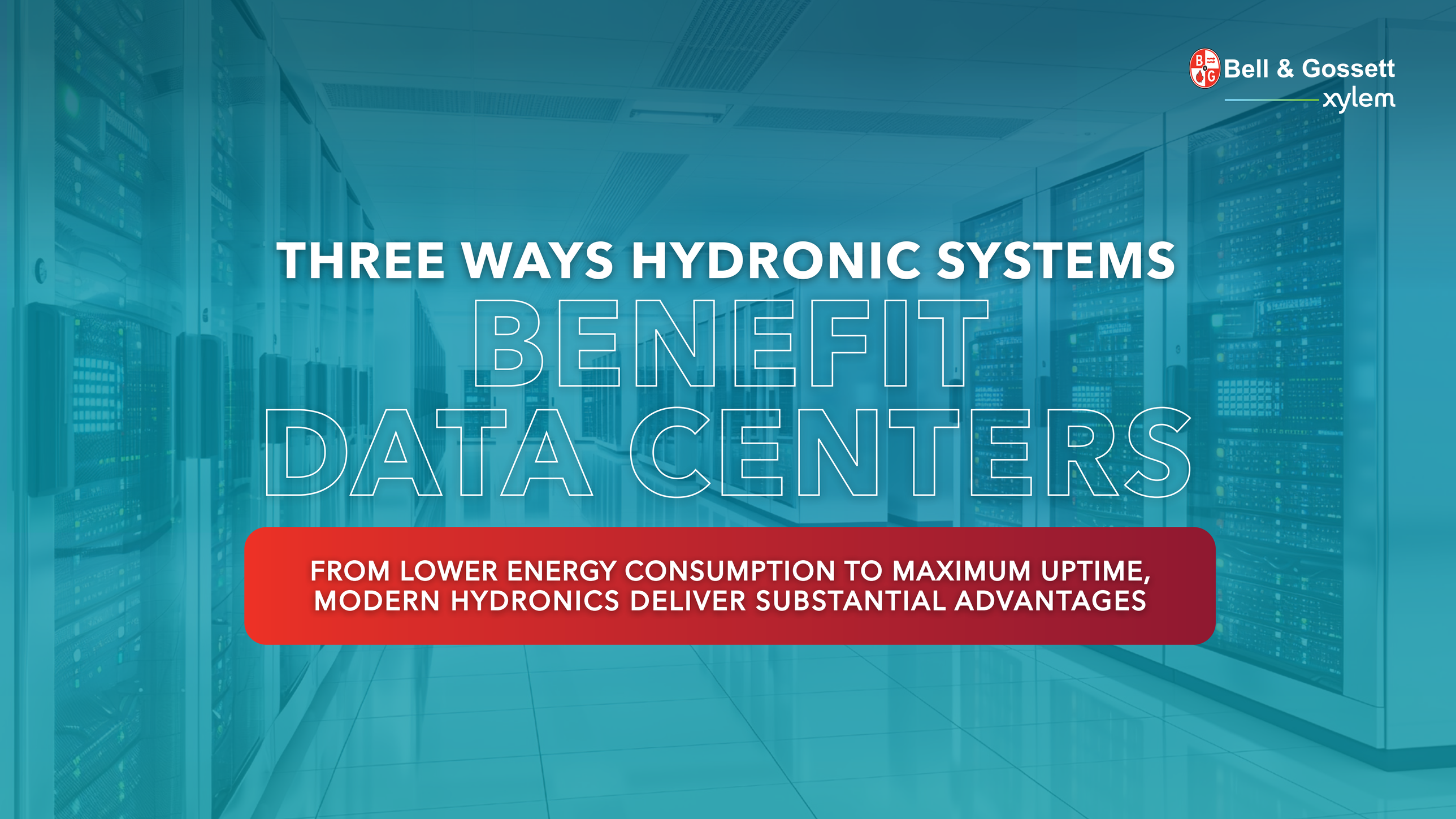

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THREE WAYS HYDRONIC SYSTEMS BENEFIT DATA CENTERS

FROM LOWER ENERGY CONSUMPTION TO MAXIMUM UPTIME, MODERN HYDRONICS DELIVER SUBSTANTIAL ADVANTAGES

Data centers are the backbone of every modern industry imaginable, enabling system operations, data storage, connectivity and communication worldwide. But thermal management of data centers is an enormous challenge that is often overlooked. Now, with artificial intelligence (AI), the energy demand placed on data centers has increased exponentially.

Because AI is super data intensive, it generates a lot more heat that exceeds the capabilities of traditional air-based cooling methods. Research shows that liquid cooling - like water-based hydronic systems - can absorb heat **1,000 times more effectively** than air while **cutting energy consumption by as much as 40%.**

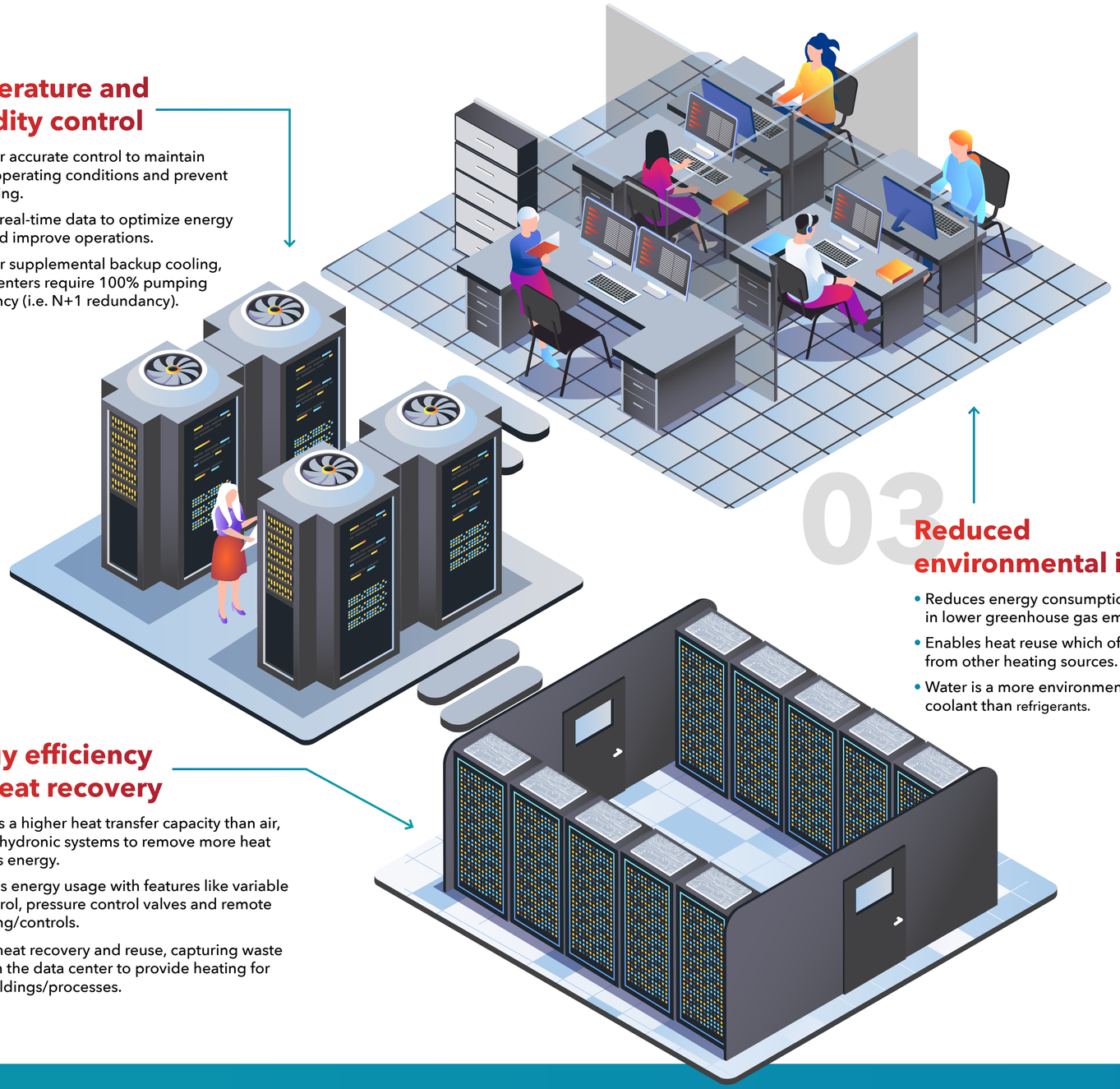
As the AI industry drives demand for new data centers nationwide, hydronics is quickly emerging as a promising solution to address cooling challenges while improving sustainability and energy efficiency.

Consider the following three advantages:

01

Temperature and humidity control

- Allows for accurate control to maintain optimal operating conditions and prevent overheating.
- Provides real-time data to optimize energy usage and improve operations.
- Allows for supplemental backup cooling, as data centers require 100% pumping redundancy (i.e. N+1 redundancy).



02

Energy efficiency and heat recovery

- Water has a higher heat transfer capacity than air, allowing hydronic systems to remove more heat using less energy.
- Optimizes energy usage with features like variable flow control, pressure control valves and remote monitoring/controls.
- Enables heat recovery and reuse, capturing waste heat from the data center to provide heating for other buildings/processes.

03

Reduced environmental impact

- Reduces energy consumption, resulting in lower greenhouse gas emissions.
- Enables heat reuse which offsets emissions from other heating sources.
- Water is a more environmentally friendly coolant than refrigerants.

DATA CENTERS HAVE BECOME THE BACKBONE OF TODAY'S DATA-DRIVEN WORLD

and cooling systems play a vital role in keeping these mission-critical facilities operational. In their quest for smart cooling strategies, hydronics is an increasingly attractive solution for data center providers seeking to maximize energy efficiency and achieve sustainability goals.

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