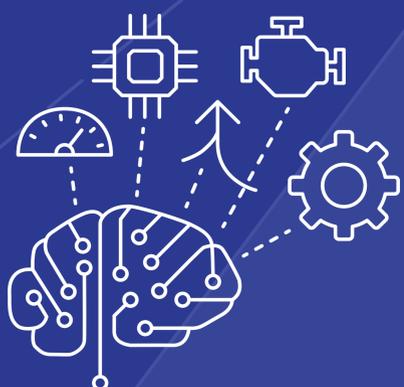


Artificial intelligence (AI) in the real world: Predictive maintenance

Predictive maintenance helps organizations reduce machine downtime to improve revenue and customer experience.



Using AI to help predict machine failure



- Proactively addressing problems = **smoother operations**
- Increasing uptime = **more opportunity to generate revenue**
- Detecting issues before failure = **lower costs, improved safety**
- Decreasing the risk of unexpected events = **happier customers**

Typical results:

Machine downtime reduced

30-50%

Machine life increased

20-40%

Source: McKinsey & Company, Manufacturing: Analytics unleashes productivity and profitability (2017)
<https://www.mckinsey.com/business-functions/operations/our-insights/manufacturing-analytics-unleashes-productivity-and-profitability>

Predictive maintenance *in action*

Example: a car-sharing service for short-term rentals:

Collect data

To maximize the time cars are on the road, the company equips its fleet with Internet of Things (IoT) devices that report in real time on:

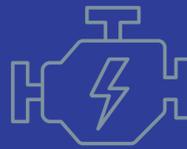
Fluid levels



Tire pressure



Engine temperature



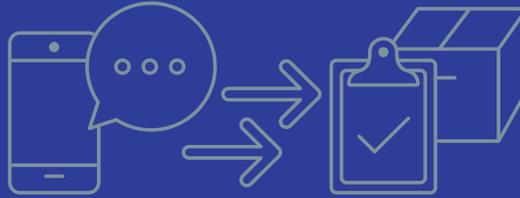
Analyze information

Details are added to existing records in the fleet manager's dashboard. The AI software analyzes this real-time information along with historical data to predict whether the car will fail.

Current Cars				
Customer Name	Car Type	Vehicle Make	Probable Cause	Failure Prediction
Georgia Garcia	Standard	Nissan Maxima	Tire treads wearing thin	80.8%
Jessie Rodriguez	Luxury	Mercedes SLS	Runs out of oil at 60,000 km	71.1%
Lori Moody	Standard	Ford Focus	No problem identified	49.0%

Take action

The company is alerted to the problem and the system automatically notifies the customer and orders a new part or service.



Get results

Predictive maintenance based on artificial intelligence drives benefits for the car-sharing company:



Reduces repair costs



Increases amount of time vehicles are on the road



Improves the driving experience

Read **the blog** to learn more about how predictive maintenance can help your business.