





# From reactive to intelligent: Maintenance evolution for the future

Demand for 100% uptime pervades across all industries—from production systems on factory floors to turbine blades on wind farms. Vital services to consumers also must stay up to speed, including connected vehicles, medical devices, and even household appliances.

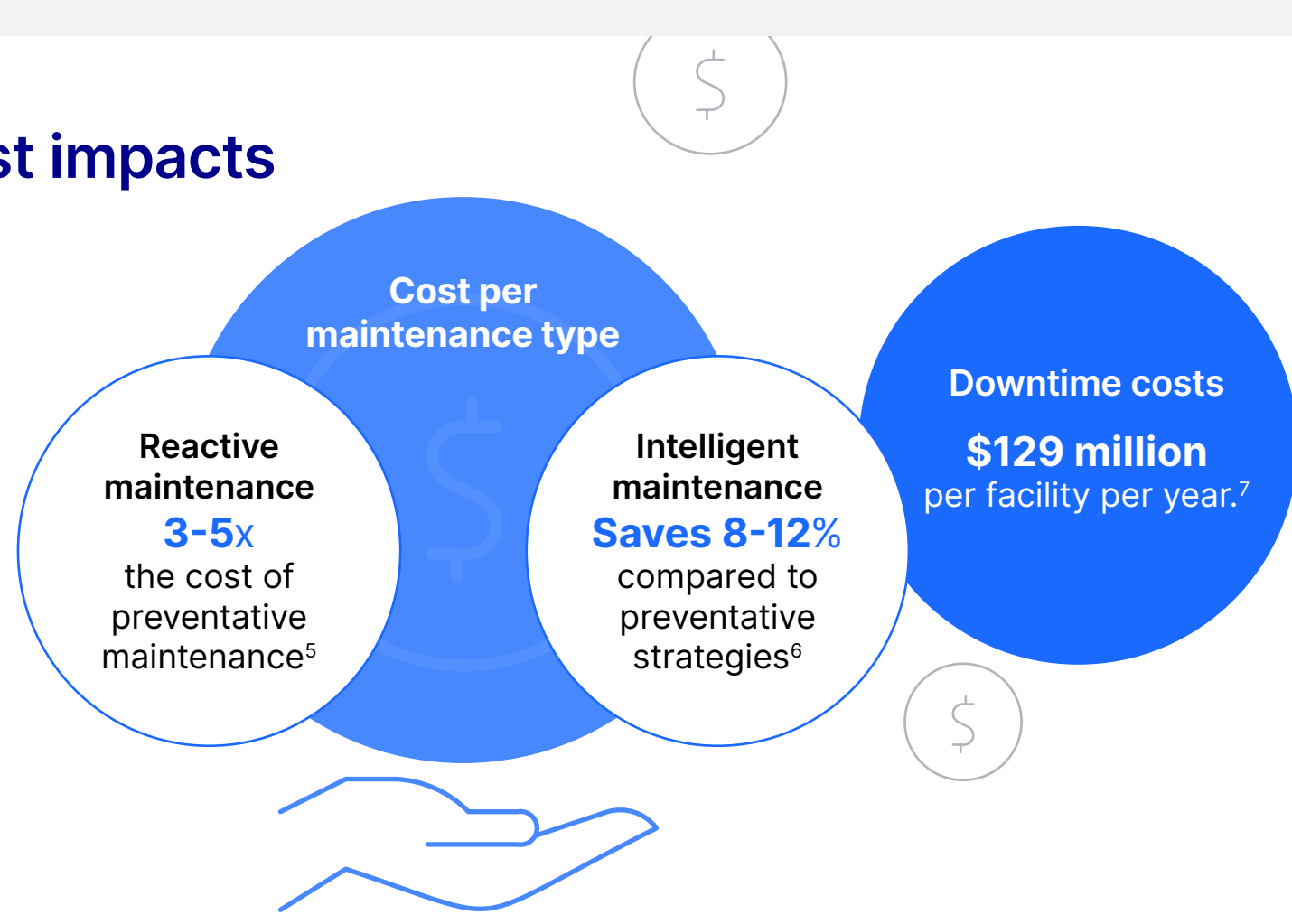
Intelligent—predictive, preventative, prescriptive, and actionable—maintenance addresses these needs, improving operational efficiency and workplace safety, reducing costs, and increasing asset lifespans. With increasingly powerful analytics capabilities, intelligent maintenance will provide an even greater competitive advantage.

Understanding each approach is key to success as a company evolves from one mode to another.




## Maintenance strategies defined

 <p><b>Reactive maintenance (Break-Fix)</b></p> <p>Wait for failure before repairing</p> <p><b>34%</b> of companies still rely on reactive maintenance.<sup>1</sup></p>	 <p><b>Proactive maintenance (Preventative)</b></p> <p>Regularly scheduled inspections to avoid failures</p> <p>Preventative maintenance reduces downtime by <b>25-30%</b>.<sup>2</sup></p>	 <p><b>Predictive maintenance</b></p> <p>Uses IoT and AI to predict failures before they occur</p> <p>Predictive maintenance can reduce equipment breakdowns by <b>60-70%</b>.<sup>3</sup></p>	 <p><b>Intelligent maintenance</b></p> <p>Performs essential tasks beyond what other models provide and towards actionable maintenance that can operate without human intervention</p>
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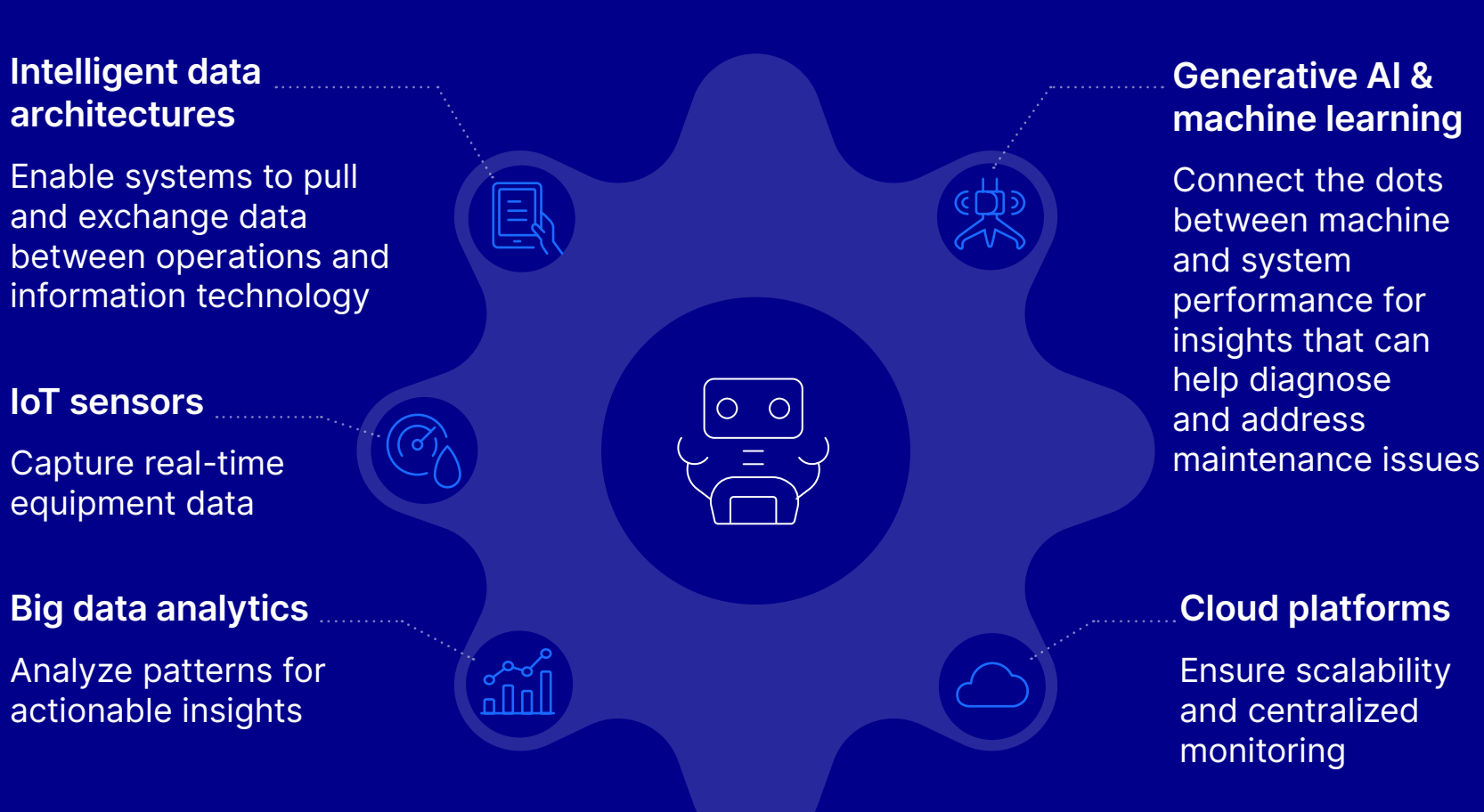
## Cost impacts





## Key benefits of intelligent maintenance

 <p><b>ROI</b></p> <p>Delivers a <b>10x</b> return on<sup>8</sup> investment</p>	 <p><b>Asset longevity</b></p> <p>Extends equipment life by <b>20%</b><sup>9</sup></p>	 <p><b>Downtime reduction</b></p> <p><b>40-50%</b><sup>10</sup></p>
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## Technologies powering intelligent maintenance



## Adoption trends

 <p><b>Current adoption</b></p> <p><b>28%</b> of companies use some sort of either predictive or intelligent maintenance approach<sup>11</sup></p>	 <p><b>Future growth</b></p> <p>Predictive and Intelligent maintenance market is expected to reach <b>\$23.5 billion by 2025</b><sup>12</sup></p>
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## Transition to intelligent maintenance

 <p><b>Top challenges</b></p> <ul style="list-style-type: none"> <li>✗ Data integration issues</li> <li>✗ Lack of skilled staff for advanced analytics</li> <li>✗ Complexity of Implementation</li> <li>✗ Cybersecurity concerns</li> </ul>	 <p><b>Solutions</b></p> <ul style="list-style-type: none"> <li>✓ Invest in training and tools</li> <li>✓ Start small and scale gradually</li> <li>✓ Build partnerships with technology providers to fill skill and technical gaps</li> <li>✓ Improve workforce knowledge in data analytics, IoT, and machine learning technologies</li> </ul>
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Ready to transform your maintenance strategy? Start implementing intelligent maintenance today.

[Find out more](#)

1 Plant Engineering, *2023 Maintenance study*, 2023  
 2 Gartner, *Top 10 Strategic Technology Trends*, 2023  
 3 Deloitte Analytics Institute, *Predictive Maintenance: Taking Proaction to the Next Level?*, 2023  
 4 Database trends and analytics, *Intelligent Maintenance: Keeping the connected economy up to speed*, 2024  
 5 Plant Engineering, *2023 Maintenance study*, 2023  
 6 U.S. Department of Energy, *Operations and Maintenance Best Practices Guide Release 3.0*, 2020  
 7 Siemens, *The True Cost of Downtime - Digital Asset Management*, 2022  
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 9 PwC, *The Business Case and Best practices*, 2020  
 10 Gartner, *Hype Cycle for Customer Service and Support Technologies*, 2023  
 11 Statista, *Leveraging advanced data analytics and AI*, 2023  
 12 MarketsandMarkets, *Predictive Maintenance Market Growth and Trends*, 2020