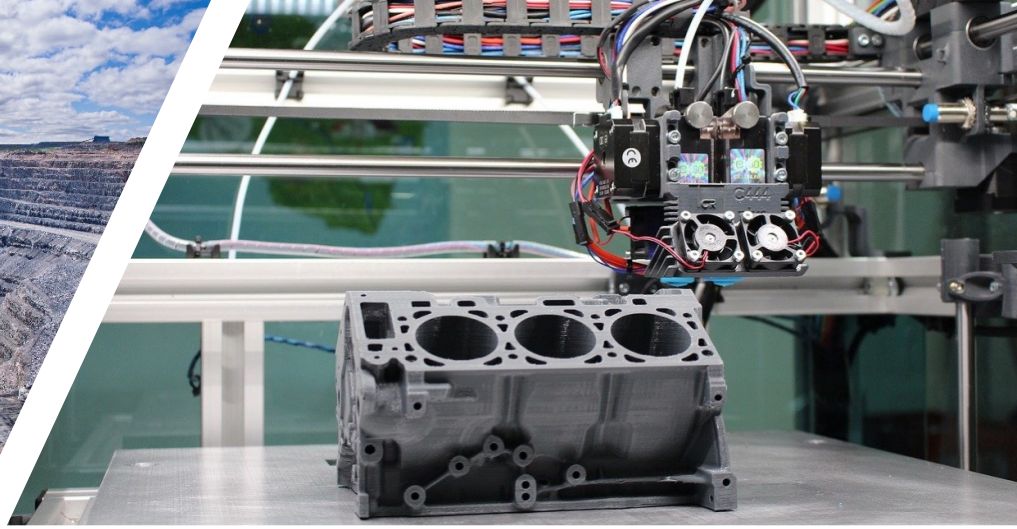


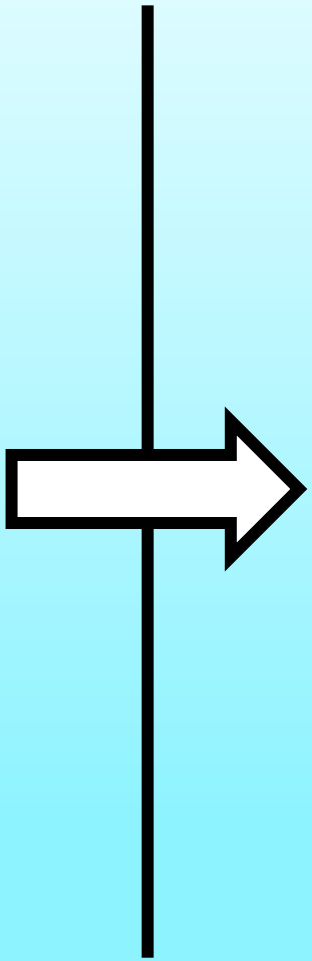



NSPA
Northern Sparsely Populated Areas

ARCTIC ADVANTAGES


ARCTIC CHALLENGES

- Sparsely populated
- Cold climate
- Micro companies
- Limited administrative capacity
- Dependency on raw materials
- Urban growth poles in the rural regions
- Sensitive economies and labour markets



ARCTIC ADVANTAGES

- Energy intensive industries
- Industrial processing automatization/AI
- Test activities
- Space technology and infrastructure
- Distance spanning technologies (E-health, hospitals, technology, infrastructure)
- Research in sustainable mining and metallurgy

Energy intensive industries

ARCTIC CONDITION

- Cold climate
- Clean energy

ARCTIC ADVANTAGE

- Cold climate
- Clean energy
- Expertise in energy efficiency in data centers
- Shorter delivery distance compared with competitors in Asia

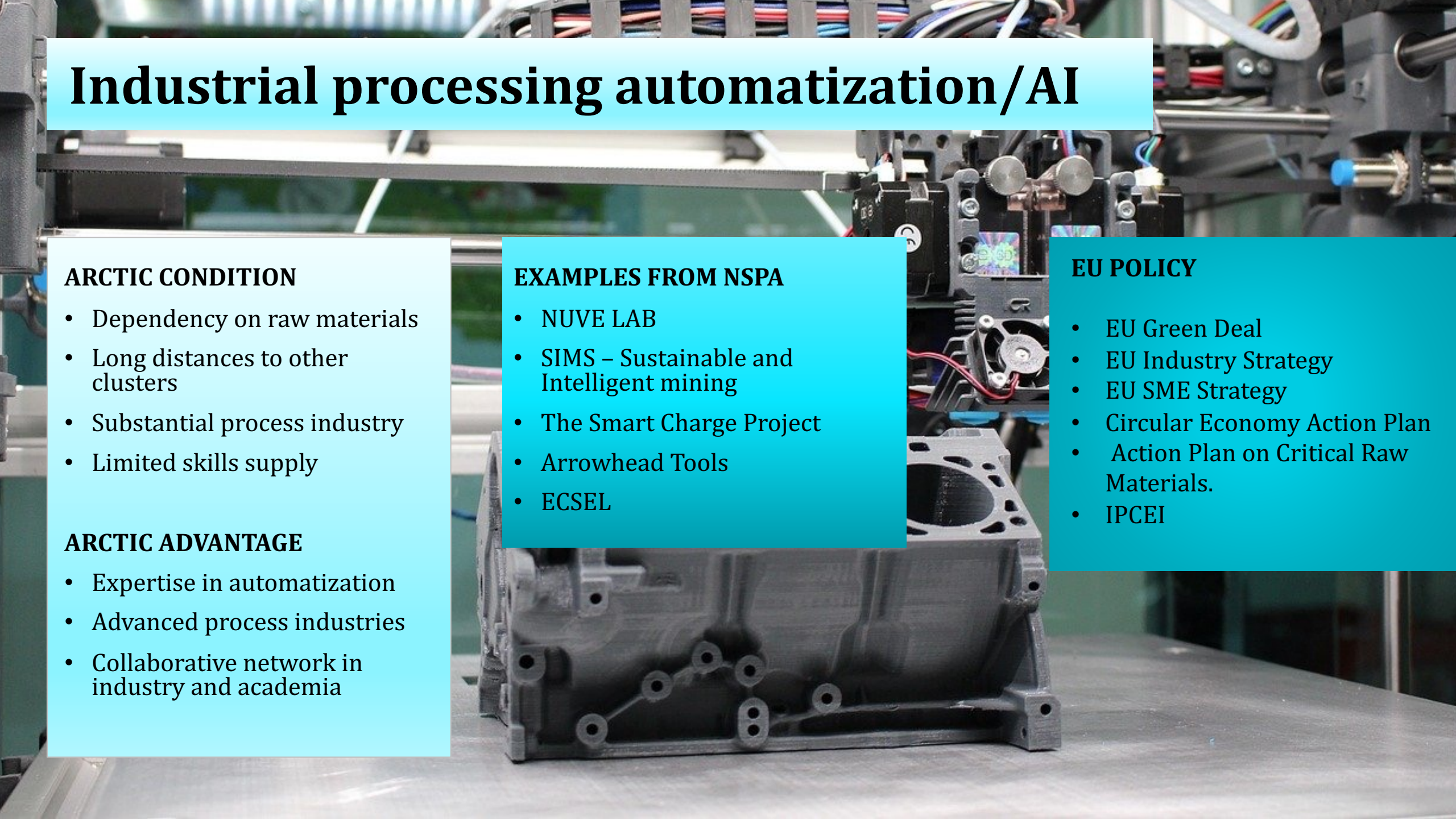
EXAMPLES FROM NSPA

- Nordic Battery Belt Logisticcs
- LUMI HPC
- Arctic Hydrogen Platform

EU Policy

- EU Green Deal
- Digital transition
- REPowerEU
- Digital Europe Program
- EU Batteries Regulation
- European Battery Alliance
- Circular Economy Plan
- Action Plan on Critical Raw Materials

Industrial processing automatization/AI



ARCTIC CONDITION

- Dependency on raw materials
- Long distances to other clusters
- Substantial process industry
- Limited skills supply

ARCTIC ADVANTAGE

- Expertise in automatization
- Advanced process industries
- Collaborative network in industry and academia

EXAMPLES FROM NSPA

- NUVE LAB
- SIMS – Sustainable and Intelligent mining
- The Smart Charge Project
- Arrowhead Tools
- ECSEL

EU POLICY

- EU Green Deal
- EU Industry Strategy
- EU SME Strategy
- Circular Economy Action Plan
- Action Plan on Critical Raw Materials.
- IPCEI

Test activities

ARCTIC CONDITION

- Big land areas
- Cold climate
- Remote locations

ARCTIC ADVANTAGE

- Winter conditions big parts of the year
- Discrete locations
- Technical expertise
- Small cities for implementing new technical solutions

EXAMPLES FROM NSPA

- ITS testing “Aurora Borealis”
- SPGA – Swedish Provning ground association
- Green Flyway – International test arena for future aviation
- Örnsköldsvik Airport – National testbed for Airports
- FAIR – Swedish Finnish collaboration for development of regional Airtrafic operated by electric vehicles

EU POLICY

- R&I Policy
- Industrial Strategy

Space technology and infrastructure

ARCTIC CONDITION

- Big land areas
- Northern position
- Remote locations
- Cold climate

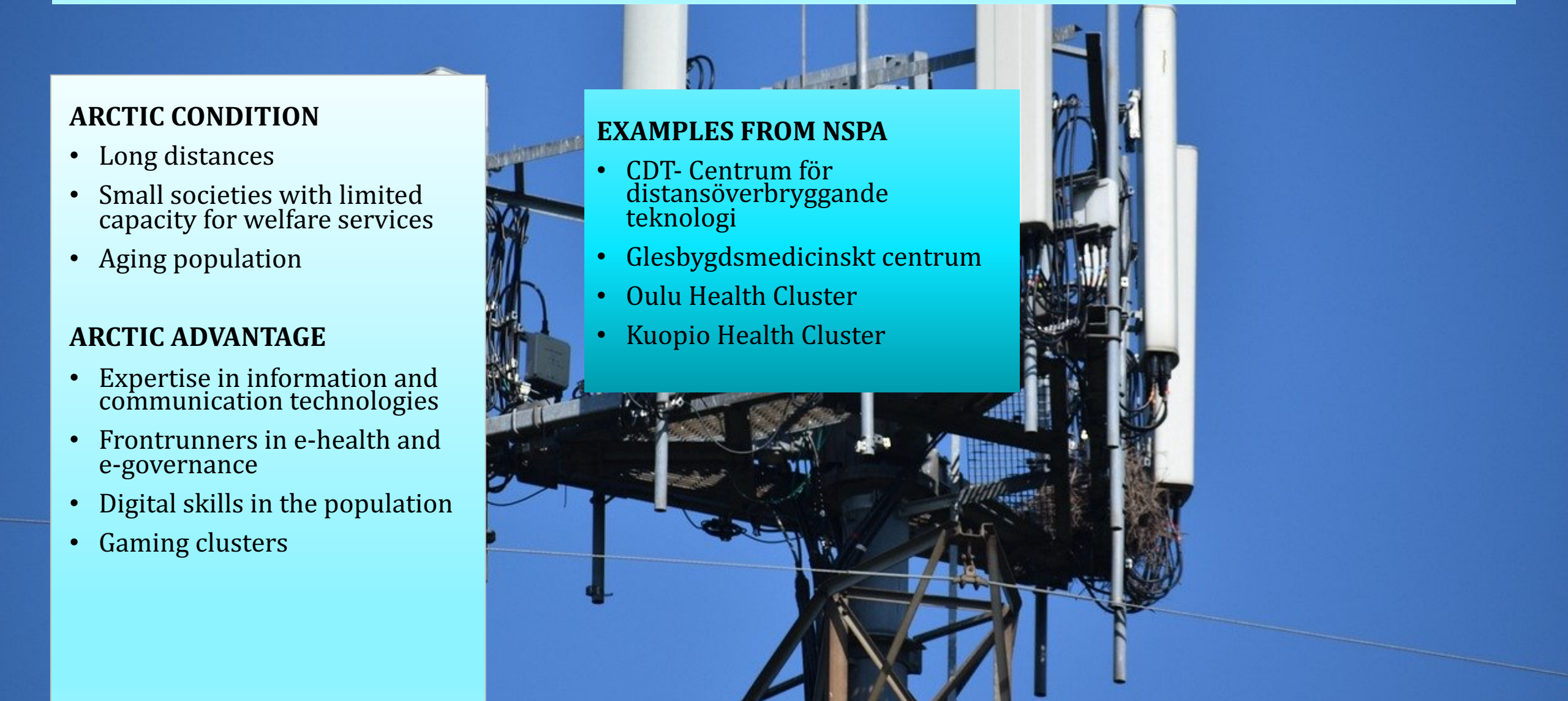
ARCTIC ADVANTAGE

- Polar position
- Limited light pollution
- Proximity to land and water for rocket landing
- Monitoring of satellites in orbit
- Launch of small satellites to polar orbit

EXAMPLES FROM NSPA

- Lapland Satellite by SGO
- Esrange – Space center
- Luleå University of Technology SPACE
- EISCAT
- Kongsberg Satellites Service (KSAT)
- Andøya Space Center
- UiT The Arctic University of Norway

Distance spanning technologies (E-health, hospitals, technology, infrastructure)



ARCTIC CONDITION

- Long distances
- Small societies with limited capacity for welfare services
- Aging population

ARCTIC ADVANTAGE

- Expertise in information and communication technologies
- Frontrunners in e-health and e-governance
- Digital skills in the population
- Gaming clusters

EXAMPLES FROM NSPA

- CDT- Centrum för distansöverbryggande teknologi
- Glesbygdsmedicinskt centrum
- Oulu Health Cluster
- Kuopio Health Cluster

Research in sustainable mining and metallurgy

ARCTIC CONDITION

- Dependency on raw materials
- Sensitive environment
- Sensitive economies
- High standards in sustainability
- Small labour markets

ARCTIC ADVANTAGE

- Leaders in sustainable mining
- Leaders in metallurgy for added value
- Research infrastructure for metallurgy
- Spinoffs exporting knowledge and technology globally

EXAMPLES FROM NSPA

- SIMS – Sustainable intelligent mining
- SWERIM Testbed
- KIC RawMaterials Northern Node

Summary

- Competitive advantages in the Arctic

- Arctic challenges ⟹ Innovation ⟹ Arctic Advantages

- Group activities:
  - Mapping of the advantages
  - Monitoring of EU Policy
  - NSPA storytelling
  - Capture project opportunities
  - Profit from and contribute to EU Green and digital transitions