

# The liquid cooling transformation is here.

Why data center owners – from edge to hyperscale – are adopting liquid cooling solutions.

## Traditional air-cooled data centers produce a great deal of waste every day.

In 2020, data centers used over  
**200 terawatt-hours** of energy



as much as  
**1%** of all **global energy usage**

In the US, they consume as much energy as  
**7 million** homes

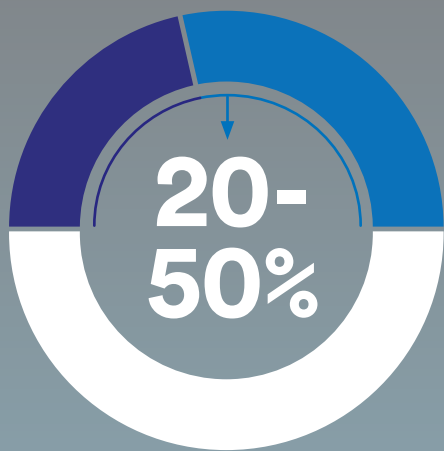


Plus, they have a carbon footprint larger than the **airline industry**



### Energy consumption

Most air-cooled data centers use



of their **total energy** just on air cooling

### Water waste

A small 30MW data center uses as much as



Hyperscale data centers can use



as much as a city of **30-50,000** people!

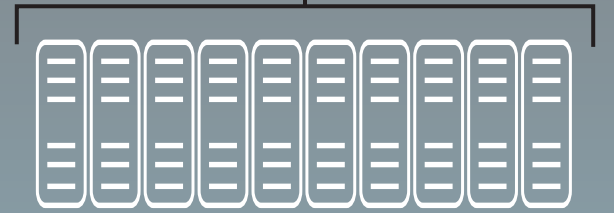
And much of this water is lost to **evaporative cooling!**



### Space and power

Traditional air-cooled data centers require a **large physical footprint**

Up to **10** kW/m<sup>2</sup>



and only produce

**4-40** kW

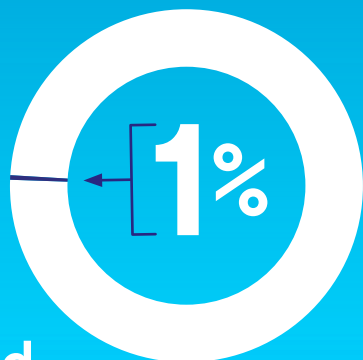
of power per rack

## But what if we could reduce consumption?

### Cooling with 3M Fluids can...

Reduce **Energy consumption**

**Reduce** energy used by cooling to as little as



And energy consumption by **95% or more!**

Eliminate **Water waste**



**Reduce** design complexity and maintenance



Optimize **Space and power**

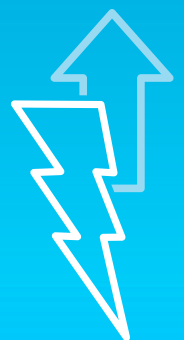
**Shrink physical footprint** by

**10x**



Up to **100** kW/m<sup>2</sup>

**Increase power density** to up to



**250** kW per rack