



## A new level of transit standards and expectations for safety and reliability

Asset and work management involve rigorous practices across all industries yet has never been more important in transit and transportation. This checklist summarizes the different methods and practices to rethink the transit asset management model. That means making sure that the right type of maintenance is deployed for the right asset, at the right time, by the right person, at the right place/point, and for the right condition.

### Understanding the Maintenance Maturity Model

Moving assets up or around the range of modes in the Maintenance Maturity Model will help identify which physical assets are most critical to operations and pose the greatest risks to business continuity.

- 1. Reactive:** Repairing the asset after it breaks or malfunctions
- 2. Preventive:** Maintaining assets at pre-scheduled time intervals
- 3. Condition-based:** Repairing assets once a single point of failure is pinpointed
- 4. Predictive:** Predicting asset failure with algorithms and sensor technologies
- 5. Prescriptive:** Identifying potential issues before they happen; laying out the processes and people necessary to avoid asset malfunction

Using the maintenance maturity model and enterprise asset management as-a-service enables transit operations and maintenance organizations to move from level 3 to level 4 by leveraging technologies developed in the Maintenance 4.0 paradigm – where asset analytics is the key driver for initiating maintenance. At level 4 maintenance, tactics, and decisions purely driven by data analytics, whereas level 5 leverages both advanced technologies like artificial intelligence and machine learning coupled with asset investment planning to determine the most economic tactic for the current asset's lifecycle.

## Build modeling, budgeting, and reporting

With a large array and number of assets at play, the following action items help transit agencies and transport organization identify the most important assets.

- Assure credibility of KPI indicators with focus on quality data capture
- Collect data components of every asset including labor, materials, and tools
- Embrace the concept of the digital operational twin to create a method of obtaining quantified, qualified, and standardized statements of condition for those components
- Produce real time situational awareness of all component condition
- Apply asset investment principles to select the most economic maintenance response
- Assign budget numbers to each asset and its maintenance mode
- Automate how data is gathered
- Deploy digital work to enable operational data and value capture

## People at the heart of asset performance

The next generation of operations and maintenance workers will challenge the speed and usability of legacy asset management solutions.

- Have workers participate in business process design and decision making to breed a commitment to excellence
- Augment worker tribal knowledge and resiliency with IoT tools such as AI, machine learning, and innovative digital work features like voice input to provide job safety and satisfaction

- Utilize digital workflow personas and business rule configurations to drive autonomous operations and maintenance activity tasks
- Initiate a maintenance excellence working group to drive continuous improvement – then implement change
- Measure resiliency and readiness of the workforce for training and certification, planning and control

## The right technology makes it possible

While safely and reliably moving people will remain a constant through any evolution, agencies should now focus on the technology infrastructure that helps support that core mission.

- Leverage asset performance management combined with asset investment planning capabilities to establish asset lifecycle / replacement requirements by equipment class.
- Apply machine learning and artificial intelligence to validate collected data enabling asset analytics to drive the correct operations and maintenance response
- Digital work technologies take the guess work out of field-based activities allowing workers to be more flexible and productive
- Transition from legacy EAM to an asset performance management solution for better security, scalability, resiliency, lower total cost of ownership, and faster time to value

For a broader look at how transit agencies and transport organizations can move people more safely and reliably, read more in [the best practice guide](#).

To learn more, visit [eam.hexagon.com](https://eam.hexagon.com)

## About Hexagon

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Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build, and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

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