



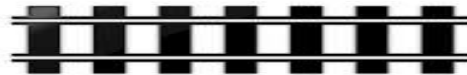
Capital Project Prioritization and Selection – MBTA Process & Plans

Eric Waaramaa

Massachusetts Bay Transportation Authority

July 22, 2011

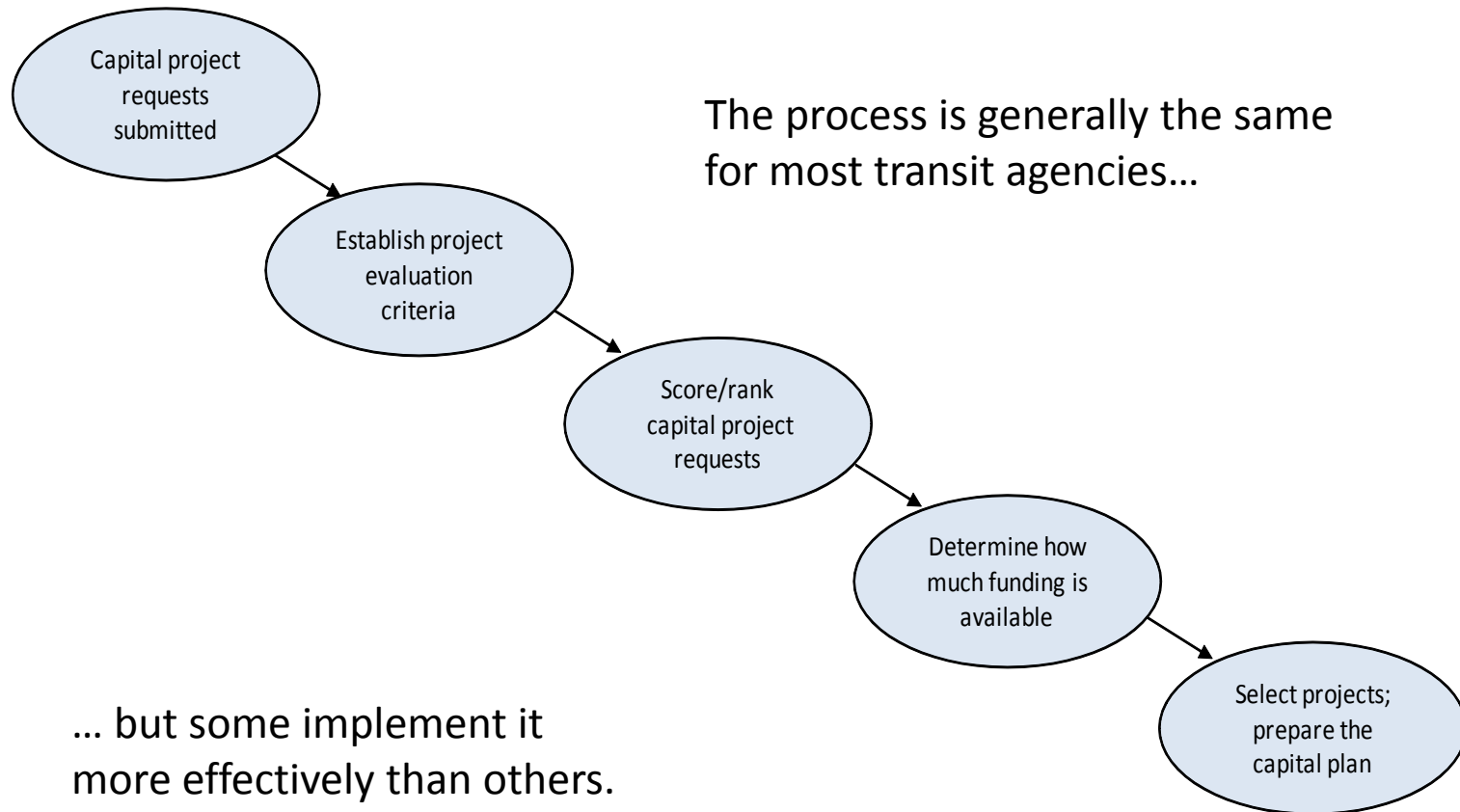
Capital project prioritization and selection
It's all about balance.



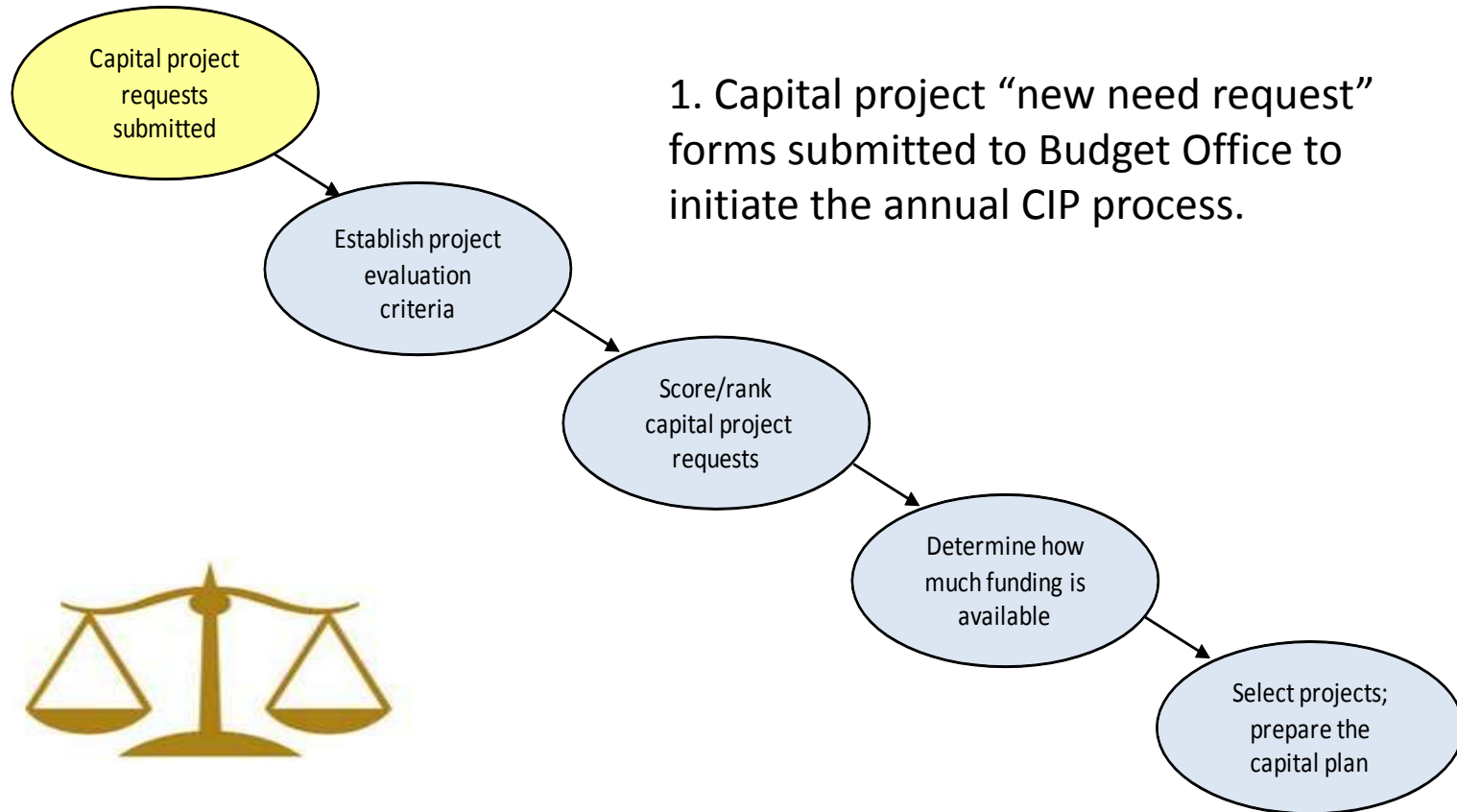
“The underlying goal of asset management is to take a broad approach to resource allocation and programming decisions that will provide greater value to the system and overall satisfaction for end users through improvements in program effectiveness and system performance.”

Source: USDOT - “Asset Management Overview”

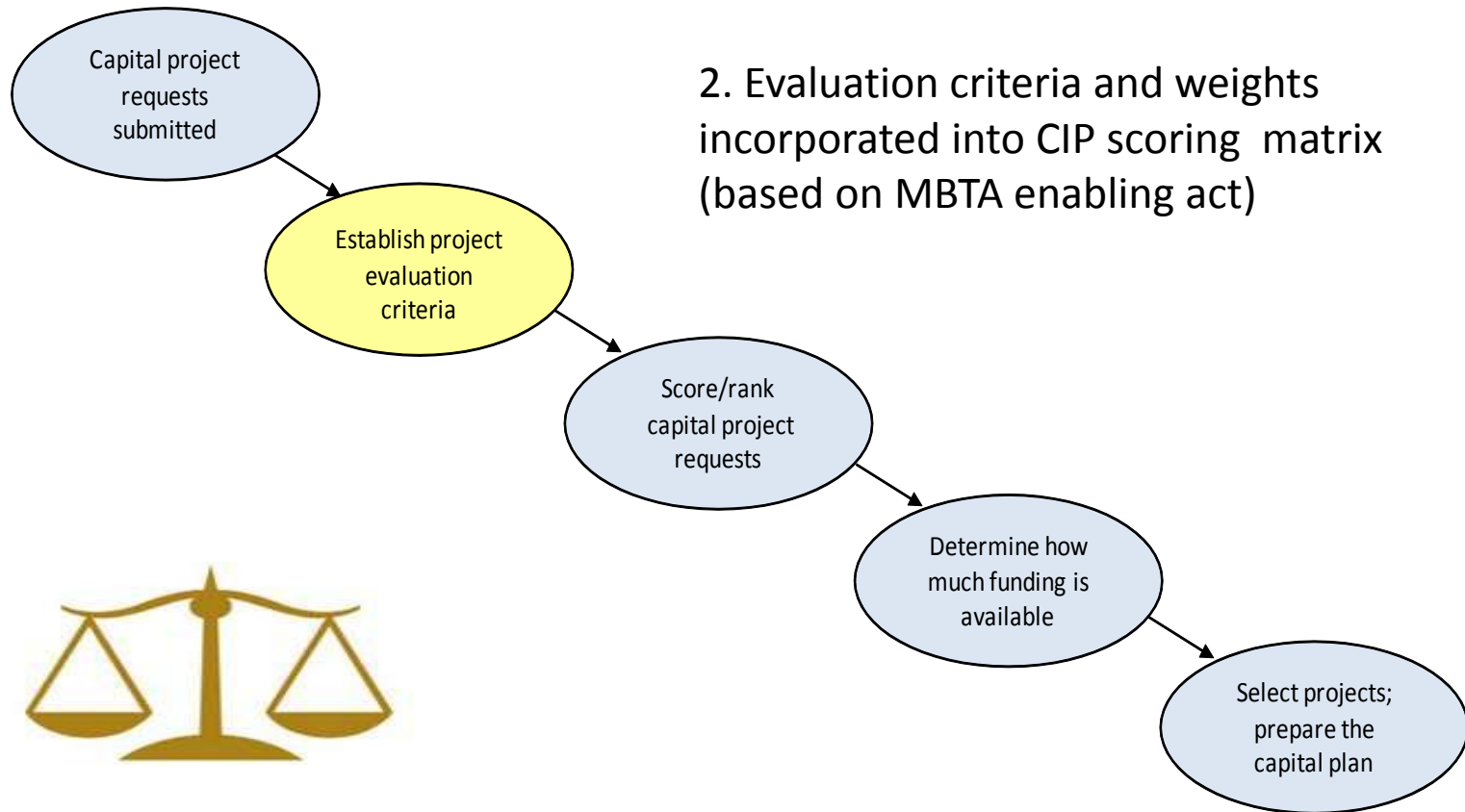
Capital project prioritization and selection We all do it (some better than others).



Capital project prioritization and selection MBTA current process



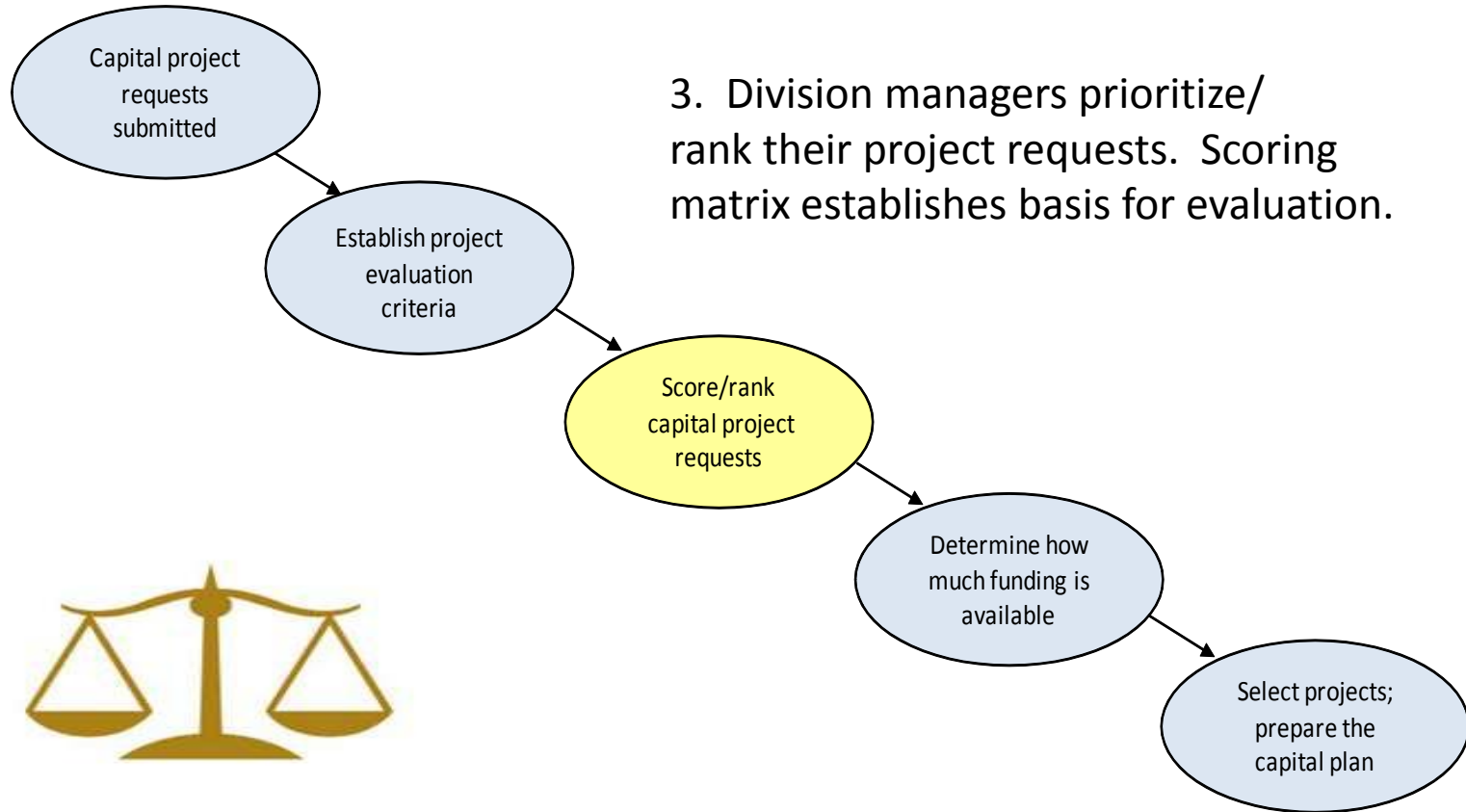
Capital project prioritization and selection MBTA current process



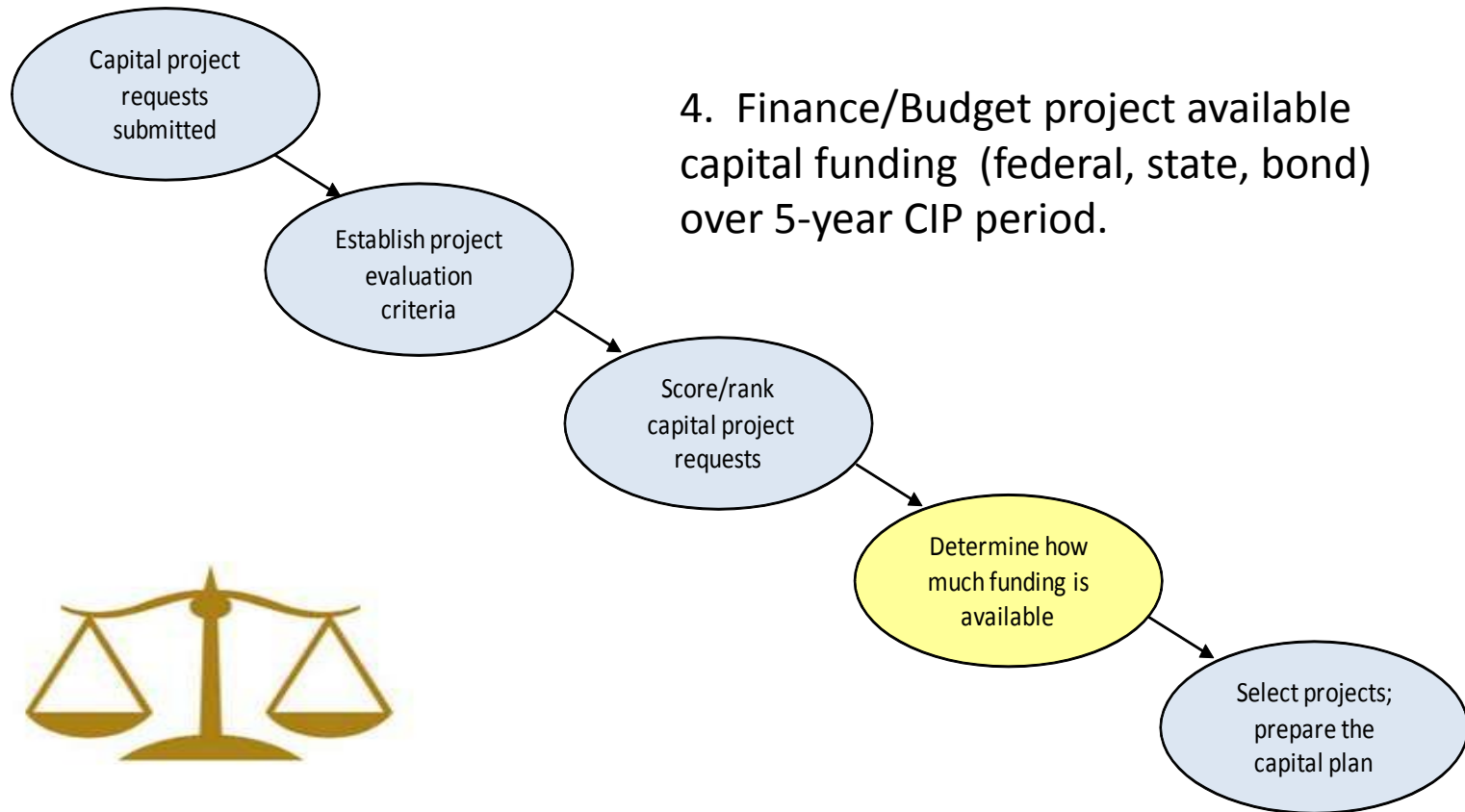
Capital project prioritization and selection MBTA evaluation criteria and scoring matrix

	Health Impact (Customers or Employees)	Environmental Impact	State of Good Repair	Operational Impact	Legal Commitment	Cost/Benefit (e.g., passengers, budget impact)	
	10	10	20	20	20	20	
20			Past useful life now (11-20)	Operations critical (16-20)	Currently overdue (20)	Positive cost/benefit (11-20)	
19					Major operational improvement (11-15)		Due during CIP (11-15)
18							
17							
16							
15							
14				Moderate operational improvement (1-10)	Due after CIP (1-10)	Neutral (10)	
13							
12							
11							
10							
9	Critical (6-10)	Critical (6-10)	Past useful life during CIP (6-10)	Negative cost/benefit (0-9)			
8							
7							
6							
5							
4	Yes (1-5)	Yes (1-5)	Past useful life after CIP (1-5)				
3							
2							
1							
0				No health impact	No envir. Impact	Does not replace/ renew asset	No operational improvement

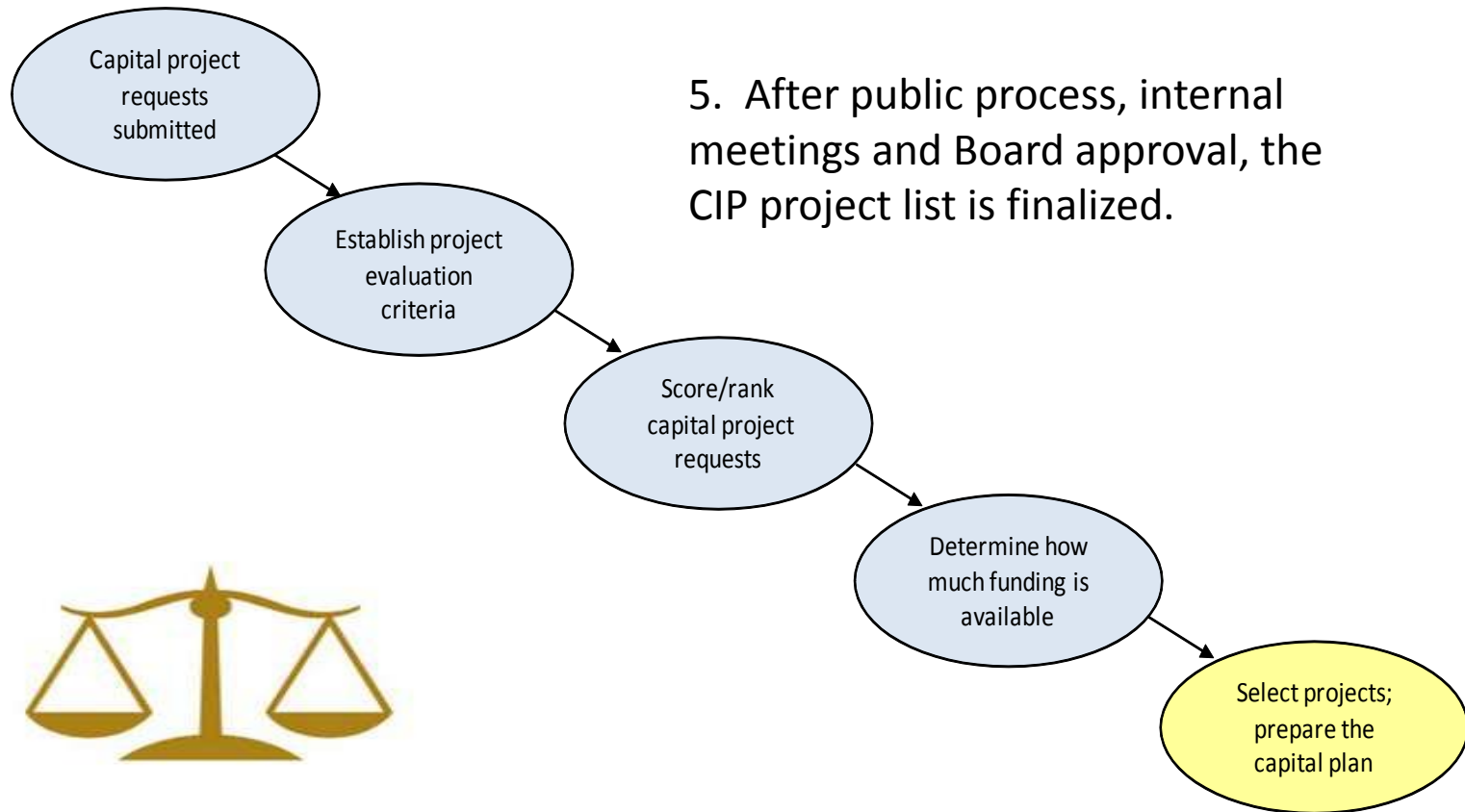
Capital project prioritization and selection MBTA current process



Capital project prioritization and selection MBTA current process



Capital project prioritization and selection MBTA current process



Capital project prioritization and selection MBTA current process

Current system works very effectively, but...

- Not linked directly to MBTA goals, objectives, performance measures
- Safety always #1 priority, but sometimes hard to quantify (as most all projects have a safety impact at some level)
- Can be difficult to find proper balance/mix between modes and purpose (e.g., SGR/preservation, customer enhancement, accessibility, etc.)
- Individual project rankings based on manager's judgment as opposed to a consensus-based scoring system
- Budget office must fill role of "referee" at times

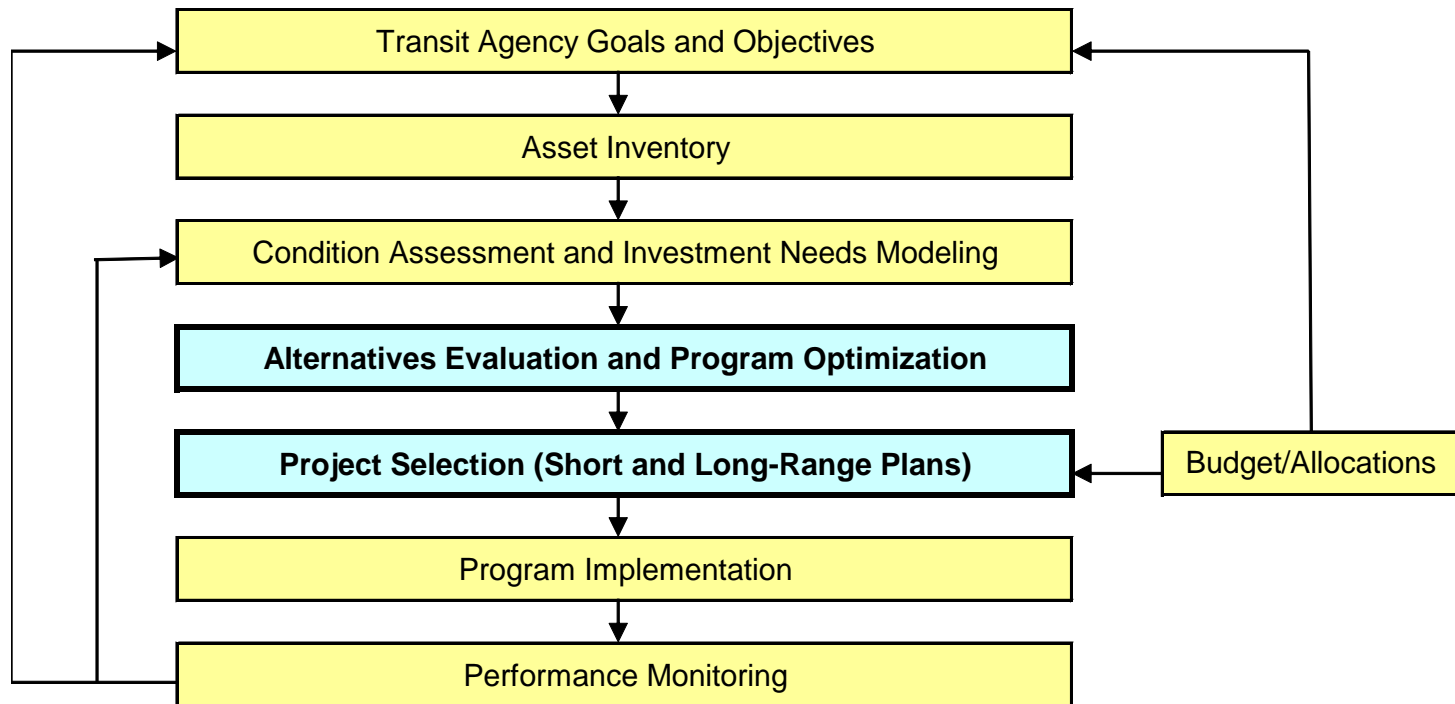
It works very well, but we think it can work even better.

Capital project prioritization and selection MBTA plans

We would like capital project evaluation, prioritization and selection to be part of a more comprehensive Transit Asset Management (TAM) system



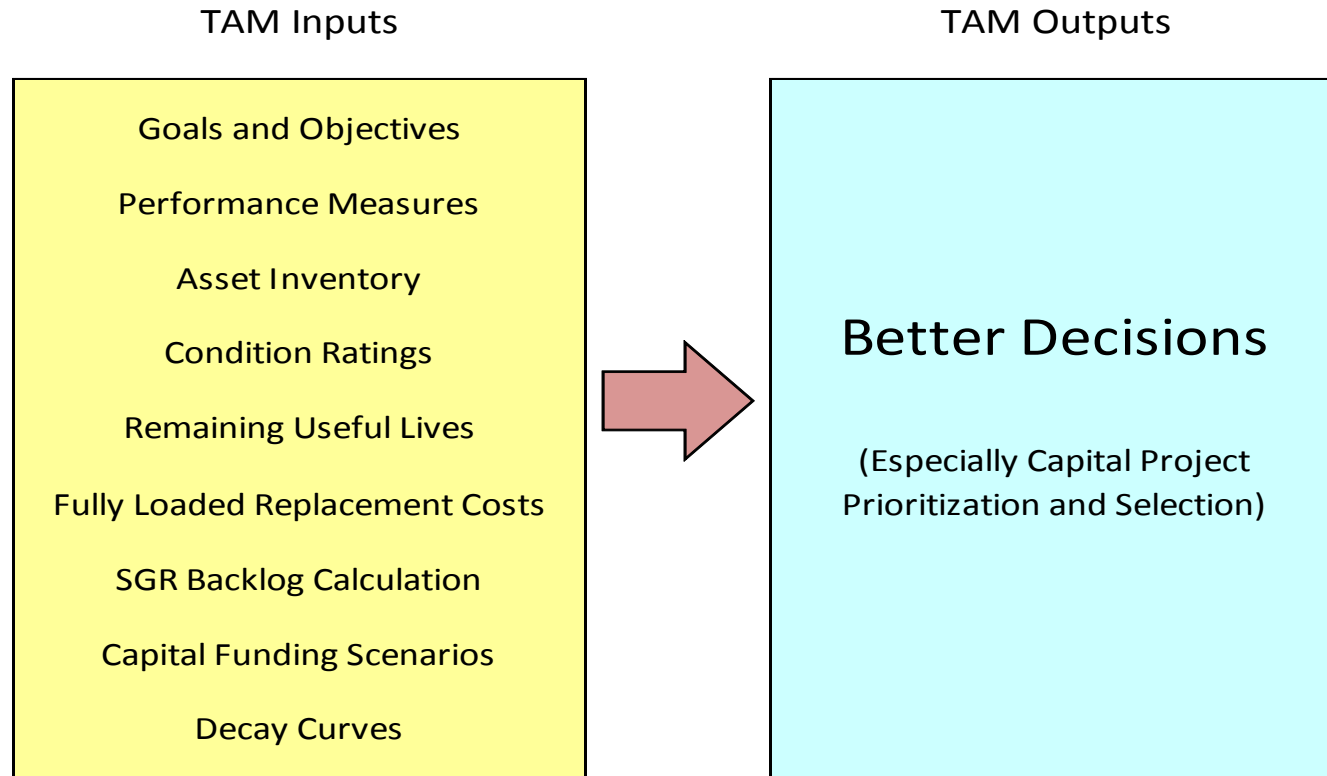
Capital project prioritization and selection
It's at the center of Transit Asset Management.



“Asset management is, at its core, a process of resource allocation and utilization.”

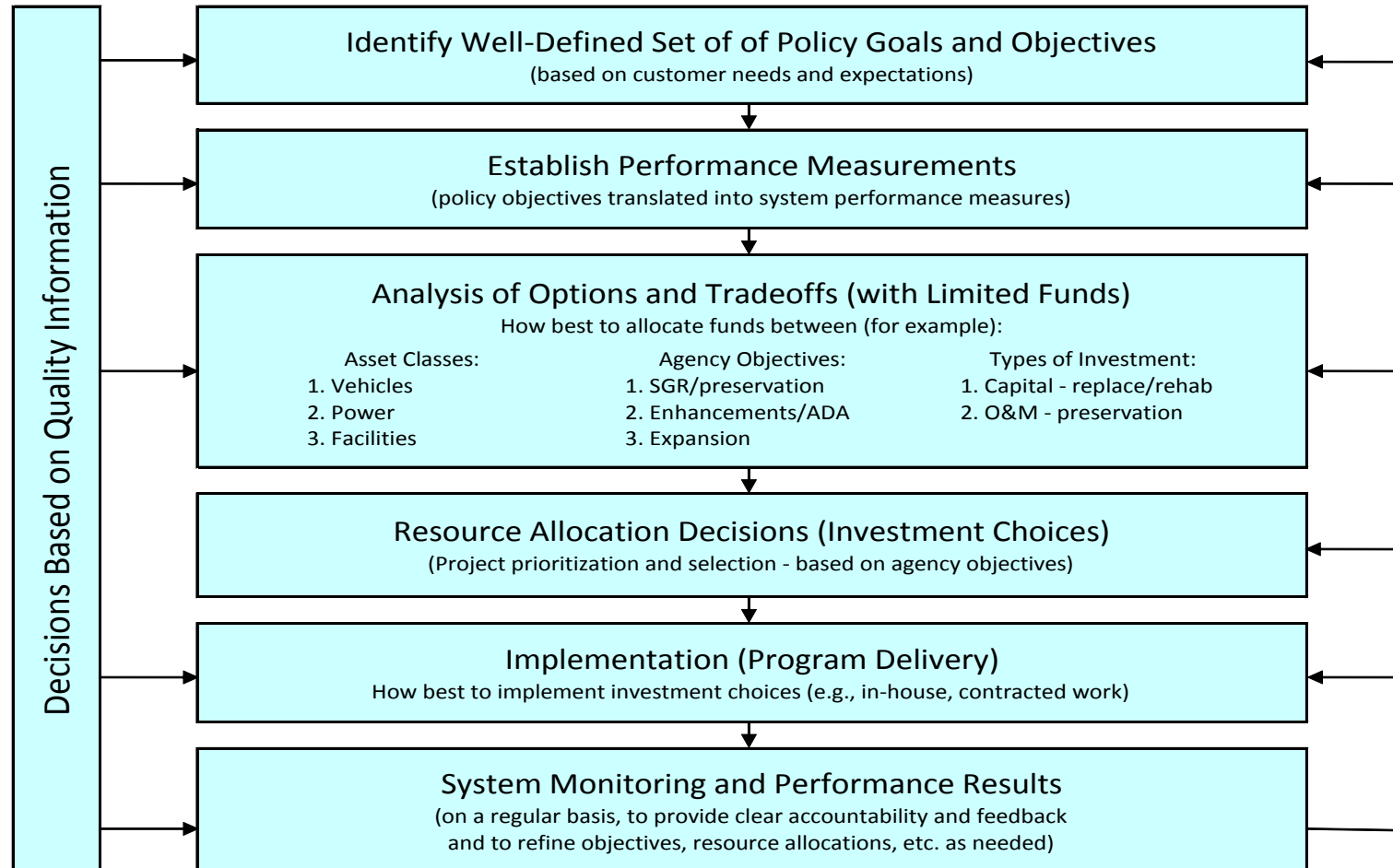
Source: AASHTO – Transportation Asset Management Guide

Transit Asset Management (simplified)

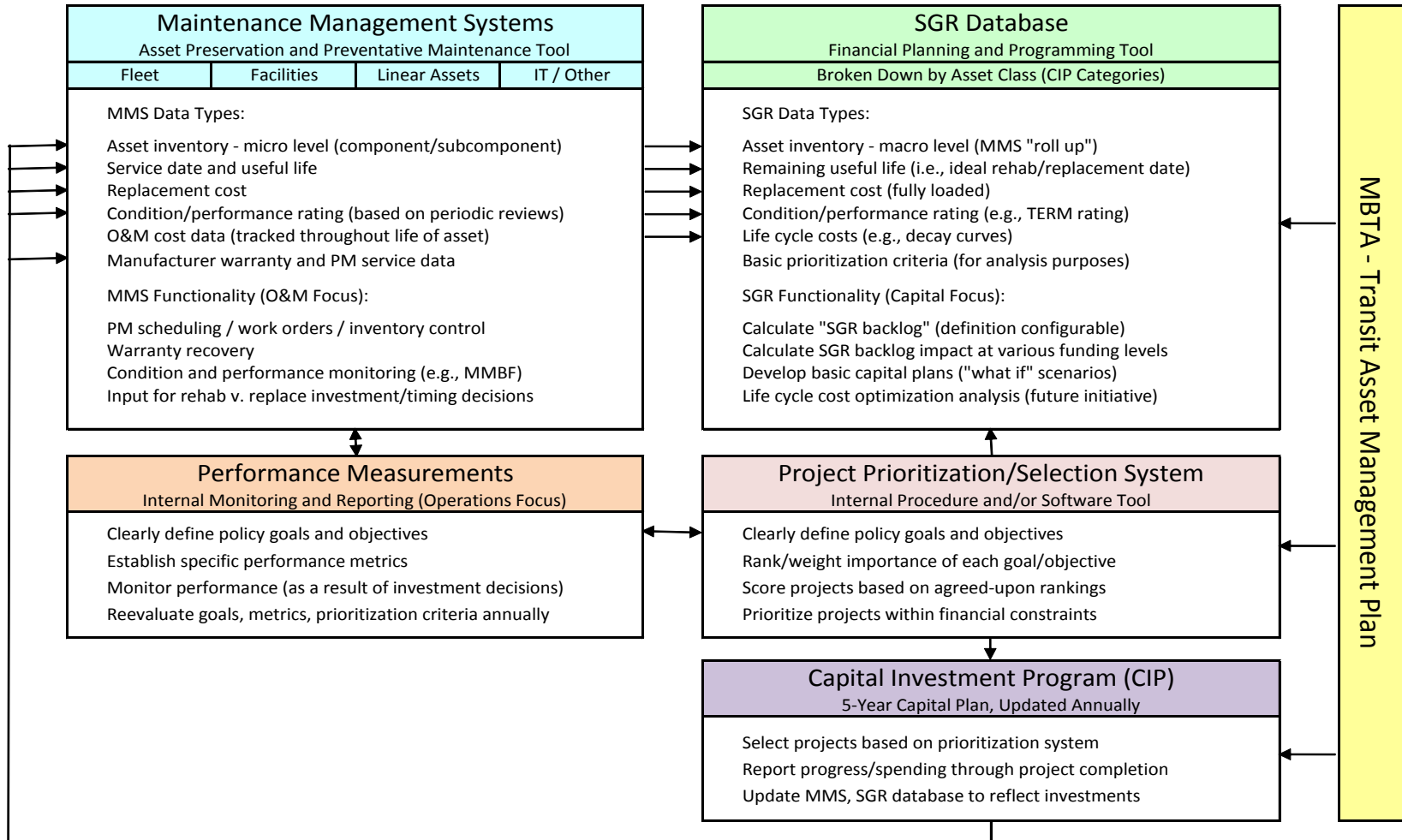


The TAM data should directly support capital project prioritization and selection decisions.
If not, what's the purpose of doing all that work to capture and manage the data?

Capital project prioritization – within TAM framework



TAM plans – the pieces of the puzzle



TAM and project prioritization/selection

We know what it should look like.

We have most of the pieces.

But how do we make them fit together?



I guess that's why we're all here!

Any ideas?

Thank you.

