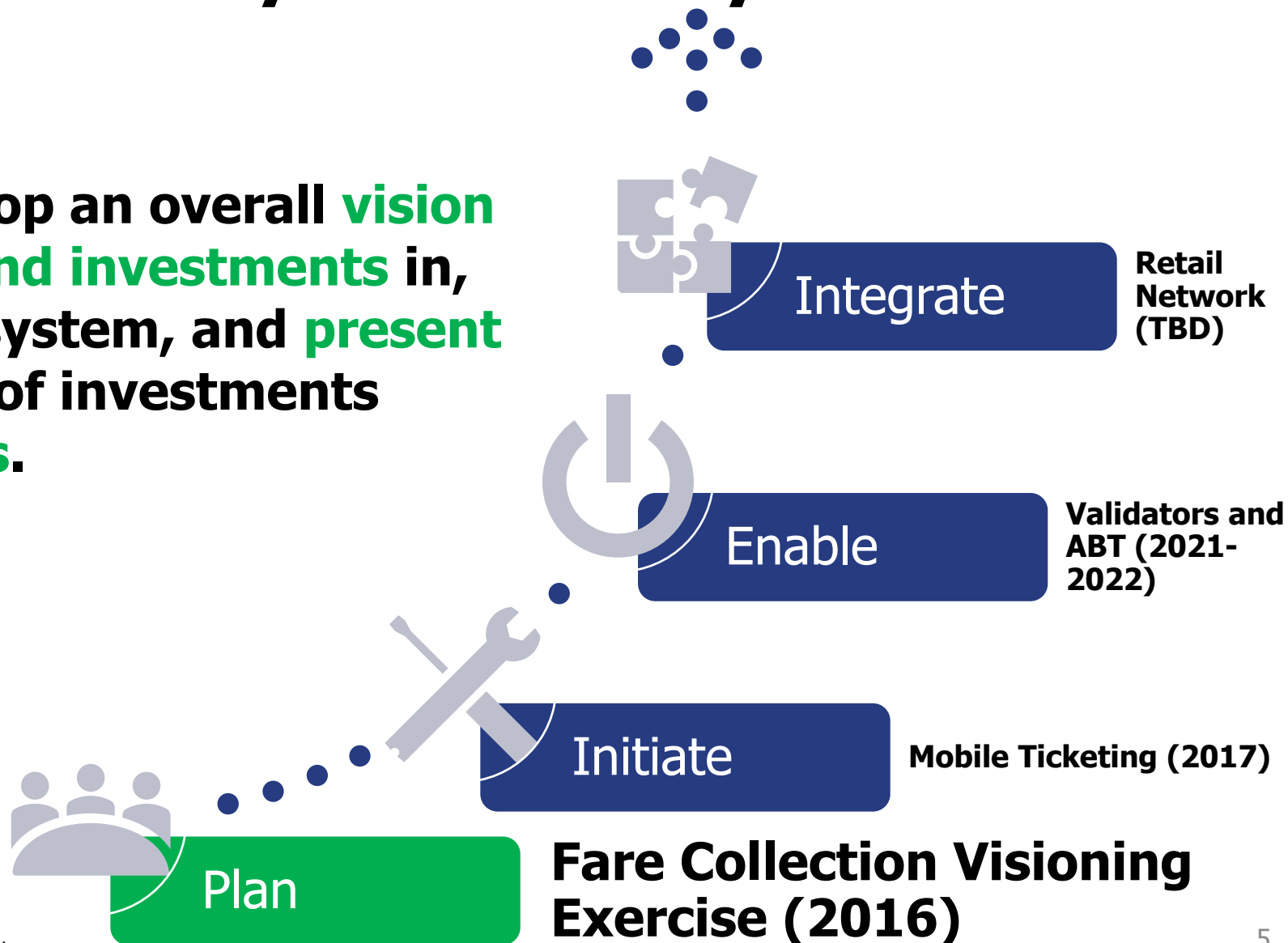
* Before COVID-19 disruption

Digital Fare Collection Journey

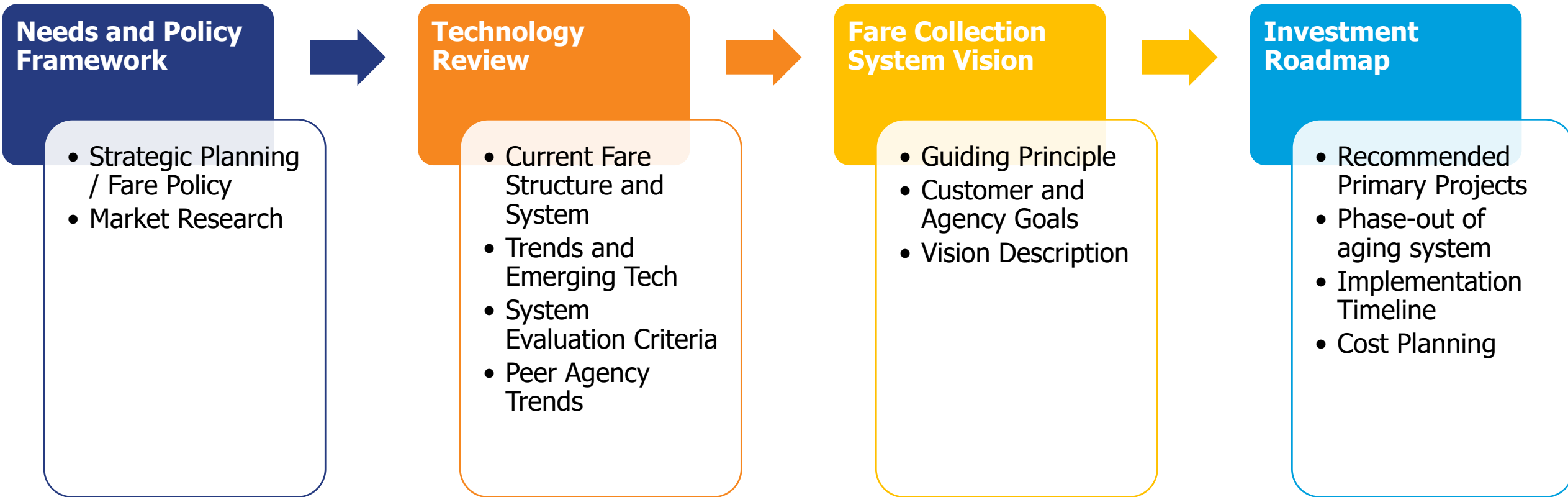
August 11, 2021 – Regional Transportation District

Digital Fare Collection System Journey

The goal was to develop an overall **vision** for the **evolution of, and investments in,** RTD's fare collection system, and **present a high-level roadmap** of investments over the **next 15 years.**



Fare Collection System Vision Exercise Process



Needs and Policy Framework



- Strategic Planning / Fare Policy
- Market Research

Strategic Planning & Fare Policy

- Conducted a survey of existing RTD policy and strategic planning documents to identify goals relevant to the fare collection system.

FOCUS AREA	STRATEGIC GOALS	INITIATIVES
TECHNOLOGICAL INNOVATION	<ul style="list-style-type: none">• Implement technological advancements to enhance the customer experience, operate more effectively, and improve communication• Modernize the transit experience with user-friendly technology to allow for more seamless travel across the region	<ul style="list-style-type: none">• Improve the rider experience with easy fare payment options through smart card technology• Develop 5-year ITS Plan to assess current state of technology development and establish a roadmap for future technology development• Integrate technology systems to automate data transfers and improve service delivery

Technology Review



- Current Fare Structure and System
- Trends and Emerging Tech
- System Evaluation Criteria
- Peer Agency Trends

Technology Review

- Emerging Tech - A technology assessment was completed reviewing both the current technology landscape for fare collection and emerging trends.
- Evaluation Criteria – Fare collection systems were evaluated across various assessment categories. The comparative assessments were color-coded to describe whether they were positive (green), neutral (yellow), or negative (red).

Table 4: Evaluation of Main Fare Collection System Types

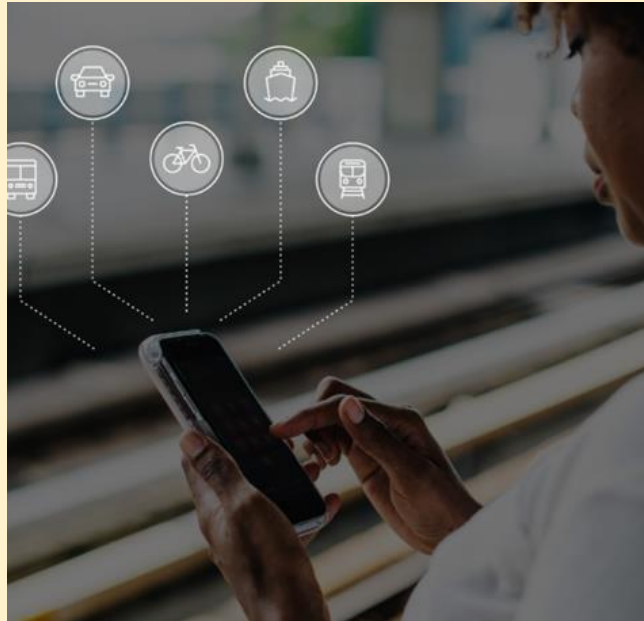
Assessment Categories ↓	Account Type →	Cash/Paper	Card-based Fare Collection System	Account-based Fare Collection System
Costs	Capital Costs	Capital costs are typically low.	Capital costs are typically high.	Capital costs are typically high.
	Operations Costs	Operational costs are typically high due to labor intensiveness of operations.	Operational costs are moderate due to technology intensiveness of fare management.	Operational costs are moderate due to technology intensiveness of fare management.

VISION STATEMENT

Fare Collection System Vision



- Guiding Principle
- Customer and Agency Goals
- Vision Description



RTD will provide a fare system that is customer-focused, cost-effective, affordable, and equitable; that supports a modern, consistent, and seamless transit experience in the Greater Denver Area; and that provides a flexible and scalable platform for improving future regional efficiencies while enabling smooth functioning of operations.

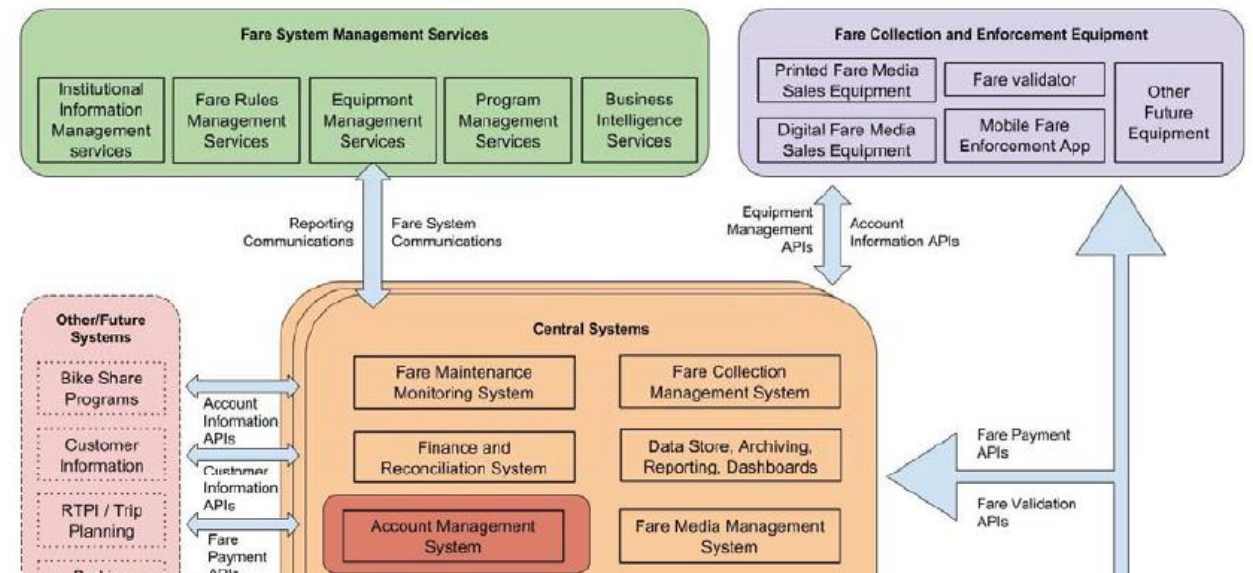
Fare Collection System Vision

- Guiding Principle
- Customer and Agency Goals
- Vision Description

Vision Description

Breaking apart the fare collection system into a set of major functional subsystems, each of which would have its own processes and life cycles for upgrading, enhancement or replacement.

Figure 3: Fare Collection System Vision



Investment Roadmap

- Recommended Primary Projects
- Phase-out of aging system
- Implementation Timeline
- Cost Planning

Recommended Primary Projects

A reasonable list of recommended projects acted as our **call to action** to help the team focus on implementing the plan.

For the purpose this roadmap, four primary projects have been identified:

1. **Mobile ticketing.** This initiative is underway at RTD, and the opportunity exists to build and configure that system in a way that supports the ultimate fare collection system vision. This project is also advancing the concept of providing mobile options for customers, which is beneficial both for RTD and reflective of a key area that the fare collection industry is focused on.
2. **Consolidated customer and account management system.** One of the RTD's current challenges is dealing with multiple customer information systems, including a new one that will be added once mobile ticketing is implemented. This project would create an integrated customer management system that ultimately will be the core customer and account management system for all RTD customer relationship management including, but not limited to, the fare collection system.
3. **Account-based fare collection system.** Key to achieving the long-term vision is the creation and establishment of an account-based system that would contain most of the elements in the vision. Unfortunately, it is unlikely that any of the current SMT elements will be able to be retained in the new system due to their age and fundamental design. It may be possible to reuse the TVM system in a new

Key Takeaways

- Set expectations with your Consultants
- Think Big!

Thank you.

