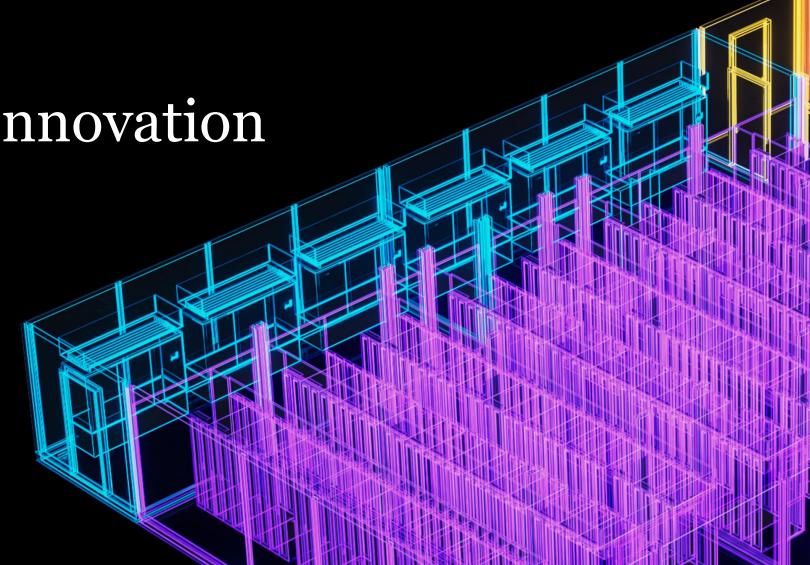
Zagreb, November 21-23 2023

Vertiv Driving Innovation

The Prefabricated Modular Revolution





Agenda – November 22, 2023



| 08:00 | Welcome Coffee and Registrations | |
|-------|---|---|
| 08:15 | Expo Area & Networking: Vertiv Showroom and Digital Experience Corner | Lucijana Kasumovic, marketing director for integrated modular solutions, Vertiv |
| 09:00 | Keynote: 2024 Data Center Trends | Karsten Winther, president for Europe, Middle East and Africa, Vertiv |
| 09:30 | Keynote: Latest Trends, Innovation and Market Growth in PFM | Vladimir Galabov, research director, cloud and data center, Omdia |
| 10:00 | Keynote: Vertiv's Roadmap in PFM Solutions | Viktor Petik, VP for integrated modular solutions in EMEA, Vertiv |
| 10:30 | Coffee Break & Interviews | |
| 11:00 | Customer Panel - Challenges and Benefits of Prefab Solutions | Moderator: Kresimir Krpan, solutions architecture and presales engineering director EMEA, Vertiv Panelists: Gareth McElroy, director technical facilities, MEEZA Mikael Svanfeldt, CTO, EcoDataCenter Ela Pticek, design architect for integrated modular solutions, Vertiv Tea Helman Jukić, cofounder, Arhitektonski studio Helman Jukić |
| 12:00 | Q&A and Closing Remarks | Karsten Winther, president for Europe, Middle East and Africa, Vertiv |
| 12:30 | Lunch & Interviews | |
| 14:00 | Bus transfer to Vertiv's Integrated Modular Solutions facility | |
| 14:45 | Facility Tour | |
| 16:45 | Coffee Break & Interviews | |
| 17:00 | Bus transfer to Zagreb | |
| 18:00 | Nikola Tesla Museum Exclusive Visit | |
| 19:00 | Celebratory Dinner | |



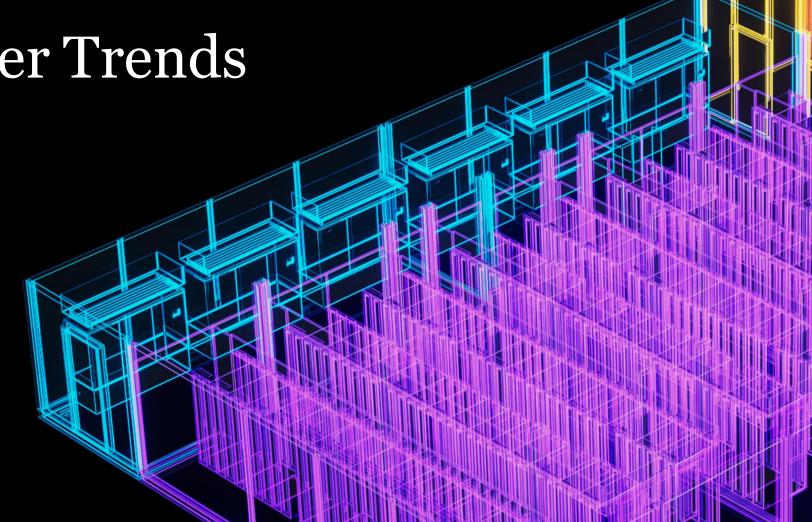
Karsten Winther

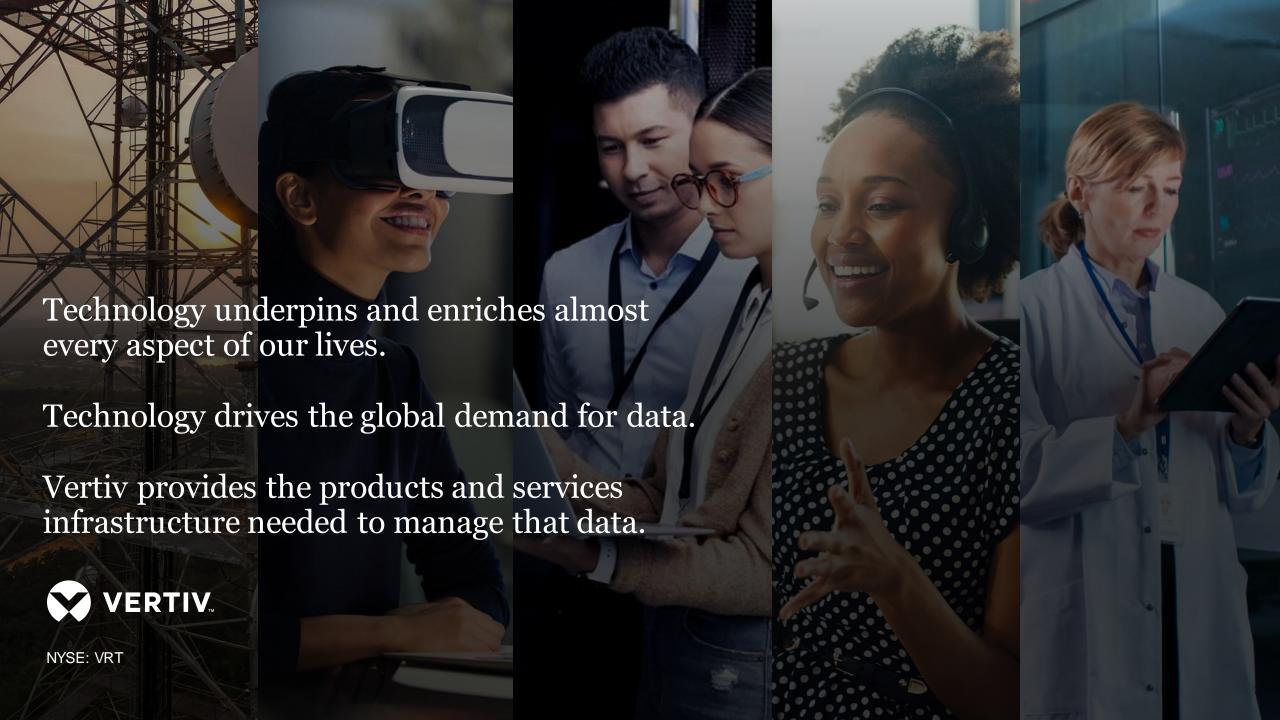
President

Europe, Middle East and Africa

22 November 2023







Primary EMEA Locations



Derry (Northern Ireland)

- Prefabricated Modular Solutions
- Electrical Switchgear LV & MV















Letterkenny (Ireland)

• Prefabricated Modular Solutions













Tognana (Italy)

• Thermal Management







Bologna (Italy)

AC Power







Burnfoot (Ireland)

- LV Electrical Switchgear
- **Busbar Production**
- **Sheet Metal Fabrication**
- EMS Software Development











Volyne (Czech Republic)

- Racks
- PDUs
- TF









Nove Mesto (Slovakia)

- · Thermal Management
- AC Power
- DC Power
- Sheet Metal Fabrication









Rugvica (Croatia)

- Prefabricated Modular Solutions
- Thermal Management











E+I FACILITY

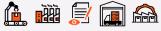
Ras Al Khaiman (UAE)

- · LV Electrical Switchgear
- **Busbar Production**
- Sheet Metal Fabrication
- Prefabricated Modular Solutions











Local Expertise and Service Coverage

EMEA presence

9 Manuf. and Assembly Locations

65+ Service Centers

650+ Service Field Engineers

100+ Technical Support/Response

5 Customer Experience Centers/Labs

And Globally

22 Manuf. and Assembly Locations

240+ Service Centers

3,500+ Service Field Engineers

220+ Technical Support/Response

20 Customer Experience Centers/Labs



Architects of Continuity™



Vertiv at-a-glance – Fiscal 2022



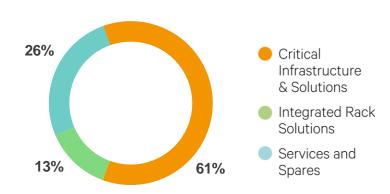






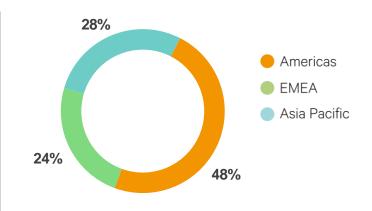
Customers include

Alibaba, Alstom, America Movil, AT&T, China Mobile, Equinix, Ericsson, Reliance, Siemens, Telefonica, Tencent, Verizon, Vodafone



Offering*

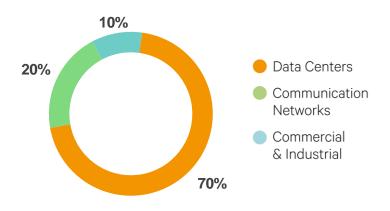
Broad range of power, thermal, and IT and edge infrastructure, solutions and services portfolio



Geography*

Global, well-established footprint, and supply-chain network

*by revenue



End market*

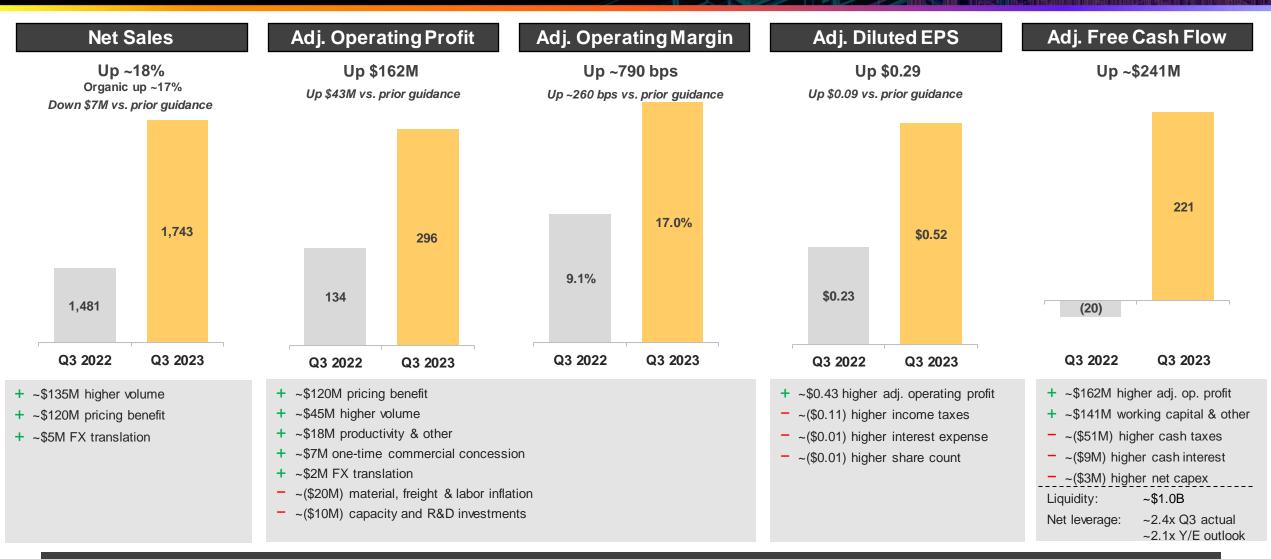
Customers who operate in some of the world's most critical industries

Market breakdown rounded to nearest 5%

Third Quarter 2023 Financial Results

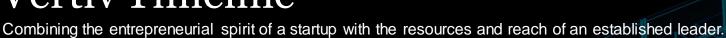


\$Millions; midpoint of guidance range unless otherwise specified

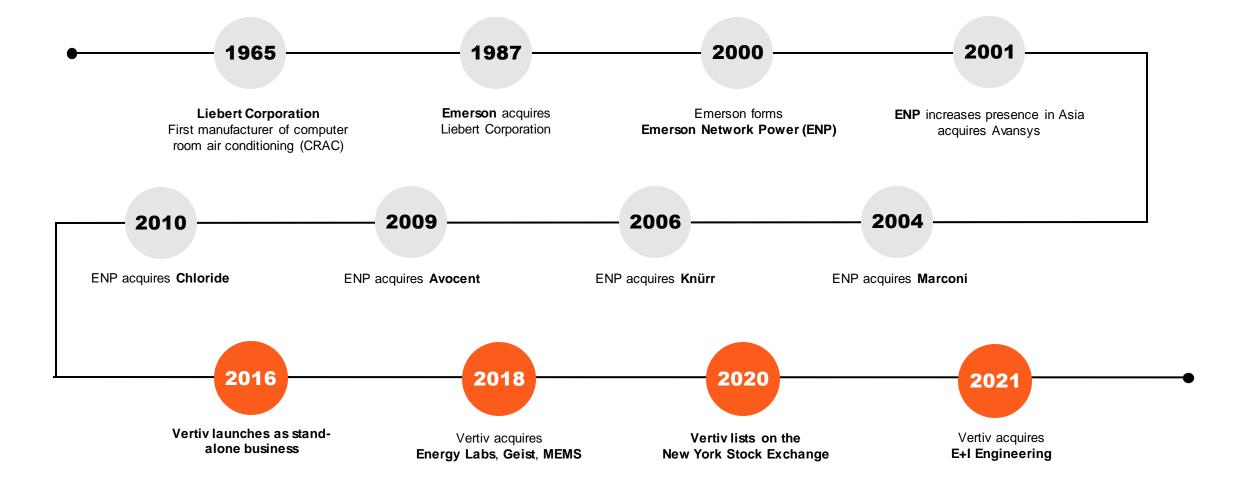


Strong third quarter financial results driven by organic sales growth and price-cost discipline

Vertiv Timeline







2023 Investments in EMEA and Global R&D



Investing in Talent and Growth

- >500 new EMEA based employees
- New job openings in key areas

Investing Globally in Innovation: Engineering, Research and Design

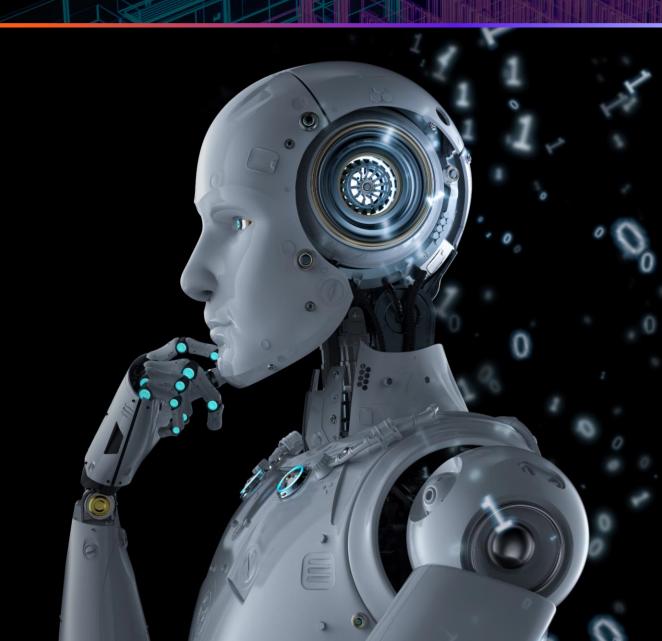






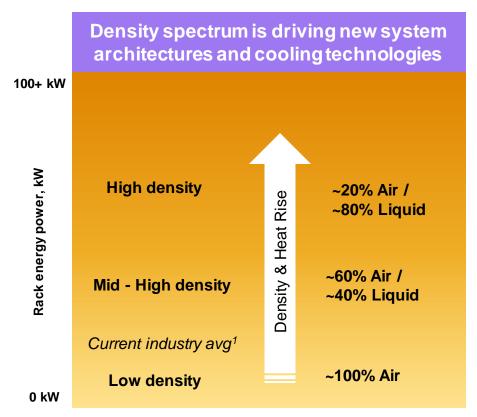
Artificial Intelligence

The next big thing is already here



AI is Creating Momentum for the Industry





Illustrative Density Spectrum & Cooling Technology²

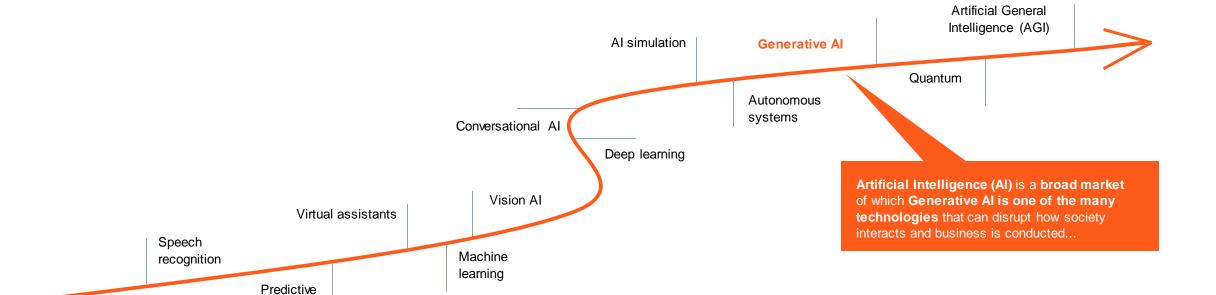
1) Uptime Institute, 2) Management estimates, 3) Data Center Physical Infrastructure industry analyst reporting

- Changes in technology and data center design are required to serve the new higher density / AI workloads
- Data center operators are exploring capacity expansion and migration plans via retrofitting sites and new builds
- An increase in total addressable market is anticipated with AI workloads being primarily net new to the existing market
- Data hall cooling solutions will continue to be a material portion of the total market even in the new AI data center designs
- Tailwinds for Vertiv in the growing data center market and higher-density applications like AI
 - Portfolio breadth with a #1 position³ in Thermal management
 - Product development investment and technology partnerships
 - Scale and ability to increase capacity

Vertiv well-positioned to serve the growing higher-density applications stimulated by Al workloads

Gen AI is Turbo-Charging the AI Market





Generative AI expected to increase Global GDP by **\$7 trillion** (7% over 10 year period), with a **1.5% growth in labor productivity**¹

analytics

Global revenues for Al-related software, hardware, and services is forecasted to surpass \$900B in 2026, representing a 18.6% five-year CAGR²

79% of leaders reported full-scale deployment for three or more types of Al applications – a 17% increase from 62% in 2021³

Intelligent automation

^{1.} Goldman Sachs, Generative AI could raise global GDP by 7%

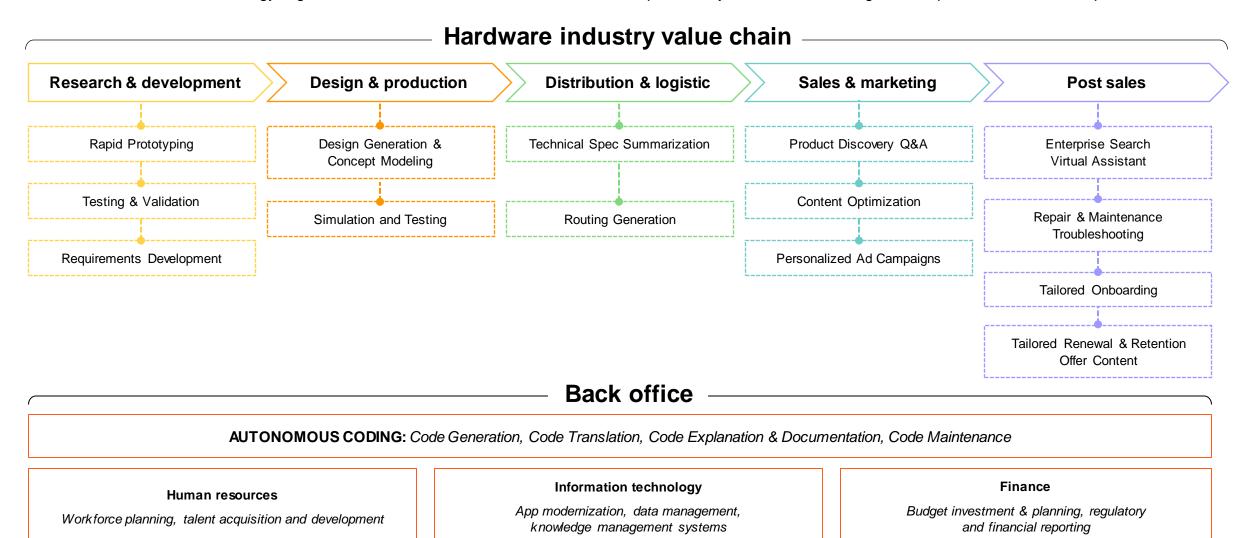
^{2.} IDC Worldwide Semiannual Artificial Intelligence Tracker

^{3.} State of AI in the Enterprise, 5th Edition, Deloitte

Industry Applications – High Tech / Manufacturing



Generative AI can enable technology organizations across various use cases to increase productivity, achieve cost savings and improve the customer experience



Property of Vertiv.

Impact of AI on Data Centers: Two Key Trends



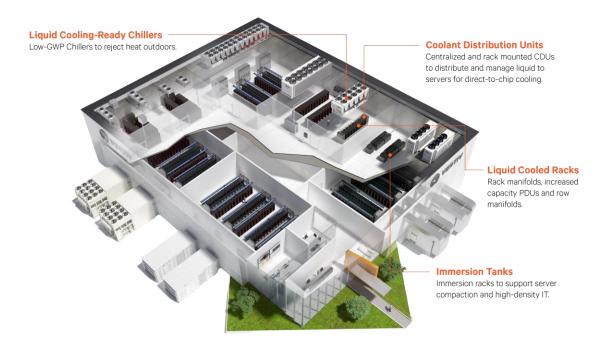
Dynamic Grid Support as a Strategic Asset

~100% increase in power flexibility systems - plants, grids, demandside response & energy storage - projected by 2030¹



Dual Cooling – Air & Liquid – on the Rise

Liquid Cooling global market opportunity of ~\$500M USD projected to grow at ~40% CAGR²



Vertiv – A Fast and Easy Way to Deploy AI



Vertiv offers complete solutions to power and cool high-performance computing and enable Al applications run at peak performance.

Tailored deployment methods, and extensive monitoring and service capabilities provide end-to-end speed and simplicity.

Power

Higher amperage is required to support AI. GPU clusters require far more power than previous hardware.

High-density cooling technology is required to reject excess heat generated by accelerated computing hardware.

Cool

Integrate

Prefabricated solution options provide end-to-end simplicity and accelerate deployment speed.

Remote management and monitoring tools offer visibility into complex environments.

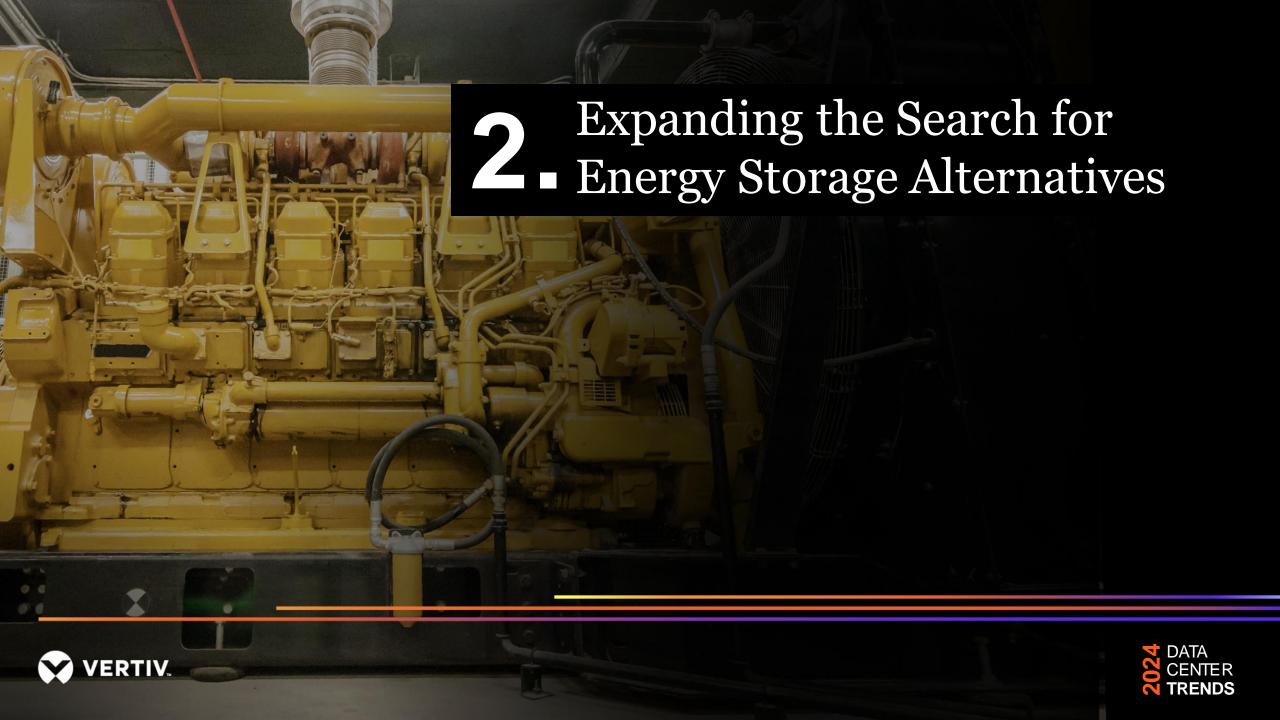
Connect

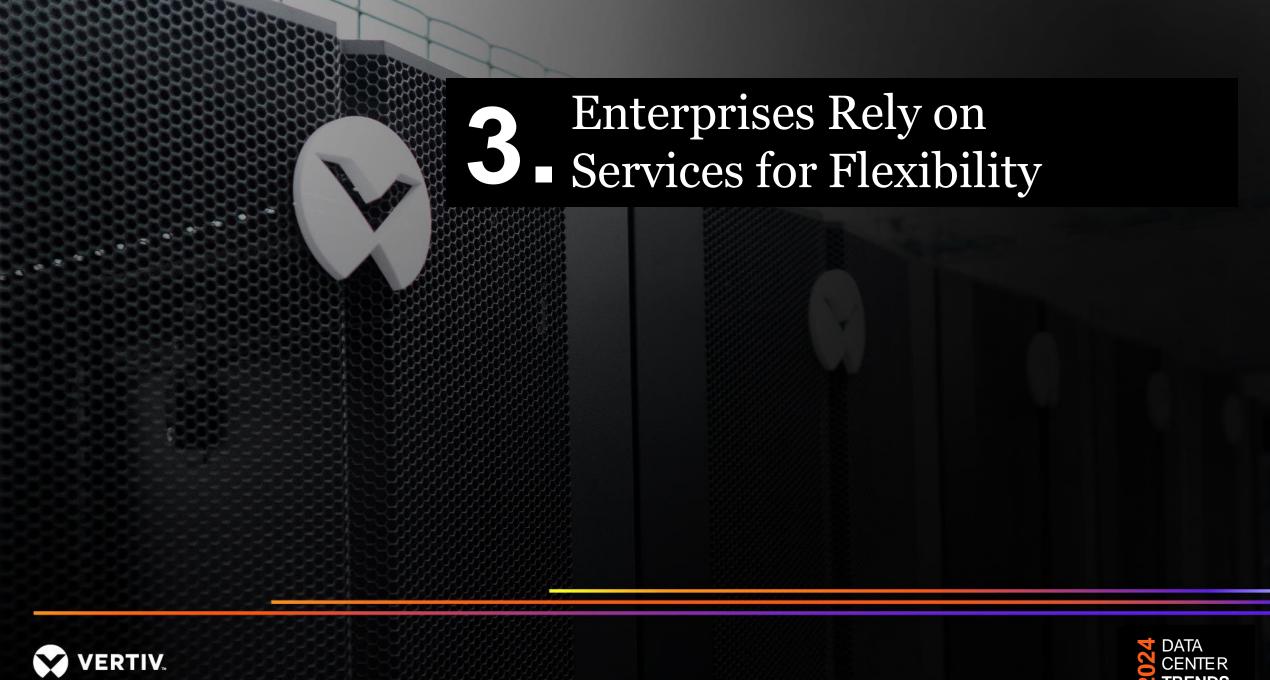
Manage

Digital-enabled turnkey services with extensive capabilities and global coverage.







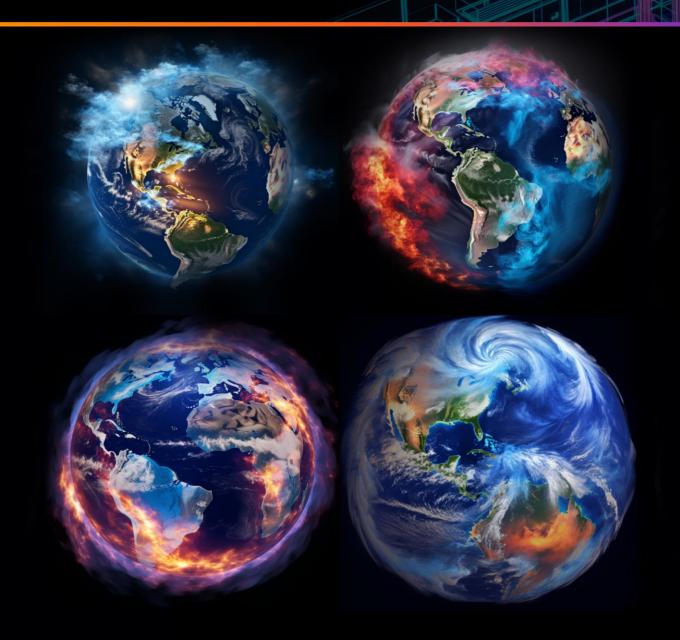


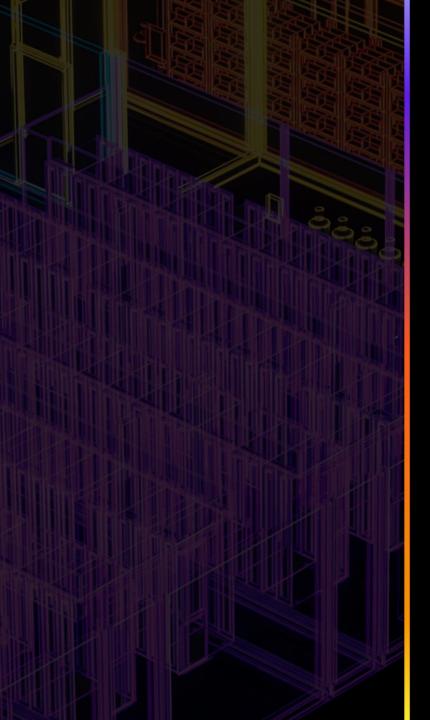




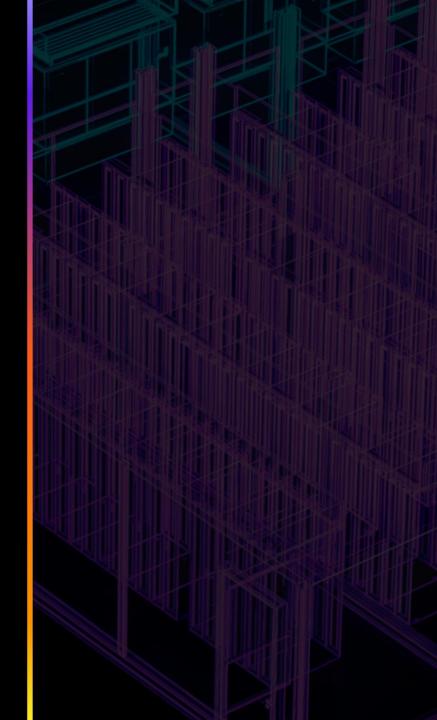












The modular Al factory



Vlad Galabov

Director, Cloud and Data Center Research

Cloud service providers & enterprises are rushing to take advantage of generative AI

We've entered an intense 5-year data center power capacity buildout period

Prefabricated data center technology is key to enabling this buildout

Top 10 data center operators have already adopted modular strategies

The market for prefabricated modular data centers has grown faster than we expected



Capturing a wave of opportunity spurred by generative AI is the top priority



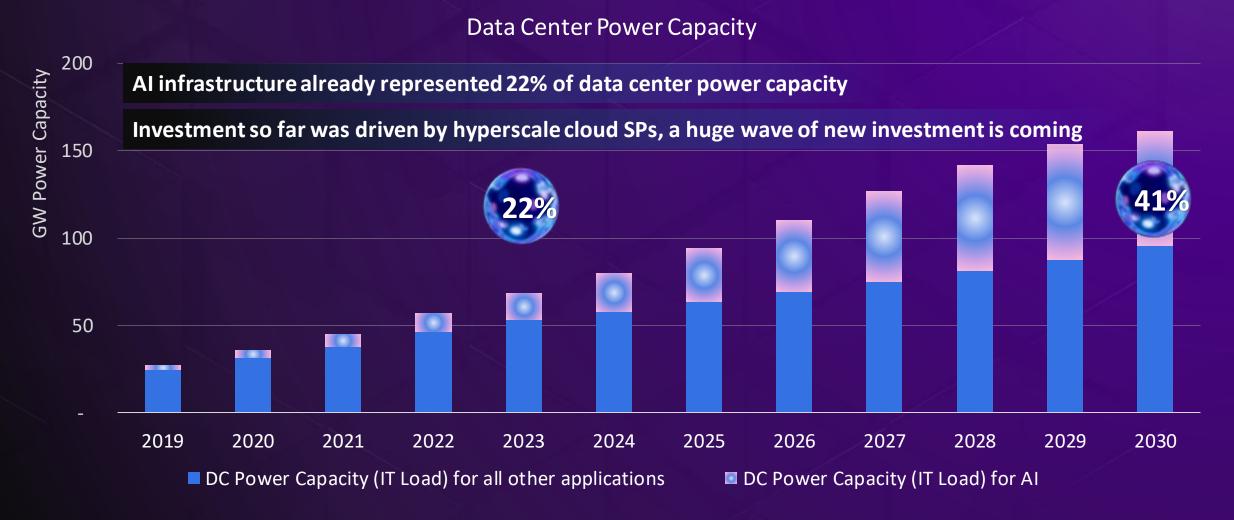
Average annual data center capex of a hyperscale cloud service provider



Spend on AI infrastructure in 2023



Unprecedented data center power capacity required for AI computing





Only a handful of companies got their hands NVIDIA's top spec GPUs in 2023

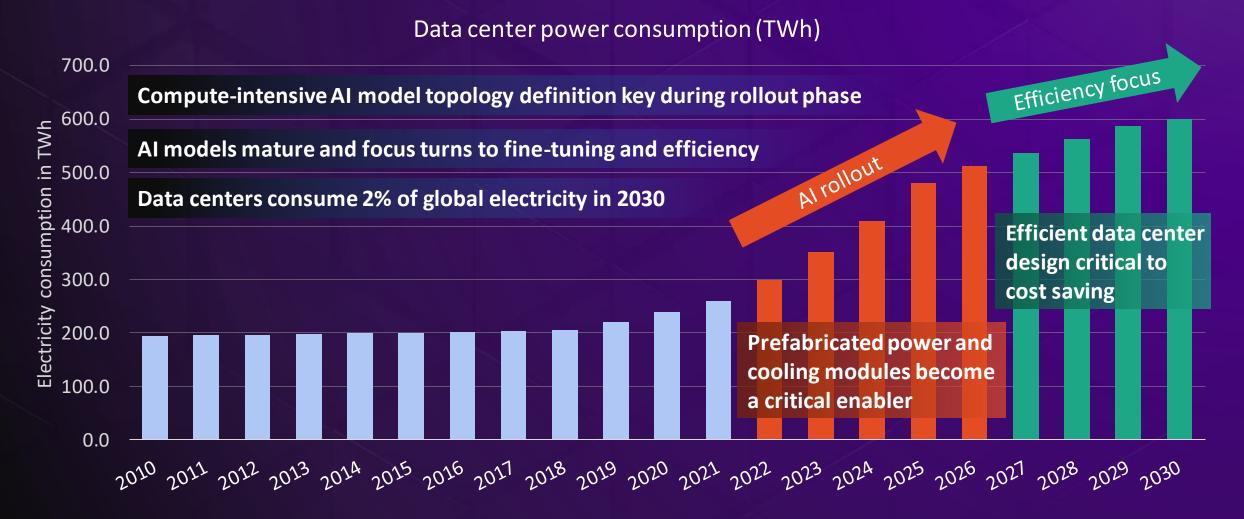


Broad market adoption begins in 2024





We've entered an intense 5-year data center power capacity buildout period







Within the data center, rack density is increasing

LLM training Gen 1 LLM training Gen 2



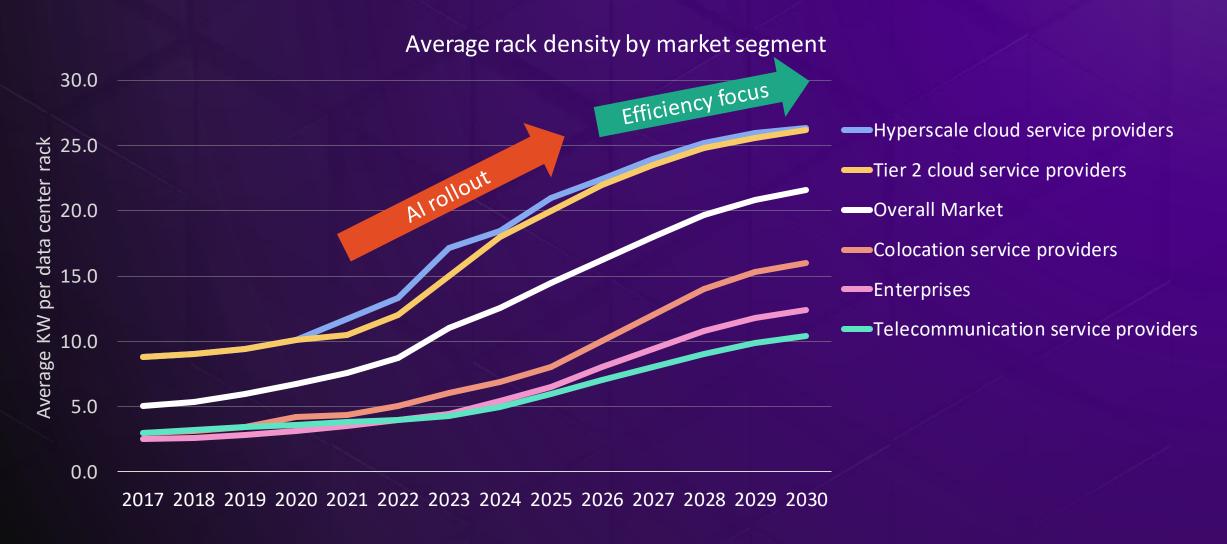


LLM training Gen 3





Data center rack density will go up across all market segments



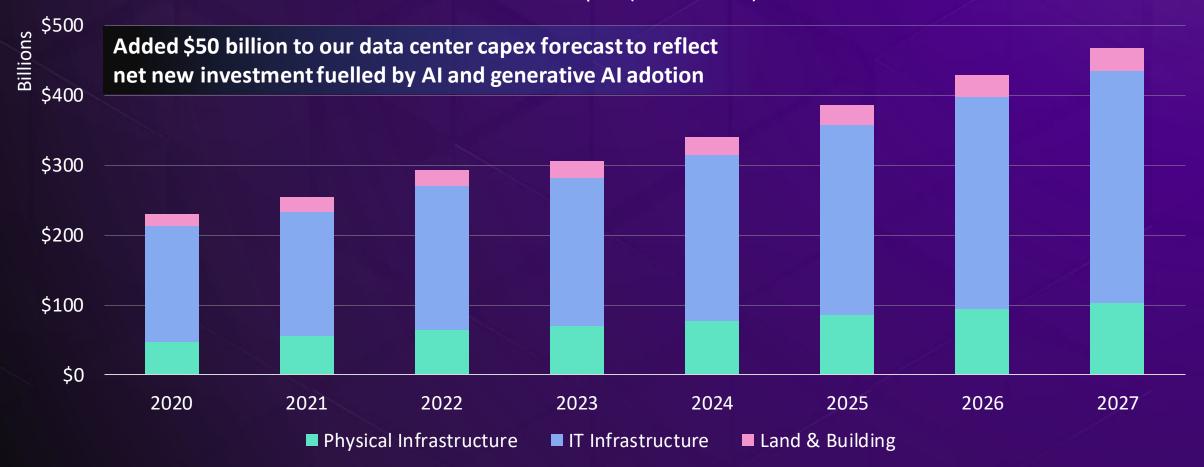


Prefabricated modular technology enables a dense and efficient data center design



Data center capex nearly half a trillion dollars by 2027

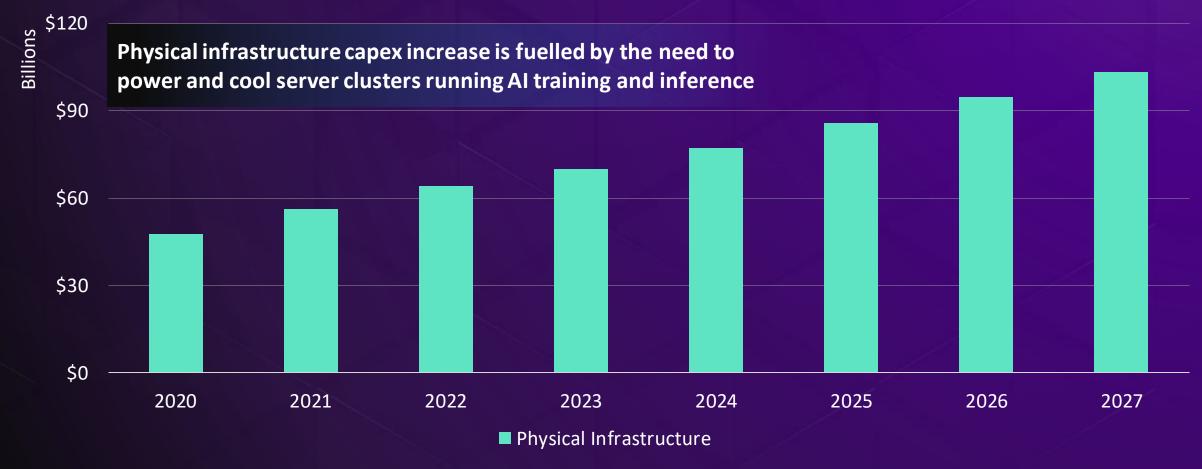
Data center capex (USD billion)





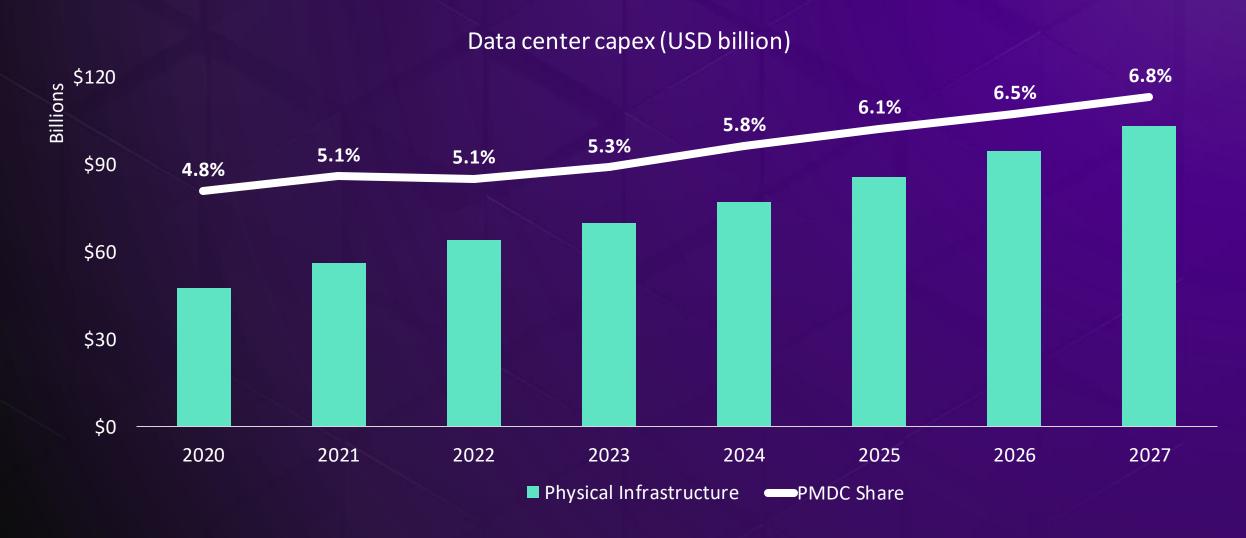
Data center capex nearly half a trillion dollars by 2027

Data center capex (USD billion)





Building using prefabricated modules is increasingly popular





Market for prefabricated data center modules will nearly double by 2027



PMDC Revenue in 2023

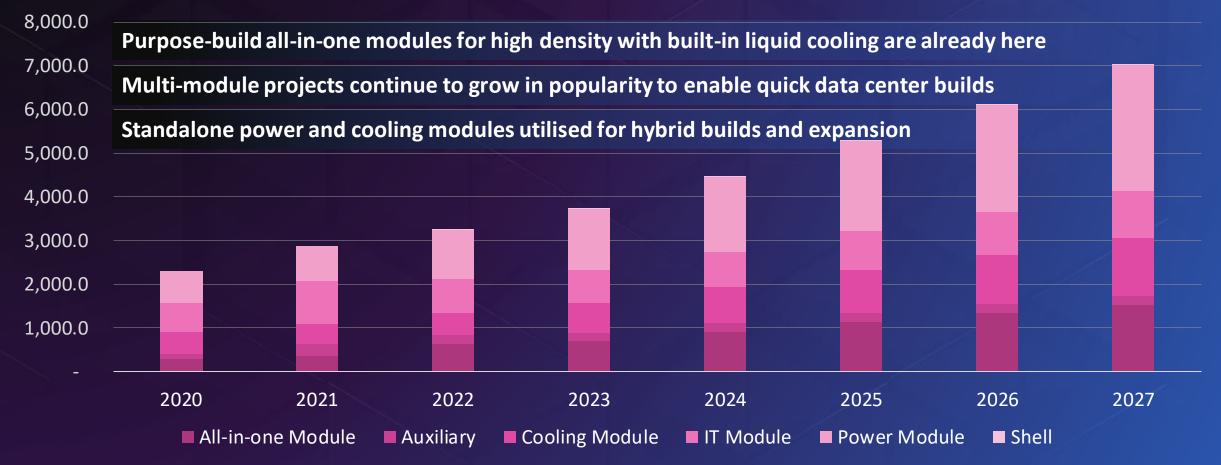
Omdia raises its forecast for the 2022 and 2023 PMDC market





Power modules remain most popular prefabricated modules

Prefabricated modular data center revenue (USD Million)





Prefabricated modular data center league table

Johnson W Schneider Electric ZTE VERTIV. **HUAWEI** Top 5 Controls **Top 10 BladeRoom** KSTAR **ABB Anord Mardix** Active Power (Piller) **Atos Bmarko Structures** Baselayer **Cannon Technologies** Altron Coolnet Datapod Compass DC DXN **Top 40** IIJ Coromatic Eaton Stulz iTeaQ Dell Technologies Eltek (Delta) Secure IT Environments **Fibrebond** PCX Corp HPE Workplace Technology



Why build AI capacity with prefabricated modular technology?



Time saved in deployments of modular data centers ranges from 40-80% compared to traditional building approaches



Allows capacity expansion as needed without affecting current operations



Factory-controlled environment mitigates risk (quality, delays, SCM, etc.)



Why build AI capacity with prefabricated modular technology?

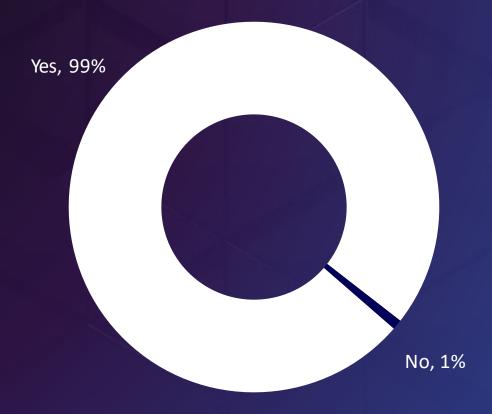
What do you believe are the main reasons to deploy a modular data center?



Last year we surveyed 228 companies across 8 countries that operate their own data centers.



Is modular data center a part of your future data center strategy?



Last year we surveyed 228 companies across 8 countries that operate their own data centers.





"Enabling business agility, accelerating speed to market or meeting a specific business requirement"

Stephen Donohoe, VP, Global Data Center Design



Equinix BX1 Bordeaux, France

Establishing data centers in a new global region

Attaching power modules to existing facilities in space-constrained urban areas

Locating data centers near subsea cable landing stations to grow business

Installing facilities at edge locations for proximity to end users





Launched AWS Modular Data Center for US DoD



Quick to deploy and move

Pre-configured and simple to use

Cheaper than building from the ground up

"Simple to use, secure, cost-effective, and can respond to largescale compute and storage needs wherever the mission demands."

Liz Martin, director of the Defense business at AWS





Azure Cloud



Boydton, Virginia







Quincy, Washington





Azure Modular Data Center



Quick to deploy

Pre-configured and simple to use, consistent with cloud

Low-latency and satellite connectivity

Can run fully disconnected



Cloud service providers & enterprises are rushing to take advantage of generative AI

We've entered an intense 5-year data center power capacity buildout period

Prefabricated data center technology is key to enabling this buildout

Top 10 data center operators have already adopted modular strategies

The market for prefabricated modular data centers has grown faster than we expected





Vlad Galabov

Director, Cloud and Data Center Research



Vertiv's Roadmap in PFM Solutions

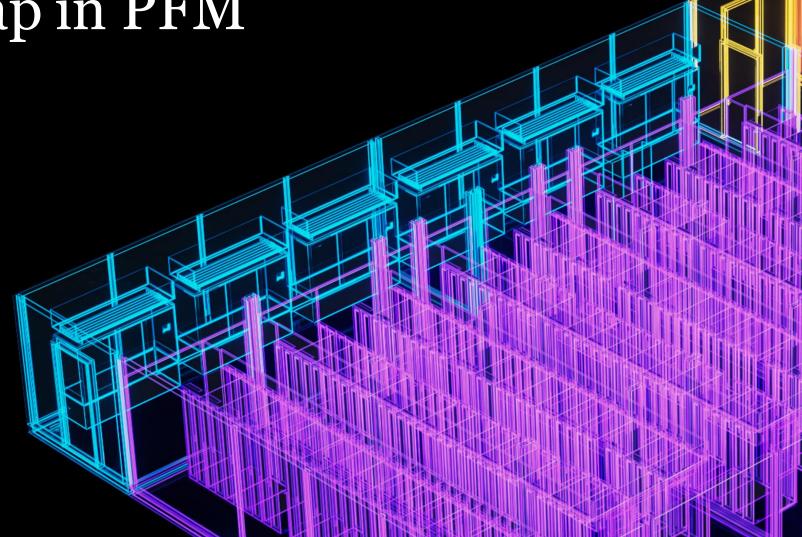
Viktor Petik

Vice President Integrated Modular Solutions

Europe, Middle East and Africa

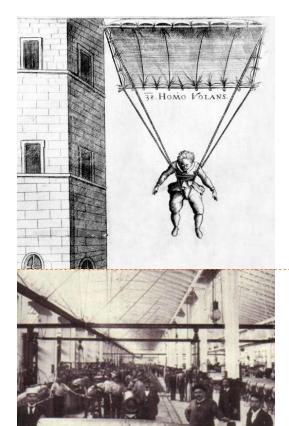
22 November 2023





Innovations from Croatia





Parachute

Faust Vrančić, 1617

Torpedo Ivan Blaž, 1861



Ballpoint Pen

Slavoljub Penkala, 1906

The Necktie (Cravat)

17th Century



Tomislav Uzelac, 1997



Vertiv offers a wide range of customized and standard prefab solutions designed to provide low-risk and high-value for customers all over the world.



200+ Solutions specialists



3500+
Service Field engineers



220+

Technical support personnel







Prefab Solutions Value Proposition



- Innovative solutions with cost optimisation
- Rapid design and deployment
- High quality factory integration
- Simplified and scalable assembly
- Risk reduction with cost certainty

Vertiv Integrated Modular Solutions Portfolio



Standard Solution

Vertiv™ SmartMod™ and SmartMod™ Max



- All-in-one data centers
- Vertiv power, cooling and racks
- Up to 26 racks / 210 kW

Vertiv™ SmartMod ™ Combo



- Vertiv SmartMod Max + Power Module scalable solutions
- Up to 104 racks / 600 kW

Prefabricated Modular



- Scalable design up to 2 MW IT blocks
- 200 300 racks
- 6 14 months deployment

Vertiv™ MegaMod™



- Scalable standardized multi-module data center
- Up to 128 racks / 0,5 MW or 256 racks / 1 MW block

Hybrid Approach



- Prefabricated critical components –
 Power Modules / Cooling Modules
 / IT Modules
- Traditional constructed building
- Scalable design up to 40 MW IT
- 450 1500 racks
- 12 18 months deployment

Vertiv Power Modules & SKIDS





- LV Power Modules
- Vertiv distribution panels, UPS, batteries, cooling
- Different ratings and reference designs 400 2000 kW
- N, N+1, 2N redundancy levels

Prefabricated Building Blocks



Power

Vertiv[™] Power Module 400-1200kW

Custom Power Module

Custom Power Skid

IT Hall

Vertiv™ SmartMod™

Vertiv™ MegaMod™

Unit IT

Cooling

Vertiv™ MegaMod™ Cooling Module

Vertiv™ MegaMod™ Air Handling Unit

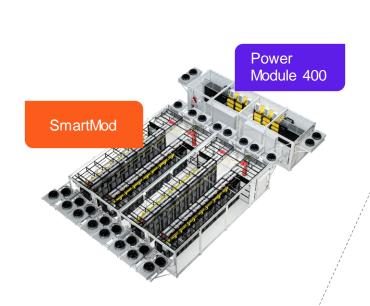
Custom Air Handling Unit

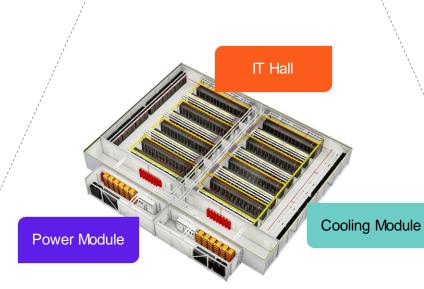
Auxilary

Hydro Module

Water Treatment System

Chilled Water Skid







WT System





MegaMod AHU

Key Locations for Integrated Modular Solutions





| Capability | Unit IT | Power Skids | Modular enclosures |
|------------------------|----------|-------------|-----------------------|
| Electrical Integration | ~ | ~ | ~ |
| Factory Witness Test | ~ | ~ | ~ |
| L3 Commissioning | ~ | ~ | ~ |
| ISO 900x Processes | ~ | ~ | ~ |
| Regional Presence | / | ~ | ~ |

- On Demand Integrated Modular Available Mixed Modular Capacity of ~100MW
- Ability to add additional 100MW of Mixed Modular Capacity in 12 months

Vertiv Services Strengths



Truly global geographical coverage & capacity

Service direct centres Engineers workforce



Consistent service delivery and offering

Offering diversity
Breadth of technologies

Knowledge, reputation & experience

Technology & R&D access Field knowledge, digital delivery tools

Single service partner & system level expert

Reliability
We are the trusted partner

Service – A Pillar of Vertiv solutions



Product design

Serviceability
Service enablement

Construction assembly

Solution design CFD modelling assembly services

Project services

Project management Deployment Start-up commissioning

Equipment / system lifecycle

Warranty & maintenance programs
Digital services (Life) & remote monitoring
Repairs & parts
Performance optimization

Decommissioning

Recycling

Project Management

Product and services holistic design

- Optimizing product serviceability
- Enabling digital services

Service as part of the solution from the design phase

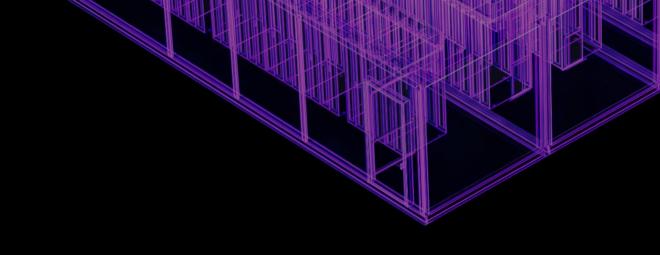
Running scenarios and recording baseline data with Computational Fluid Modelling (CFD)

Project management and solution integration through configuration start-up and commissioning testing

Lifecycle services enhancing uptime and optimized operations

- Onsite maintenance complemented by digital services with real time monitoring and service action
- Tailored Service Level Agreements
- Retrofit, Upgrades and optimization programs

SERVICES
AVAILABLE
ACROSS
THE ENTIRE
VERTIV
SOLUTIONS
PORTFOLIO

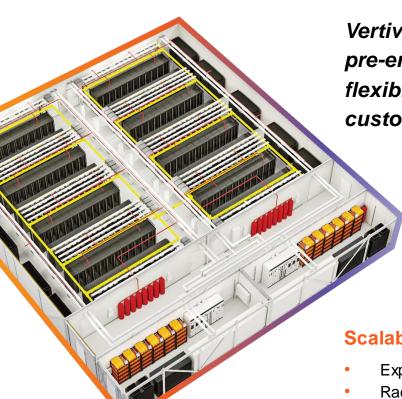


VertivTM MegaMod TM



VertivTM MegaModTM





Vertiv™ MegaMod™ is a pre-engineered solution with flexibility to adapt to specific customer requirements

Scalable prefabricated data center

- Expandable in 0.5 or 1 MW blocks
- Racks: 64 128 pcs per 500 kW block
- Average rack density: 4 8 kW / rack
- Separated IT/cooling area from power rooms

Vertiv[™] MegaMod[™] embodies all the top market drivers for modular data centres today:

- Time to market Shorter when compared to traditional data centers and custom solutions⁽¹⁾
- Environmental sustainability Vertiv MegaMod supports goals that the data center owners are facing⁽²⁾
- Scalability A flexible pay-as-you-grow data center model unlike traditional stick-built construction
- Factory-built Vertiv MegaMod is built in a factory controlled environment, mitigating risk through increased reliability and resiliency
- Expert team Vertiv experts cover all areas of designing, planning, testing with a wealth of experience, under one umbrella

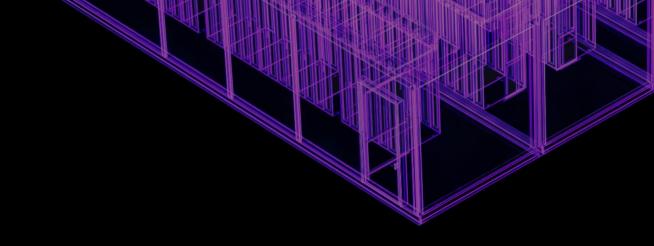
⁽¹⁾ https://www.azobuild.com/article.aspx?ArticleID=8472

⁽²⁾ Statement from one of used steel suppliers: https://corporate.arcelormittal.com/sustainability

Vertiv[™] MegaMod[™]

Prefabricated Scalable Data Center





VertivTM Power Train

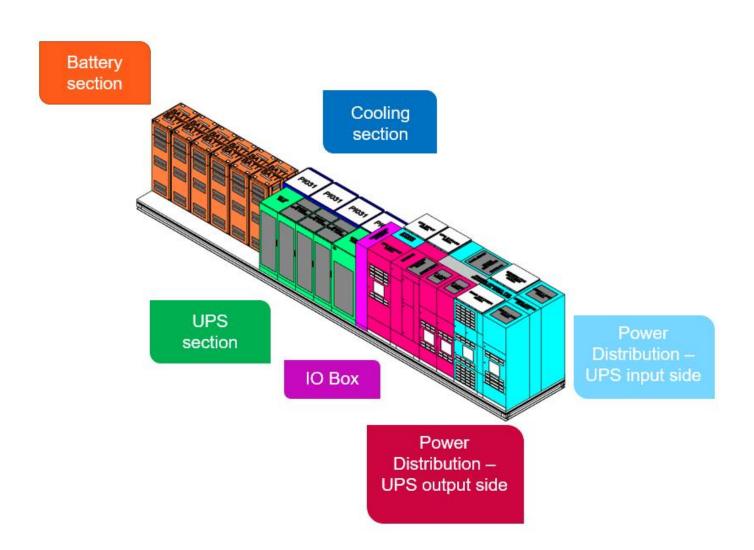


VertivTM Power Train



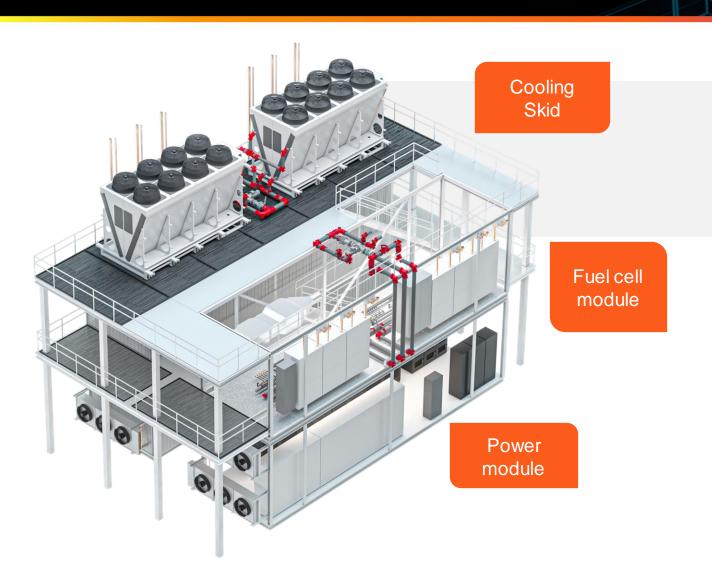
Key Features & Values

- Single-sourced complex power infrastructure solution
- Faster on-site deployment & commissioning
- Reduced footprint
- High system reliability
- Reduced transportation & shipping costs
- On-site installation material reduction
- Vertiv power train monitoring system
- Innovative design with close-coupled power module subsystems



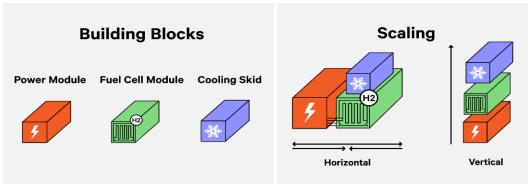
VertivTM Power Module H2





- Scalable power supply solution
- Available in a range of 150kW 3000kW
- Separated power distribution and fuel cell space

Vertiv Power Module H2 building blocks:



VertivTM Power Module H2



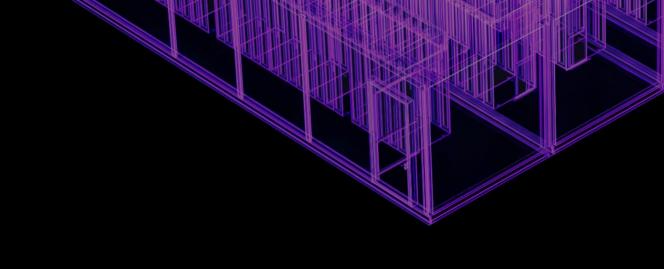


By merging UPS and hydrogen fuel cell technology into a single solution, the Vertiv Power Module H2 extends the application of reliable UPS backed-up power:

- As an alternative to diesel generators
- As prime power supply with zero emissions and low CO2 footprint

Vertiv Power Module H2 also retaines all the well-proven benefits of a prefabricated design:

- Single-supplied complex power infrastructure solution
- Rapidly deployable and factory-tested
- Simple, seamless on-site integration



High-Perfomance Computing Solutions



VertivTM SmartModTM HDX



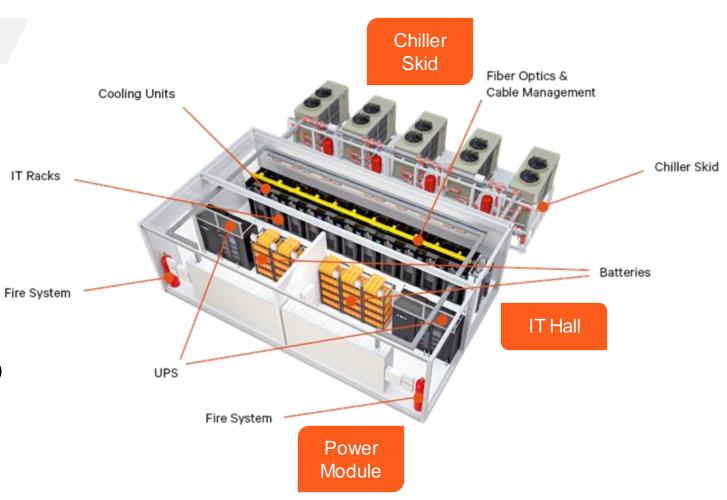
Equipment:

Power Module:

- 2N power module
- Main Switchboards with ATS functionality
- Vertiv[™] Liebert[™] UPS monolithic or modular
- Batteries (VRLA or LIB option)

IT Hall:

- Vertiv[™] IT Racks & PDUs
- Liebert® DCL Modular Rack Cooling, closed-loop cooling architecture (up to 35 kW/rack) or
- Liebert® DCD rear-door heat exchangers (active, up to 50 kW/rack)
- Overhead infrastructure



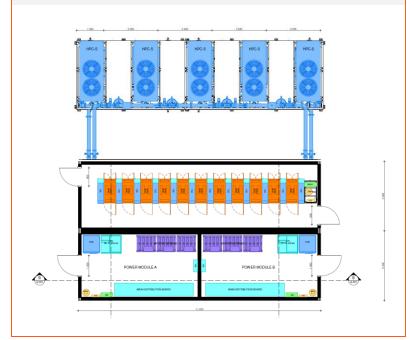
High Density Solutions / Up to 1MW or Higher



Vertiv[™] SmartMod[™] HDX DCL (385 kW)

Based on **Liebert® DCL** modular rack cooling solution featuring:

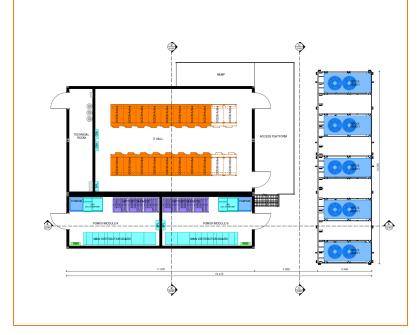
- IT Module with racks up to 11 x 35kW/rack
- Power Module
- Cooling Skid



Vertiv™ SmartMod™ HDX DCD (600 kW)

Based on **Liebert® DCD** rear-door heat exchanger solution featuring:

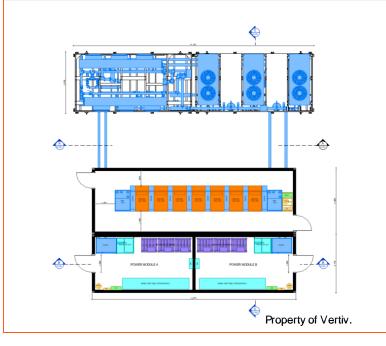
- **IT Module** with racks up to 20 x 50kW/rack
- Power Module
- Cooling Skid



D2C Solution (560+ kW)

Based on Direct-to-Chip liquid cooling solution featuring:

- IT module with liquid cooled racks and cooling infrastructure (Liebert® XDU, DCD/DCL/CRV + piping) to support 80+ kW/rack
- Power Module
- Cooling Skid



When Innovation Meets Sustainability



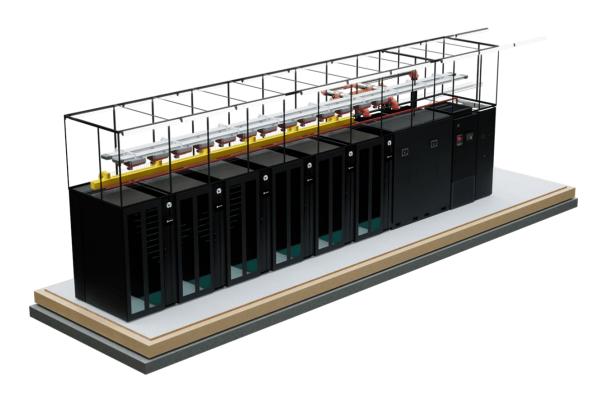
New! Vertiv Timber Mod TM





Key Benefits







Objective

- Meet existing and upcoming building regulations (Paris Agreement, European Climate Law, Fit for 55)
- Support customer's sustainability objectives



Solution

- Mass timber and solid wood reduce CO₂ footprint
- Adoption of materials with favorable environmental product declaration (EPD)
- Patent-pending application



Result



- Significant carbon footprint reduction compared to standard construction industry
- Faster and more efficient modular construction
- Excellent mechanical properties
- Elegant design easily adaptable in the urban fabric

Value and Impact





WALL SECTION

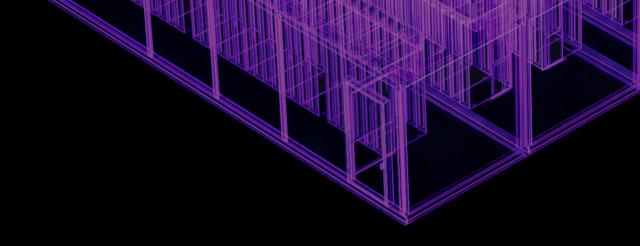


STRUCTURE

beam & column system; mass timber or solid wood



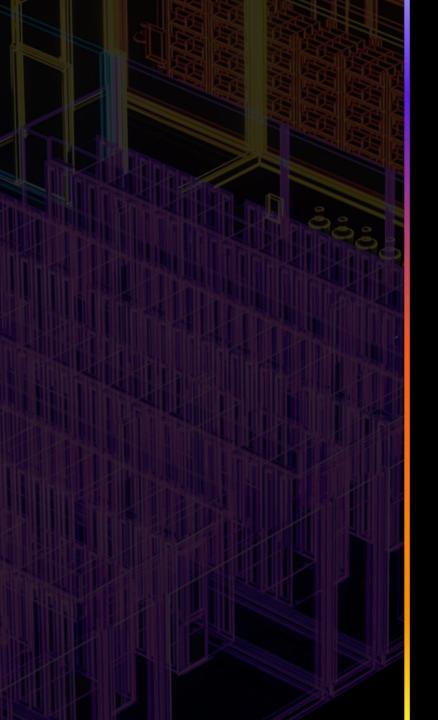




Innovation Sparks a New Era...

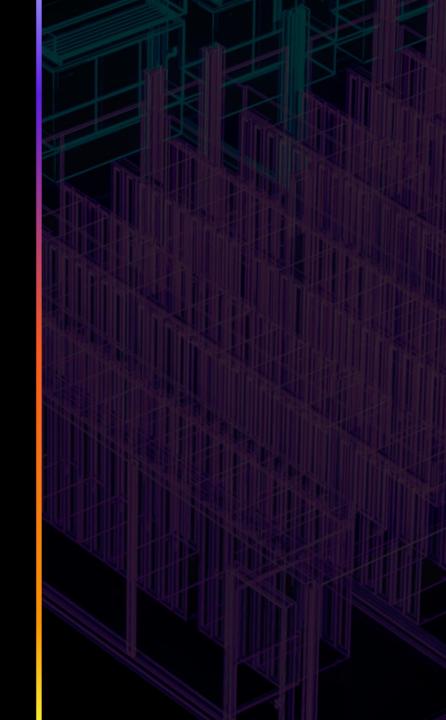








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Agenda – November 22, 2023



| 08:00 | Welcome Coffee and Registrations | | | | |
|-------|---|---|--|--|--|
| 08:15 | Expo Area & Networking: Vertiv Showroom and Digital Experience Corner | Lucijana Kasumovic, marketing director for integrated modular solutions, Vertiv | | | |
| 09:00 | Keynote: 2024 Data Center Trends | Karsten Winther, president for Europe, Middle East and Africa, Vertiv | | | |
| 09:30 | Keynote: Latest Trends, Innovation and Market Growth in PFM | Vladimir Galabov, research director, cloud and data center, Omdia | | | |
| 10:00 | Keynote: Vertiv's Roadmap in PFM Solutions | Viktor Petik, VP for integrated modular solutions in EMEA, Vertiv | | | |
| 10:30 | Coffee Break & Interviews | | | | |
| 11:00 | Customer Panel - Challenges and Benefits of Prefab Solutions | Moderator: Kresimir Krpan, solutions architecture and presales engineering director EMEA, Vertiv Panelists: Gareth McElroy, director technical facilities, MEEZA Mikael Svanfeldt, CTO, EcoDataCenter Ela Pticek, design architect for integrated modular solutions, Vertiv Tea Helman Jukić, cofounder, Arhitektonski studio Helman Jukić | | | |
| 12:00 | Q&A and Closing Remarks | Karsten Winther, president for Europe, Middle East and Africa, Vertiv | | | |
| 12:30 | Lunch & Interviews | | | | |
| 14:00 | Bus transfer to Vertiv's Integrated Modular Solutions facility | | | | |
| 14:45 | Facility Tour | | | | |
| 16:45 | Coffee Break & Interviews | | | | |
| 17:00 | Bus transfer to Zagreb | | | | |
| 18:00 | Nikola Tesla Museum Exclusive Visit | | | | |
| 19:00 | Celebratory Dinner | | | | |
| | | | | | |

Customer Panel

Moderator



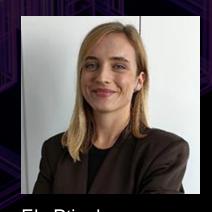
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Panelist



Gareth McElroy
Director of Technical
Facilities, MEEZA

Panelist



Ela Pticek
Architect in Design
Engineering for Integrated
Modular Solutions, Vertiv

Panelist



Tea Helman Jukić Owner and Principal Architect, Arhitektonski studio Helman & Jukić

Panelist



Mikael Svanfeldt CTO, EcoDataCenter













Customer Panel

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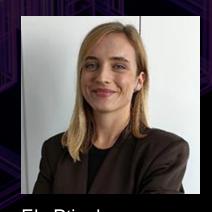
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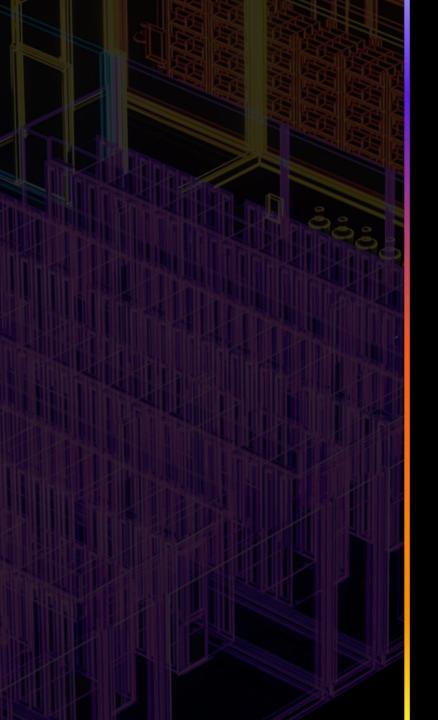


Panel Session Q&A



Q&A& Closing Remarks







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