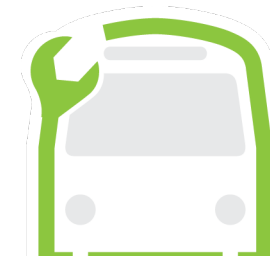


TAM Virtual Roundtable

TAM and Organizational Strategy

July 29, 2020



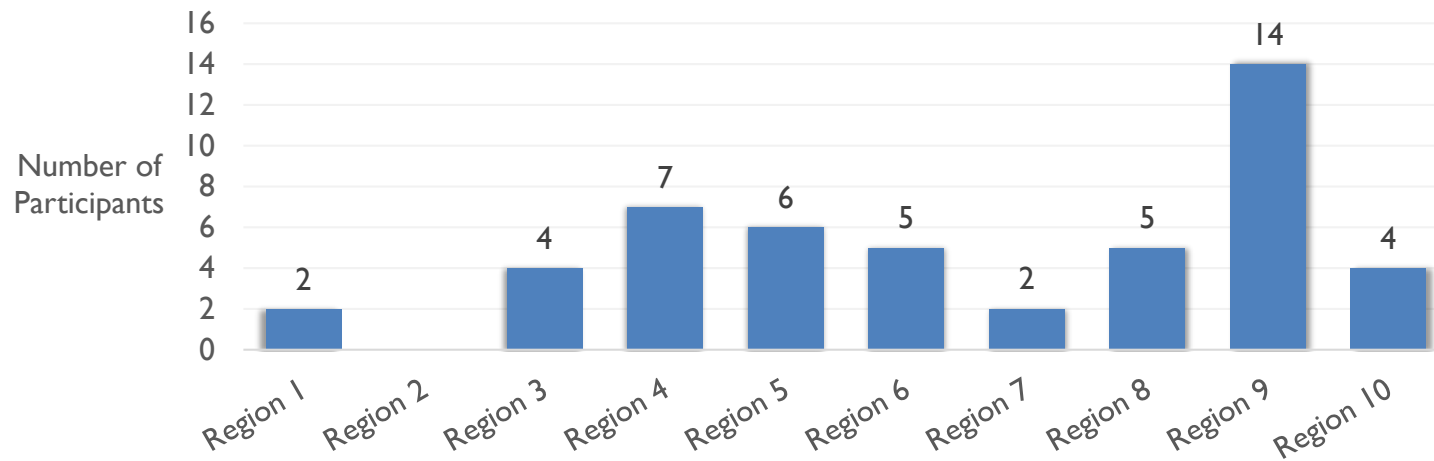
**TRANSIT
ASSET
MANAGEMENT**

Welcome and Introduction

- FTA Introductions
 - Mshadoni Smith, Ph.D.
 - Roxanne Ledesma
- Reflections from Day 1
- Teams Logistics

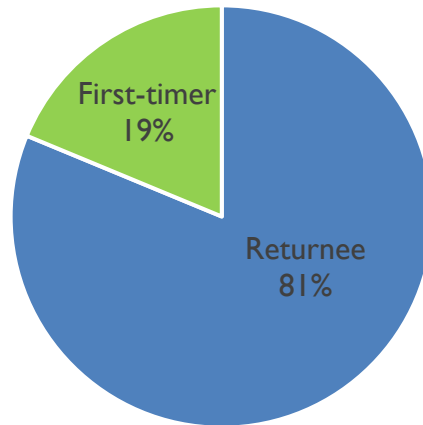
Who is here?

FTA Region Distribution

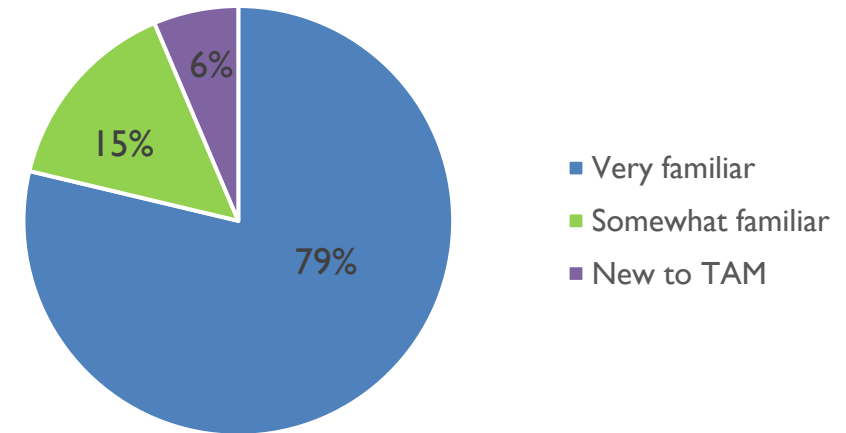


Familiarity with TAM

Previous TAM Roundtable Attendance



Attendees' familiarity with TAM



Outline for Today's Session

- Introductory Breakout groups
- Session on TAM and Organizational Strategy
- Question and Answer
- Breakout groups
- Open discussion

Please follow the link in your email from July 28 to report to your Microsoft Teams break-out room. If there are logistical issues, please put them in the chat pod. You will have 20 minutes in the breakout room.

BREAK-OUT DISCUSSION

Talking points for break-out

Please share your name and agency

Discussion question: **What have been some recent challenges and successes related to TAM?**

Report Back on Discussion Themes

- “TAM is great!”
- “No problems here!”
- “Our executives listen to us!”

Hanh Tran, MetroTransit
Alan Lehto, TriMet

TAM AND ORGANIZATIONAL STRATEGY



Metro Transit

Transit Asset Management

Hanh Tran
Manager, Asset Management
Minnesota Metro Transit



Overview

- Legislature created the MTC in 1967
- Metro Transit is one of the country's largest transit system
 - 77.9 million rides, 51.86 million bus rides and 26.1 million rail rides
 - 251,564 average weekday ridership
 - 3 rail lines and 130 bus routes
 - 23,974 rideshare accounts
 - 14,581 guarantee ride home registration
 - 1,109 average monthly participants
 - 1.4 million total vanpool miles
- Serves - 7 counties, 90 cities, 907 SQ. miles
- In 2016, Metro Transit was honored as Transit System of the Year by the American Public Transportation Association

Five Years Capital Program

Capital Improvement Program Parameters:

- Fiscally constrained Capital Budget
- Focus is safety, asset preservation and Long-term Capital Maintenance

Capital revenue sources:

- Regional Transit Capital
- Federal formula reflects MAP-21
 - 5307 Formula Funds
 - 5337 State of Good Repair
 - 5339 Bus and Bus Facilities
- State bonds assume amounts appropriated and anticipated
- New Starts Federal funding

Five years Capital Program Priorities

Maintain Current System

- Priority to State-of-Good-Repair
- Replace vehicles per fleet management plans
- Maintain & repair existing facilities
- Transit improvements

Build Transitways/Expand Bus System

- Southwest and Bottineau LRT
- Bus Rapid Transit program
- Expansion vehicles
- Bus electrification program
- New Minneapolis bus garage
- Support & customer facilities
- Technology

Thrive in Motion

Asset Management Plan



Stewardship

Prosperity

Equity

Livability

Sustainability

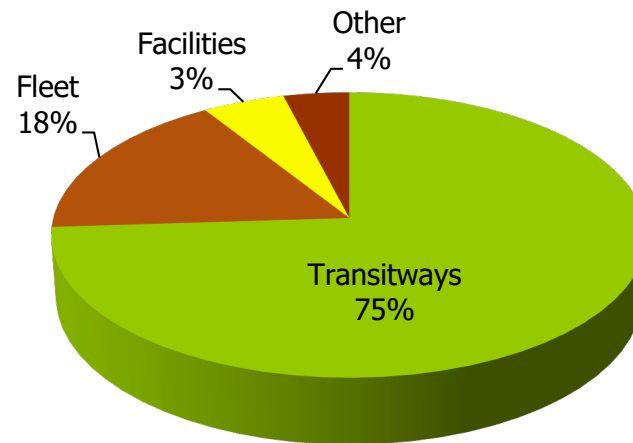
Integration

Collaboration

Accountability



Transit Capital Program



- Five years Capital Program future spending includes \$392M Authorized and \$3.856B Planned

Notable Modifications To The Program

Major Commitments

- Priority to State of Good Repair
- New Minneapolis Garage
- Bus Electrification
- LRT Vehicle Replacement
- Fare Collection Equipment
- Meet Metro Mobility Ridership Growth

Adjustments Made

- Buses extended to 14 years
- Federal Grant Award
- Project timelines and costs reviewed
- Cash in capital and debt service funds

Transit Asset Management Plan

Metropolitan Council

2018

Fleet

Authorized

- Maintain the Current System
- Replacements per Fleet Plan
- CTIB Vehicle Note Payable
- Non-Revenue Vehicles



Planned

- Replacements
- ABRT Bus Procurement (CMAQ)
 - B, D, E and Orange
- Electric Buses
- Overhaul of Rail Vehicles
- SWT Service Expansion (CMAQ)

Facilities - (Customer & Support)

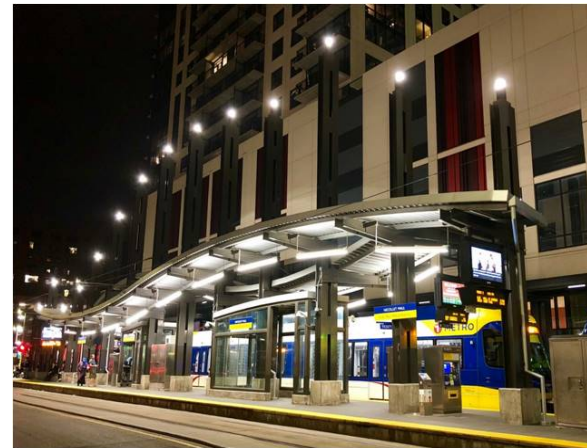
Authorized

- Energy Enhancements
- Improvements, Repairs and Refurbishments
- Heywood Campus Administrative Expansion
- New Minneapolis Garage



Planned

- Bus Electrification Infrastructure
- Hoist Replacements
- Improvements, Repairs and Refurbishments



Transitways

Authorized

- Complete C Line Construction in 2019



Planned

- Metro Green and Blue Line Extensions
- Partial Funding for BRT/ABRT
 - Rush, Gold and ABRTs
- LRT Interlocking Projects
- LRT/Northstar ADA and Safety Improvements
- LRT Rail Replacement
- Apple Valley Transit Station Parking

Transit Asset Management

Progress to Date

- Create the TAM Plan
Completed on-time as required by FTA
- Asset Integration into Maintenance Workplans
Work with departments continues on establishing effective asset management business processes. Best practices from across Metro Transit are being shared between departments.
- Asset Data Monitoring
The e-Process Management inspection web form is a key tool required to gather asset condition data for the TAM Plan and Asset Renewal Program. Mobile workorders are needed for staff in the field to record accurate parts and labor for operational cost analysis and end-of-life predictions.
- Develop Asset Renewal Program
Current process is CIP interactive discussion with departments.



TAM – Investment Prioritization Process

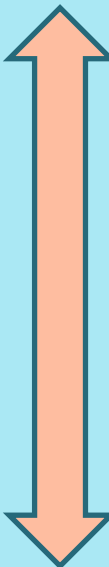
The Enhance Decision-Making process

Developing six-year CIP by Data driven and transparent process:

- Setting State of Good Repairs (SGR) targets annually
- Identifying capital needs
- Getting input project needs from all departments
- Evaluating the needs, benefits, and risk of each proposed project
 - what is the primary driver of the project need?
 - What agency goals and objectives are supported?
 - What risks are associated with eliminating, delaying, or downsizing the project?
- Prioritizing them by a select set of goals and measurements:
 - Ranking each project by three sets of evaluation criteria
- Process identified these factors:
 - Current Council authorized funding
 - Balance of current Council authorized funding remaining
 - Description of the project scope
 - Discuss of operating and maintenance costs, cost-savings, staffing requirements

Evaluation factor - Need

What is the Primary Driver of Project Need?

<p>Major Expansion</p> <p>Major expansion of assets to support new transit service</p> <p>Examples: New transitways, new bus garage, new office buildings, new park-and ride, land acquisition for new facility</p>	<p>Expansion</p>  <p>Preservation</p>
<p>System Enhancement</p> <p>New or expanded assets to enhance the existing transit system</p> <p>Examples: Bus shelter expansion and upgrade, real-time signs expansion, new non-revenue vehicle, secure bike parking at existing facility, traction power energy storage, TSP technology</p>	
<p>System Renewal</p> <p>Projects to replace assets at the end of their useful life, extend an asset's useful life, or optimize an asset's use</p> <p>Examples: Roof replacement, rail replacement, vehicle reconditioning, updating software</p>	
<p>Urgent Fixes</p> <p>Critical Projects that, if delayed, could compromise health, safety, and welfare of customers or employees</p> <p>Examples: System failures, emergency hoist replacement</p>	

Evaluation criteria - Benefits

What agency goals and objectives are supported?

- Increase mobility and access to opportunity
- Maximize operational efficiency, safety and financial integrity
- Improve the customer experience
- Support sustainable, prosperous, and equitable communities
- Develop a healthy, resilient and effective workforce

Evaluation criteria - Risk

What risks are associated with eliminating, delaying, or downsizing the project?

- Financial
- Safety
- Service reliability
- Ridership
- Resource availability

THANK YOU!

Hanh Tran – Manager, Asset Management
hanh.tran@metrotransit.org



Leveraging Opportunities for Increasing Internal Attention on Transit Asset Management

July 29, 2020

TRI  MET



BUSINESS PLAN

FY2021 – FY2025

FINAL
March 2020

We all agree (right? 🤔)...

- TAM and State of Good Repair needs are adequately reflected in our budgeting and executive decision-making
- I don't need any further help getting my executives to recognize the importance of TAM

Reality: We all could use more. Saying we support TAM/SGR isn't the same as doing it in the Budget.

What we sometimes hear (or say)

Leadership just chooses what they way to fund

We always fund the “new shiny object”

How do I get them to pay attention?

I need top-level support

If only my leadership team listened to us

My GM won't sign the TAM Plan

Fundamental Connections



Strategic Business Plan - Goals



Vision:	TriMet will be the leader in delivering safe, convenient, sustainable, and integrated mobility options necessary for our region to be recognized as one of the world's most livable places
Mission:	Connect people with valued mobility options that are safe, convenient, reliable, accessible, and welcoming for all
Values:	Safety, Inclusivity, Equity, Community, and Teamwork
Customers	Satisfied riders Satisfied community stakeholders and employers Supporting broader community
Internal Business Practices	Deliver safe, efficient, and equitable service Design and deliver successful projects Business practices that create value and spur innovation and continuous improvement
People and Innovation	Ensure a culture of safety TriMet is where diverse and talented people want to come, stay, and thrive Foster service excellence and innovation
Financial	Fiscally sound and compliant Manage assets to ensure safety and optimize value, performance, and resiliency Financial capacity to advance regional expectations for service growth and quality as represented in Regional Transportation Plan

Customers

Satisfied riders

- 1. Provide safe service
- 2. Increase ridership
- 3. Improve overall customer experience
- 4. Ensure equitable distribution of services and resources across the TriMet system
- 5. Improve customer information and services

Satisfied community stakeholders and employers

- 6. Help shape the future of cities and our region in line with Metro 2040 Growth Concept
- 7. Ease congestion by providing attractive travel options during peak periods
- 8. Support the region's economy by expanding employee access to jobs and customer access to businesses and services
- 9. Advance mobility for those with limited options
- 10. Improve environmental sustainability and stewardship

Supportive broader community

- 11. Ensure strong support for transit and TriMet
- 12. Increase funding for regional mobility expansion

Internal Business Practices

Deliver safe, efficient and equitable service

- 13. Increase personal safety
- 14. Provide reliable performance
- 15. Improve service delivery
- 16. Increase resiliency

Design and deliver successful projects

- 17. Develop higher capacity bus services
- 18. Develop partnerships to support faster and more reliable bus service
- 19. Meet milestones for successful development of SW Corridor
- 20. Improve existing MAX infrastructure for reliability and capacity

Business practices that create value and spur innovation and continuous improvement

- 21. Maximize benefits and potential of Hop Fastpass
- 22. Implement TriMet's Non-Diesel Bus Plan
- 23. Grow business inclusion and diversity efforts
- 24. Innovatively increase financial resources

People and Innovation

Ensure a culture of safety

25. Successfully implement the Safety Management System (SMS) across the organization

TriMet is where diverse and talented people want to come, stay, and thrive

26. Invest wisely in people

28. Foster sense of community and cross-functional camaraderie

30. Recruit a talented workforce

27. Ensure open and honest communication between management and front-line employees

29. Achieve agency Affirmative Action goals

31. Pursue Professional Growth for Employees

Foster service excellence and innovation

32. Foster employee innovation, including process improvements and partnerships

Manage assets to ensure safety and optimize value, performance, and resiliency

34. Meet or exceed state of good repair targets for all identified asset classes

Financial capacity to advance regional expectations for service growth and quality as represented in Regional Transportation Plan

35. Manage financial capacity to deliver regional expectations for service growth

36. Maintain acceptable farebox recovery to optimize the balance of service demands, revenue, and cost

Financial

Fiscally sound and compliant

33. Manage financial performance within Strategic Financial Plan guidelines

Strategic Priority and Measure

TRI MET



Strategic Priority- Maintain our current system:
Improve the state of good repair for TriMet assets to maintain our current system in good condition for our customers

BUSINESS PLAN

FY2021 - FY2025
FINAL
March 2020

TRI MET



BUSINESS PLAN

FY2021 - FY2025
COVID-19 ADDENDUM
May 2020

Measure - Meeting targets for specific asset classes (as reported to National Transit Database for now)

Key Strategic Actions

Objective #34: Meet or exceed state of good repair targets for all identified asset classes

- Replace Type 1 light rail vehicles (manufactured in 1984)
- Procure and implement Enterprise Asset Management System and overhaul procedures to improve inventory, maintenance, condition assessment, and planning for assets
- Develop and implement plans to repair, replace or otherwise remedy any asset classes not fully at target

TRI MET



BUSINESS PLAN

FY2021 - FY2025

FINAL
March 2020

TRI MET



BUSINESS PLAN

FY2021 - FY2025

COVID-19 ADDENDUM
May 2020

Capital Project Requests Must Identify TAM Assets Involved

TriMet - Capital Improvement Program - Project Proposal & Summary Form

Project Name:	Battery Electric Bus Purchases - Gillig (STIF 3.1)	Program:	Fleet	Submittal No.	126	Project No.	5626
Project Location:	Center Powell Merlo	Classification:	4 - Opportunity-Based/Externally Funded	Alternatives to Project Attached?			
Project Manager:	Tyler Bennett	Budgeted Division:	MT	New or Existing? Existing			
Project Sponsor:		Budget Coordinator:	Brett Rogers	Project Origination Year: FY2020			
ED Sponsor:	Roland Hoskins	Budget & Grants Analyst:	Mark Ashcraft	CPC Approval Date:			

Business Plan - Objective Alignment (select up to 3; reference "Business Plan" tab for additional details)			TAM Assets Impacted		
24. Test electric buses in service for performance and cost-effectiveness			Asset Description	Asset ID	TAM Priority
15 - Provide reliable performance					
17 - Ensure cost-effective service					
Project Phase			Stakeholders		
P4a - Project Dev to 60%			Department	Contact	
Project Gate (last gate passed through)					
Passed through Gate 3 in TBD					
MODA Rank	Division Rank	Binder Page	OPS - Bus	Ed Bennett	
44/60 (G&Ph)	9/42	MT-42		Miles Crumley	
			OPS - Bus	Tyler Bennett	
				Young Park	
			* If more than 7 assets impacted, note on a separate tab & reference that tab above		

Project Description:
Purchase and deployment of up to five 40' Gillig Battery Electric buses (including spare parts, training, and extended warranties), supported in part by FTA Low-No grant and STIF funds.

Project Justification (Attach supporting documentation/spreadsheets as necessary to make the case. Include notes detailing the impact if the project is not approved):
See TriMet's Non-Diesel Bus Plan. This project represents a highly cost-effective opportunity to enable TriMet to gain experience with battery electric buses, with substantial support from FTA's Low-No grant program. The agency is interested in deploying extended range battery electric buses in full service applications to test their efficiency, reliability, and overall performance relative to our current fleet. Battery electric buses offer significantly reduced local air pollutants, greenhouse gases and noise, all of which are valued highly by our riders and community as a whole. This awarded grant enables the agency to purchase and deploy these buses with minimum upfront cost while following through with our Federal partners on this grant intent.

Project Proposal (2) | Cash Flow | G&Ph | TAM Assets | Table 1B Bus Repl & Expansion | FY19 ↑ ... (+) | ◀

Embed in Budget Classifications

1				
2				
	H	I	J	K
3	Classification:	2 - High Priority (SGR, Safety, & Service Reliability)		
4	Budgeted Div	<div>1 - High Priority (Externally Mandated) 2 - High Priority (SGR, Safety, & Service Reliability) 3 - Discretionary 4 - Opportunity-Based/Externally Funded 5 - Future Projects</div>		
5	Budget Coord			
6	Budget & Gra			
7				

Capital Budgeting Process

Project ranking includes measures directly related to state of good repair:

- Safety and security for riders and employees
- System reliability or resilience
- Customer experience

Transit asset management priority score and ranking included in capital budget request forms

Description	Asset ID	TAM Priority	Quartile Priority
New Flyer (2500)_Bus Fleet #52_Group A	2019-51923-FltA2500	55	1st Quartile
New Flyer (2500)_Bus Fleet #52_Group B	2019-51923-FltB2500	55	1st Quartile
New Flyer (2600)_Bus Fleet #54_Group B	2019-51923-FltB2600	311	1st Quartile

High priority projects defined as SGR, Safety, & Service Reliability

Multiple Objective Decision Analysis

(Capital Program Priority Scoring)

Project Name	CL	Safety & Security for Riders & Employees	System Reliability or Resilience	Customer Experience	Alignment with Regional Goals, Policies, and Plans that promote Transit	Revenue & Cost Impact	Environmental Stewardship	Equity	MODA Value	MODA Value with Cost	Rank
LRV Fleet Replacement & Expansion	2	3	5	5	4	4	3	4	76.5	76.5	1
Blue Line Station Rehab	2	4	5	3	3	3	2	5	66.4	67.2	2
Track Rehab Program	2	4	5	4	3	3	1	3	62.7	63.5	3
ATP Vehicles Replacement & Expansion	2	3	5	3	3	3	3	4	61.7	62.5	4
.....
Electric Bus Purchases	2	2	2	3	4	2	5	5	50.4	51.4	14
Bus Stop Development	2	2	2	5	3	2	2	5	48.3	49.2	15
.....
NRV Replacement & Major Repairs	2	2	4	2	3	3	4	2	45.6	46.5	17
.....
Building Interiors Program	2	2	2	2	2	3	1	2	26.2	27.2	28



Who sorts the spreadsheet?

Project	MODA Score (Project Benefit)	Asset Priority
Project #15	81.2	12
Project #27	75.1	15
Project #4	69.9	24
Project #12	65.0	43
Project #6	49.9	107
Project #20	38.3	205

Updates Keep the Issue Visible

- ❑ Measures included in Business Plan updates to Board (Fall strategy session, Winter draft, and Spring Final Business Plan)
- ❑ Monthly updates on Business Plan to Executive Team, that include transit asset management when needed
- ❑ Annual update on measures and performance - just before budget season starts

Reception and Reaction

- Reaction has been generally positive
- Turning positive statements into positive action - that takes time

More...

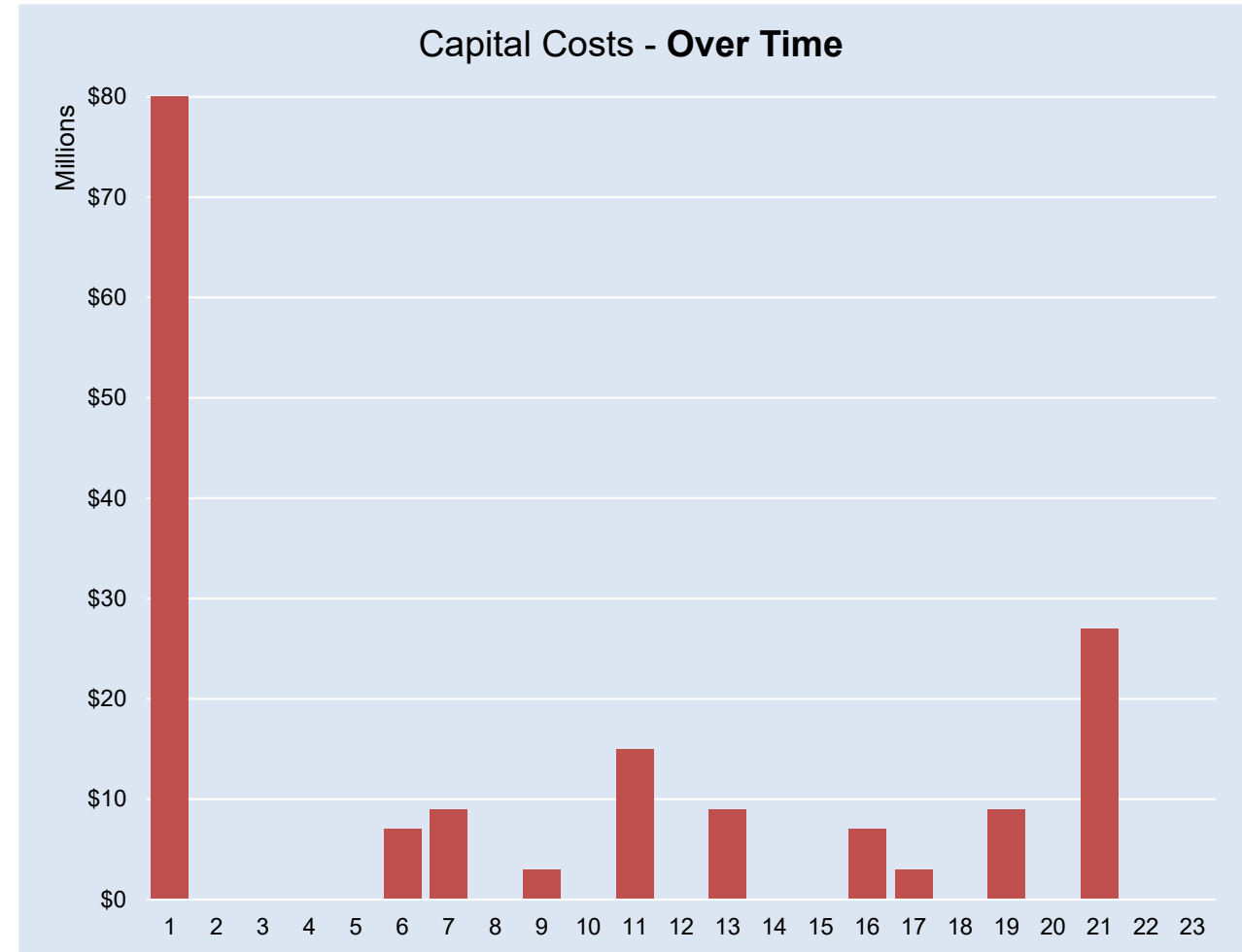
Advocating the addition of future capital cost requirements for large- and medium-sized capital project proposals

E.g.,

Capital cost =\$80M (up front)

VS

25-year capital costs: \$169M →



Take-Aways

- Many opportunities to incorporate TAM into processes that make State of Good Repair more visible
- Incrementalism can be our friend
 - No two of these were added at exactly the same time
- Accomplish what you can - and plan for another chance

Basic Checklist of Opportunities

- ☐ Dashboard?
- ☐ Annual TAM or backlog Report?
- ☐ Prioritization available to maintenance budget staff?
- ☐ Section in the Budget?
- ☐ Internal communications messages?

Thank you

Alan Lehto, *Director, Business Planning & Asset Management*

LehtoA@trimet.org



Please ask your questions in the chat pod and identify to whom they are directed. There will be an opportunity for open discussion later in the session.

PARTICIPANT QUESTION AND ANSWER

Please follow the link in your email from July 28 to report to your Microsoft Teams break-out room. If there are logistical issues, please put them in the chat pod. You will have 25 minutes in the breakout room.

BREAK-OUT DISCUSSION

Break-out Discussion Questions

- How is TAM reflected in your current budget or strategic planning initiatives?
- Brainstorm other ways to incrementally give TAM more visibility at the Executive level, using tools that you are available now.
- What other tools, strategies, or techniques that you don't currently have would be useful in gaining visibility?
- If you were CEO for a day, what top 3 things would you change for TAM?

REPORT BACK AND OPEN DISCUSSION

Please follow the link in your email from July 28 to join tomorrow's session.

**THANK YOU FOR ATTENDING DAY 2 OF THE
2020 TAM ROUNDTABLE!**