



# 10 Ways

to Leverage AI in Manufacturing & Supply Chain

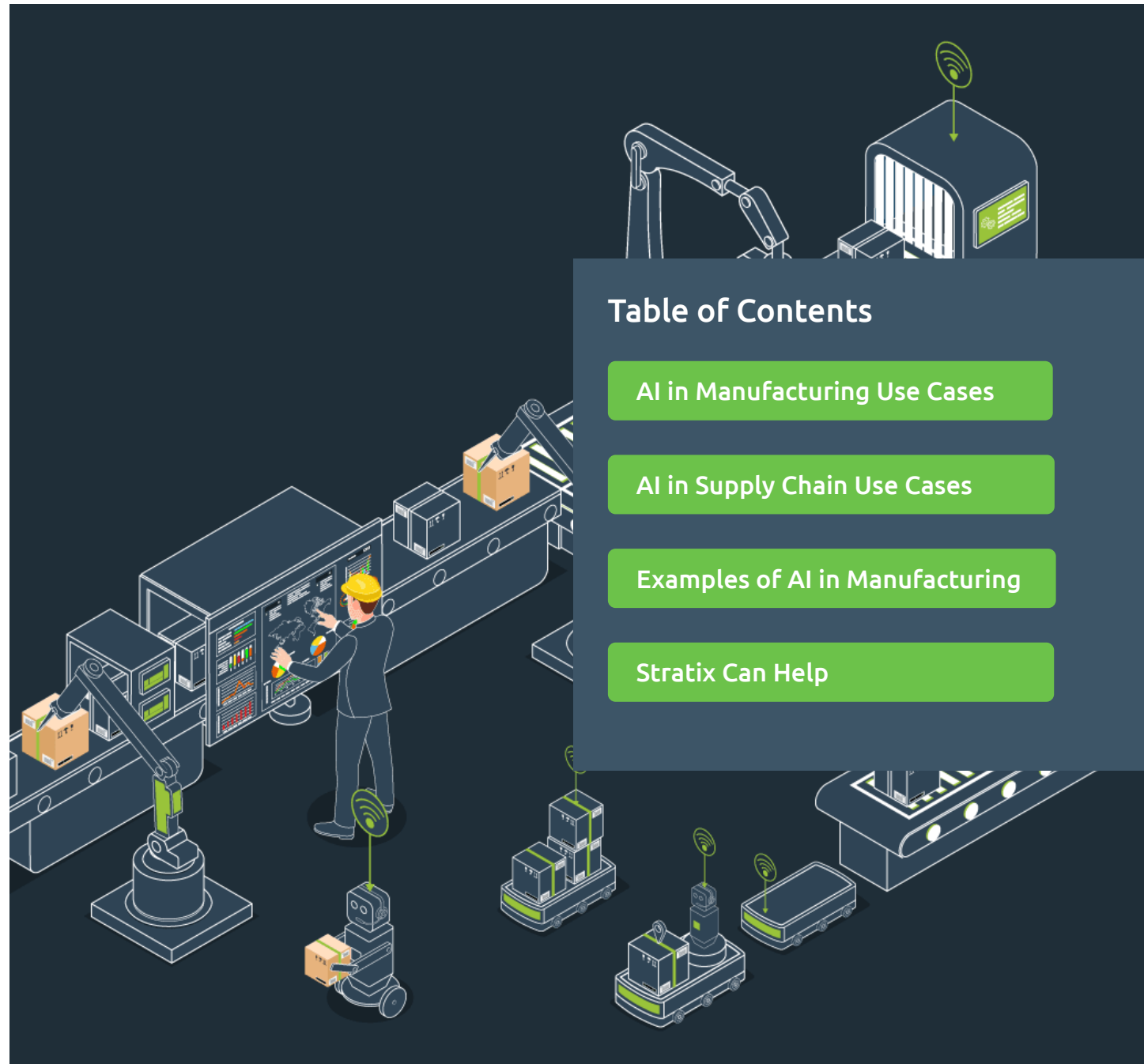


**Are** You Ready for the Future?

The hottest topic for companies around the world right now is artificial intelligence. [McKinsey reports](#) that 65 percent of respondents in their 2024 Global Survey said their organizations regularly use generative AI—nearly double the number from a survey done just ten months before.

Everyone wants to know how they can improve with AI, but there's also concern about likely disruption and what that means for the future. Many are struggling to separate AI hype from AI value. They lack the expertise for knowledgeable evaluation.

The bottom line is AI is a powerful tool that's infiltrating just about every industry. Companies that are not thinking about it risk being left behind. The use cases are incredibly varied, and you're only limited by your imagination. Here are six ways to leverage AI in manufacturing and four more for supply chain management.



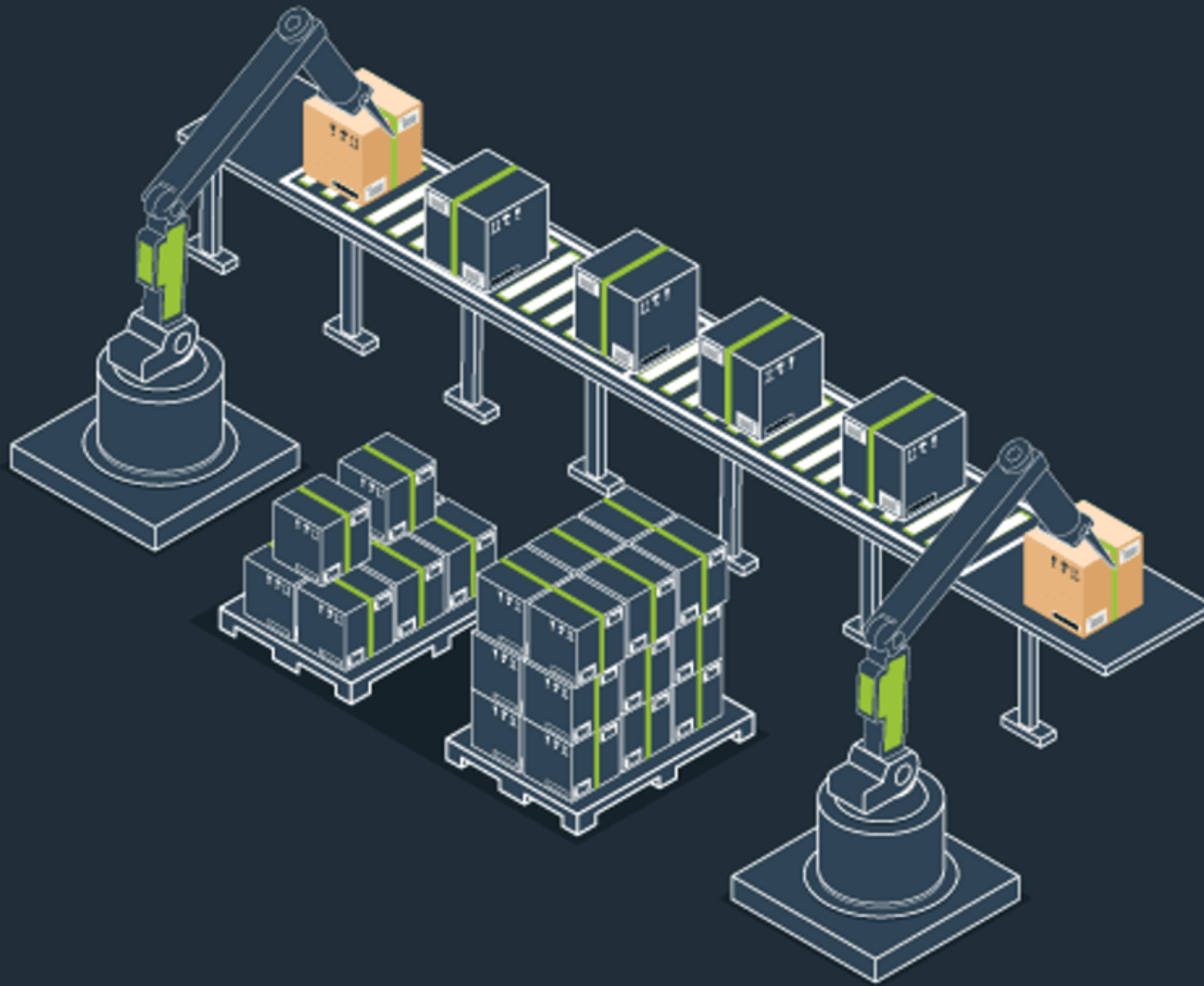
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## AI in Manufacturing Use Cases

# Many Companies are Already Using AI

## 1. Robotics and Automation

While robotics is far from new in manufacturing, AI can take it to the next level. It'll automate complex and repetitive tasks previously too difficult for traditional automation systems. AI can improve efficiency and precision in assembly, welding, painting, and material handling functions.

AI can also power robots that work alongside humans. Collaborative robots (cobots) can do repetitive or dangerous tasks with more precision. They adapt to human movements, enhancing productivity and reducing the chance of workplace injuries.

[Ford Motor Company uses cobots](#) for welding, gluing, and quality control. [Six of its cobots can sand](#) the entire body surface of a car in just 35 seconds.

## 2. Custom Manufacturing

Since Henry Ford began leveraging assembly lines more than a century ago in manufacturing, they've reduced costs, improved quality, and dramatically boosted productivity. The challenge is when consumers want a customized product that's not the same as all the others coming off the line.

AI can enable mass customization, allowing manufacturers to offer personalized products at scale by dynamically adjusting production processes based on individual customer preferences. A great example is Nike, which offers "[Nike by You](#)." Through a website, customers can choose a base shoe, customize the colors, and even put their own lettering on their custom sneakers.

AI can also cut costs and wastage by optimizing designs to meet specific functional requirements while minimizing material usage.





#### Who is using AI for Forecasting?

- Amazon with their inventory management
- Maersk Line with their shipping efficiencies
- Walmart with their customer service

### 3. Demand Forecasting

A challenge for manufacturers has always been trying to see into the future when deciding how much to make of something. Too much, and product is wasted or has to be sold off at cut-rate prices. Too little, and there's a missed opportunity to sell more.

This is one area where AI makes a huge difference with its ability to crunch vast amounts of data for actionable analytics. AI algorithms can look through historical sales data, market trends, and external factors like weather or economic conditions to accurately forecast future demand. With better forecasting, companies can maintain optimal inventory levels, reducing both stockouts and overstock situations. eCommerce giants like [Amazon routinely use AI](#) to ensure that products are available in just the right quantities exactly when customers want them.

#### 4. Quality Control

The key to minimizing costs associated with quality control problems is spotting issues as soon as possible—or better yet—preventing them in the first place. AI does both far better than human inspectors.

AI-powered computer vision systems can examine products for defects or inconsistencies, ensuring higher quality and reducing waste. Not only that, AI can monitor production processes in real time, adjusting parameters to maintain consistent product quality.

[A study by McKinsey](#) found that AI can help reduce quality control costs by 10 to 20 percent.

#### 5. Predictive Maintenance

Something else that AI does better than humans is keeping manufacturing equipment running. It can analyze data

from machinery sensors to predict when equipment will likely fail, allowing for maintenance before a breakdown occurs. Predictive maintenance helps in reducing unplanned downtime and extends the lifespan of machinery.

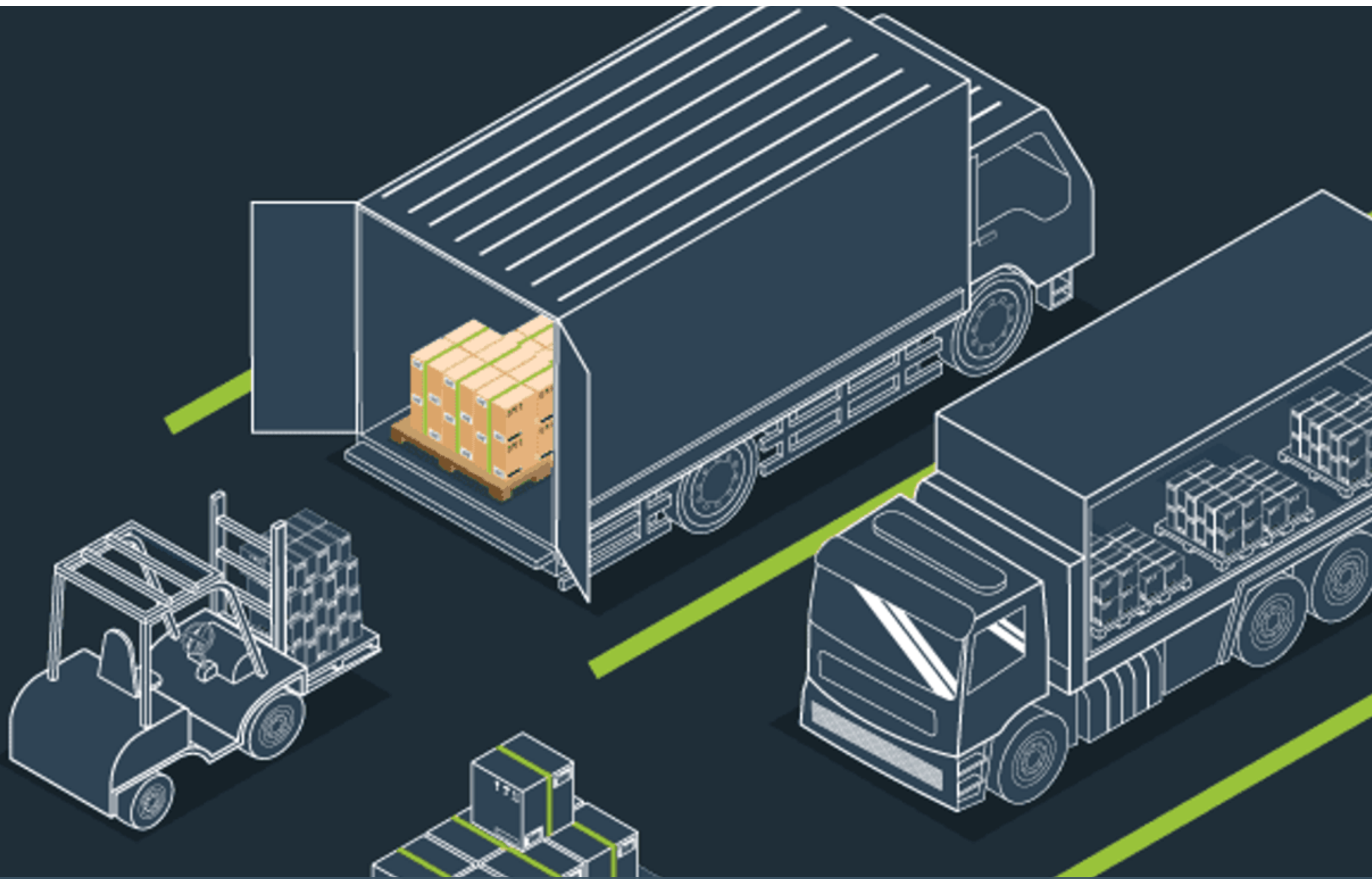
[BMW says that using AI for predictive maintenance](#) has helped it avoid around 500 minutes of disruption a year at one plant alone.

#### 6. Energy Management

AI can optimize energy consumption in manufacturing plants by analyzing usage patterns and adjusting processes to be more energy efficient. It'll also help track and reduce carbon footprints, helping companies meet sustainability goals.

[One California water utility uses an AI-enabled control system to save thousands](#) of kilowatts of electricity annually.





## AI in Supply Chain Use Cases

# It's All About Speed

## 1. Supply Chain Optimization

The pandemic showed just how critical it is to have a holistic view of supply chains. Any disruption along the way is a significant problem, and any improvement can increase profit margins.

AI provides real-time insights into the supply chain, helping companies monitor the movement of goods and materials, predict delays, and respond quickly to disruptions. Thanks to technology like IoT sensors and RFID tags, a wealth of data is available around logistics. It takes AI tools to swiftly parse all that information to deliver real-time intelligence that organizations can act on.

AI can use that same data to optimize logistics and transportation routes, reducing delivery times and transportation costs. For example, [about 20 percent of the trucks on the road are](#)

[empty](#) because no loads are available that need to go in the same direction as the driver—using AI to better design routes can cut that in half.



Interactive poll not supported  
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## 2. Supply Chain Risk Management

While AI can parse information from sensors to spot supply chain problems, more broadly, it can analyze global events, supplier performance, and market conditions to predict and mitigate risks in the supply chain.

Say a once-reliable supplier has started falling behind on orders. AI can flag that so it can be considered before new orders are placed. For example, [Unilever uses an AI application and service provided by German-based start-up Scoutbee](#) to find alternative supply sources on short notice.

### 3. Supply Chain Automation

AI is a powerful tool for streamlining processes in the supply chain, such as warehouse operations. In order fulfillment, AI can automate and optimize order processing, picking, packing, and shipping—making everything faster and more accurate.

In warehouse management, AI can track inventory levels, optimize warehouse layouts, and direct autonomous vehicles or robots.

For example, the [UK grocery store chain Ocado uses AI](#) to manage its logistics operations. It even has robots that pack grocery orders—significantly reducing fulfillment times.

### 4. Customer Service and Support

Customer service can be automated and improved with tools like AI-driven chatbots that handle customer inquiries related to orders, shipping, and product information. It has the dual benefit of

improving the customer experience while reducing costs.

AI can also analyze customer behavior and preferences to deliver targeted marketing campaigns—improving customer engagement and sales.



## Google Gemini is Leading the Way

The team at Google is at the forefront of AI development. Its Gemini platform can understand and combine different types of information, including text, code, audio, image, and video.

That means it can do everything from examining images captured in the manufacturing process in real-time to quickly sifting through vast amounts of data for actionable insights.

Google is also dedicated to integrating AI with its Android operating system to give mobile users AI tools that they can leverage wherever they are.

Stratix recently hosted a webinar with Google to talk about the possibilities of AI. View the on-demand webinar to learn practical AI applications that drive productivity and security, tailored for modern enterprise needs.



## MOBILE TECH TALKS

ON-DEMAND

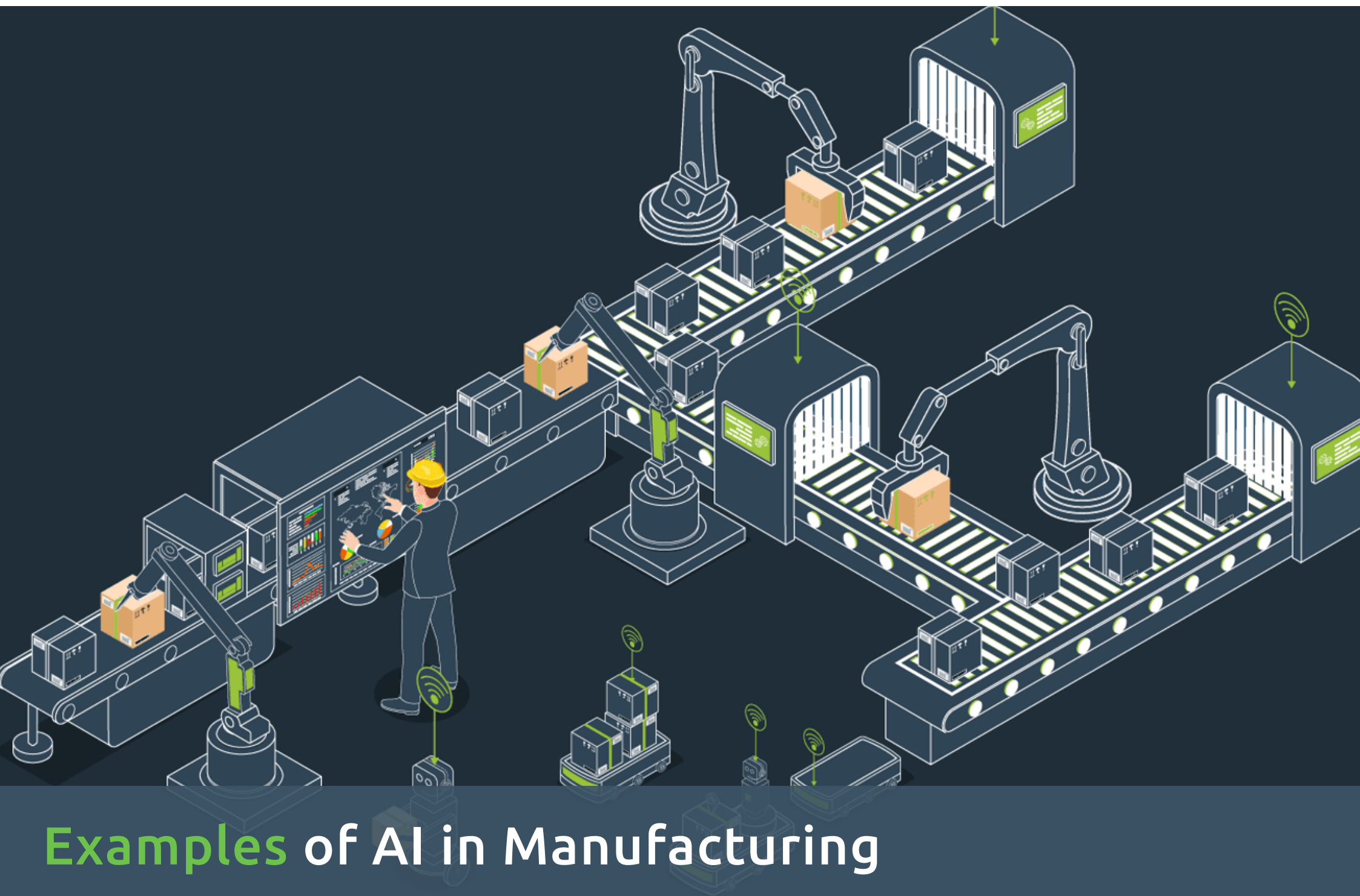
# AI in Enterprise Mobile

Journey to realizing true productivity gains using AI in the enterprise.

Learn practical AI applications that drive productivity and security on Android and Pixel devices, tailored for modern enterprise needs.

[View On-Demand](#)





# Examples of AI in Manufacturing

# You're Only Limited by Your Imagination

One way to understand the possibilities of AI is to look at some real-world use cases that companies are already doing.



## Plumbing Fixtures Maker

Porcelain is a crucial raw material in many plumbing fixtures, but it's notoriously difficult to work with. A plumbing fixtures maker was seeing 8-10% of its products that need porcelain coming off the line with defects. [Using AI built on the Google Cloud platform](#), engineers were able to determine the problem was in the quality of the raw materials used combined with kiln temperatures. Using data-driven production methods, the company was able to implement corrective measures.



## Anheuser-Busch

The maker of some of the world's most recognizable beer brands like Budweiser, Corona, and Stella Artois [uses AI built on the Google Cloud platform](#) to extend the life of filters used in the brewing process and minimize downtime.



# Google Pixel Unboxing

**Pixel's features make them perfect across a wide spectrum of use cases and industries**

Check out the latest generation of phones engineered by Google and built with artificial intelligence at the center that makes them powerful business tools.

## Google Gemini is Leading the Way

Even if you don't have any immediate plans to leverage AI, you should be thinking about your technology infrastructure, so you have what you need when you adopt AI solutions. That includes your mobile technology. AI requires more processing power, so you may want to upgrade teams to a more powerful mobile device such as Google's Pixel 9 series of devices.

Google's latest Pixel mobile devices are loaded with AI tools. It's now the default digital assistant—helping users quickly find answers from images, text input, or audio. Gemini Advanced will help write emails and process massive amounts of information like long documents and spreadsheets. It'll then summarize and analyze that data.

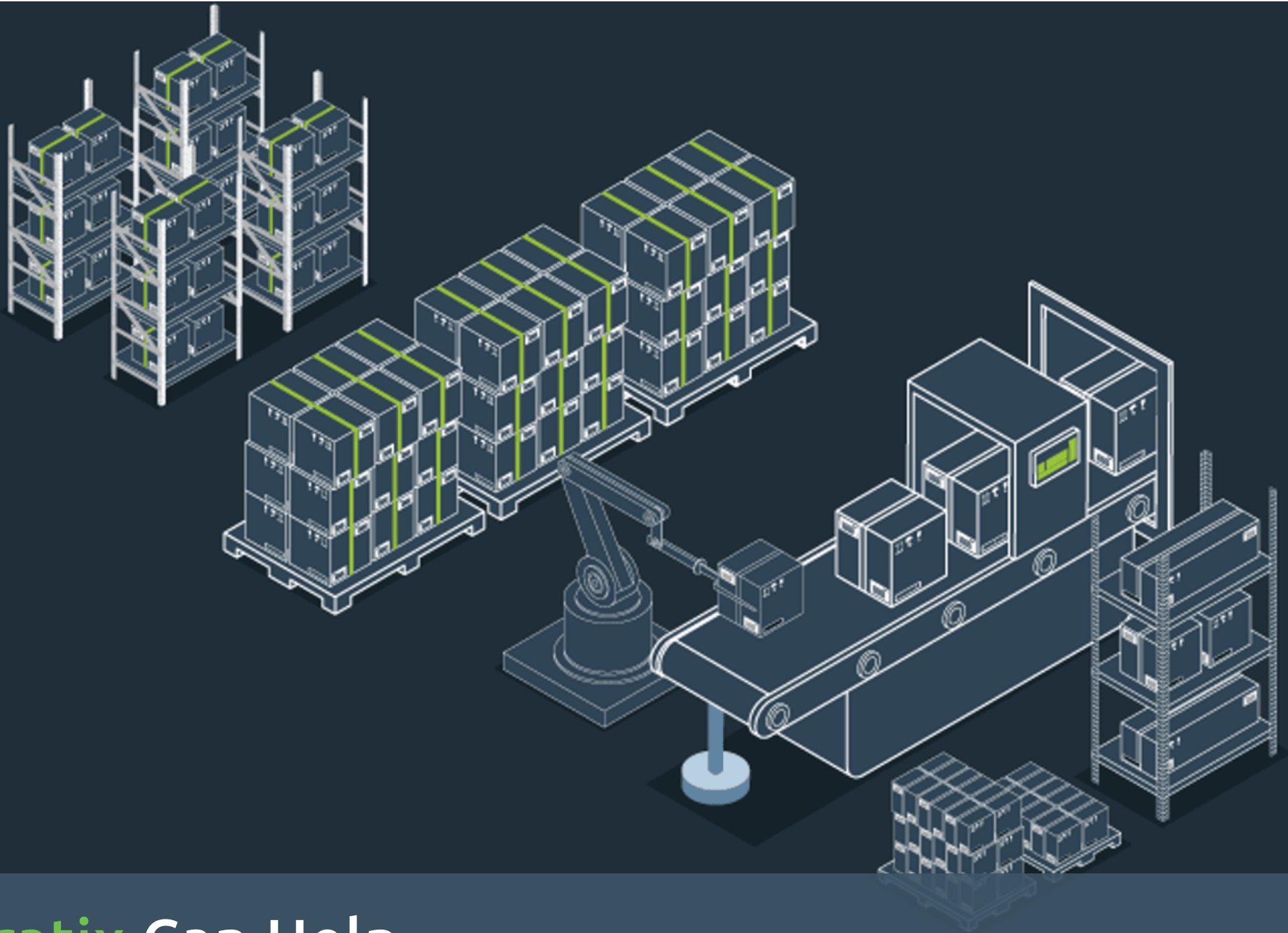
Putting mobile devices in the hands of employees in manufacturing settings also empowers them to quickly see data and alerts coming from Gemini. They can then quickly respond

*Gemini mobile app available on select devices, languages, and countries. Internet connection required. Check responses for accuracy.*

Gemini



and deal with product defects or maintenance tasks.



**Stratix** Can Help

## We Know What Works

Thanks to our extensive relationships with device makers and software providers, Stratix is at the forefront of technology development. We're constantly analyzing new devices and software to see how they can solve challenges for our customers and help them increase productivity and profits. We're your trusted guide, and we enjoy a good challenge!

## Solution design

When looking at AI technology, it's important to understand the context of where it's to be used to see if it will deliver the expected value. Our [solution architects](#) will study your workflows, needs, and goals. We can then design a solution that integrates with your existing processes and systems

to get you the highest possible ROI.

## Advanced deployments capabilities

One of the challenges that many organizations face is pulling together the necessary expertise and resources needed for large deployments. Everything must be choreographed perfectly to ensure success and high user adoption.

At Stratix, we have the scale and expertise to pull all the pieces together, get everything kitted and configured to be out-of-the-box ready and deliver it rapidly wherever it needs to go. When you partner with us, things work as expected. We prevent digital transformation failure.



# Industry-leading support

Successful technology programs don't stop with deployment. Stratix also has the resources and expertise to keep everything running smoothly.



## Help Desk

Our technical support team boasts industry-leading satisfaction scores. They're trained on your environment and understand the user's needs and workflows so they can help faster and more successfully.



## Endpoint Management

The best way to solve problems is to prevent them in the first place. We have a dedicated unified endpoint management team that pushes out updates and patches and can do remote troubleshooting to keep everything running smoothly.



## Authorized repair

Our authorized and trained repair technicians quickly and expertly repair broken devices back to factory specifications.



## Spare pool

We can keep a spare pool of preconfigured devices for you that can be shipped out overnight. It keeps downtime to a minimum, and we put repaired devices back in your spare pool.



## itrac360

With our proprietary itrac360 platform, you have complete visibility of your entire mobile environment. You know where things are and what their status is for things like repair and spare pool.

The background of the slide is a stylized, monochromatic illustration of an industrial manufacturing environment. It features silhouettes of large robotic arms, conveyor belts, and structural elements of a factory, all in shades of blue and grey. The overall aesthetic is modern and technological.

## Conclusion

By integrating AI into manufacturing and supply chain operations, companies can achieve greater efficiency, reduce costs, improve product quality, and enhance their ability to respond to market changes and customer needs. With our expertise and resources, Stratix makes AI easy, convenient, and cost-effective.

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