

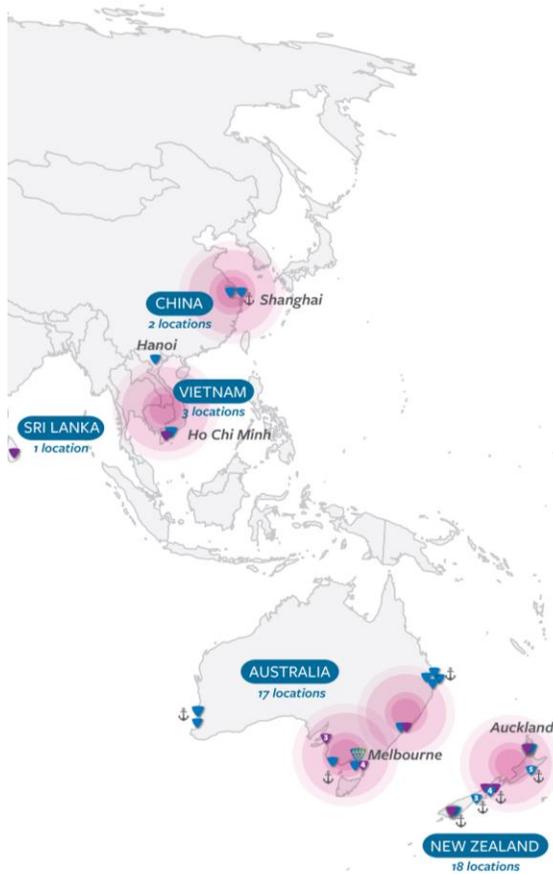
Rethinking The Way Temperature-Controlled Warehouses Consume Energy

Tim Moran

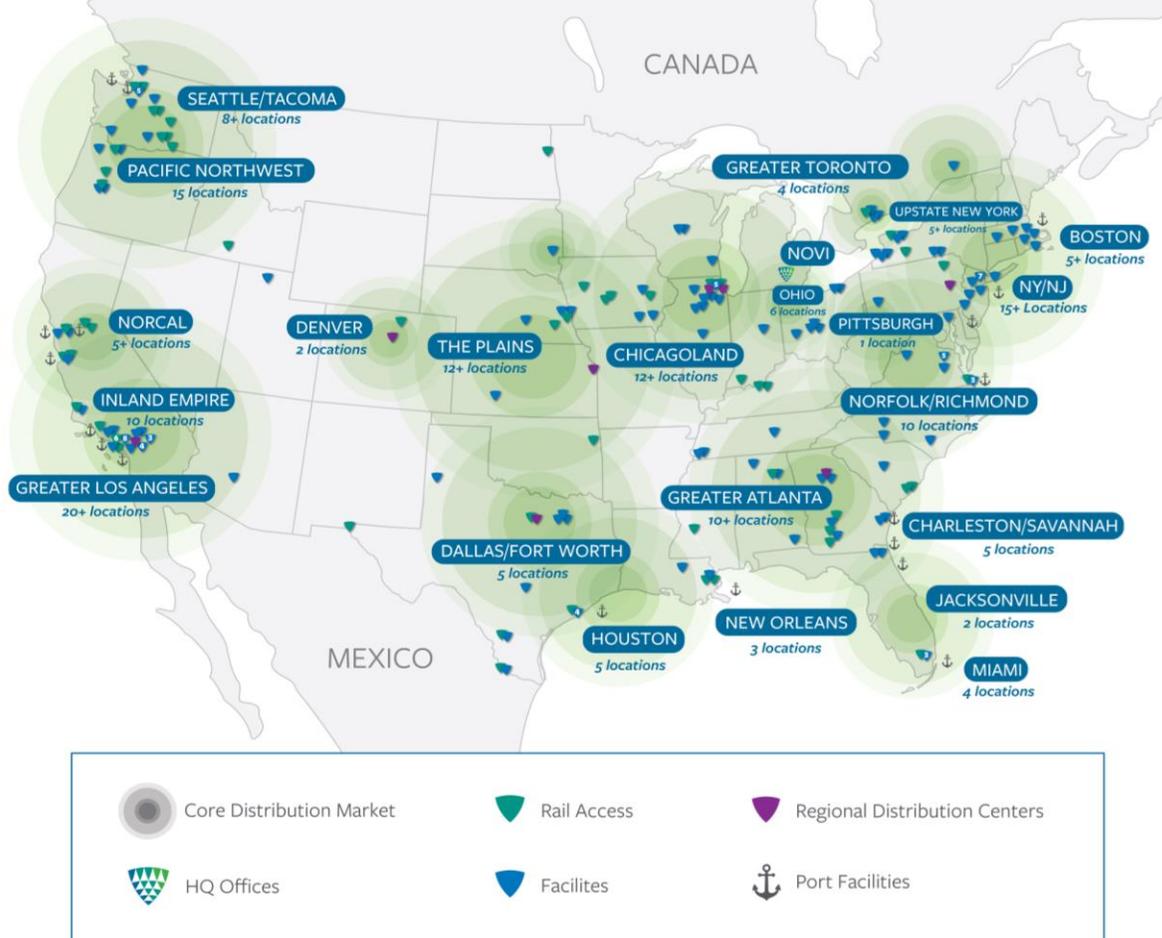
euramm^on Symposium, 17th June 2021



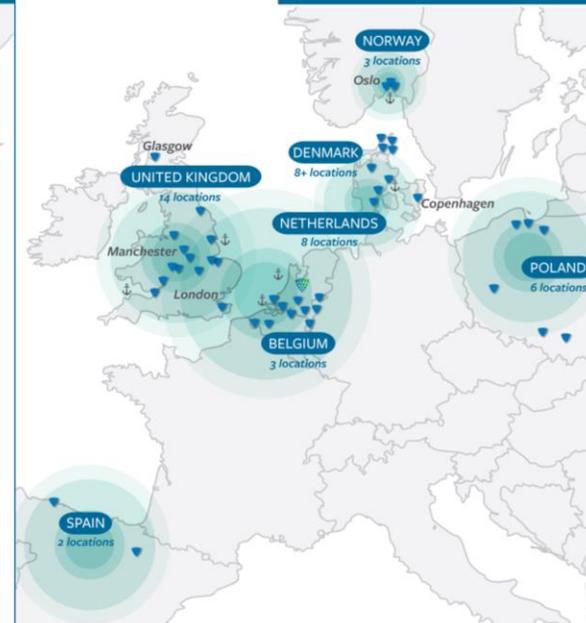
ASIA-PACIFIC



NORTH AMERICA



EUROPE



SOUTH AMERICA



17,000+ Employees | 340+ Facilities in 16 Countries

Revenue \$3billion | 6.5 million Pallet Spaces





We've Reduced Energy Intensity by 33% Since 2015



Bright Done Right

Newly installed LED-efficient lighting at **seventy-four** sites



Freezer or Battery?

Newly installed flywheeling technologies allow **four** sites to act as thermal batteries



Cold in a Flash

Improved blast cells slash freeze times in half at **three** sites



Sealed Shut

Newly replaced freezer doors are driving down energy waste at **ninety-nine** sites



Capturing Potential

Variable frequency drives allow us to use only the energy we need at **twenty-four** sites



Solar Energy

Lineage is producing its own renewable energy through solar installations at **eighteen** facilities

New Projects In Pilot

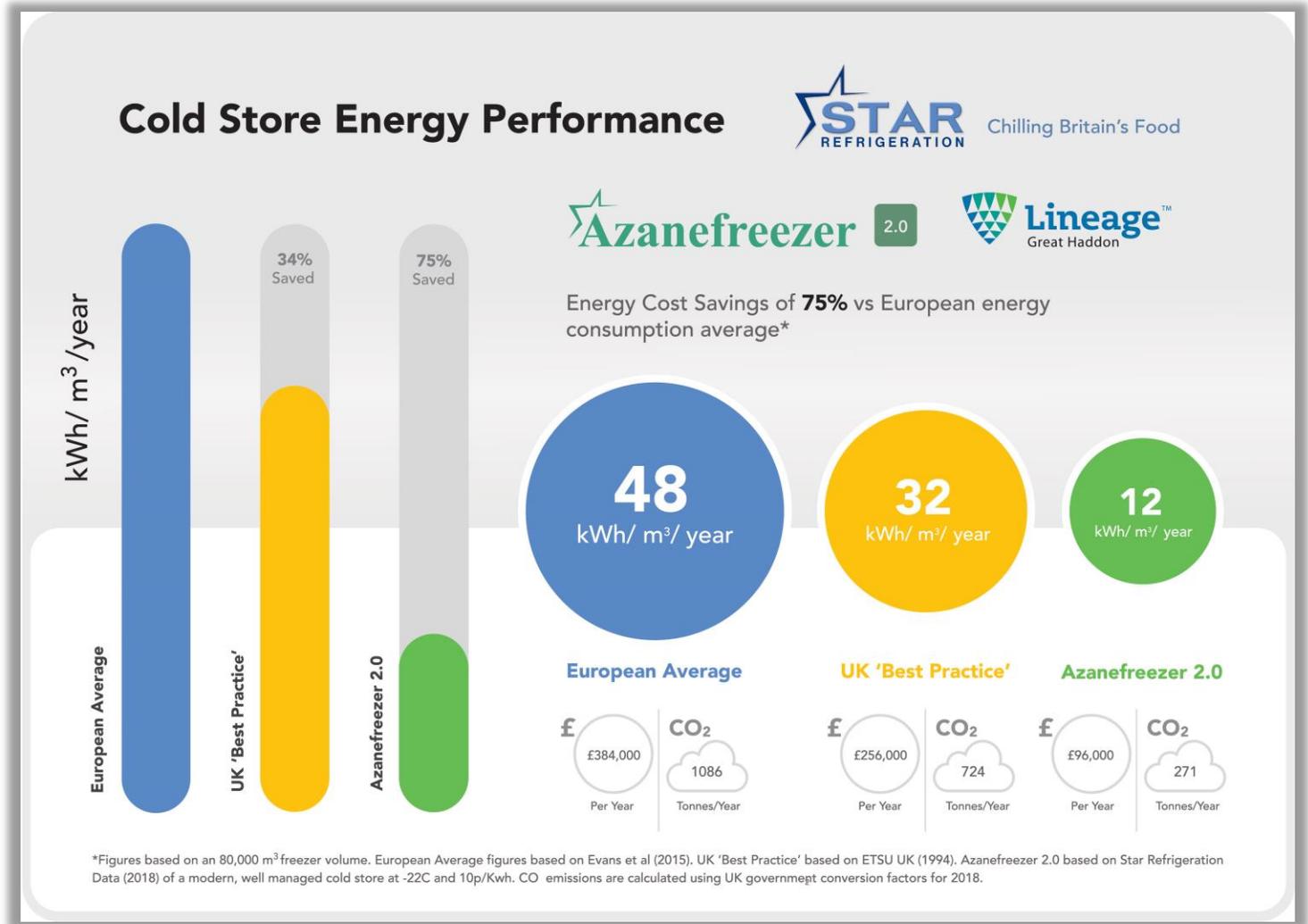
Voltage Optimisation | Load Shedding on Battery Chargers | Power Generators | Custom Control System | Capacitor



Refrigeration Energy Performance

Over the last 2 years we have spent in excess of **£3.4 million** on upgrades and improvements to reduce energy consumption

Azaneefreezer technology's **annual energy usage is one third** of that of the UK's best practice meaning Lineage is set to **cut carbon emission by 1500 tonnes** of CO₂ per year from only 3 sites.

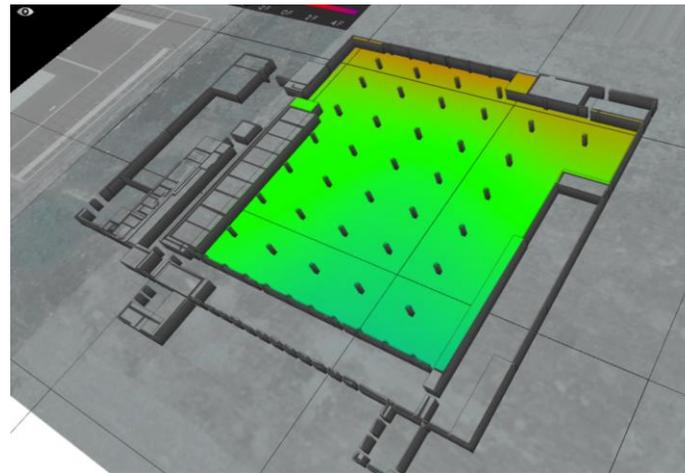
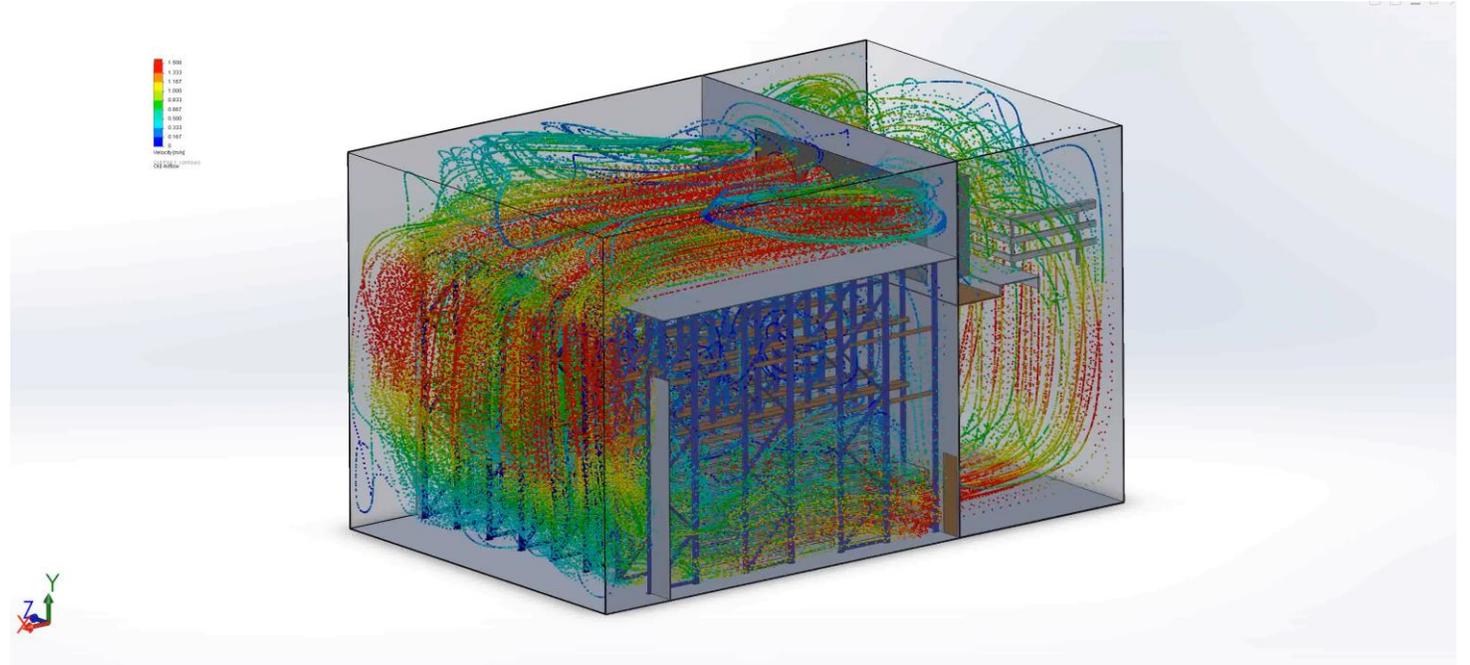




The Power of Data

Data can also be used to control energy consumption and monitor all the areas that effect energy consumption.

Using heat maps and machine learning property algorithms along with up to 2,000 real time IoT sensors in a single building we are able to **control our engine rooms and ensure optimal energy efficiency.**





Innovation that's Award Winning

FAST COMPANY

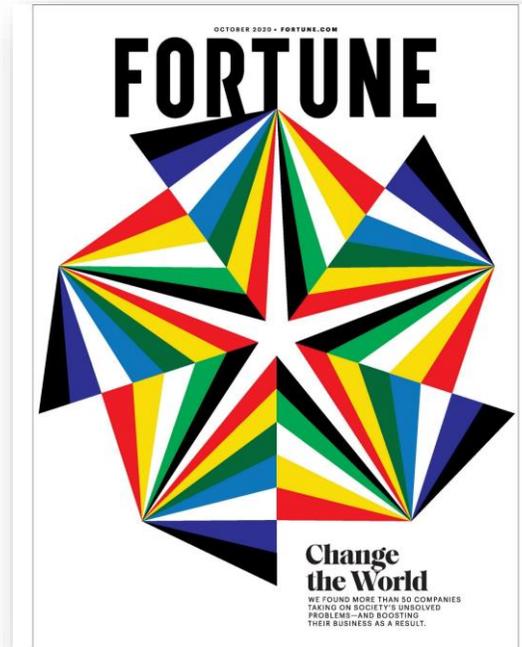
50 Most Innovative Companies 2019 and No. 1 in Data Science

The team at Lineage is constantly challenging the status quo — driving Silicon Valley-style innovation in the temperature-controlled logistics industry. It is that commitment to innovation that led Lineage to be recognised recently by Fast Company.

FORTUNE

Change the World List 2020

Fortune recognised Lineage's social and environmental impact through two award-winning energy innovations — a redesigned and optimized blast freezing process and an energy efficiency and scheduling algorithm known as “flywheeling.”



FAST COMPANY