



RAIL TRANSIT SEMINAR



August 26-28,
2025

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State of Good Repair & Asset Management Process for Rail Transit Systems



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Benefits of SOGR



Benefits:

Improved system safety

Improved system reliability

Improved service delivery

Improved budget planning and financial efficiencies

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Facts

Facts

1. You do not know if you are in a State of Good Repair (SGR) unless you have an asset management program/process.
2. State of Good Repair is easily determined through good Asset Management (AM).
3. Reporting SGR/AM is a requirement if you receive federal funding





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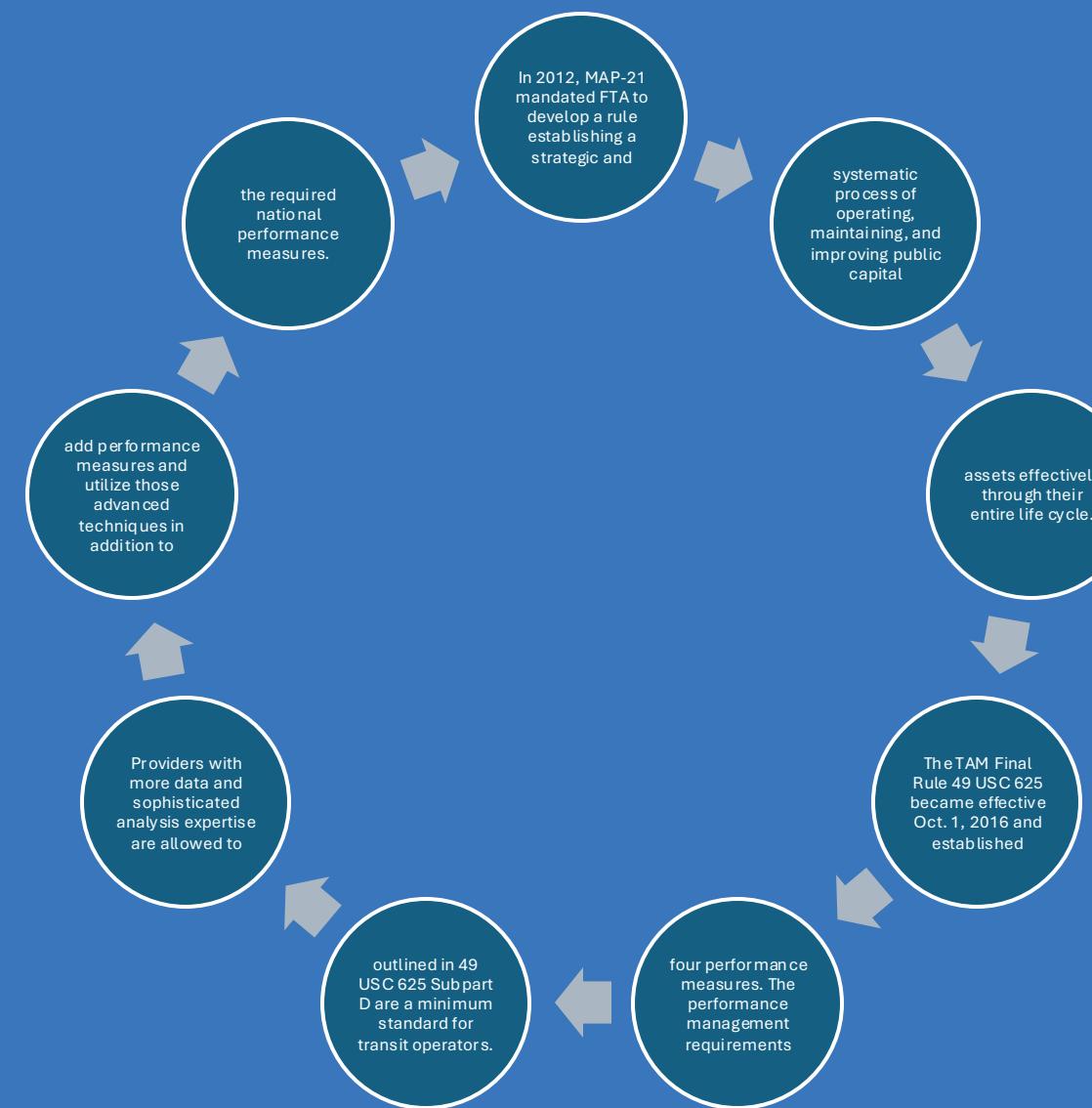


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Federal Regulations for TAM



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State of Good Repair

A typical definition for State of Good Repair:

The condition in which an asset is able to operate at a full level of performance.

The asset is considered to be in a state of good repair when that asset:

1. Is able to perform its designed function
2. Does not pose a known unacceptable safety risk
3. Its lifecycle investments must have been met or recovered



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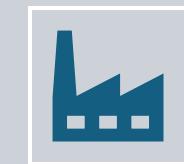
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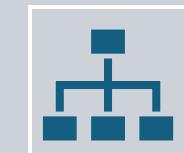
Asset Management Plan



Asset Management Plan:



The first step in achieving SGR is by developing an asset management plan.



The asset management plan should include:

- Executive-level direction to support the goals of the asset management program
- Documented commitment to achieving SGR
- Defined asset management objectives
- Defined and assigned roles and responsibilities

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Federal Asset Groupings

Category	Class
Equipment	<ul style="list-style-type: none"> ▪ Construction ▪ Service Vehicles <ul style="list-style-type: none"> ▪ Maintenance
Rolling Stock	<ul style="list-style-type: none"> ▪ Railcars ▪ Buses ▪ Other Passenger Vehicles <ul style="list-style-type: none"> ▪ Ferries
Infrastructure	<ul style="list-style-type: none"> ▪ Fixed Guideway ▪ Signal Systems ▪ Structures <ul style="list-style-type: none"> ▪ Power
Facilities	<ul style="list-style-type: none"> ▪ Support Facilities ▪ Passenger Facilities <ul style="list-style-type: none"> ▪ Parking Facilities





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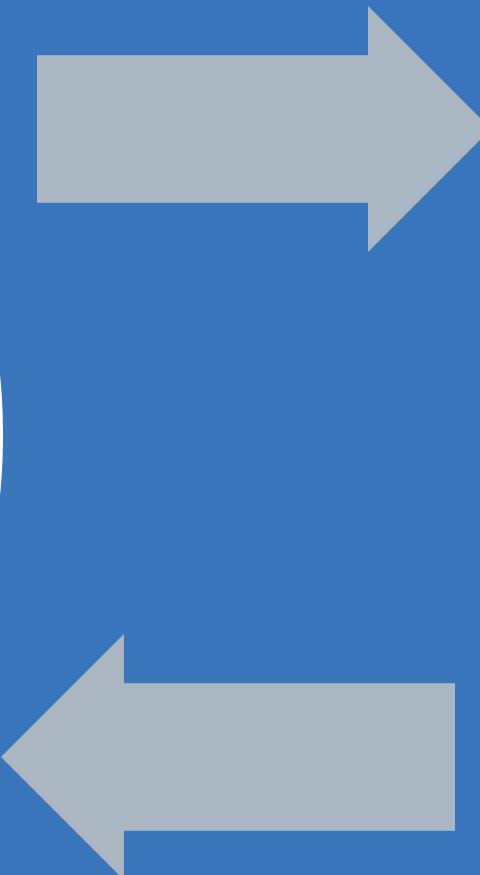


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Asset Inventory

The second step in developing a process to manage your assets would be to generate an inventory of asset records by asset types. This is the point when you will want to identify and document your asset breakdown structure or "ABS". This should be a parent-child relationship including components that make up an asset. You would include all rail cars, buses, facilities, track, bridge, tunnel, electrical, 3rd rail or Catenary, PTC/ATC, signals, switch and crossing assets. Having a correct asset inventory is essential in determining the State of Good Repair.



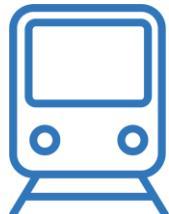
- Critical fields for the asset record would be:
- In-service/installed date
 - Estimated Useful life or Useful Life benchmark
 - Meters: this could be miles, hours or usage
 - Original Cost
 - Maintenance and rehab costs
 - Condition rating

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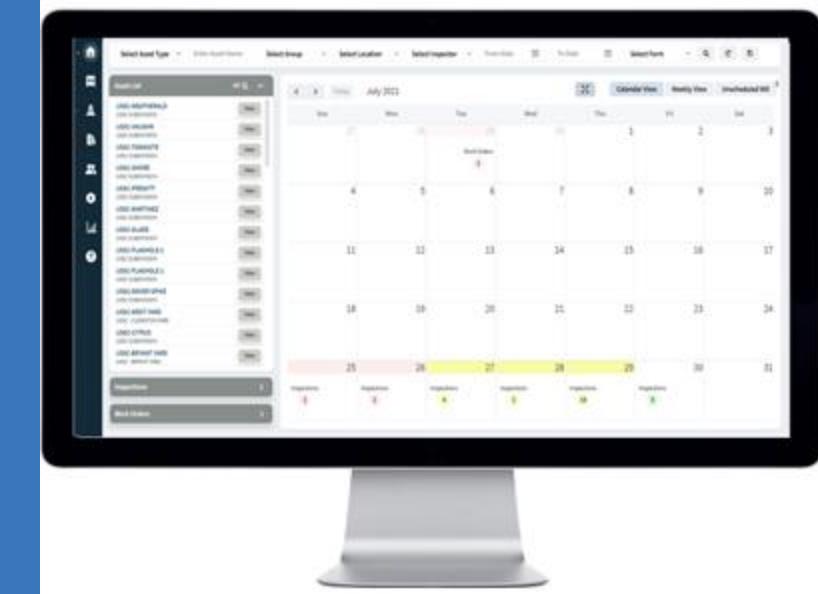
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Building Your Asset Inventory

Some asset indicators can be set-up to capture usage. For example, how many times a switch throws or # of trains or tonnage on a track asset.

You should also think of methodology to capture performance restrictions against assets. In the railroad industry slow orders, out-of-service (OOS) and FRA Part 213.9 (b) are a few examples.



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Linear Assets

Linear Assets provide more challenges as the asset could be 100's of miles long.

- Figuring out what parts of that asset should be rehabbed or replaced is a challenge.
- Also, you must match asset information to like minded assets, i.e., all curves should be a parent-asset and all tangent sections should be an asset as well.
- The curve assets and components will deteriorate quicker than those on tangent. One other thing to consider is if the track segment is in the tunnel or outdoors as UV rays can damage elastomer type fasteners.



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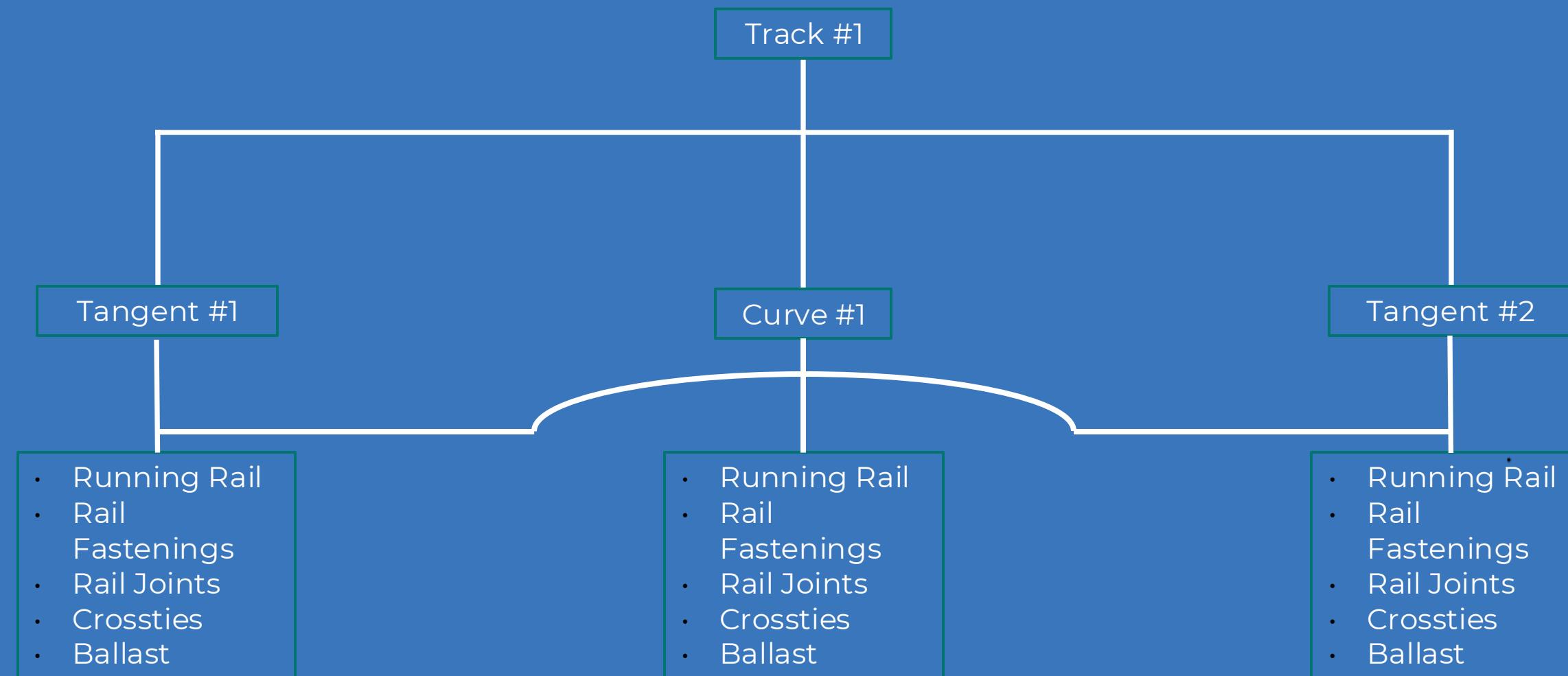
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Linear Asset Breakdown Structure



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Condition Assessment

Once you have comprised your asset inventory and populated the before mentioned fields, you should embark upon a condition assessment process. This process typically utilizes a numbering system to determine the current condition of the asset.

One example of a condition rating method is:

Status	Condition Score	Description
Excellent	5	No visible defects, near-new condition
Good	4	Some slightly defective or deteriorated components
Adequate	3	Moderately defective or deteriorated components
Marginal	2	Defective or deteriorated components in need of replacement
Poor	1	Seriously damaged components in need of immediate repair
Failed	0	Asset is out of service





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Condition Assessment

How is the condition rating updated?

- The asset conditions can be updated during normal scheduled inspections
- Or you can schedule a third of the assets per year and you will always keep them up-to-date.
- This condition rating may be used to extend the asset life due to the asset not wearing as originally thought.



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Condition Assessment

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Condition Assessment

Condition Assessments can be performed during normal inspections or by special inspection:

Status	Condition Score	Description
Excellent	5	No visible defects, near-new condition
Good	4	Some slightly defective or deteriorated components
Adequate	3	Moderately defective or deteriorated components
Marginal	2	Defective or deteriorated components in need of replacement
Poor	1	Seriously damaged components in need of immediate repair
Failed	0	Asset is out of service

Group: EP&E Tech
Name: Sw -23-AR
Region: Southeast
Location: Blue Line
Description: Switch #23 at Armor Yard
Status: Active

Latitude: 33.760644 Longitude: -85.004199
Actual MP: 0.00 Override MP: 0.00 Available track

In-Service Date: 09/25/2001 Useful Life Benchmark: 15 years
Est Replacement Date: 09/25/2016 Current Condition Rank: 3 Moderately defective or deteriorated components
Original Cost: 100000 Priority: 1 - Operational/Safety Critical

Notes: There are no notes details to display



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Condition Assessment

The screenshot displays the Railroad Software Condition Assessment module. On the left, a table lists asset status based on condition scores:

Status	Condition Score	Description
Excellent	5	No visible defects, near-new condition
Good	4	Some slightly defective or deteriorated components
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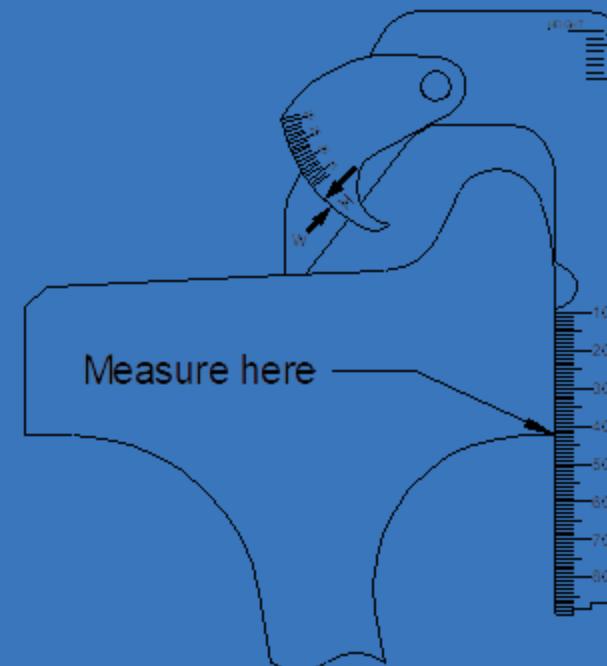
The right side shows a detailed asset record for an Alstom Streetcar (SC-M1-1011). The record includes:

- General Information:** Group (Rail Car Mech), Name (SC-M1-1011), Region (Midwest), Location (Havelock Yard), Description (Alstom Streetcar), Status (Active).
- Geolocation:** Latitude (33.760644), Longitude (-85.004199).
- Asset Details:** Manufacturer (Alstom), In-Service Date (04/13/2021 00:00), Model # (CQ 312), Estimated Useful Life (50 Years), Condition Rating (4 - Good), Original Cost (\$1,000,000).
- Condition Assessment:** A red arrow points from the table to a callout box around the "Wheel Flange Wear" and "Wheel Wear Condition" fields, both set to "3 - Adequate".
- Asset Items:** A list of components including Comm. Control Panel, Electronic Control Unit, Destination Sign, and Friction Brake System.



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Wheel Measurements



Left Front 1:		Right Front 1:	
Left Front 2:		Right Front 2:	
Left Satellite:		Right Satellite:	
Left Rear 1:		Right Rear 1:	
Left Rear 2:		Right Rear 2:	
Left Match Wagon:		Right Match Wagon:	

The wheel wear can be updated through the normal or special inspection frequency.
Data can be used to trend and project when the wheel would need truing or replaced.



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Wheel Measurements

The screenshot shows the trackasset software interface. At the top, it displays the asset number INSP-0000115, asset name EMU-256, and section --. On the right, it shows the combined form name EMU Weekly Inspectomp, asset type Electrical Multiple Unit, and form layouts Table (selected) and Form. Below this, the 'Inspector' dropdown is set to RRS Demo Account. The main area is titled 'Wheel Measurement' and shows a table for 'Electrical Multiple Unit' with columns LF-1, RF1, LF2, RF2, LR1, RR1, LR2, RR2, and Result. A legend indicates three status levels: C (Test Completed - Left in Compliance), A (Adjustments Made - Test Completed - Left in Compliance), and R (Repair/Replace - Test Completed - Left in Compliance). The 'Wheel Measurement' checkbox in the asset type list is checked. A sidebar on the left lists various asset types, and a vertical toolbar on the far left contains icons for navigation.

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NAME

ADDRESS

target	hits	score	target	hits	score
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
Total 1st 14			Total 2nd 14		
1st 14					
Total Round					

VISIT our Pro Shop for your Archery needs.
We handle the very fine line of Bear Archery equipment.

SGOR Score

Most agencies and properties consider themselves in a state of good repair when the overall rating is above a 3. This of course depends on the criticality of the asset and the impact to safety. It is possible to have an overall acceptable score for state of good repair but have an individual asset such as a bridge that is in a poor state of good repair. The latter would take precedence over the SGR score.

Some advantages of using a condition rating system is that if an asset has reached its useful life benchmark but still functioning as designed, it would not be flagged for capital rehab or replacement. Another advantage is that you can generate an overall condition score for each asset type to help pinpoint the best use of funding to maintain your property in a state of good repair.

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Continuous Quality Improvement

Please keep in mind that the asset record is alive and will need continuing updates. In the railroad and transit industries, track, signal, crossing, and bridge inspection intervals typically follow the Federal Railroad Administration's guidelines and provide an easy means of updating current condition ratings.

The continuous updating of the asset condition ensures that the overall condition score for each asset type is in an acceptable state of good repair.

Asset Details	
In-Service Date	09/25/2001
Est Replacement Date	09/25/2016
Original Cost	100000
Useful Life Benchmark	15 years
Current Condition Rank	3 - Moderately defective or deteriorated components
Priority	1 - Operational/Safety Critical



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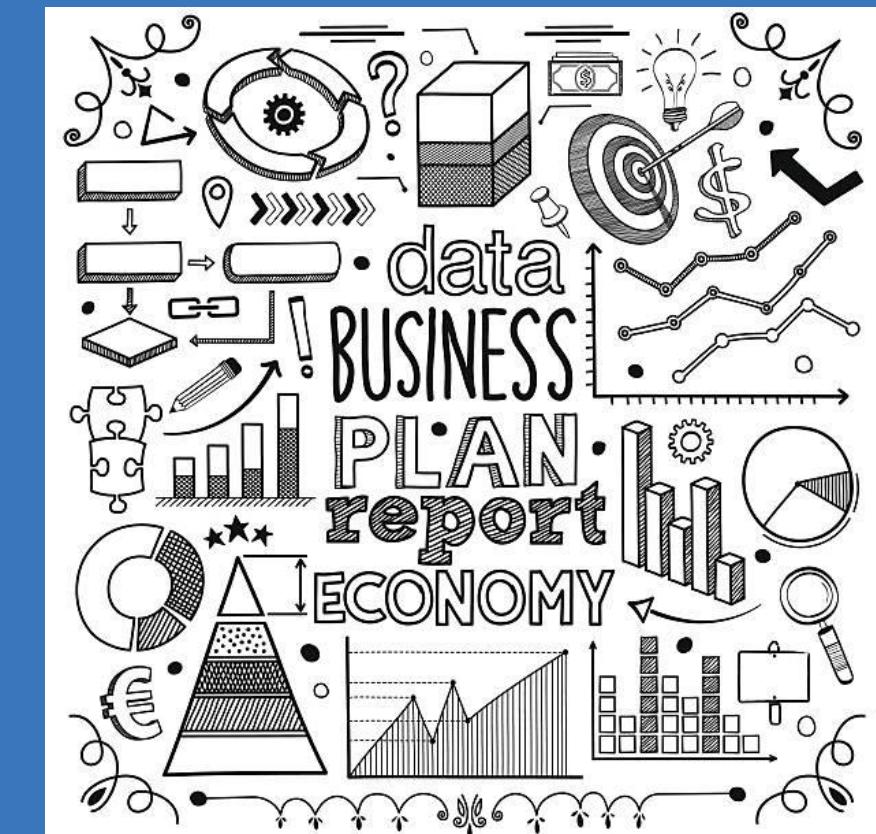


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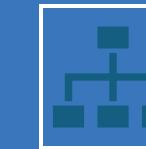
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Key Performance Indicators



A key performance indicator that can be used for track asset types is the “percentage of track currently under a performance restriction. An agency can set their own acceptable goals for this section. Things to consider would be if the performance restrictions on your road are causing service and delivery delays.

Asset management is not a “one and done” exercise. It is very important that an agency or property involve all stakeholders and asset owners and that all parties buy-in to the asset management plan. In my experience, I have witnessed those who thought of this process as just another set of numbers to provide management and they experienced little to no improvement.

On the opposite end of the spectrum, I have also witnessed those who bought-in to the asset management process and maintained their assets in better repair while spending less money.



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Summary



State of good repair and good asset management processes lead to a safer rail system and greatly reduces unnecessary spending by focusing on the assets that actually need to be rehabbed or replaced. For many, this is a cultural change but improving safety and decreasing operating and capital costs more than justify initiating a comprehensive asset management methodology.



The federal government has many opportunities for funding that will support state of good repair and asset management. If your agency or property has already implemented this methodology, their chances of receiving grants grows exponentially.



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ISO 55001 Certification

- MARTA Received ISO 55,001 certification in 2019.
- First North American Transit to receive this honor.
- It takes many departments/stakeholders using the same playbook (Asset Management Plan)



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Questions & Contact Info

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