Greater Minnesota Transit Technology Plan

Technology Memorandum One: Reader Guide

We understand that you are all busy so we want to point out significant areas of the report where we want you to pay special attention. Some of these areas are for foundational knowledge. Others are areas that relate to the discussion we will hold at the next Steering Committee Meeting.

Below is a quick summary of the plan, along with some key areas where we'd like you to read and think about in advance or the meeting. These are noted with a  icon.  icons are noted in areas where we would like specific feedback.  icons note sections we would like you to apply to the next Steering Committee meeting.

Instructions

To respond to the  icons, we would like you to 1) put your comments into the Technology Memorandum One PDF (click here for instructions on how to add comments to a PDF), 2) save the file and 3) email it back to Erica Hamilton (ericamhamilton@gmail.com) OR email your feedback to Erica in the body of an email.

Chapter 1: Introduction

This section presents the Greater Minnesota Transit Technology Plan, the reasons for it and introduces the ideas of the subsequent chapters.

Chapter 2: Background on Transit Technology

Need a crash course in transit technology and/or technology terminology? This is the chapter for you!
Even if you are relatively familiar with both, we recommend at least skimming this chapter so that you know what terms and acronyms mean (like AVL, GTFS, etc.). The knowledge from this chapter is important to the foundation of the entire plan and the work of the Steering Committee. It provides a baseline knowledge of transit technology and terms.

 Please pay attention to pages 8-10 on interfaces and standards.

 Page 11 discusses the centralized to distributed continuum described at the last Steering Committee meeting. If you missed that meeting or need a refresher, please read this section or watch the last 30 minutes of the second Steering Committee meeting.

 What terms would you like us to add to the glossary?

Chapter 3: Technology Maturity Assessment

Chapter 3 describes the current state of technology in Greater Minnesota. It reviews plans, summarizes the technology assessment survey and N-CATT Technology Summit, and discusses some of the needs. If you are not familiar with issues impacting Greater Minnesota, consider skimming this chapter.

 Please read the conclusions on pages 40-41.

 In what ways do these conclusions resonate with you? What questions or concerns do you have? What are we missing?

Chapter 4: Peer Review Findings

Interviews were conducted with peer agencies of varying sizes to learn about their approaches to technology and lessons learned. Chapters 4 and 5 will be the focus of the next Steering Committee meeting and future goal setting and objectives discussions.

 Please read pages 44-45 (a summary of key findings). If you wish to review further, there is detailed information following on pages 47-54.

 Which of these key findings most resonate with your agency or transit systems as a whole?

 MnDOT and public transit providers need a tool to measure progress towards goals – goals they are actually interested in, and progress they actually care about (not just total amount of technology on the vehicles). At the steering committee meeting, we will talk about what performance measures matter and how we could measure them to track progress towards meaningful goals.

 What do you think of the idea of “champions” as informal advocates for testing new ideas, or is it more appropriate to ensure technology programs and goals are embedded and related to specific processes in everyone’s job descriptions?

 Pay careful attention to the Peer Agency Conclusions on page 51 and be prepared to apply these at the Steering Committee Meeting.

Chapter 5: Trends and Opportunities

Chapter 5 looks at the impact of technology on transit - and the opportunities and challenges related to these impacts. This chapter describes several big picture concepts (e.g., data collection, standards and sharing; software integration; technology support) and ties them to organizational capacity.

 Read the sections on data collection, standards, and sharing on pages 53-55. Think about the data you collect, how it is shared internally or with MnDOT, the data format (excel tables, faxes, APIs), and the software you use to store the data -- then respond to the question below about data standards that would benefit your/Greater MN public transit systems.

 Which data standards would most benefit Greater MN public transit systems? What are some of those benefits?

 On pages 55-56, the limited integration between software vendors is discussed. While this is common with transit technology, poor integration between software vendors occurs on a regular basis. I'm sure you have all experienced times when technology fails you, and others when it makes your life easier. For example:

Technology Fails
Some employers offer an incentive if you engage in regular physical activity (often this is reduced health insurance premiums). To track this data, employers often rely on software vendors to assist in these efforts. Virgin Pulse is one such application designed to interface with fitness trackers (such as Garmin or Fitbit) where you can track health data. Many large employers use VirginPulse point levels to determine health care premium pricing, with employees being required to meet a certain level by a deadline or pay a higher premium. Not all exercise tracked with a fitness device, fitness equipment or heart rate monitor can sync automatically to this tool. For example, steps logged on a Fitbit are automatically uploaded to the device, but other activities do not automatically import into VirginPulse. Thus there is some burden on the user to make sure they are getting all their points to avoid the penalty payments for insurance. This typically means the user has to input the data manually.

Technology Wins
Weight Watchers (WW) and Fitbit data syncs; this Fitbit activity data is seamlessly shared to give activity points in the WW mobile application. These activity points allow Weight Watchers to increase their food/beverage points for the day. Workouts logged with a specific tracking tool, Strava, can be downloaded from the Strava website and then uploaded to your Virgin Pulse account.

The Technology Challenge
Not every tool works with every piece of equipment - users might feel the burden to research these integrations on their own to make purchase decisions, and it affects the quality of their experience as they interact with these tools. These products are designed to encourage physical activity, and without these seamless integrations, the link between clever behavioral science and changing user behavior is broken.

 This was an example using fitness trackers; what are some examples you encounter in your work, where two tools are not interfacing efficiently with one another, requiring you to manually download data from one tool and input it (either re-entry or via upload) into another tool or program?

 Pages 57-59 looks at how the various types of transit technology relate to the centralized <---> distributed continuum described on page 11. At the Steering Committee, we will discuss pros and cons of centralized <---> distributed models for asset management, leadership, procurement, and training.

 Pay careful attention to the Conclusions and Opportunities section on page 61 and be prepared to apply these at the Steering Committee Meeting.