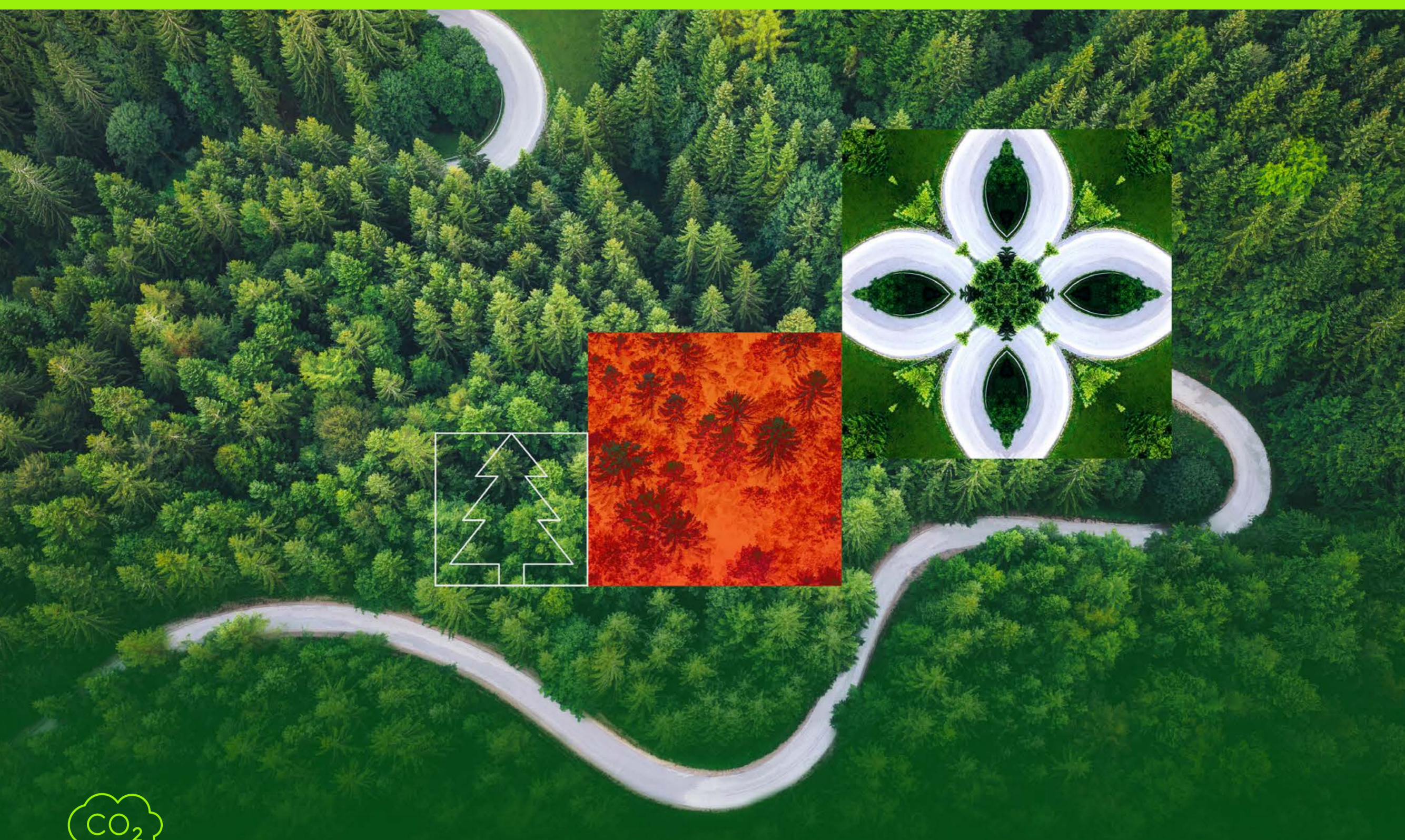


Your climate, controlled

How autonomous systems shape the future of facility management



Right now, organizations worldwide are planning for a carbon-neutral and carbon-negative future. While electric fleets, solar generation, and more efficient storage solutions dominate headlines, diligent facility management practices offer a clear first step toward a more sustainable facility.

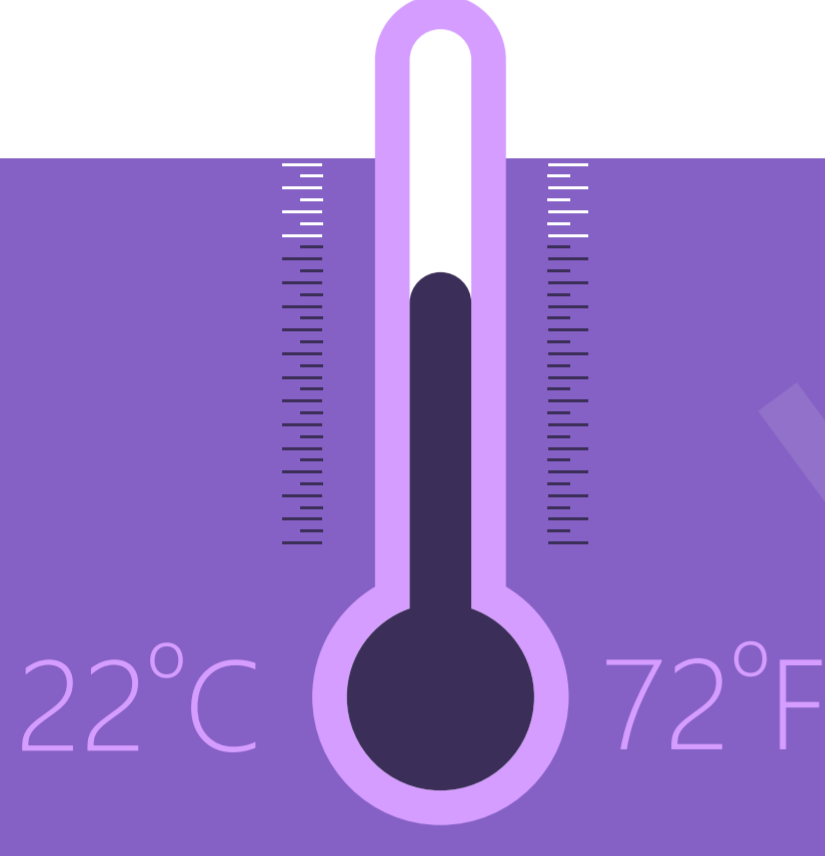
Every built environment has specific climate requirements that impact:

- 1 Employee comfort and performance
- 2 Product stability
- 3 Equipment condition

72% of executives are turning to AI to reduce facilities and operations costs and improving profitability.¹



Loose climate control practices can cost organizations unsustainable energy spend, along with unnecessary health and air quality concerns. **Autonomous systems provide facility managers and engineers with a scalable, always-on solution for reducing energy consumption by optimizing system performance without sacrificing working conditions.**



When interior temperatures change, it lowers productivity. Peak human productivity occurs in indoor temperatures around 72 degrees Fahrenheit (22 degrees Celsius).²

A more consistent cold chain

At *Munson's Pickles and Preserves Farm*, the facility management team must constantly balance its workers' well-being against external conditions and its products' needs.

With an autonomous system, *Munson's Pickles and Preserves Farm* can find the ideal performance balance to ensure the production facility is kept at an ideal temperature while reducing its overall energy consumption and providing a more consistent final product.

- 1 Autonomous sensors measure hard-to-perceive environmental variables like pressure and humidity to adapt production lines for optimal performance.
- 2 Improved oversight helps monitor air quality conditions to ensure a healthier working environment.
- 3 Autonomous temperature controls adjust to ensure consistent and comfortable conditions regardless of what's happening outside.
- 4 Automize system performance to reduce energy consumption.
- 5 Autonomous systems can simulate potential optimization techniques to identify new methodologies to improve system performance.
- 6 Improved AI helps site managers, engineers, and administrators track energy usage and usage goals.
- 7 AI support helps secure facilities in extreme conditions like heatwaves or equipment failures.
- 8 Constantly learning AI assesses everyday conditions to make recommendations for optimal performance settings.



“Using this AI, we were able to uncover a new plan for optimization in about 2 weeks, with an expected reducing in energy of about 15%.”

Brendan Bryant, Mechanical Engineer, DB Engineering³

With greater control, oversight, and versatility, autonomous systems empower facility managers to rethink climate conditions.

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. →

[Get the e-book](#) →



Sources:
 1. Data-driven work spaces: IoT and AI Expand the Promise of Smart Buildings. Harvard Business Review. 2018
 2. Effect of Temperature on Task Performance in Office Environment. Ernest Orlando Lawrence Berkeley National Laboratory. 2006
 3. Getting Microsoft to Carbon negative with the help of cutting edge AI. Microsoft. 2020