

Capturing Norway's digital opportunity

Norway as a digital hub for oil and gas and other asset-heavy industries

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47 interviews - great engagement!

Companies interviewed as part of this study



Note: For some companies, multiple executives were interviewed. In addition, some companies have chosen to remain anonymous
Source: BCG

Digital hub characteristics



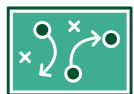
WORLD LEADING PRODUCTIVITY GAINS

World leader at realizing productivity gains through the application of digital technologies; eliminating inefficiencies and frictions in the value chain and creating new sources of revenue



FRONTRUNNER FOR DIGITAL INNOVATION

Forefront in driving digital innovation; short lead-time from ideation to commercialization of new ideas, an innovative culture, a collaborative mindset and a strong link between industry and academia

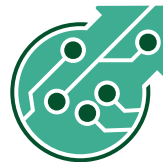
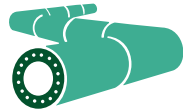


RICH ECOSYSTEM, NEW BUSINESS MODELS

Comprehensive ecosystem supporting digital development; traditional industry players, new tech companies, start-ups, investors, regulators, industry, academia and research institutions; international companies leveraging Norway as "test laboratory" for new digital solutions

Huge opportunity for Norway – already happening

INDUSTRY DEVELOPMENT



EMPLOYMENT



225,000

In O&G industry



20,000

Digital roles

Norway - great starting point as a digital hub



DOMAIN EXPERTISE



VAST AMOUNTS OF DATA



TECH INFRASTRUCTURE



COLLABORATIVE CULTURE



REGULATIONS & CONDITIONS

“ Norway has an opportunity to take a leading position by combining its world-class domain competence with knowledge about digital technologies.

”
- SVP, Kongsberg Maritime
Commercial Marine

“ Norway is a fantastic country for incubation and innovation; data access is an important enabler. Norway is also better at sharing than other countries; there are a lot of good initiatives for data sharing underway.

”
- COO
Aker Solutions

“ Technological infrastructure in Norway is very well positioned relative to our peers.

”
- Group VP and Digital Lead
ABB

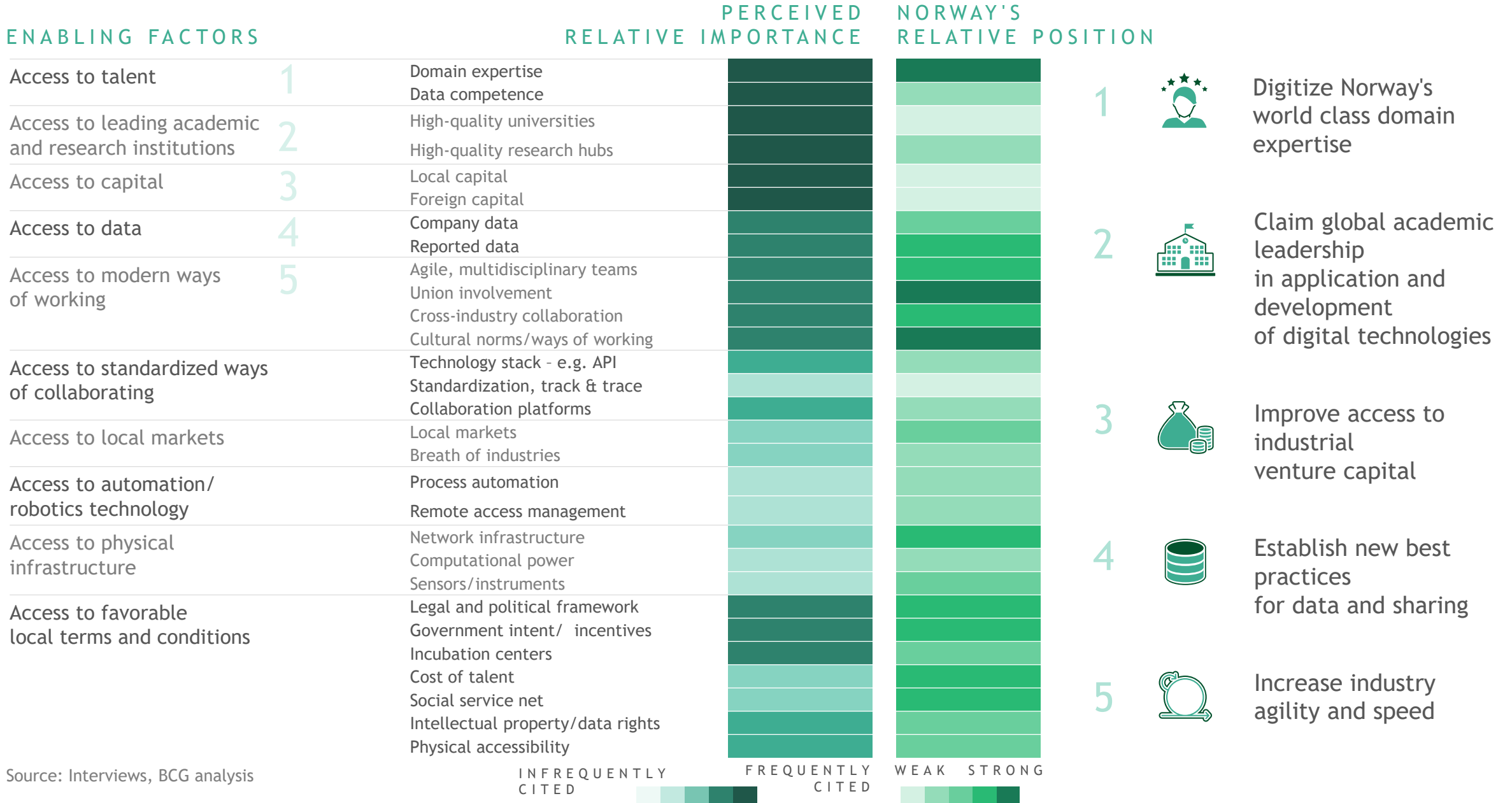
“ Sharing culture is the single most important factor for the success of the industrial cluster at Raufoss.

”
- President & CEO
Nammo

“ Norwegian core values such as equality, flat organizations, informal ways of working, strong welfare and social support, proximity to nature, environmental awareness are compatible with the value set of young global talents seeking to become business entrepreneurs. As such, the conditions are present for Norway to enhance its startup community, a prerequisite for digital innovation.

”
- Anonymous

Five opportunities to increase the attractiveness



Source: Interviews, BCG analysis

Digitize Norway's world class domain expertise

80%



UNDERSTANDING
THE PHYSICS



ENGINEERING
MODELS



DATA STRUCTURES
& QUALITY

20%



DIGITAL AND DATA
MODELLING SKILLS



SW DEVELOPMENT,
IT ARCHITECTURE

All stakeholders have a role to play to increase Norway's attractiveness



GOVERNMENT



ACADEMIA & RESEARCH INSTITUTIONS



INDUSTRY



INDIVIDUAL COMPANIES



Digitize Norway's world-class domain expertise

- Government-led program for digital upskilling
- Tax breaks for digital training programs
- Program to attract digital talent
- Reduce taxation for int'l talent



Claim global academic leadership in application and development of digital technologies

- Expand Catapult program to train in new ways of working
- Increase research funding for user-driven research
- Tax relief for investing in applied innovation research



Improve access to industrial venture capital

- Increase government incentives for scale-ups
- Fund-in-fund investment to attract foreign venture capital
- Reevaluate wealth and options taxation for startups



Establish new best practices for data and sharing

- Regulate sharing of specific datasets
- Initiate industry data workshops



Increase industry agility and speed

- Promote digital agenda through regulations and license to operate

- Workshops and digital training programs

- Set ambitious goals to build deep knowledge in specific domains
- Consider cross-functional institute to address specific industry challenges
- Expand partnerships with leading academic communities

- Standard contracts enabling data sharing
- Regulatory framework for IP rights and data sharing
- Research program to explore legal issues with data sharing

- Standard contracts structures accelerating digital developments
- Sessions sharing digital best practices and success stories

- High potential collaboration topics for academia/business
- Sessions to increase business / academia collaboration

- Standard interfaces, standards for data sharing and fair contract regimes
- Stimulate data sharing and remove waste between parties
- Data workshops sharing best practices

- Industry-wide digital training program for managers
- Exemplify bonus schemes related to growth leveraging digital tech.

- Connect strong domain expertise with digital talent
- Invest in employee training and adopt new work processes
- Attract international talent

- Co-fund applied research programs
- Collaborate proactively with academia

- Increase internal funding for venture capital investments
- Expand collaboration with startup communities

- Share data with limited commercial implications

- Compensation structures incentivizing a successful digital agenda
- Implement new ways of working

For further information please contact



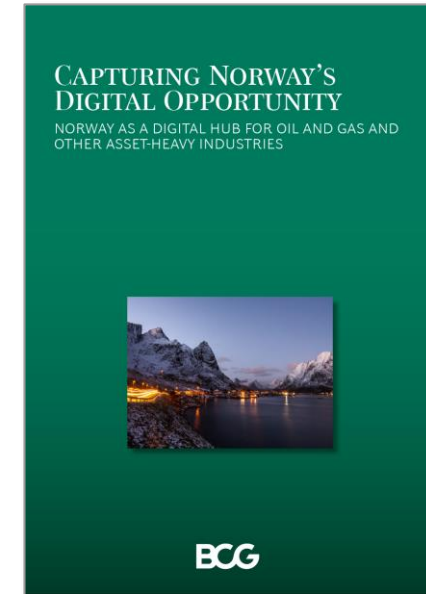
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The full report can be found here:

<https://www.bcg.com/en-nor/perspectives/220325>



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