



Greater Minnesota Transit Technology Plan

Technology Memorandum Two: Technology and Management Solutions - Prep for 3/4/21 SC Meeting

Below is information about three key tools to help you advance the overall technology goals and strategies as applied to *your* organization. They are: 1) the Baseline Technology Reference Chart, 2) the Transit Stacks and 3) the Relationships Between Key Supports. Please review these tools and the questions below, and make notes for yourself. We will be asking for your feedback on these at the March 4 Steering Committee meeting.

Baseline Technology Reference Chart

Figure 4.2 on page 5.

- This is organized by the transit agency size measured by fleet size or trip count. Does this organization work? What might be better?
- In what ways does this help your agency? How can you imagine using this?
- What are your questions or suggestions to make this better?

Table 4.2 Baseline Technology Reference Chart

Technology	FLEET SIZE OR TRIP COUNT			
	1-4 million OPEX 100-200 per day	5-10 million OPEX 200-400 per day	10-20 million OPEX 400-800 per day	20+ million OPEX 800+ per day
Managing Software/Cloud and Related Management Solutions				
Cloud Migration and Scheduling Off-peak	Y	NA	NA	NA
Integrating API into workflow	Y	NA	NA	NA
Algorithm to optimize schedule	Y	NA	NA	NA
Linear and matrix scheduling and management	Y	Y	Y	Y
Planning	Y	Y	Y	Y
Load and capacity management	Y	Y	Y	Y
Driver Workforce on Schedule/ MCOs	Y	NA	Y	NA
Reschedule with MCOs	Y	NA	Y	NA
Customer Facing Trip Planning				
Real-time departure	Y	Y	Y	Y
GPS	NA	Y	NA	NA
GPS location	NA	Y	NA	NA
GPS file	Y	NA	NA	NA
Communications with Riders and Staff				
Web page	Y	Y	Y	Y
Social media	Y	Y	Y	Y
Mobile/Smartphone system	Y	Y	Y	Y
Asset Management				
Asset Management (e.g. storage, fuel, etc.)	Y	Y	Y	Y
Asset Management (e.g. storage, fuel, etc.)	Y	Y	Y	Y
Vehicle Scheduling				
Advanced Vehicle Scheduling (AVS)	NA	Y	NA	NA
Capacity	Y	Y	Y	Y
Automated Passenger Counting (APC)	NA	Y	NA	NA
Automated Passenger Counting (APC)	Y	Y	Y	Y
Automated Passenger Counting (APC)	Y	Y	Y	Y
Automated Passenger Counting (APC)	Y	Y	Y	Y
Fare Payment				
Advanced fare management	Y	Y	Y	Y
Advanced fare management	Y	Y	Y	Y
Advanced fare management	Y	Y	Y	Y
Advanced fare management	Y	Y	Y	Y
Advanced fare management	Y	Y	Y	Y
Service Planning/Operations/Performance				
Customer service and operational performance	Y	Y	Y	Y
Customer service and operational performance	Y	Y	Y	Y
Customer service and operational performance	Y	Y	Y	Y
Customer service and operational performance	Y	Y	Y	Y
Customer service and operational performance	Y	Y	Y	Y

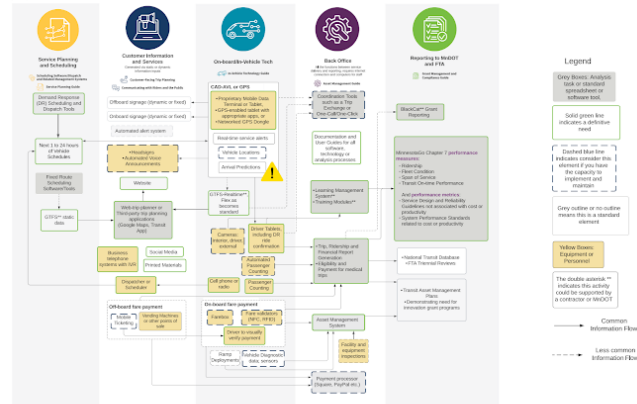
Transit Stacks

Figures 4.3, 4.5, 4.7 on pages 9, 13, 17.

This is also organized by agency size, and explains how the different technologies work together and what's most appropriate for each agency size, and is intended to support decision making.

- In what ways does this help your agency? How can you imagine using this?
- What are your questions or suggestions to make this better?
- This information is more complicated for mid-sized agencies with multiple transit modes (see medium-sized agency transit stack on page 13. What additional questions or suggestions do you have for this to better support decision making for these agencies?

Figure 4.7 Large-Agency Transit Stack

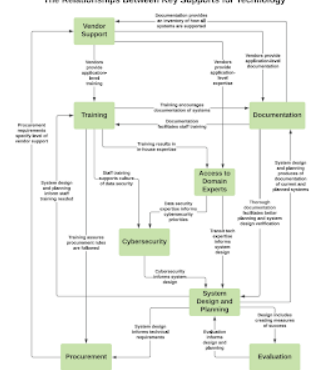


Relationships between Key Supports

Figure 4.8 on page 20.

- In what ways does this help you determine how to improve your supports? How can you imagine using this?
- What questions do you have about the nodes or elements?
- What are your questions or suggestions to make this better?

The Relationships Between Key Supports for Technology



This diagram illustrates how key supports for technology relate to one another. The relationships between supports shown here are intended as further information on the narrative descriptions for each specific support.