

A hand is shown holding a server rack component, possibly a drive tray, in front of a server rack. The server rack is filled with server units, some of which have green indicator lights. The background is a blue-tinted image of a server room.

Data Center Technologies

Munters Capital Markets Day

Stefan Aspman, President Data Center Technologies

GLOBAL EXPERTS
of leading cooling
solutions using a wide
range of heat rejection
technologies. With a
diversified product
portfolio and extensive
application knowledge,
we create sustainable
climate solutions for
data centers
worldwide.



Providing sustainable cooling solutions to facilitate the digital transition



Underlying demand

5,9 M

Google searches per minute



DC's consume vast amount of energy

1-7%

of total electricity usage depending on country



Many DC's consume huge amount of Water

Millions

of liters per day



Cooling can represent up to

50%

of a DC's power consumption



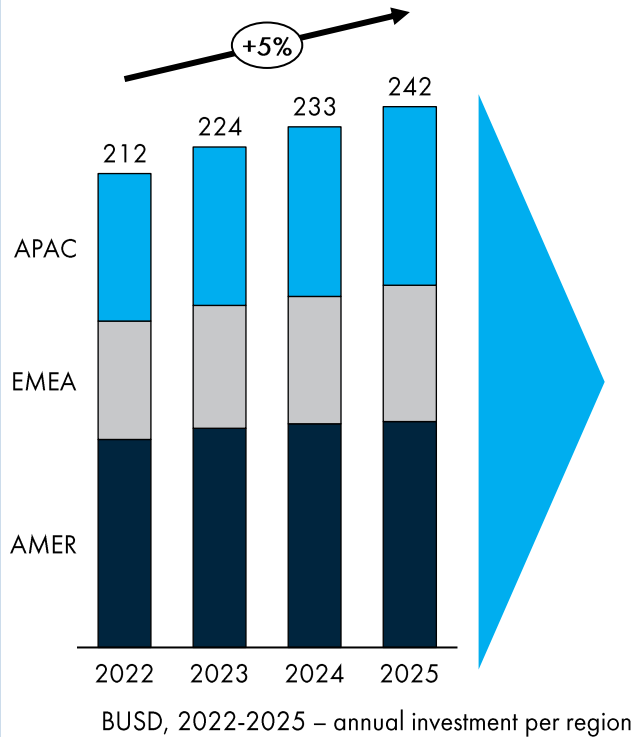
Sycool Split provide world Leading

PUE*

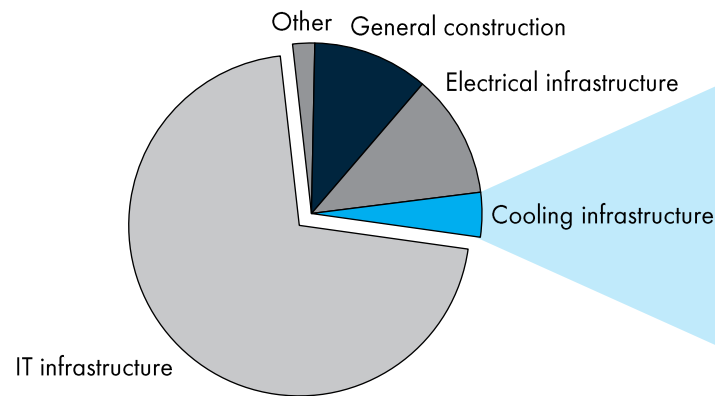
without the use of water

Data Center cooling market expected to grow with ~7-10% globally

DC build investments incl. IT infrastructure

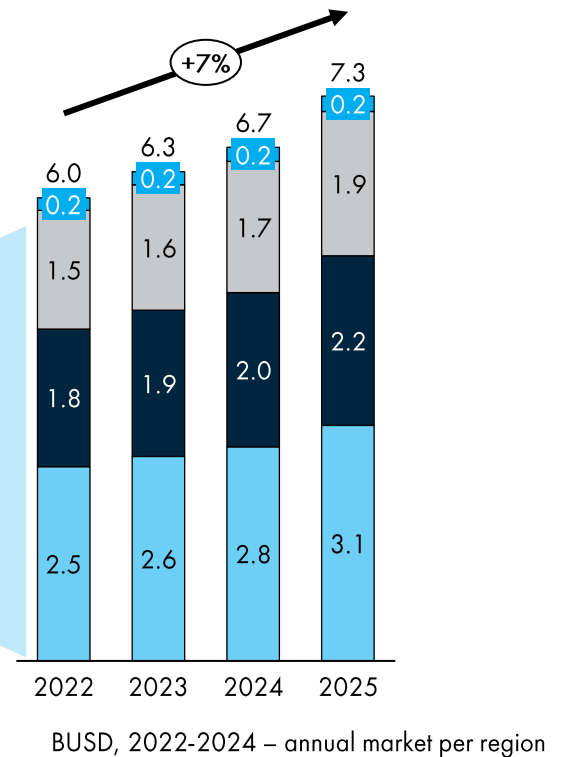


DC cooling share of total build investment



Indicative

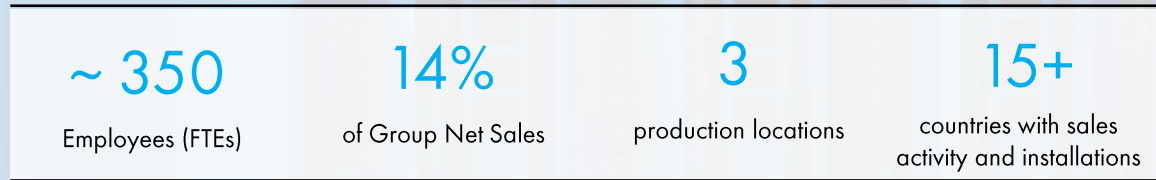
DC cooling, addressable market



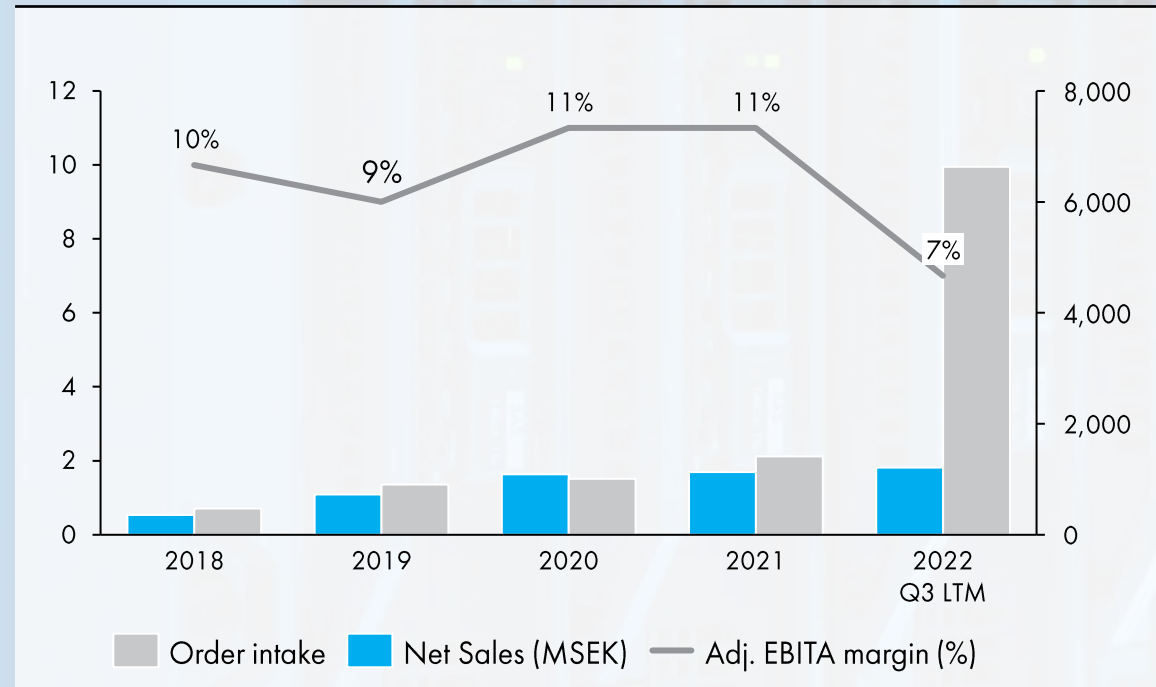
Source: Ordered market study from 2019

Leading position in our core markets

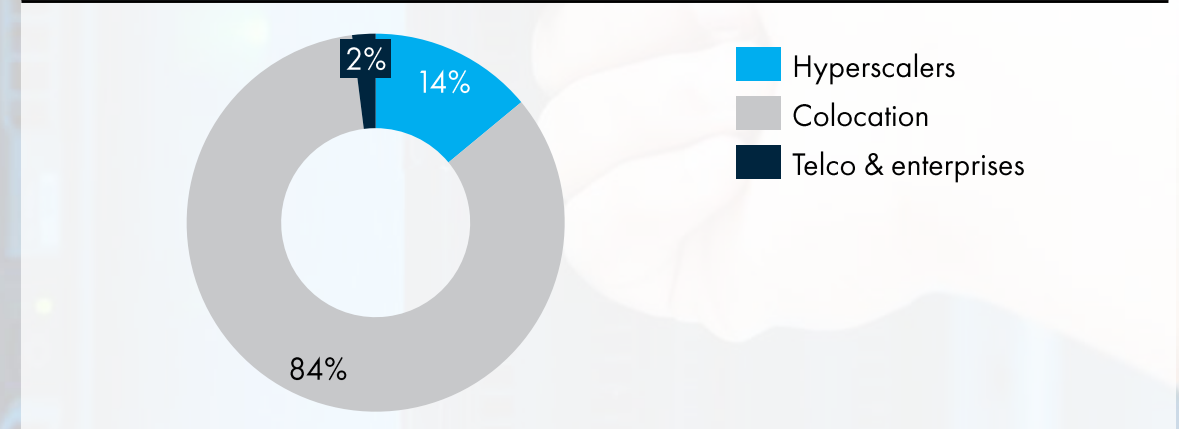
Key figures



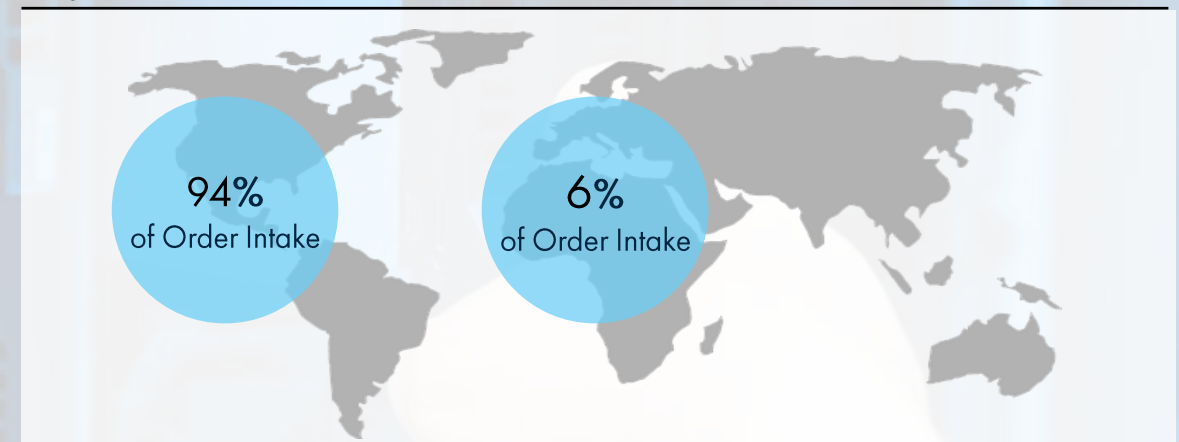
Growth & Profitability



Customer distribution order intake

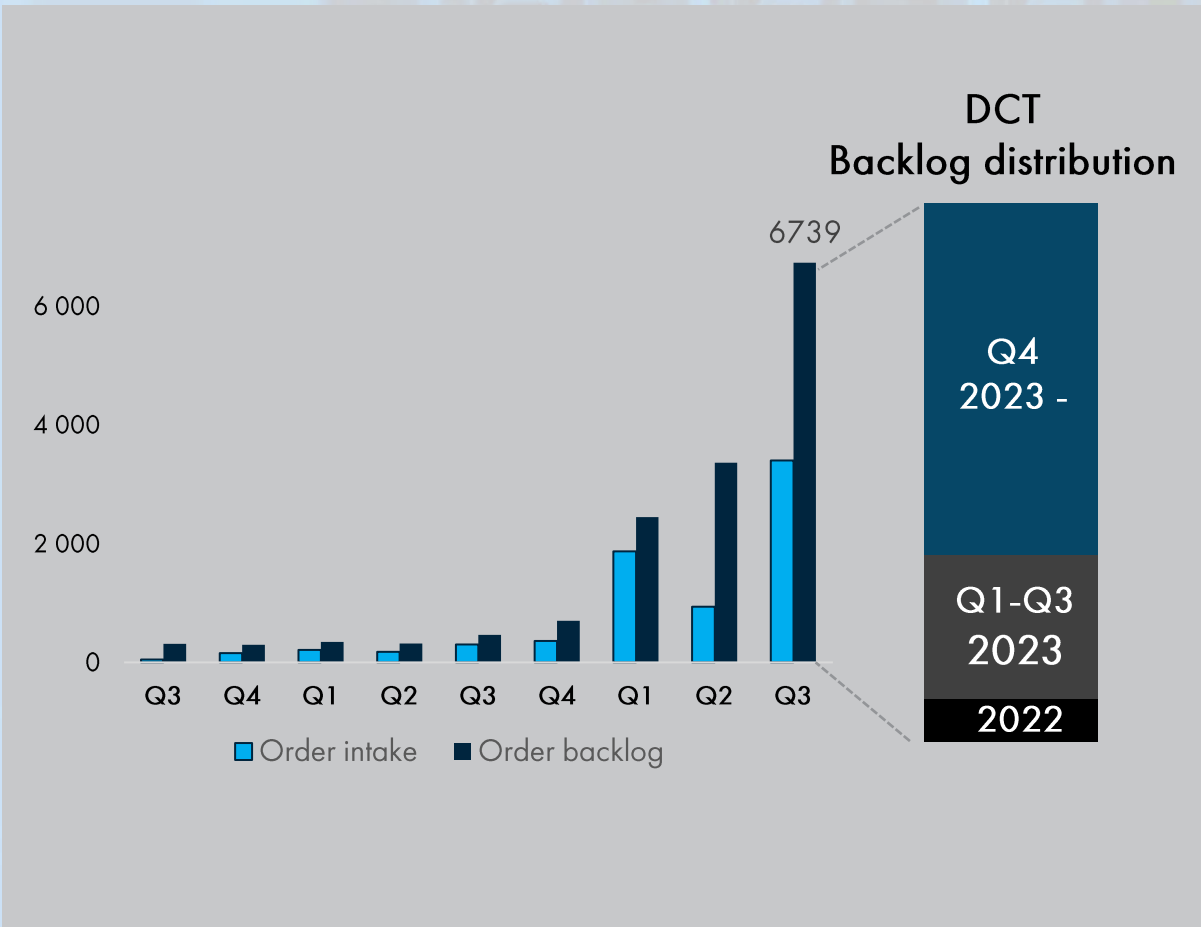


Regional distribution order intake



OI YTD Q3 2022

Fantastic order intake and well-timed capacity expansion



- 365,000 sq.ft. (34,000 m²)
- >50% manufacturing increase over current Virginia facility
- completed in Q3, completely moved in Q4 2022
- Access to larger labor pool



All figures as of Q3 2022, LTM

Capacity expansion

Focus Area	Maximize the Current Footprint	Expand the Current Footprint	Leverage Partnerships
Activities	 <ul style="list-style-type: none">Increase utilization of shift workMPS & optimized flow lanesIncrease vertical integrationOther Munters Facilities with open capacity	 <ul style="list-style-type: none">Continued ramp-up of SyCool in TexasExpanded capacity in IrelandKept Buena Vista for strategic projects	 <ul style="list-style-type: none">Developing new and existing collaborations

Customer considerations



TYPE OF DC



SIZE



POWER DENSITIES



DESIGN



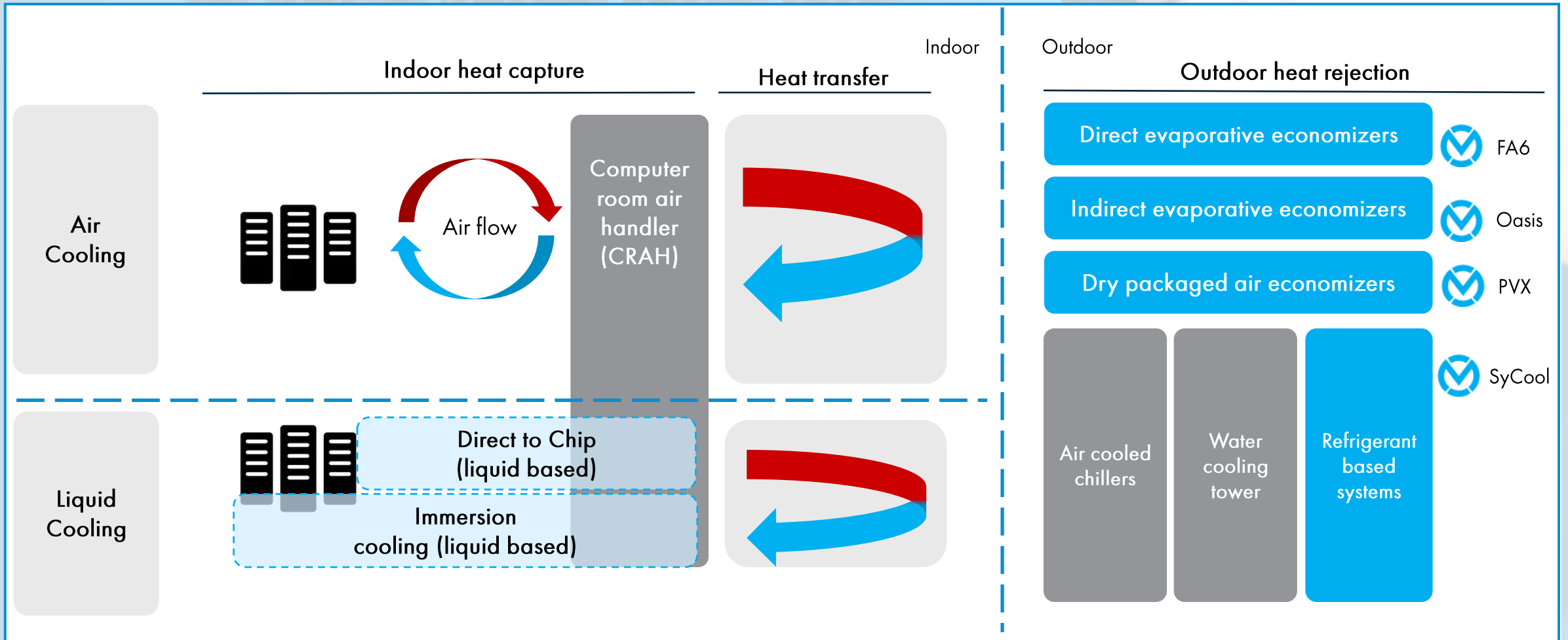
LOCATION



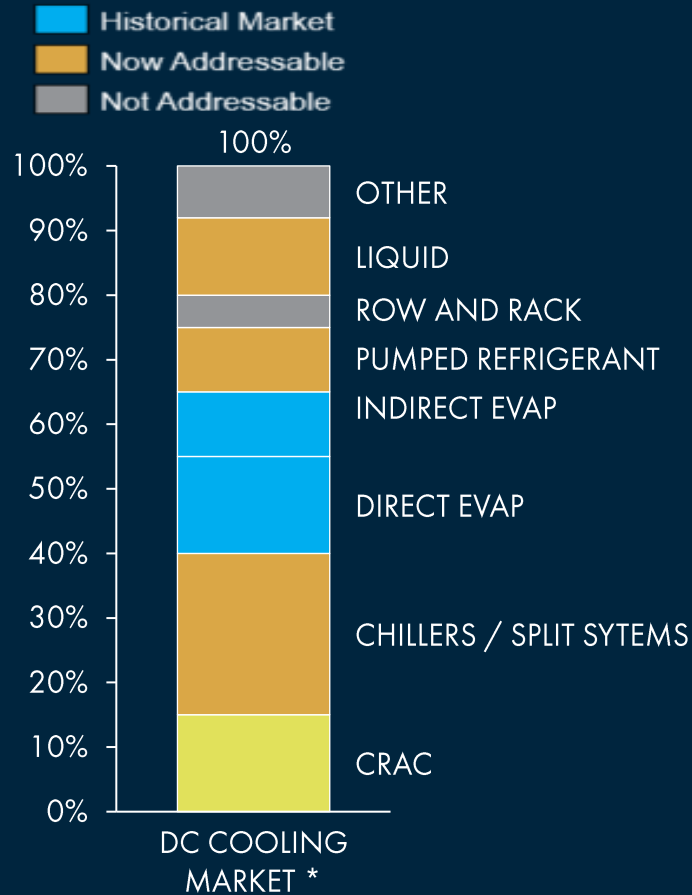
RULES / REGULATIONS

A variety of cooling technologies present in the market

– SyCool can reject heat for air and liquid cooling



Growth Being Driven by Market Share Gains and a broadened portfolio



Cooling Technology	Outlook	2017	2018	2019	2020	2021	2022
Other	Green Arrow						
Liquid Direct to Chip or Immersion	Green Arrow						SyCool
Row & Rack	Green Arrow						
Pumped Refrigerant	Green Arrow				SyCool		
Indirect Evap	Yellow Arrow						Oasis
Direct Evap	Yellow Arrow						Air Handlers & FA6
Chillers & Split Systems	Green Arrow				SyCool		MCW (Fan Wall)
CRACS	Yellow Arrow						Edpac Line

HIGH LEVEL SHIFTS AND TRENDS | CONSIDERED FOR STRATEGY

BEFORE / NOW

THE FUTURE WE STRATEGIZE FOR

CURRENT FOCUS



LOCATION /
STRUCTURE



NEAR FIBER NETWORKS



OUT-OF-TOWN DC's



COOL, STABLE CLIMATES



URBAN AREAS



SMALLER AND LARGER AND TALLER



MODULARIZED

- Coverage in Europe
- Split systems
- Solutions for Edge DC's



COOLING TECH



1/3 HAVE SOME RACKS
>20kW



DC's TO SEPARATE WORKLOADS



AIR COOLING
NOT ENOUGH

- SyCool towards liquid cooling
- Strategic Collaborations



SUSTAINABILITY



AIR BASED COOLING



LIQUID AND AI-ASSISTED COOLING



REUSING
EXCESS HEAT



EVAPORATIVE COOLING



SCARCITY CHANGES THE GAME



REGULATIONS
AND BANS

- Sycool to Liquid Cooling
- Develop the leading position in systems not using water

Future Data Center Ambition



Continually balance our “recipe” for success
- stress modularity and invest in application knowledge



Multiply our reach
- expand and optimize our footprint and broaden the offering in Europe to grow market share



Grow the addressable market
- develop the portfolio of solutions including service, organically and through partnerships



For customer success and a healthier planet
continue to guide the market towards sustainable cooling solutions



