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An Asset Manager's Guide to



VISION

BUILDING A MEANINGFUL COMPANY

VISION

by James Mourafetis

What does it mean to have a vision for your company? Why should you have one and how do you create it? As you'll see in this article, developing a vision requires buy-in from department level managers and is crucial for a company's success.

Why Create a Vision?

Businesses that rely on heavy assets depend on an effective enterprise asset management (EAM) program to address three common challenges: increasing asset utilization rates, increasing operational performance and minimizing costs. For an EAM program to be effective, a company needs a vision that is executable, easy to manage and sustainable. This vision also needs to define quantifiable measures, time frames and responsibilities, all of which produces buy-in of process owners.

Who Creates a Vision?

The key to aligning your company's goals, mission and values is to convert these concepts into a department level strategy. Organizations often try to deploy top-level goals and measures to meet a corporate level objective, but they don't enable department level key managers to determine their own vision and strategies. The result is a lack of commitment by key stakeholders, who now simply work through a corporate exercise to meet commitments they don't necessarily embrace.

Rather, these six steps should be followed in creating a vision that emphasizes buy-in from department level managers.

1

Form the real team

Begin by forming a cross-functional asset management steering committee with key department level stakeholders. For complex organizations, develop a functional area interface map between key processes and departments.

Here is a real-life example:

In a Class 1 railroad, a locomotive work group (LWG) was formed as the asset steering committee for locomotives, which is a key asset in freight rail. Since many of the functional interactions occur between network operations and the mechanical department, the LWG included key stakeholders from network operations (the department that schedules and utilizes locomotives) and the mechanical department, which maintains the locomotives.

Modernization Plan- Impact Areas

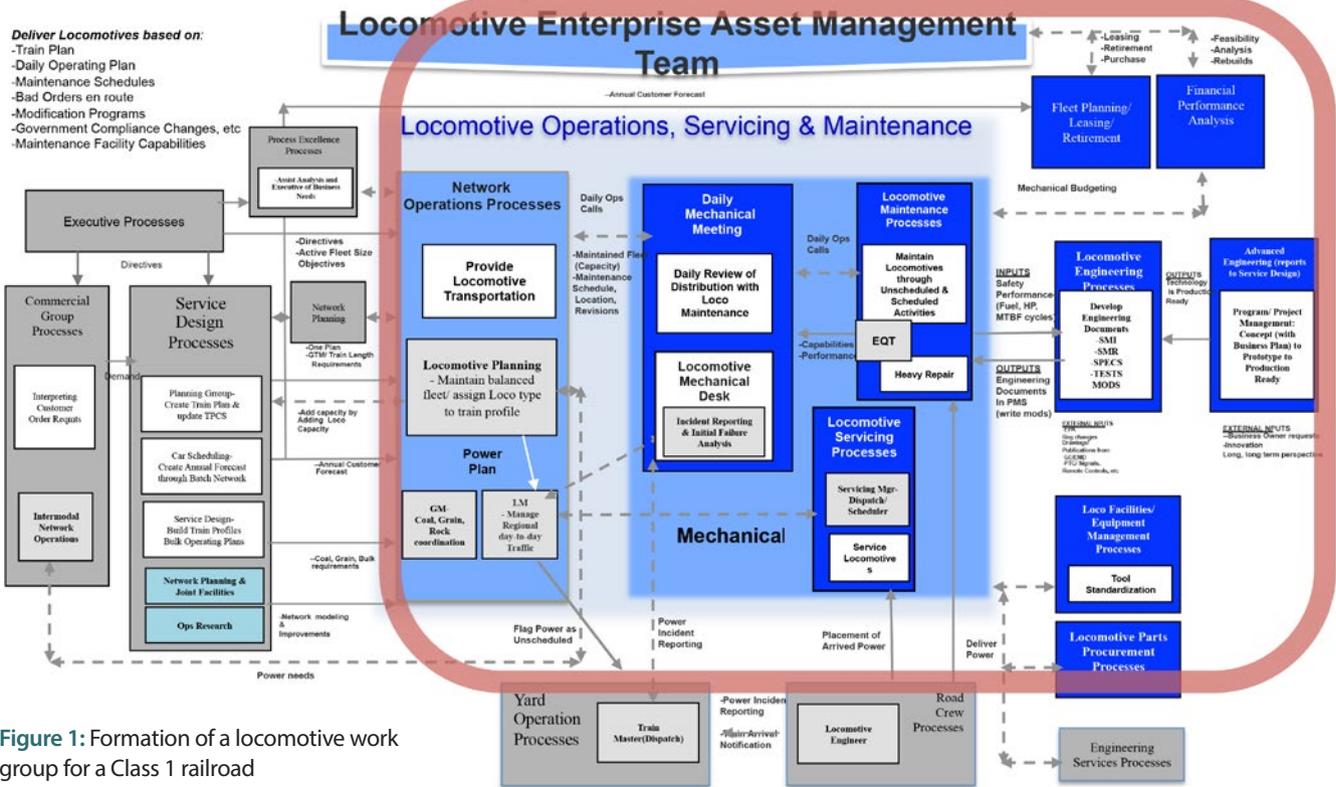


Figure 1: Formation of a locomotive work group for a Class 1 railroad

2

Set key goals, drivers and attributes

To set the vision for the asset steering team, conduct interviews with managers cascading from the asset steering team. There are two interview goals: identify how the asset steering team will develop its EAM strategy and deployment, and formulate the asset team's key operating goals, drivers and attributes. In the example of the Class 1 locomotive asset steering team, interviews generated key locomotive goals, drivers and attributes.

It's crucial to understand the key goals, drivers and attributes as a system in order to understand that decisions based on one driver will impact another. The asset steering team can then use a balanced, aligned approach to authorize capital expenditure (CAPEX) for projects. This might change how the organization aligns resources to support the asset steering team's goals.

Goals	Asset Drivers	Attributes Describing Drivers
<ul style="list-style-type: none"> Right locomotive at right place and time Minimize disruptions due to fleet condition gaps Minimize locomotive maintenance and train-to-train dwell 	Locomotive distribution	Fleet resizing, agile pairing, capacity-driven scheduling, footprint aligned with demand
	Fleet Availability	Readily available parts and tools, maximized labor productivity, perfect quality, optimal workflow
	Fleet Condition	On-road problem resolution, real time health status, confidence in ETR's, compliance
	Execution	Optimal energy efficiency, achieve planned results, enable employees to learn and grow

Figure 2: Key goals, asset drivers and driver attributes for Class 1 railroad

3 Set benchmarks: outside-in

Based on its top-level goals, drivers and attributes, the asset steering team can now assess what other world-class, heavy asset organizations are doing using outside-in benchmarking. This enables you to compare industry best in class practices and how your organization is resourced and performs against best practices.

Your team can now identify external best practices that align with the key attributes of your asset team's drivers and determine gaps. It's important to highlight great things departments are already doing. The asset steering team can use benchmarks from other heavy asset industries, as well as their own, to set realistic targets.

This is important because managers form beliefs of what is good based on how they rate their department's performance with their industry peers. Over time, this forms an insular perspective of what's good, which prohibits managers from learning best practices outside the industry. The example in Figure 3 highlights the comparison of outside-in best practices with internal initiatives and gaps.

Attributes	Opportunities	Good Practice
Capacity driven Scheduling	<ul style="list-style-type: none"> Manual shop capacity assessment Difficult to quantify shop capacity in real time Shop count drives scheduling which discourages FIFO workflow 	<ul style="list-style-type: none"> Optimization tools for Q scheduling
Footprint Aligned with Demand	<ul style="list-style-type: none"> Variation in maintenance repair and Q capabilities generates light moves Limited coverage of future growth corridors due to existing footprint Compliance of certain commodities prevent fastest route (ie; chemicals) 	<ul style="list-style-type: none"> Network modeling initiatives
Agile Pairing	<ul style="list-style-type: none"> Static locomotive plan for train profile Manual power assignment, heavily dependent on LM's capabilities and knowledge Local optimization due to limited visibility of overall network impact 	<ul style="list-style-type: none"> Distribution guiding principles
Fleet Rightsizing	<ul style="list-style-type: none"> Multiple locomotive classes constricts power assignment & distribution Productivity factors and sensitivity matrices are used to convert GTM to fleet size requirements. Need for improved fleet life cycle planning tools Limited locomotive level cost visibility 	<ul style="list-style-type: none"> Fleet strategy in place for key classes – AC, 4000 DC, 3000 DC, 4 Axel

Attributes	Cross- Industry Best Practices	Internal Initiatives
Capacity-driven Scheduling	<ul style="list-style-type: none"> Shop capacity models with real time data on shop workload, service time, free capacity and expected repair times 	<ul style="list-style-type: none"> SAS forecasting implementation in service design For Q: Locomotive shop balancer and route
Footprint Aligned with Demand	<ul style="list-style-type: none"> Optimized shop location using network models and failure history Create 'super shops' and improve flexibility 	<ul style="list-style-type: none"> Network modeling – <ul style="list-style-type: none"> Shop & Service Center Locations Infrastructure Corridor Congestion Fuel Truck Simulation Model
Agile Pairing	<ul style="list-style-type: none"> Dynamic locomotive assignment based on real time load information Decision support systems - software that advises LMs on best assignment in real time 	<ul style="list-style-type: none"> Hump yard simulator (need similar for shops) Locomotive plan optimizer, simulation optimizer SAS forecasting implementation in service design
Fleet Rightsizing	<ul style="list-style-type: none"> Reduce fleet complexity Explore secondary markets for aging fleet disposal Lifecycle cost approach to drive use-repair-dispose strategy 	<ul style="list-style-type: none"> Loco PIT- <ul style="list-style-type: none"> Purchase 50 new GE Units Utilization 4.1 to 4.15 GTM/HpHr Retirements

Figure 3: Current state and best practices for locomotive distribution

4

Establish an inside view of functional performance

Look at functional areas to gauge your organization's internal best practices. This is where your skills at getting functional managers on board are critical.

In large organizations, where key supporting functions, such as maintenance, have few internal operating and financial measures, operating measures are often only at the reporting level outside the functional area. They also often lag indicators, such as how many assets are inspected, repaired, or on hand; how long assets are dwelling; and what percentage of fleet level measures is out of service or available. Financial operating expense measures are typically rolled up to the line item level without detailing work scopes within the operation.

These high-level, lagging measures don't provide the resolution to change the impact of the operating and financial measures. They don't show progression of work, drill downs of reliability issues, labor and material costs, or cost of maintenance lines, such as overhauls, engine change outs, etc. In many organizations, these top-level measures are perceived as a deceptive means to hide what's really going on in the facility or operation.

It's best to bring in outside consulting resources for two reasons: credibility from third-party observation and analysis of operational and financial performance, unbiased by the politics of the organization, and preventing internal rifts.

“For an EAM program to be effective, a company needs a vision that is executable, easy to manage and sustainable”

5

Facilitate a series of vision sessions

You're now ready to facilitate the development of a vision to gain a shared understanding of what is good from both industry best practices and an outside-in perspective on what other world-class heavy asset companies are doing. The question to answer is: How will the future be different from today? This phase enables the asset steering team to formulate a long-term vision and develop the building blocks to achieve it.

A real-life example would be a prescriptive analytics firm working in the mining industry. When an outside consulting firm helped the Class 1 railroad develop its long-term vision, fleet condition was a key driver for the locomotive working group. A more reliable fleet of locomotives meant the fleet could be more predictably utilized and provide improved asset efficiency. Through vision sessions, locomotive working group members learned about an outside-in approach to prescriptive analytics to improve reliability, so they procured the prescriptive analytics firm to reduce catastrophic locomotive engine failures. Locomotive reliability for this Class 1 railroad is now best in class in the industry.

Hold three to four vision sessions so asset steering team members can digest all the input. Use outside help to facilitate these sessions to avoid political mines from internal employees facilitating sessions. Figure 4 is an example of the vision for the Class 1 railroad's locomotive working group.

Vision-Locomotive Asset Group

Maximize the time a locomotive is pulling cars

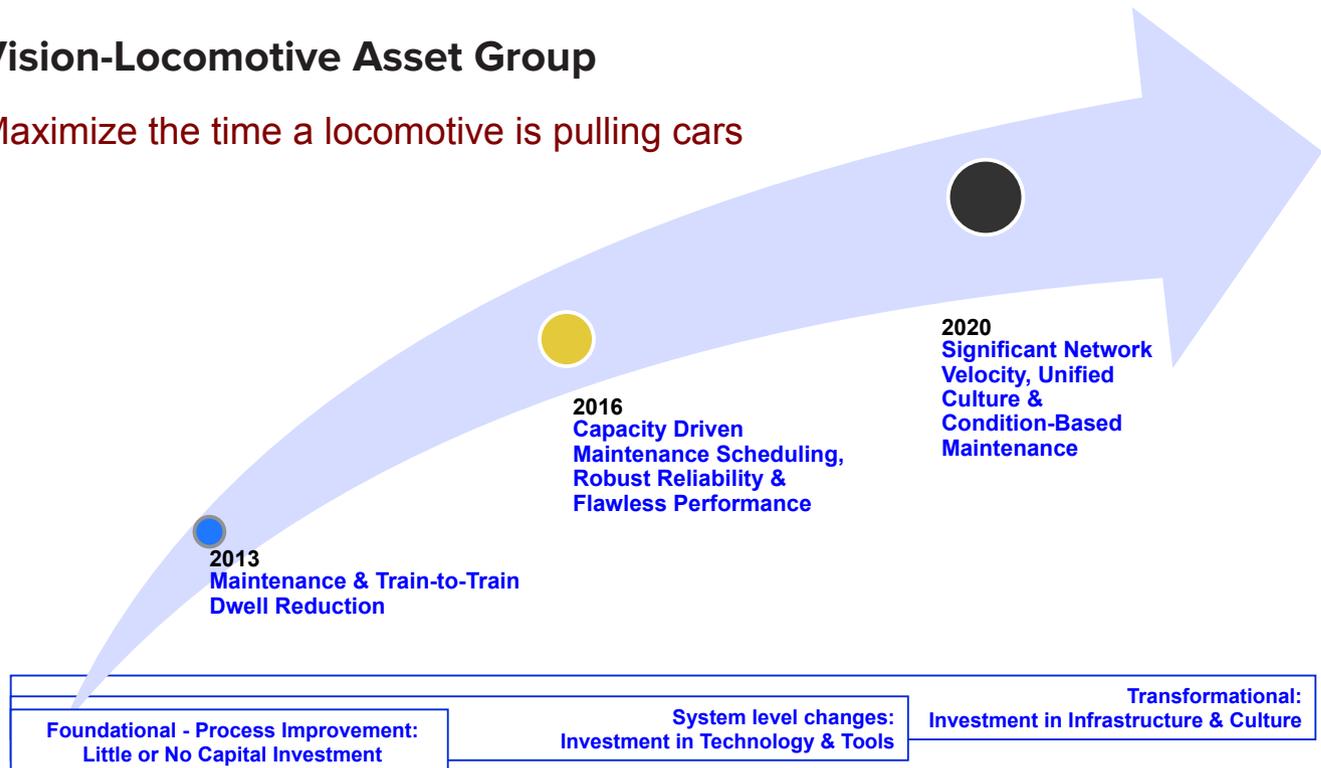


Figure 4: Development of a vision for a Class 1 railroad

6

Implement the vision

The goal of the vision sessions is to collaboratively develop a working draft asset vision comprised of short-, mid- and long-term initiatives that are developed, vetted and agreed to by the asset management steering committee. The vision needs to be in a simple enough format so all levels of the asset management team's cascading organization, including down to the mechanic, understand where the team is heading.

What's Next?

As you see, a vision can help a company be more effective in its programs and operations by creating a department level strategy. In order for the vision to produce business success, department level managers must be on board. Following the six steps outlined in this article will help you get your team aligned with your company's goals, mission and values.



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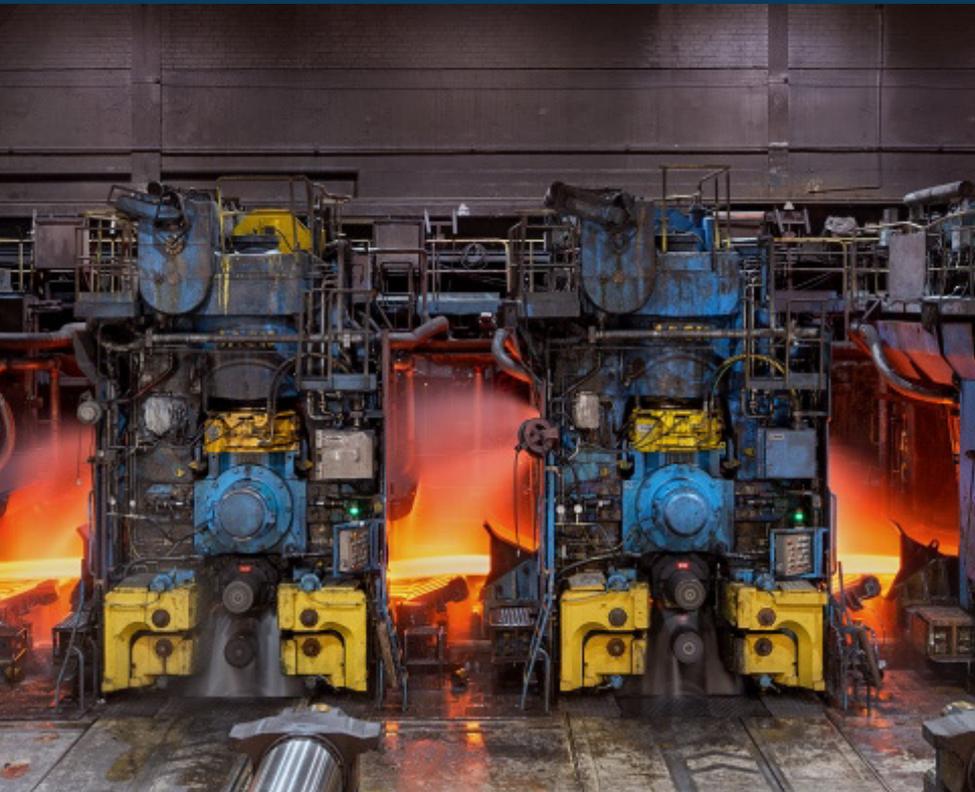
1 rail industry and public transportation. James has led many large and global operational improvement initiatives, as well as leading industry initiatives in transportation and mining to improve the availability, reliability and utilization of infrastructure, equipment, and workforce productivity. www.argoconsulting.com.

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