

# Microsoft datacenters in the Netherlands

As more people and businesses rely upon technology to stay connected, informed, and productive, digital needs in the Netherlands and around the globe are growing. And that means the need for hyperscale datacenters is growing too.

*Hyperscale brings hyper efficiency.* Microsoft cloud services offer customers an energy-efficient and carbon neutral alternative to running their own private datacenters. [Research](#) shows that Microsoft cloud services are up to 93 percent more energy efficient than traditional enterprise datacenters.<sup>1</sup>

As part of our commitment to building a sustainable future, Microsoft strives to empower the communities where our employees live, work, and operate our datacenters. With that, it's important we share information to ensure you understand why datacenters are needed, Microsoft's commitments to responsible operations, and the benefits of hosting a datacenter in your community.

<sup>1</sup> <https://www.wsp.com/en-GL/insights/microsoft-cloud-computing-environmental-benefit-study>

[Why datacenters >](#)

[Microsoft commitments >](#)

[Community benefits >](#)

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## Cloud computing powers our digital world

Cloud computing is the delivery of computing services over the internet. Common daily activities are made possible through cloud computing, such as:



Email



Online banking



File storage



Collaboration



Online shopping



Mobile apps

Cloud computing can provide consumers and businesses with the benefits of data sovereignty and privacy, lower costs, easier access, higher reliability, and lower carbon footprint.

## The Microsoft Cloud is for everyone

The Microsoft Cloud serves over 1 billion customers and 20 million companies worldwide.

Dutch organizations relying on the Microsoft Cloud include large enterprises, startups, governments, hospitals, banks, schools, and other organizations that contribute to a modern society.



## When Microsoft joins a community, we bring our commitments for a better world



Support inclusive economic opportunity



Commit to a sustainable future



Earn trust



## Microsoft datacenters are key to our sustainability goals

### Carbon negative by 2030

We are actively entering into purchase agreements for renewable energy, which helps propel the development of additional clean energy sources and over time reduces costs for everyone. By purchasing renewable energy, we are enabling a carbon-free energy future for communities.

Leadership in Energy and Environmental Design (LEED) is the world's largest green building certification program. LEED provides the framework for healthy, highly efficient, lower carbon emissions and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement and leadership. **New Microsoft datacenters being built are designed to be LEED Gold certified.**

Power usage effectiveness (PUE) measures **cloud energy efficiency**. Lower PUE indicates more energy-efficient datacenters, with a PUE of 1.0 being the best score. The Microsoft North Holland datacenters were designed to run at an

efficiency rate of 1.16 and had a **12-month weighted average PUE of 1.16** through February 2022. Microsoft has purchased **455 MW of offshore wind power and 180 MW of onshore wind power in the Netherlands** to support our facilities.

### Water positive by 2030

The new Microsoft Netherlands datacenters **use outside air and zero water** for cooling when temperatures are below 29.4 degrees Celsius, reducing cooling water use to less than 5 percent of the year. The new Netherlands facilities also use rainwater capture as an alternative water source that helps offset humidification water needs.

During 2021, the new Netherlands datacenters operate at an efficiency rate of **0.08 L/kWh**. Microsoft designed the facility for a water usage efficiency rate of **0.01 L/kWh**.

Microsoft's water storage facility uses **recycled water from the cooling system**.

### Zero waste by 2030

In 2020, we successfully opened our **first Microsoft Circular Center in our North Holland datacenters**, which is designed to extend the life cycle of servers through reuse and support a circular economy for the Microsoft Cloud.

By June 2021, we demonstrated **83 percent reuse of our end-of-life assets and components in the Netherlands** which is **above the Microsoft target of 78 percent**. **By 2025, 90 percent of servers and components within our regional datacenter network will be reused.**

Additionally, Microsoft is conducting research and development to reduce waste by **determining new recycling solutions for used air filters and fiber-optic cables**.

## Since 2018, Microsoft has donated more than €2.6 million to projects supporting community-identified priorities



**Collaborating with ROC Horizon College and ROC Kop van Noord-Holland**, Microsoft is facilitating workforce training to prepare students for careers in IT, including work in datacenters. Servers and other IT equipment were donated to build labs that emulate a working datacenter.



**Microsoft partnered with the RSG Wiringherlant secondary school and the Dutch Ministry of Education** to pilot new curricula on digital transformation and sustainability, providing new learning environments and labs. The partnership created robotics and programming initiatives and provided laptops to students for under-resourced families.



**Microsoft is collaborating with Climate CleanUp** to facilitate workshops for community organizations, stakeholders, and citizens to develop and refine projects that execute nature-based solutions to the climate crisis. Selected projects will benefit from expertise from Climate CleanUp to understand carbon reduction impact of projects and can apply for Microsoft Community Sustainability grants.

## Microsoft datacenters create family-wage operations and construction jobs as well as positive impacts to the local economy

Microsoft datacenters represent a capital-intensive investment and long-term commitment to the community. More than 375 full-time employees and contractors work across the Microsoft Netherlands datacenter campuses. And since construction started in 2013, more than 11 million hours have been worked on construction projects, with an average of 687 construction jobs per year.



### Construction jobs

- Electricians
- Plumbers and pipefitters
- Carpenters
- Structural iron and steel workers
- Concrete workers
- Earth movers



### Datacenter operations

- Campus management
- People management
- Learning and development
- IT operations
- Mechanical engineers
- Electrical engineers
- Security contractors
- Building maintenance

## Microsoft datacenters are best in class in performance, reliability, safety, and sustainability

Using Biomimicry, Microsoft worked with a local landscaping company to plant 150 trees and 2,300 square meters of shrub, grasses, and groundcover around the Middenmeer datacenter with the intent that the native plants selected will mirror a healthy, resilient ecosystem and support biodiversity, improve storm water control, and prevent erosion.

Globally, Microsoft datacenters use fossil fuel generators for backup power during the rare grid emergency, which accounts for less than 1 percent of our overall emissions.

In some regions, Microsoft is piloting running backup generators with renewable, cleaner-burning fuels, and also piloting the replacement of datacenter generators with long-duration batteries.

Microsoft construction and operations in the Netherlands comply with applicable air quality requirements to support healthy regional air quality.