Blending innovation and sustainability into datacenters using biomimicry

At Microsoft, we are committed to leveraging biomimicry to enhance our datacenters and contribute positively to the environment. By blending our datacenters into the natural landscape, we aim to create resilient ecosystems that support biodiversity, strengthen community ties, and help our datacenters become better neighbors in the landscapes they call home.

What is Biomimicry?

Biomimicry is an approach to innovation where we learn from nature to solve modern design challenges. It involves analyzing nature's best ideas to design technologies that are more adaptive, innovative, efficient, and sustainable.

Case study: Middenmeer datacenter in Noord-Holland

Using the tools of biomimicry, our team started by learning how resilient landscapes function in the province of Noord-Holland. They researched local ecology, including native habitat types and biodiversity, soil health, water and air quality, as well as community agricultural practices.

"Incorporating biomimicry into our datacenter designs allows us to not only preserve nature but also actively restore and enhance it. Our solutions are inspired by the natural world and aim to create a sustainable future for all."

Kaitlin Chuzi, Director of Biomimicry and Advanced Ecosystems for Microsoft's Datacenters The Microsoft team worked with community and ecological insights to co-develop landscape solutions that reflect local resilience patterns at Middenmeer datacenter campus.

From there, they incorporated biomimicry principles by planting 150 native trees and 2,300 square meters of shrubs, grasses, and groundcovers around the campus.

This approach helps create a healthy, resilient ecosystem that supports biodiversity, improves stormwater control, and prevents erosion.

"Middenmeer datacenter and our biomimicry community projects serve as a dynamic outdoor laboratory, fostering nature-inspired learning for children and community members. The lessons Microsoft learns from this pilot program will be incorporated into future projects, both here in Noord-Holland and all over the world."

Florien ten Hove, Netherlands Community Lead at Microsoft

Scan to watch a <u>video</u> about our biomimicry approach

