Building the Green Standard: atNorth's Heat-Reuse Mega Campus

Jóhann Thor Jónsson

atnorth

reflection on my last speaking event in Denmark

I commented in a panel that ….

“ It was high time for all the data center operators to put increased focus on the opportunities in the massive amount of heat generated by our operations and start to find ways to harvest the waste heat in a sustainable and effective manner.”

Now is the time to follow up on these comments

- atNorth’s **DEN02** will be of Europe’s largest data centers designed from the offset to re-use waste heat
- Substantial effect on local community through employment generation
- Massive impact on Co2 reduction in the logistic chain for imported vegetables
- New baseline for large scale data center deployments

Building a Nordic decarbonizing IT platform

who are we?

The leading pan Nordic operator of data center infrastructure

- 3 operational sites in Iceland
- 2 operational sites in Finland, 2 under construction
- 2 sites in Sweden, 1 under development
- 2 new sites in Denmark under development
- Expansion options in all Nordic regions
- Operational since 2009
- Owned by Partners Group since 2022

More compute for a better world

Colocation Provider of the Year

Digital Infrastructure Project of the Year

Top 60 Sustainability start-ups

Best Location - Iceland

Best use of HPC in Financial Services

Hewlett Packard Enterprise AWARDS 2020 Service Provider of the Year

Hewlett Packard Enterprise AWARDS 2019 Service Provider of the Year


ICE01


ICE02


ICE03


FIN01


FIN02


FIN03


FIN04


SWE01


SWE02

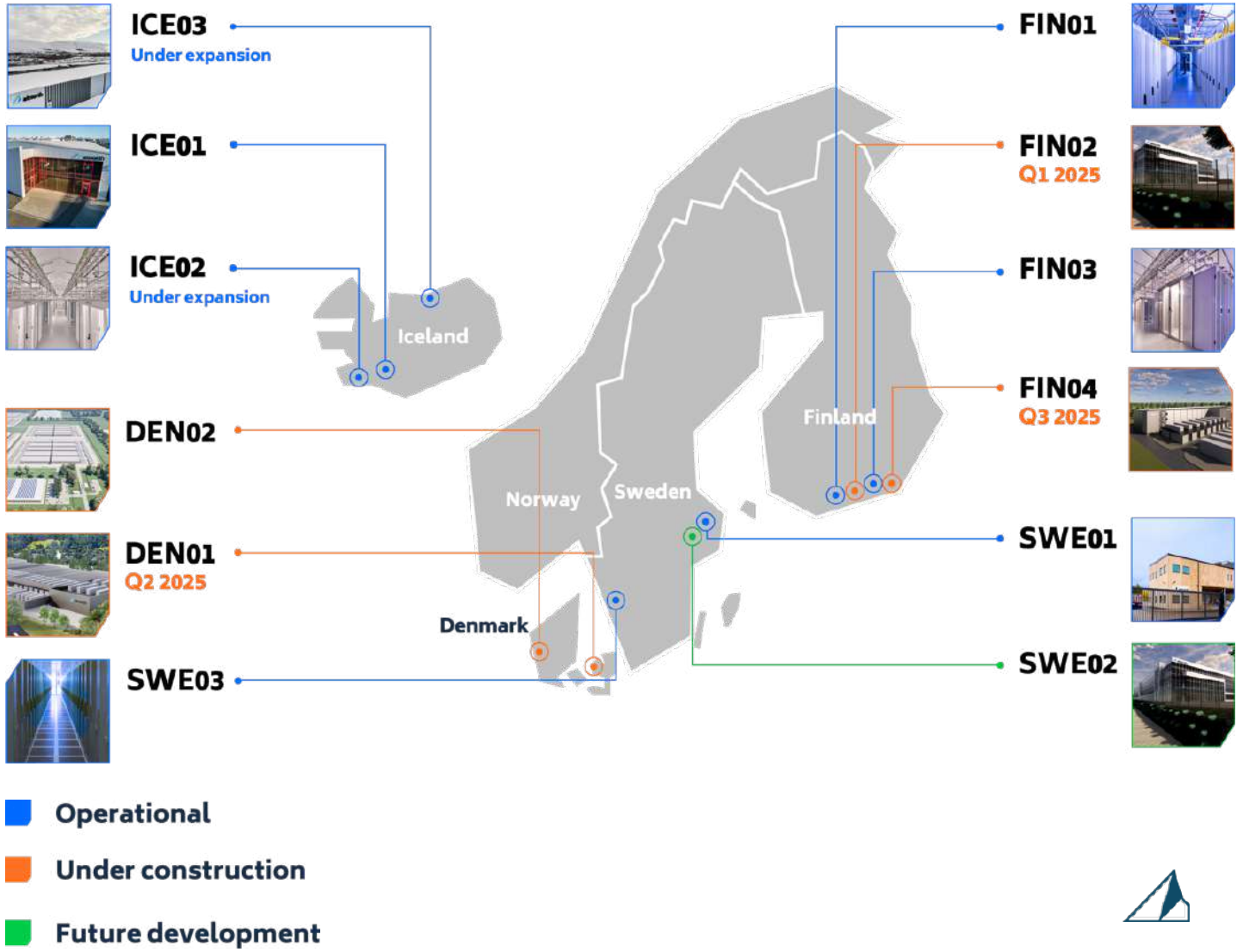

SWE03


DEN01


DEN02

why atNorth loves the Nordics

- Energy from renewable sources
- Ample connectivity
- Sustainable initiatives
- Circular economy principles
- Europe's lowest energy price
- Ideal climate for free natural cooling
- Ease of doing business
- Experienced workforce
- Low risk region
- Solid power grid
- Stable political economies



our flexible offering

We are here to scale alongside our customers

High-density colocation

Racks, cages/pods and private data halls in our Nordic data centers, designed for high-density colocation that deliver performance and efficiency. Flexibility to host any workload at any scale.

Build-to-suit

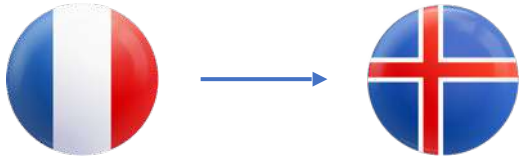
Combining class-leading, sustainable data centers and high-end, scalable data infrastructure. Positioned to support the next generation of high-end computing workloads

Gompute HPCaaS platform

Market leading simulation platform tailored to HPC workloads. Enabled on bare metal hardware dedicated to you. Ready to use

customer benefits

BNP Paribas CIB

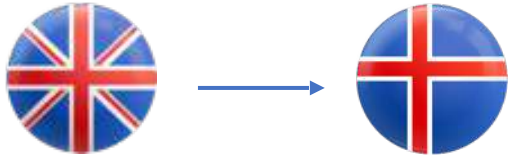


Moved from France to Iceland

50%
cost saving

85%
reduction in CO2

Shearwater
Geo Services



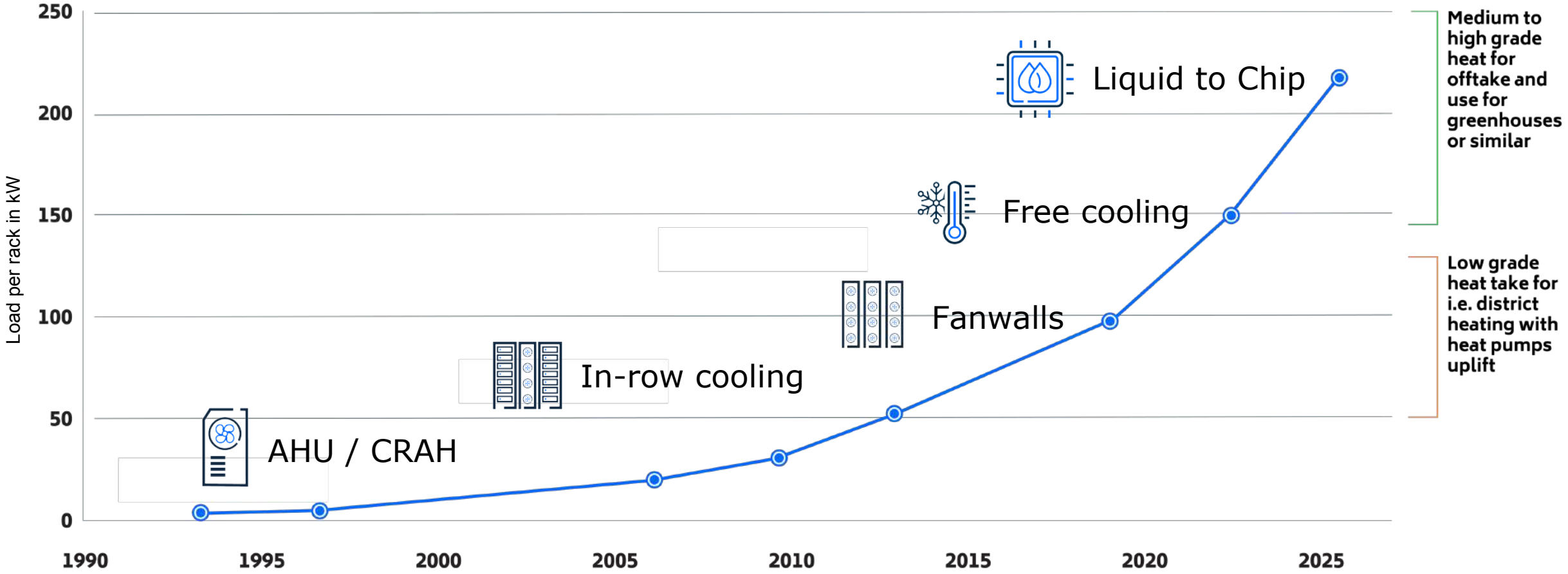
Moved from UK to Iceland

84%
cost saving

92%
reduction in CO2

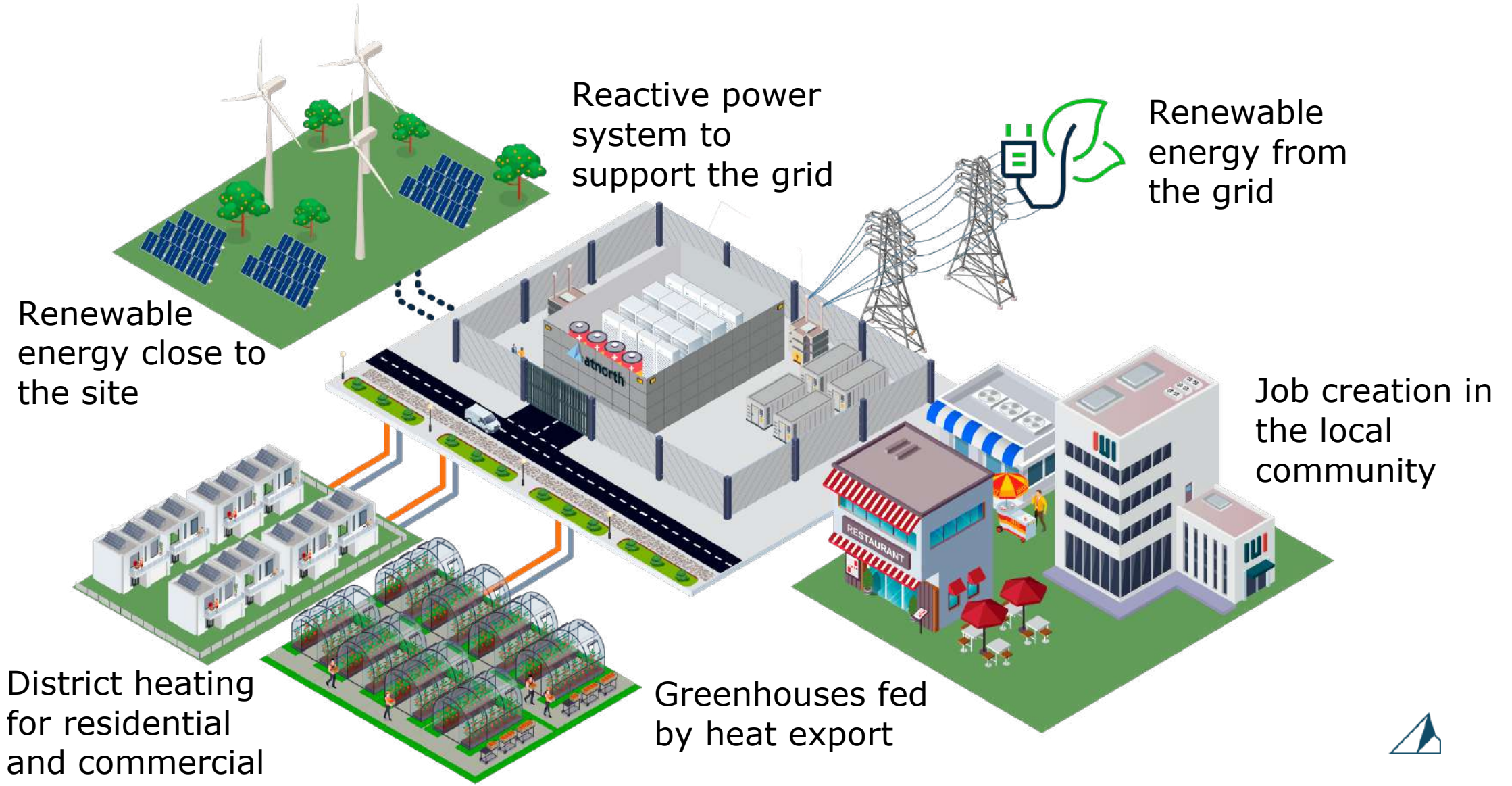

Data centers of
the future

density and cooling evolution

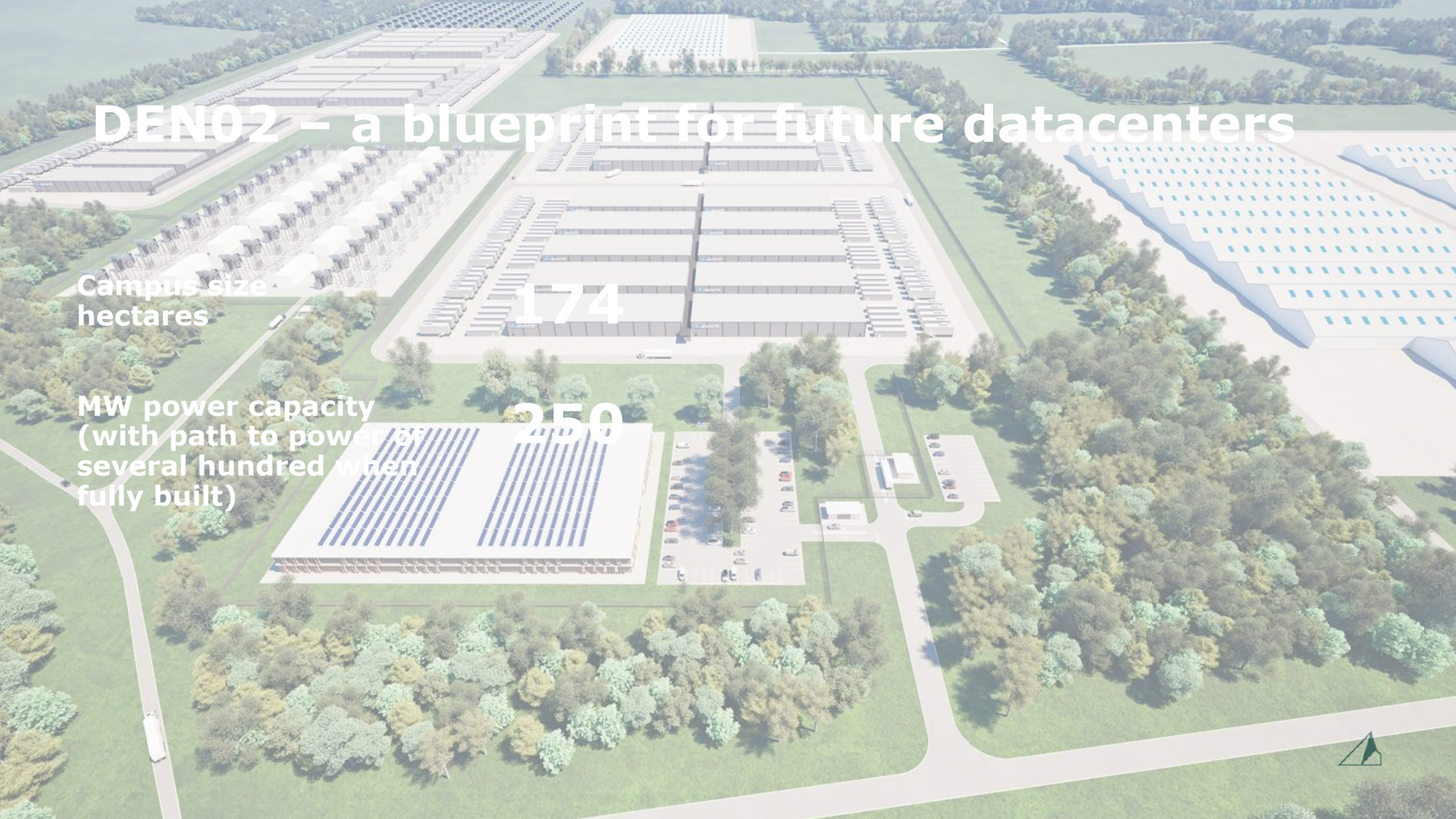


AI workloads are the new demand drivers for most of the new capacity
Will probably represent the largest capital investment in infrastructure in modern times

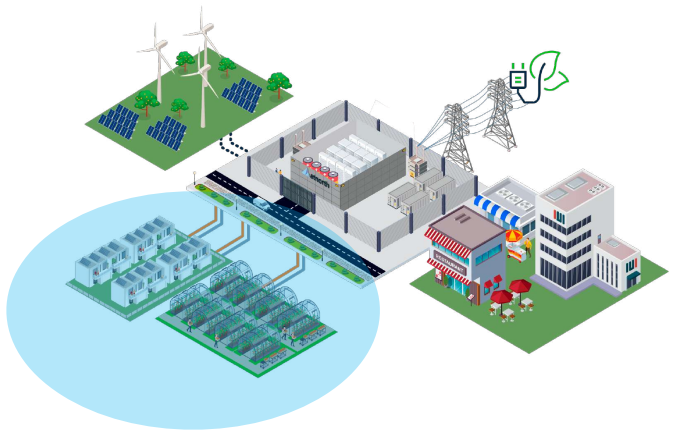
DEN02 - ecosystem of the future



DEN02 – a blueprint for future datacenters



sustainable usage of heat

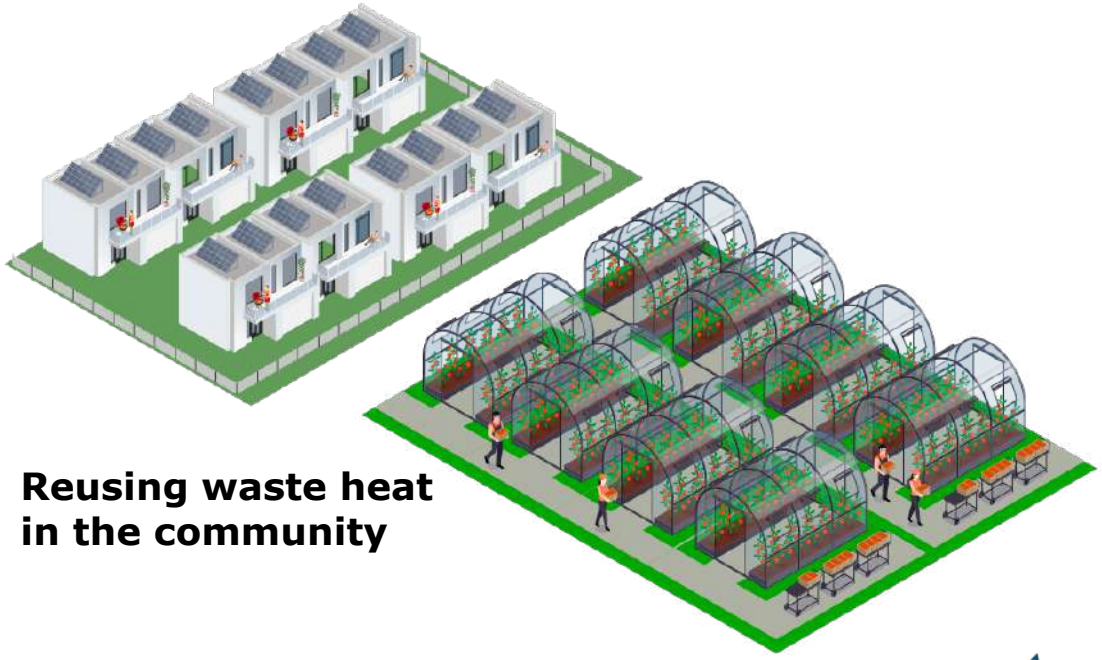


- DEN02 will focus on sustainable use of waste heat for both the local community and through new commercial and industrial initiatives
- Metropolitan areas traditionally see more appetite for classic district heating models as evident in our existing Metro DC's
- More rural locations call for new approach where we see industrial-scale opportunities (e.g., greenhouses, land-based fish farming and others).

atNorth's position

- Sustainable use of excess heat is key to future data center operations.
- atNorth will integrate heat reuse in future data center developments.

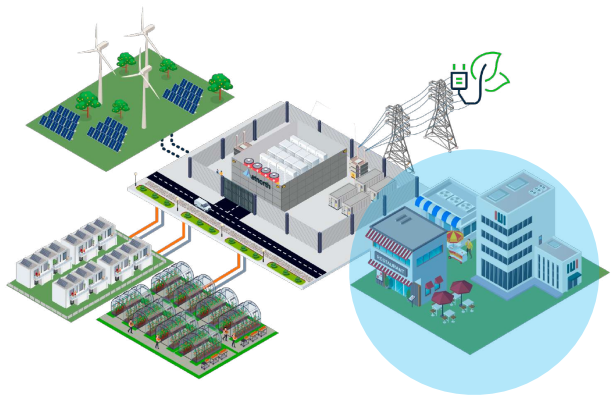
Our commitment to future generations is to find smart ways to continuously re-use the same electron throughout the entire process and reduce waste



Reusing waste heat in the community

sustainable business

contributing to the surrounding community



- We prioritize local suppliers, contractors, and tradespeople.
- Push our international experts to collaborate with local teams.
- Focus on sourcing materials locally to reduce scope 3 carbon emissions.

- Experts educate and train at all locations.
- Sites serve as opportunities to inspire future data center professionals.
- Collaborate with schools, businesses, and policymakers to share industry knowledge.
- Support local social, growth and development initiatives.
- Example: ICE03 supports Akureyri’s Technical University with tools and equipment.

Employment opportunities

DATACENTER JOBS

- Campus management
- People management
- Learning & development
- IT operations
- Mechanical engineers
- Electrical engineers
- Security contractors
- Building maintenance
- Critical environment

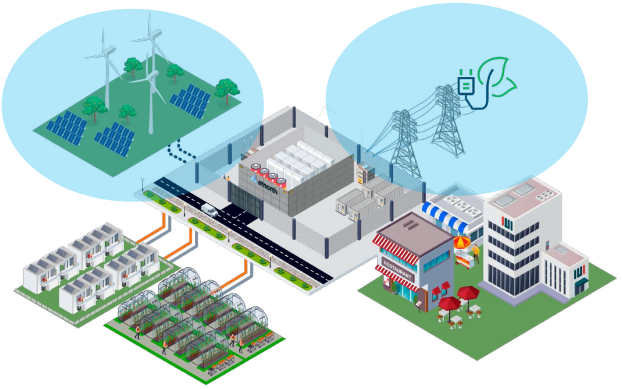
CONSTRUCTION JOBS

- Electricians
- Plumbers and pipefitters
- Carpenters
- Structural iron & steel
- Concrete workers
- Earth movers

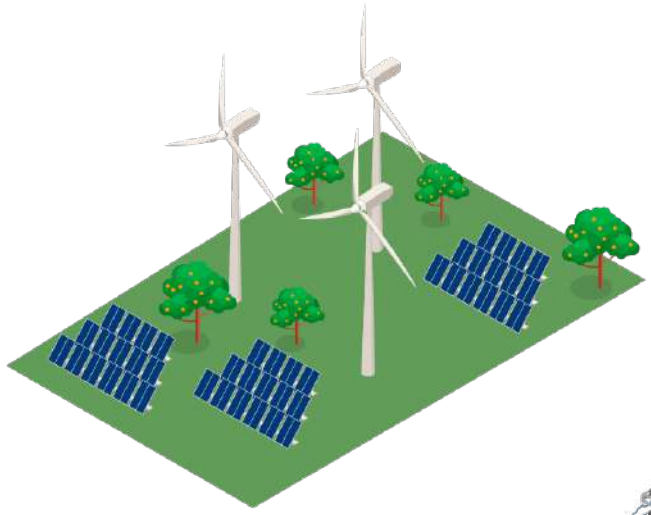
And Beyond

IT support services
Digital Infrastructure
Community services
Catering
Logistics
Hospitality

Sustainable power in the backyard



- Larger sites enable sustainable power production deployment locally
- **DEN02** in Varde will combine both local solar and wind energy for the data center.
- Grid support via Fast Frequency Reserve boosts the use of renewable energy (wind and solar).



§ Future data centers must offer grid support, not add to the problem.

§ Focus on smarter use of existing assets, not constant new builds.

§ Grid-interactive data centers with heat recovery solve environmental challenges.

§ Smart ways to allow for more solar and wind integration and production

atnorth

sustainability strategy

Our Strategy outlines our responsibility to the environment, society and the economy

climate

Dependable in climate–first matters

Using energy from only renewable sources in all our operations is a key step to maintain low GHG emission and reduce overall carbon footprint.

circularity

Enabling a circular economy

Minimizing all waste is a critical initiative for atNorth as well as continuing to drive innovation and deploy circular economy principles.

community

Empowering the community

atNorth's mission is to build a sustainable business that contributes to the surrounding community.

integrity

Integrity in all we do

Sustainability and innovation are our guiding principles. We will continue to innovate, develop and create a future proof de-carbonizing platform.