HEXAGON

Decrease costs and downtime with smart asset management for manufacturing

Increase uptime for greater profitability

In manufacturing, downtime is a dirty word. Automating workflows, sourcing new suppliers, and training employees have been the traditional avenues to greater efficiencies, higher customer satisfaction, and larger profit margins.

But poorly managed assets can figure heavily into costly downtime, as unproductive minutes tick away, which can cost up to $60,000 for a 20-minute power outage or up to $15,000 per hour in wasted material inputs, according to Engineering.com.[1]

In this eBook, you'll discover tips on executing a smart enterprise asset management (EAM) strategy that strikes a data-driven balance between lean execution and maximum equipment uptime.

Contents

The cost of doing nothing

Some manufacturers focus on tactical procedures to track and fix assets. Record keeping and schedules are manual and prone to errors. Worst of all, a lack of asset data analysis prevents insight into potential failure, which is necessary to foster a culture of continuous improvement and competitive advantage.

A recent Aberdeen report stated that most companies experience downtime, and that it can cost millions of dollars per day in lost productivity.[2]

82%

of companies experience downtime over a three-year period

$2 million

is the average cost of a four-hour outage

46%

of companies couldn't deliver services to customers

37 %

lost production time on a critical asset

The five stages of maintenance maturity

Planning an EAM evolution starts with understanding the maturity of your asset management strategy.

1. Reactive
What's broken gets fixed. While this is still a common practice, it's not sustainable, and still leads to high downtimes costs, reduced inventory turns, and safety risks.

2. Preventive
Attempts to prevent failure are focused on general, wholesale efforts such as regularly scheduled maintenance, whether equipment needs it or not. While better than being simply reactive, this is a short-sighted approach and ignores big-picture issues and insights.

3. Condition-based
At this stage, the lifecycle of individual equipment, as well as parts, are looked at more carefully. Details such as the financial benefits of maintenance for that unique asset allow for analysis and reporting of return on investment. It also provides a roadmap for additional preventive measures such as routine inspections, lubrications, adjustments, and scheduled service.

4. Predictive
Data is collected to understand when failure is likely to occur, and its potential business impact. Mean time between failures (MTBF) significantly improves by mitigating risk. Any downtime is scheduled to occur with the least impact on customer service and productivity.

5. Prescriptive
This level not only identifies the appropriate maintenance tactic of the four listed above, but it leverages asset investment strategy considerations resulting in the most economically correct maintenance tactic to be used considering the potential failure (PF) curve and the asset lifecycle promise made.

"Focusing on the manufacturing industry, only 12% are truly leveraging the power of digital technologies."

Capgemini
Industry 4.0 Maturity Model [3]

Capgemini

The predictive promise

Moving along the maintenance maturity spectrum towards predictive or prescriptive maintenance sets the stage for a successful, long-term asset performance strategy. That strategy and its results include:

- **Maximum uptime**
- **Optimal resiliency to risk**
- **Precision spending by applying the most economic maintenance tactic**
- **Deployment of staff to more value-added work**
- **Optimal lifecycle of crucial equipment**
- **Better regulatory and safety compliance**

Steps to take now

The transformation from traditional enterprise to asset performance management take time and patience—for both staff and leadership. As we begin to add the investment planning discipline to our asset performance tactics, maintainers focus on the economic factors of the selected maintenance tactic to achieve the asset lifecycle promises made. However, there are some organizational mindsets that must be in place.

Embrace digital operational twin

Staff and leaders should recognize that IoT, the proliferation of sensors, and emerging technologies such as AI, machine learning, and digital work enablement are key to consolidating, connecting, and distributing real-time data across the enterprise.

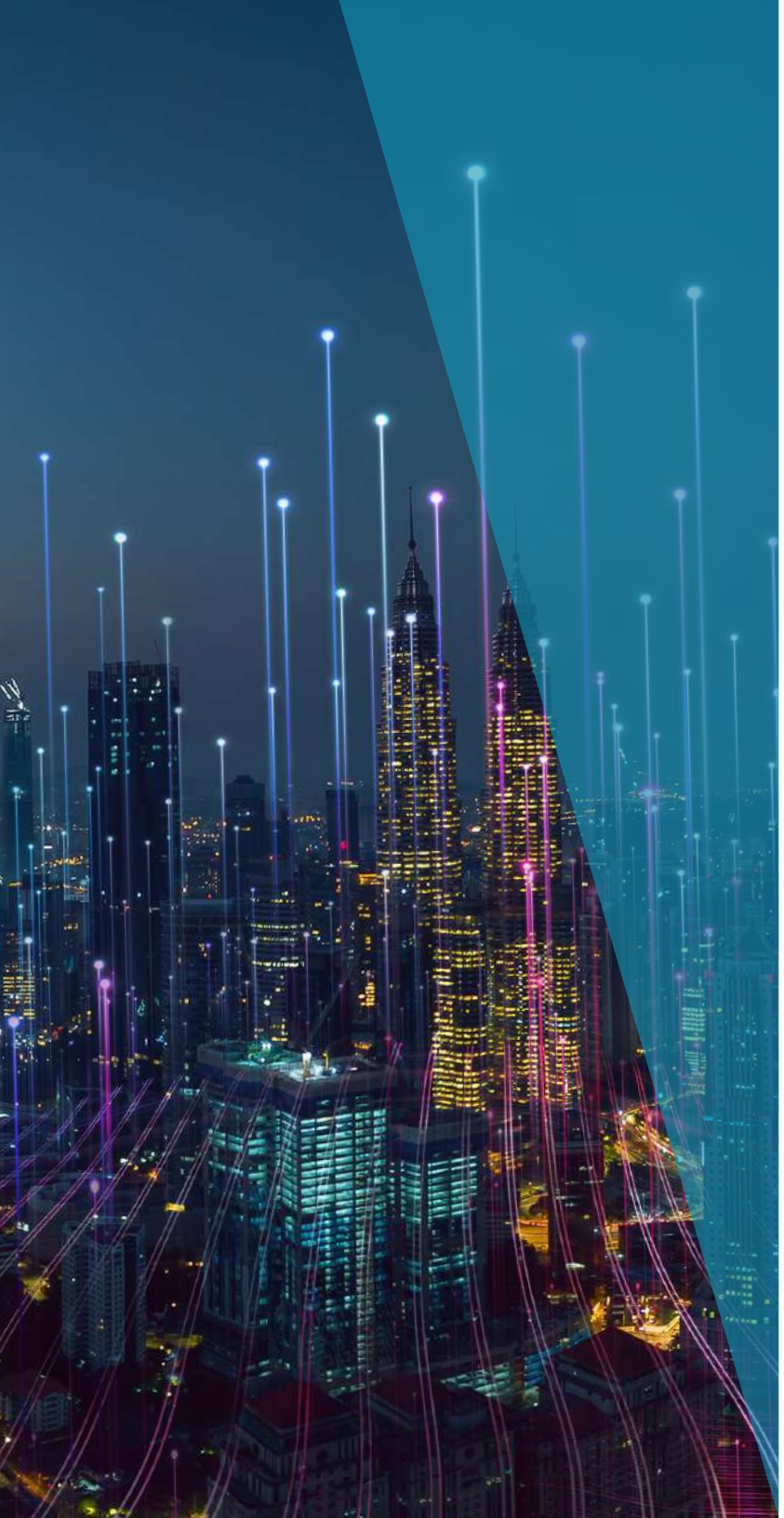
Establish asset investment plan

Increasingly, organizations are looking to asset investment planning (AIP) to determine where to spend their limited capital to ensure their assets deliver the highest level of service over the short and long term. An AIP can help organizations optimally balance costs, risks, and performance improvements of competing asset interventions, such as maintenance, refurbishment, or replacement.

Harness the value of applied technologies

Autonomous Operations and Maintenance is only achievable with embedded asset performance, investment, and predicative analytic functions, powered by technologies like data lake, artificial intelligence, machine learning, and data visualization.

Improving resiliency and having more visibility on the financial impact and performance of assets allows us to better sustain our workforces and on customers.



tecnichapa
velatia

Improving global maintenance

Tecnichapa produces metallic components for clients in the computer science, aeronautics, and communications industries. With its asset management solution, it has:

25%

Reduced the cost of external subcontracting by 25%

15%

Decreased maintenance costs by 15%

30%

Lowered plant energy cost by 30%

400 %

Improved global maintenance key indicators by 400%

Extending asset life and increasing efficiency

HxGN EAM (formerly Infor EAM) is enterprise asset management software that offers:

- A flexible deployment strategy in the cloud
- Reliability, high uptime, and operational effectiveness powered by integral asset lifecycle analytics within a single digital twin solution architecture
- Predictive, preventive, condition-based, and risk-based maintenance capabilities coupled with asset investment planning to enable the most cost-effective maintenance strategy
- High performance digital work platform that fosters sustainability, resiliency and safety

Turn your asset management strategy into a competitive differentiator.

Learn more

1 Lane Long, **"6 illustrations of the high cost of downtime, as told by engineers,"** Engineering.com, June 19, 2019.
2 Vanson Bourne Research, **"After the Fall: Cost, Causes and Consequences of Unplanned Downtime,"** accessed April 24, 2020.
3 Capgemini, **"Industry 4.0 Maturity Model – Mirroring today to sprint into the future,"** September 11, 2018.

About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

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.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21,000 employees in 50 countries and net sales of approximately 3.8b EUR. Learn more at hexagon.com and follow us @HexagonAB.