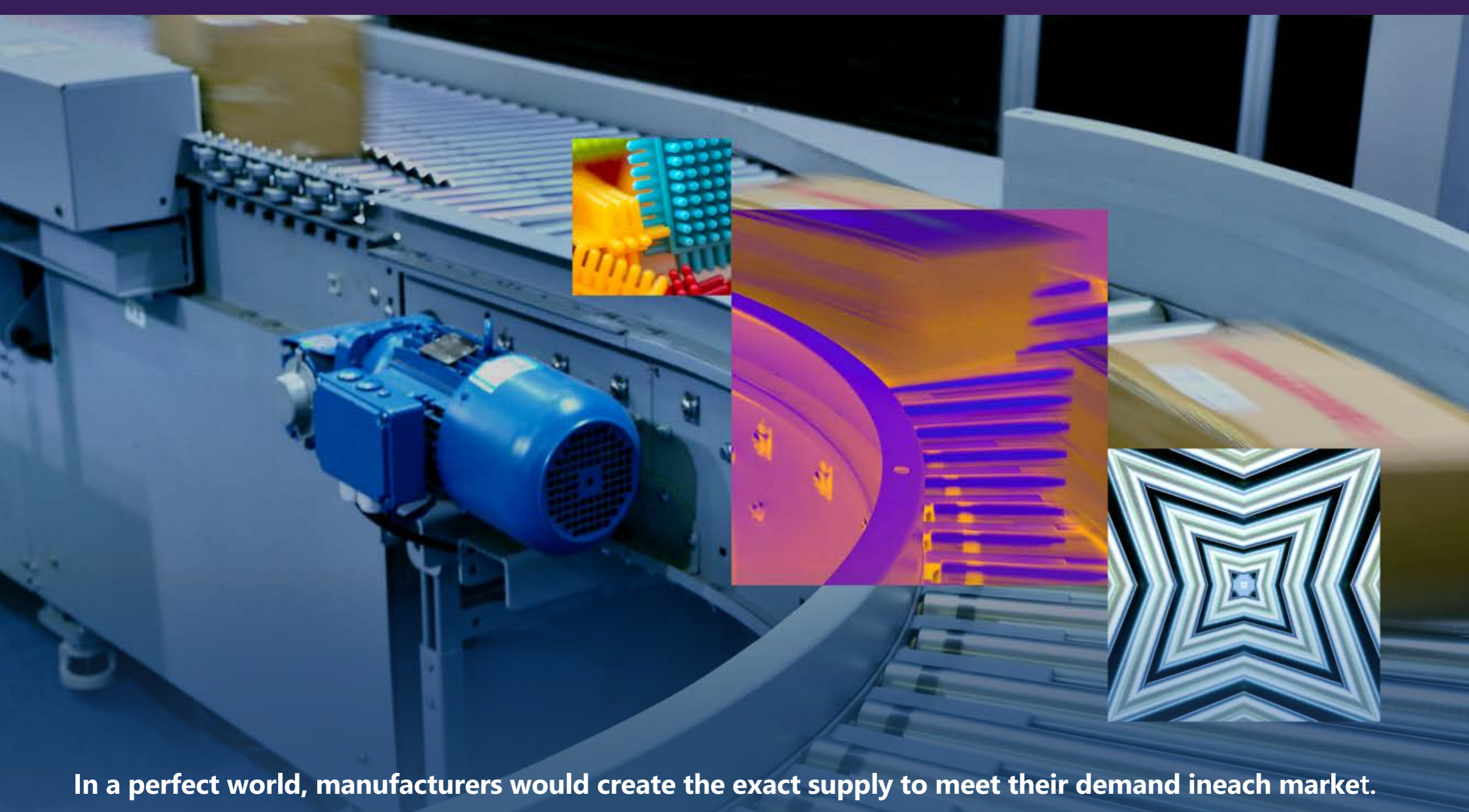**Microsoft**

The distribution network

Predicting product demand with autonomous systems

In a perfect world, manufacturers would create the exact supply to meet their demand in each market. With shifts in tastes, trends, environments and interests, predicting the demand for seasonal products is a particular balancing act for even the most senior planners. Fortunately, AI can help demand planners reduce:

| Workload by **50%** | Lost sales by **30%** | Forecast errors by **20%**[1] |

Traditionally, a single bump in this process would create a ripple effect across the entire network. By using advanced analytics to predict future trends and remove avoidable delays, autonomous systems can help stakeholders at every stage of the logistics process exceed customer expectations effectively and efficiently.

27% of manufacturers are focusing their AI implementation efforts on supply chain.[2]

"We now get answers to key business questions within five days, where normally modelling would take months."

Mitch van Deursen, Co-owner and CIO, Shoeby[3]

Autonomous systems in action

Every year, *Tailspin Toys* forecasts the seasonal demand of its Summer Splash product line. What was once an educated guess based on sales data, regional interests, and traditional weather patterns becomes a proactive and realized process with an autonomous system in place.

Logistics professionals stand to bring **$1.5 trillion** in value to their industry through digital transformation, plus an additional **$2.4 trillion** in social benefits through reduced emissions, less traffic, and better prices.[4]

Now, *Tailspin Toys* can refine its logistics process to accurately predict demand, reduce out-of-spec toys, and deliver its product in a fraction of the time.

1. Autonomous order sheets guide pickers to the right product via optimized facility routes.

2. Advanced analytics forecast growing popularity for *Tailspin Toys* in San Diego and encourage opening a West Coast facility to save on distribution costs.

3. AI-generated delivery schedules ensure no driver is stuck waiting to load.

4. Autonomous bidding solutions connect the manufacturer with a reliable driver at a fair price.

5. Autonomous environmental sensors adapt facility performance to changing external conditions in real time.

6. Autonomous data processing features predict seasonal product demands and inform production goals.

7. AI support helps drivers plan routes to avoid construction, peak traffic hours, and detours.

8. Predictive analytics help anticipate and prevent truck and trailer maintenance based on real-time inputs.

9. Engineer-taught AI helps managers monitor driver actions, habits, and statuses to ensure proper operating conditions.
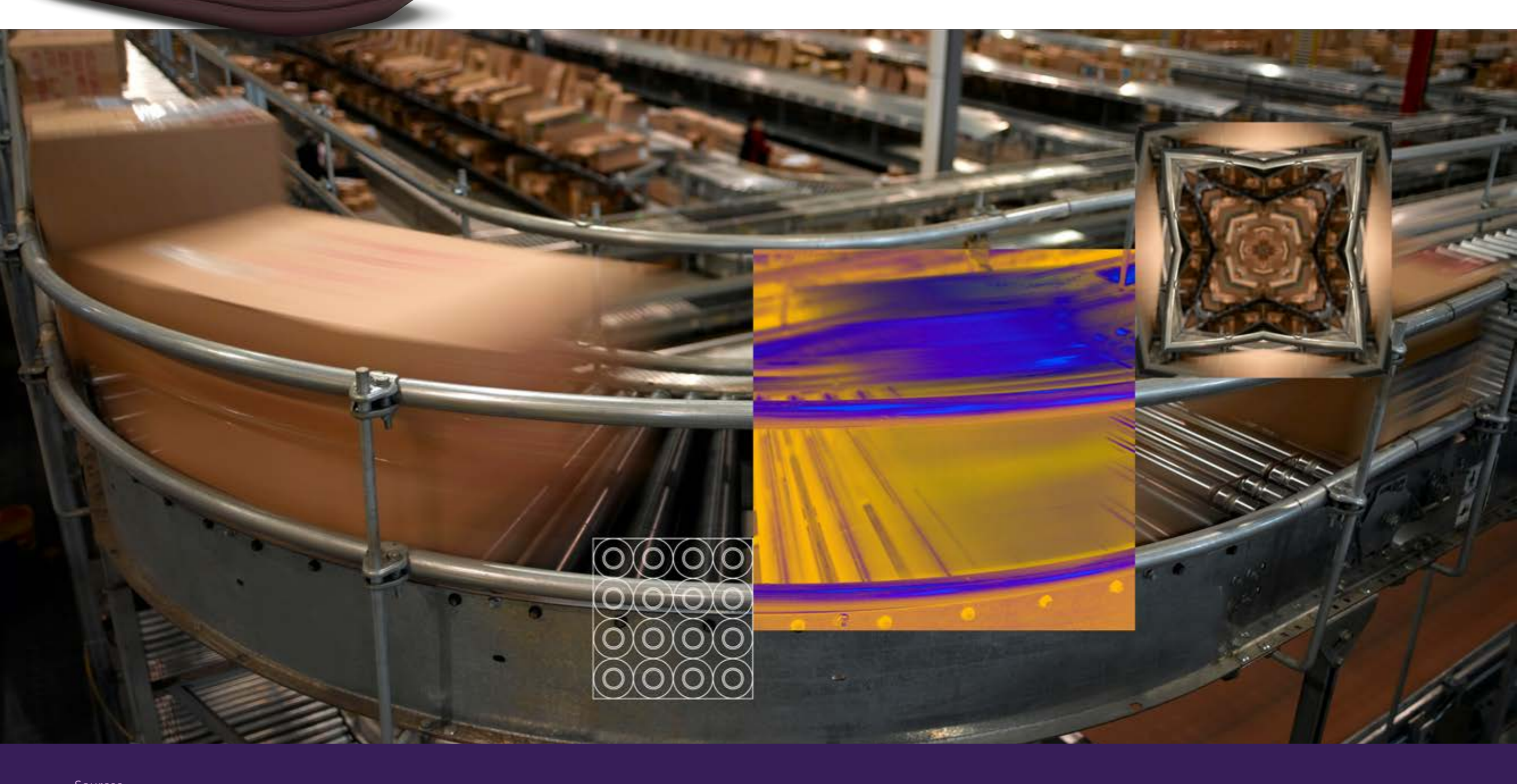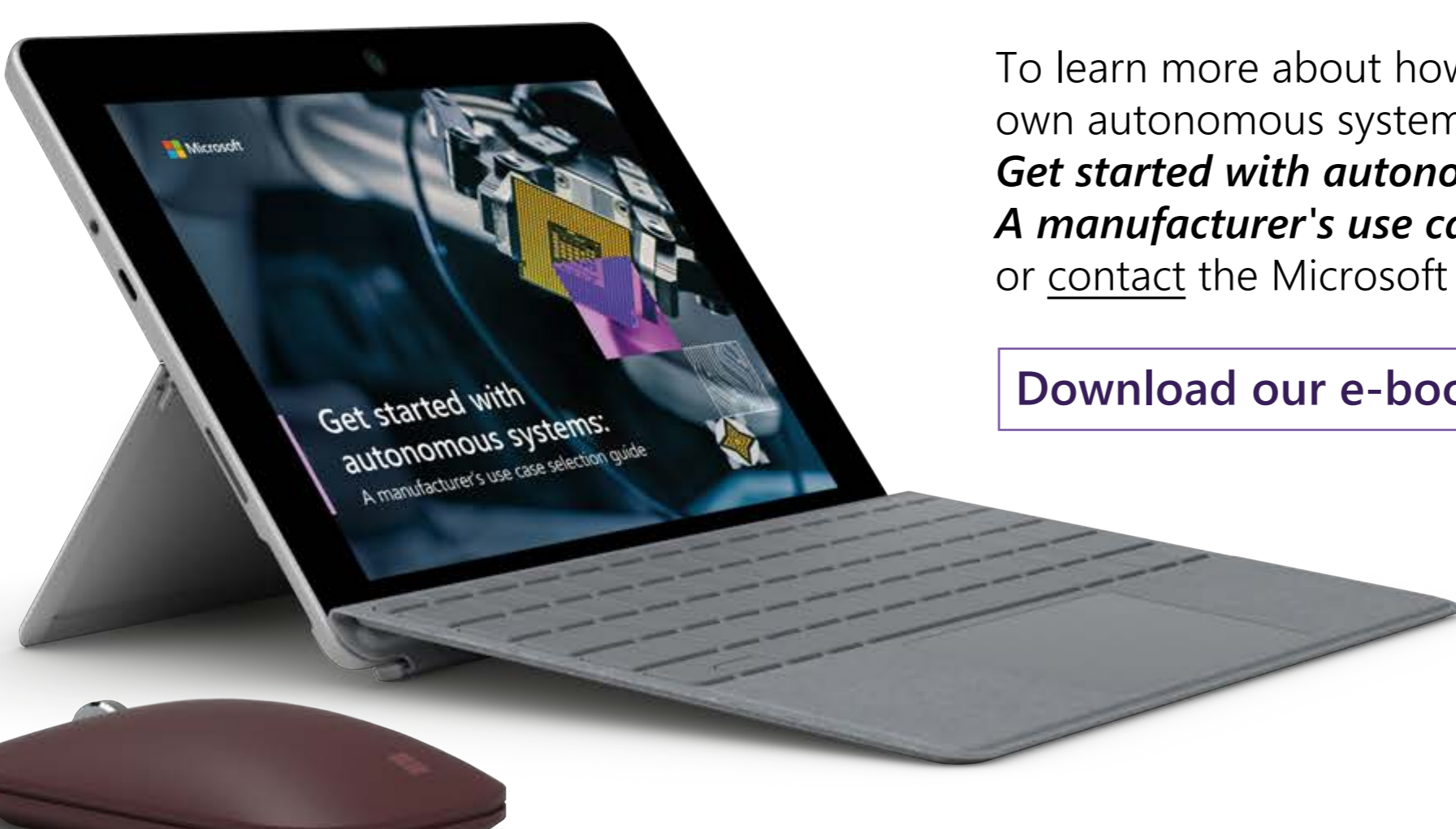
50% of companies that embrace AI over the next 7 years will double their cash flow.[5]

Autonomous systems process multiple elements to help manufacturers satisfy customers and grow profits.

To learn more about how to get started with your own autonomous system, download our e-book, *Get started with autonomous systems: A manufacturer's use case selection guide,* or contact the Microsoft team. →

Download our e-book →

Microsoft