

# Predictive Quality in Industrial Operations *with AWS*



Predictive quality analytics extract actionable insights from industrial data sources such as manufacturing equipment, environmental conditions, and human observations. It applies statistical algorithms such as machine learning to:



Determine patterns



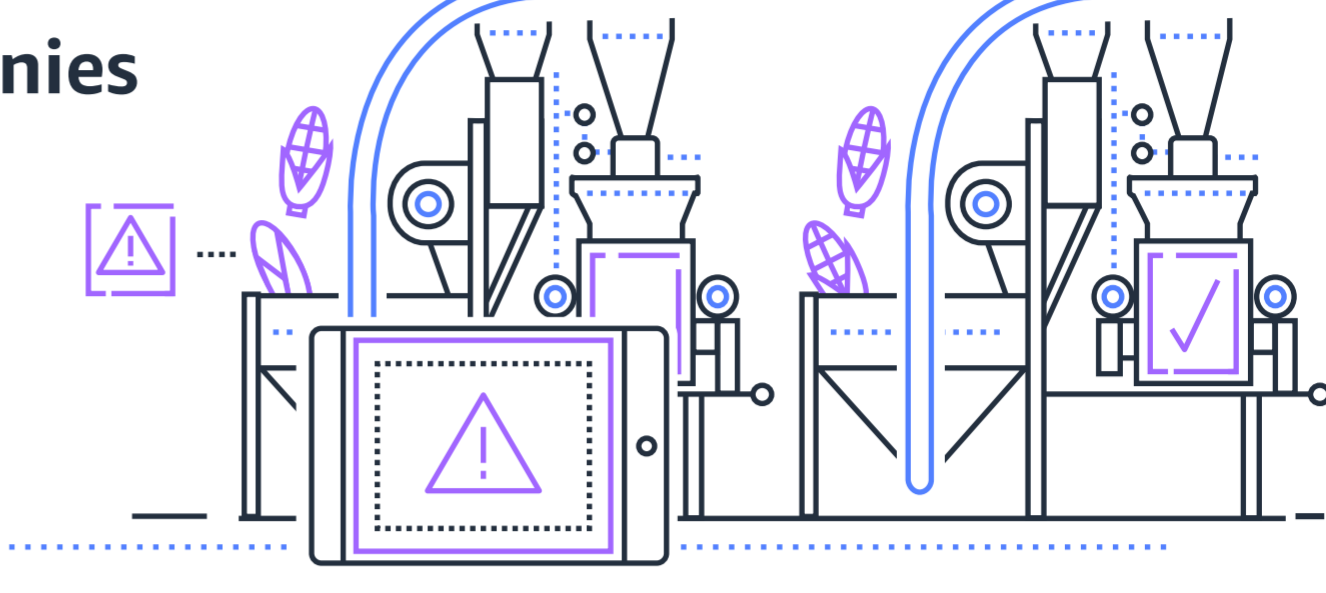
Predict future outcomes and trends



Improve the quality of outputs

## Quality problems have *big* impacts for industrial companies

The inability to determine the root cause of quality issues—along with excessive time and effort spent remedying them—can decrease yield or lead to costly product recalls



In 2017  
**295** recalls by the CPSC  
**32M** units affected

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**456** food recalls in the US



**20%** of a manufacturing company's annual sales lost to poor quality  
**\$200K** lost one day each week

**\$11.8B** paid in claims by automakers and suppliers in 2016  
**\$10.3B** in warranty accruals paid  
**26%** more than 2015

## Better quality leads to better business outcomes

With predictive quality, you can



Reduce product recalls and scrap



Improve yield and traceability



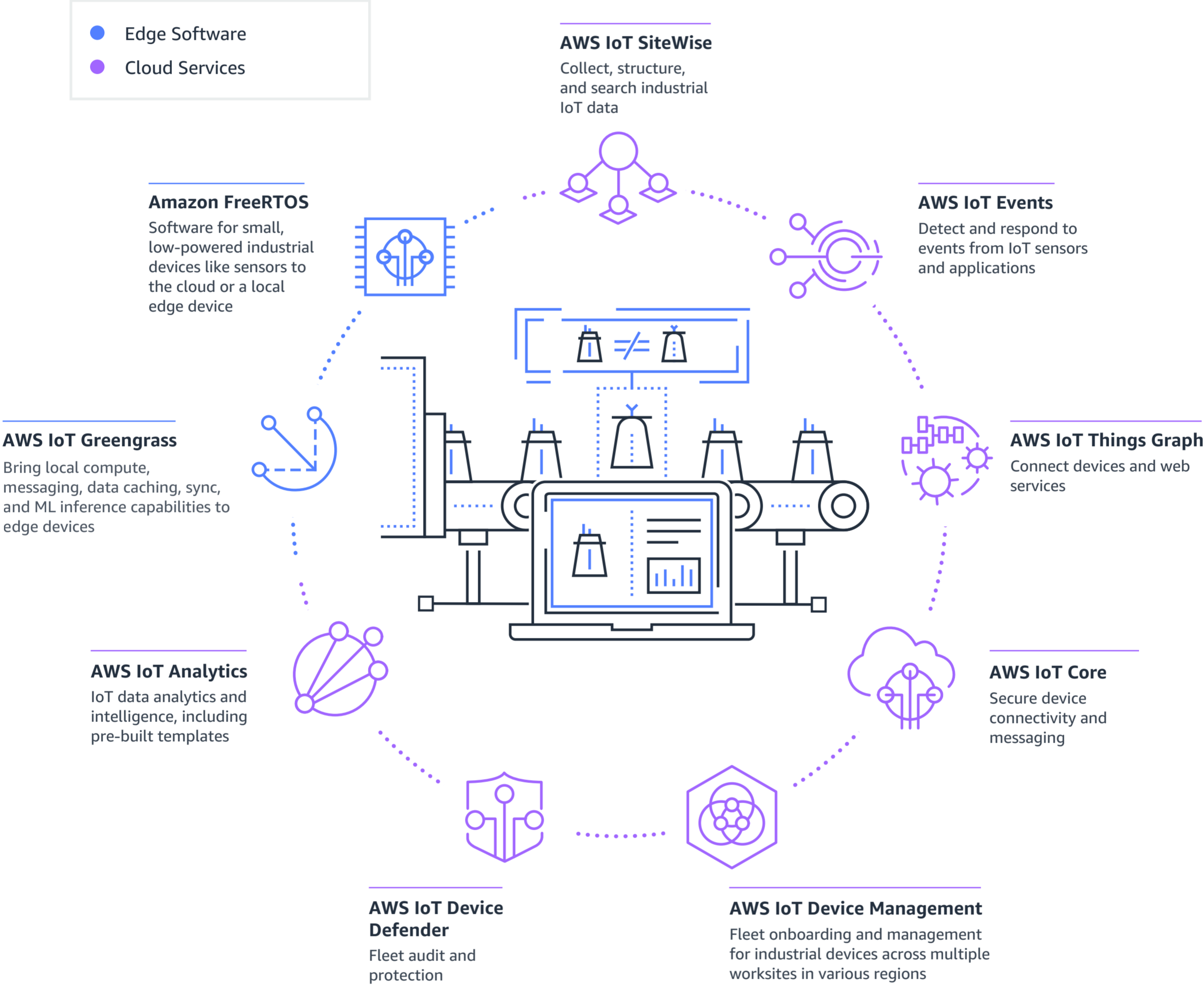
Increase customer satisfaction and profitability



Identify quality issues before they cascade down the production process

Using AWS IoT software and services, industrial companies can build predictive quality models using data from *all* the devices in their industrial environments and third party data inputs

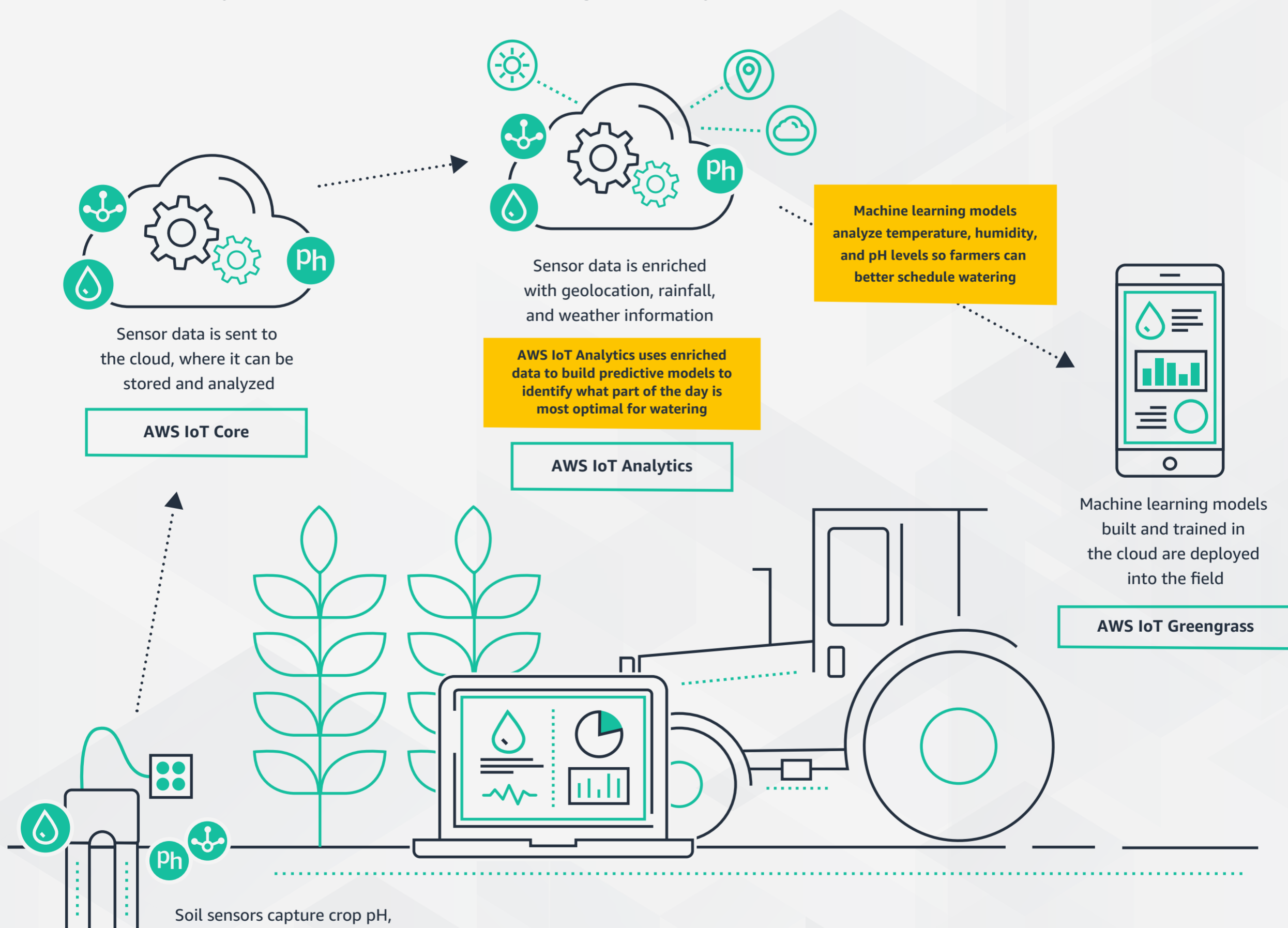
## Complete the virtuous cycle and build predictive quality models in the cloud and deploy at the edge



Partners play an important role in developing, planning, and implementing IoT projects. Our AWS IoT partners help customers bring together the necessary hardware, AWS services, and partner solutions to solve industrial business challenges. Learn more about our [AWS IoT Partner Community](#).

## Predictive Quality in Action with AWS IoT

On a vegetable farm, farmers can identify vegetable growth stages to increase crop yield and deliver more — at a higher quality — each season



AWS IoT helps Teralytic reduce farmer costs and increase yield



Yanmar leverages AWS IoT to increase produce quality in greenhouse operations



Amazon Web Services can transform your business and help your organization rise to its digital future.

Learn more

Sources:

• <https://www.qualitydigest.com/inside/quality-insider-article/what-your-companys-cost-poor-quality.html>

• <https://www.consumerreports.org/recalls/home-products-recall-round-up/>