

Predictive Maintenance

Optimize maintenance with Industry 4.0 technologies and advanced analytics

Why Predictive maintenance?

▼ **\$50 billion**

The **cost per year** of unplanned downtime for industrial manufacturers.¹

As compared to **reactive** maintenance, manufacturers using **preventive/predictive** maintenance report:

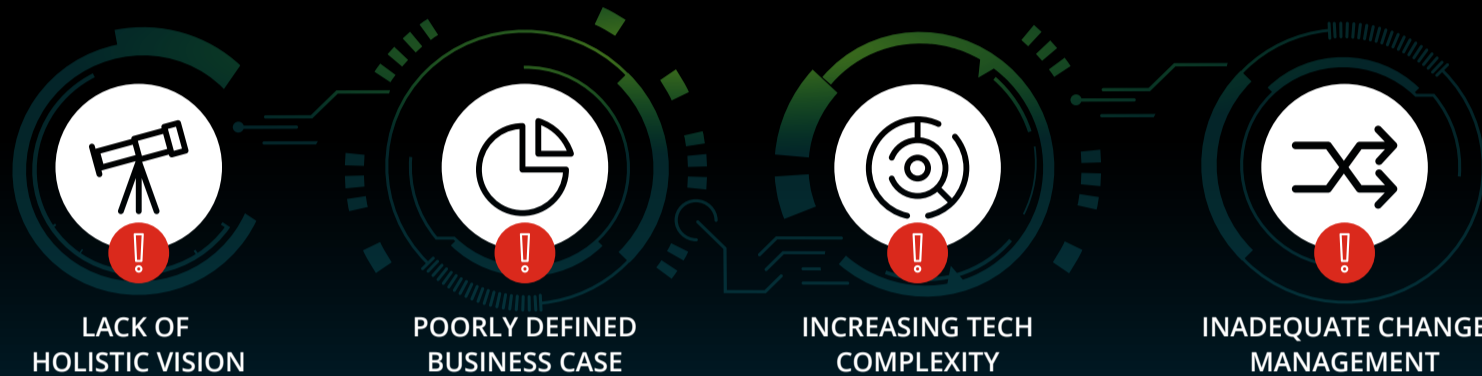
- 53%** Less unplanned downtime
- 49%** Decrease in lost sales
- 79%** Fewer defects
- 51%** Reduction in inventory growth

As compared to **preventive** maintenance, manufacturers using **predictive** maintenance report:

- 19%** Less unplanned downtime
- 87%** Fewer defects²



Challenges in implementing predictive maintenance



Benefits of predictive maintenance

Well-executed predictive maintenance solutions drive substantial downtime reduction, increase productivity, and reduce overall costs.

- 5-20% ↓** reduction in facility downtime, freeing up capacity
- 10-30% ↓** reduction in inventory levels with 5-20% reduction in carrying costs
- 5-20% ↑** increase in labor productivity
- 3-5% ↓** reduction in new equipment costs

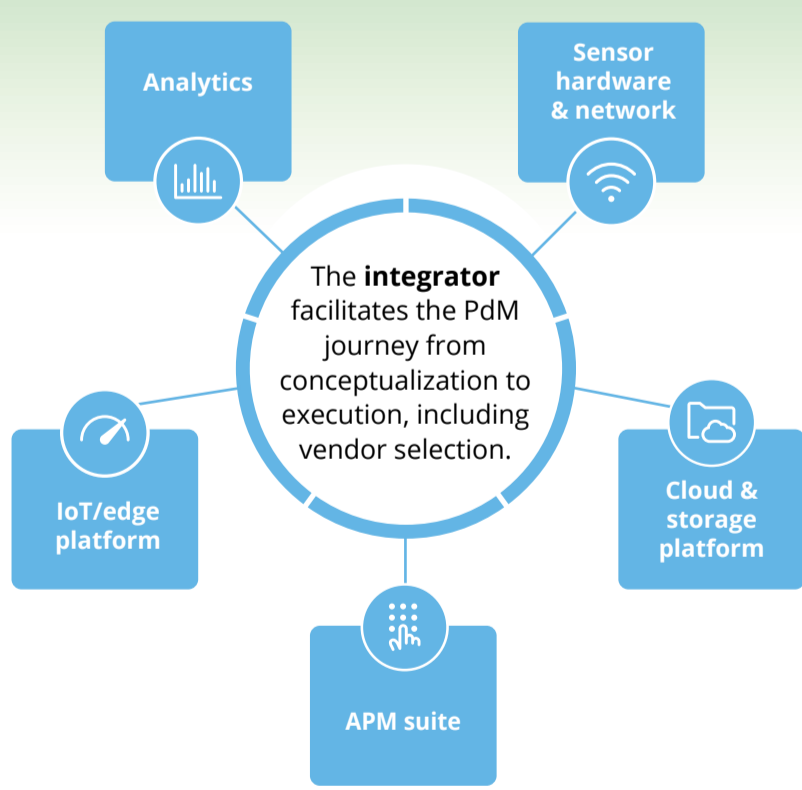
Qualitative benefits: Improved customer satisfaction, improved employee satisfaction, better work/life balance, better safety for maintenance team.³

Deloitte approach



How it works

INTEGRATION



PHASED APPROACH



Why Deloitte?

- Value tracking:** We track benefits to ensure speed to value.
- Speed & scale:** We have a portfolio of use cases tailored to your industry.
- Advanced analytics:** We build and implement custom predictive analytics.
- Team:** We created a niche in the smart manufacturing space.
- Unique skills:** We bring unique skills to activate the architecture.
- Accelerators:** We accelerate time to value using a portfolio of accelerators.
- Tailored approach:** Our alliances ensure you can build a modular, scalable, secure solution.
- Change management:** We prioritize change management efforts for long-term sustainability.

Deloitte's approach to predictive maintenance is grounded in more than 15 projects in the smart factory and predictive analytics domains

Sources:
1 IndustryWeek and Emerson, "Unlocking performance," accessed June 29, 2023.

2 The results are based on the opinions published in a paper titled "Maintenance costs and advanced maintenance techniques in manufacturing machinery: Survey and analysis" by Douglas Thomas and Brian Weiss in 2021.

3 Deloitte, "Predictive maintenance and the smart factory," 2022.

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