

# Microsoft datacenters in Italy

As more people and businesses rely upon technology to stay connected, informed, and productive, digital needs in Italy 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.

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 approach for responsible operations, and the benefits of hosting a datacenter in your community.

[Why datacenters >](#)

[Microsoft commitments >](#)

[Community benefits >](#)

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## The cloud 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



Streaming videos



Collaboration



Online shopping



Mobile apps

Cloud computing can provide consumers and businesses with the benefits of enhanced security, privacy, compliance protection, lower costs, easier access, higher reliability, and a lower carbon footprint.

## The Microsoft Cloud is for everyone

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

Organizations in Italy relying on the Microsoft Cloud are made up of a variety of sectors, such as large enterprises, startups, governments, hospitals, banks, schools, or 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

[Power usage effectiveness \(PUE\)](#) measures cloud energy efficiency. The calculation is total power consumption divided by IT power consumption. A lower PUE score indicates more energy-efficient datacenters, with a PUE of 1.0 being the best score. Our Italy datacenters are under construction and not in operation. They will have a **design average PUE of 1.12**.

Globally, Microsoft datacenters use fossil fuel generators for backup power and account for **less than 1 percent of our overall emissions**. In specific regions, Microsoft is **piloting running backup generators with renewable blend, cleaner-burning fuels**, and is also **piloting the replacement of datacenter generators with long-duration batteries**.

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

Microsoft operations in Italy **comply with applicable air quality requirements**.

### Water positive by 2030

[Water usage effectiveness \(WUE\)](#) is another key metric relating to the efficient and sustainable operations of our datacenters and is a crucial aspect as we work towards our commitment to be water positive by 2030. WUE is calculated by dividing the number of liters of water used for humidification and cooling by the total annual amount of power (measured in kWh) needed to operate our datacenter IT equipment.

Microsoft will use outdoor air with direct evaporative cooling at the Italy datacenters. This method of cooling **uses outside air and zero water** for cooling when temperatures are below 29.4 degrees Celsius, reducing water for cooling to less than 5 percent of the year. This system is highly efficient, using less electricity and a fraction of water used by other water-based cooling systems, such as cooling towers.

The new datacenters in Italy are designed for an **average WUE of 0.023 L/kWh**.

### Zero waste by 2030

Microsoft has a goal to achieve 90 percent diversion of datacenter operational waste by 2030. To reach this goal, we're working closely with our waste haulers to optimize waste

diversion programs across our global datacenter portfolio. We have achieved Zero Waste certifications for our San Antonio, Texas; Quincy, Washington; Boydton, Virginia; and Dublin, Ireland datacenter locations.

In 2020, we opened our **first Microsoft Circular Center in our North Holland datacenters**, which is designed to extend the life cycle of servers through reuse and to support a circular economy for the Microsoft Cloud. It takes five to six years from when a datacenter is operational to generate reusable assets; once the new datacenters are in use and servers are ready to be decommissioned, we plan to use the closest available Circular Center. Microsoft Circular Centers are able to process 3,000 servers per month for reuse.

Globally, Microsoft datacenters reuse **78 percent of our end-of-life assets and components; the remaining 22 percent of materials are recycled**. Additionally, Microsoft is conducting research and development to improve waste diversion by determining new recycling solutions for used air filters and fiber optic cables.

Since 2020, Microsoft has invested \$200,000 to support waste disposal, youth education, and digital skilling for the community



**Reducing the dropout rate through AI:** Microsoft partnered with Social Techno Impresa soc. Srl to use AI to reduce the dropout rate in Milan's schools. The AI developed on the Azure platform will identify students and schools at risk and help set up automated and personalized learning paths for the students to get back on track for graduation.



**Supporting disabled workers with technology:** Together with Spazio Aperto Società Cooperativa Sociale, Microsoft is supporting jobs for disabled workers in sustainability roles. This project is developing technology for disabled workers in Milan to monitor and report environmental issues within the city. More than 30 percent of Spazio Aperto's employees are disabled, and this project will equip them with accessible technology to succeed in their roles supporting the city.

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

When construction begins for the new facilities, we estimate it will require **245** construction roles and approximately **1 million work hours** to complete construction of the new datacenters. We intend to fill **25 to 30 percent of positions with local contractors.** Once the new datacenters are fully operational, we anticipate an additional **40** full-time employees will work at those facilities.



### Construction jobs

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



### Datacenter operations

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