InnoCAPE CASE STUDY VISIT

22-23 May 2019
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Introduction

Digital Norway hosted the first InnoCAPE study visit scheduled in Oslo on 22nd-23rd May 2019.

The study comprised of

- Case study presentations focusing on the Digital Norway’s digital transformation services and activities
- And a study visits to an organisation (DNB) that received Digital Norway’s digital transformation services

The case study visit was organised to build a common understanding of the functioning of DIHs around the BSR and learn about practicalities of digitalisation of SMEs, case studies will be identified, and study visits will be organised by countries which are leading in terms of Industry 4.0. Study visits provide an opportunity for partners and key stakeholders to learn relevant, good development practices from their peers. Study visits allow for a high level of interaction among participants and exposure to the topic of study, can facilitate horizontal learning and networking between a range of people working on same topic at different levels.

Programme

A short welcome note by Digital Norway was followed by introduction by representatives of the respective InnoCAPE partner organizing institutions. This was followed by four case digital community, Digitalization guide for start-ups and SMEs on day 1 and followed by Digital21 and Digital maturity Assessment (DMA) on day 2. These case presentations provided an overview of the importance of digital transformation services offered by Digital Norway.

The official program ended with a wrap-up and Q&A session allowing all participants to ask questions which came up during the discussions. For a detailed programme overview along with Table of participants, please see Appendix 1 and Appendix 2 (four cases) and study visit to DNB Appendix 3.

Participants

The event was attended by 25 persons representing 11 organizations across Europe. For a full list of participants, please see Appendix 4 (Signed attendee list).

Conclusions

The case study visit was well received by all those involved. The participating companies particularly welcomed the opportunity to meet with potential partners face to face. They organizers were also very pleased with the result of the partner visit. Due to the study visit to DNB the participants also learned about the digital tool implementation process at DNB.

Additional Materials

Appendix 5 Email invitation for the event
Appendix 6 Photos
Case Study Report

Digitalization Case Study

Company: DNB

DNB is Norway's largest financial services group and one of the largest in the Nordic region in terms of market capitalization. The Group has close to 7000 employees, and is Norway's oldest private bank, established in 1822. The Group offers a full range of financial services, including loans, savings, advisory services, insurance and pension products for retail and corporate customers. DNB’s bank branches in Norway, in-store postal and banking outlets, Post office counters, Internet banking, mobile services and international offices ensure that the company are present where their customers are. DNB is a major operator in several industries, for which the company also have a Nordic or international strategy. DNB is one of the world’s leading shipping banks and has a strong position in the energy sector, and the fisheries and seafood industry.

Reasons for digitalization

DNB is a very modern financial institution, and particularly the personal and SME bank services are fully digital. At the same time, the bank services for large international enterprises are mainly people based, and it was felt that this business area had some potential for improved customer experience related to applying digital technologies as part of their service offering. The business area for large international enterprises (Large Corporates International – LCI) therefore wanted to get more insight into how managers and employees perceived the digital maturity of the business area, and based on this, identify measures that needed to be implemented to increase the digital maturity of the business area.

Description of the solution or a policy and a project

The solution chosen by the company was to apply a wide-ranging process where all employees and manager in the chosen business unit were engaged. This engagement process consisted of five main phases (duration)

1. Preparations, contract negotiations and problem definition (6 weeks)
2. Survey (4 weeks)
3. Interviews (2 weeks)
4. Workshops with middle management (4 weeks)
5. Recommendations to top management (2 weeks)
1. Preparation
   a. Establish a contract and agree on remuneration and scope of work. An important part of this was to establish a data-processing agreement
   b. Identify ownerships to the recommendations and relevant client resources that would act as an internal project manager
   c. Prepare a project plan

2. A survey to map a representative number of employees’ impression of the digital maturity of the business area.
   a. This was done through a survey developed by Digital Norway covering 4 main areas: leadership and management, competence and way of work, customer engagement, and collaboration with partners. During the initial process, while maintaining the intention of the survey statements, the statements were adapted to fit the language used by the organization
   b. To distinguish replies coming from different groups of employees, metadata was collected as part of the process. This included their role in the organization (manager, sales, admin, …), and the organizational structure the respondent belonged to
   c. The survey was sent to 440 (about 60%) of the employees in the organization, and we received 285 replies - a reply rate of 65% - a rate the company rated as “high”
   d. The results were analyzed and grouped according to organization structure. Results for units with fewer than 5 employees were reported as part of the parent organization. Based on the survey and analysis, several hypotheses about potential areas of improvement to increased digital maturity were identified.

3. Interviews of selected employees to test the hypothesis
   a. Based on the hypothesis of potential improvement areas, an interview guide was prepared, and 12 employees from the organization were identified to cover a wide range of replies, roles and organizational belonging
   b. The interviews lasted for about 1 hour and were conducted during one week on the premises of the company
   c. A main finding from the interviews was the openness of the candidates, and most of the hypothesis were confirmed, along with deep insight on underlying issues
   d. One important aspect of the interviews was to identify statements from employees that would underline the findings from the survey. This makes the message much stronger when conducting the next phase: workshops with middle management
   e. Based on the interviews, findings within 5 areas were identified
      i. Lack of formal training and/or involvement related to digitization
      ii. Difficult to involve customers in the development process
      iii. Conservative leadership style in terms of new thinking
      iv. Red tape when initiating proposals for change or improvements
      v. Internal information overload

4. Workshops with middle management
a. The results from the survey and interviews indicated some differences in replies and discrepancies in the main findings amongst the 6 main units within the organization. This was as expected and planned for, and the feedback to each of the main units were grouped accordingly
b. These workshops had two intentions:
   i. To share the findings from the survey and interviews and get the management views on this
   ii. To identify possible mitigating actions as input to the recommendations process
c. Based on the insight from these workshops, a set of final recommendations were prepared

5. Recommendations with final report - workshop with top management
   a. Based on the process with the business units a set of recommendations were prepared for the business are management. These recommendations were related to the main findings outlined above, and for each of the, a separate background note where the survey results, statements from interviews and reflections related to workshops in the business units were collected and made available as part of the implementation plan

**Recommended actions:**

1. Broader focus by:
   a) Use the insight from how customers are affected by new technologies to assess how this affects the service offering from LCI.
   b) Test the concept of Jobs To Be Done (JTBD) with customers through an easy to use guide (or FAQ).

2. Who does what?
   Test how Digital Ambassadors can be used in the organisation

3. Information balance:
   LCIM need to prioritise which messages should reach all employees and how to utilise existing or new channels more effectively.
   Focus should be on sharing success stories involving cross divisional teams and clients.

4. Look into qualitative KPIs:
   Gain experience in how KPIs that drive behavioural change strengthen an innovative company culture (collaboration, customer involvement, experimentation)
   First in CTB, thereafter in the whole of LCI.

5. Learn innovation:
   Innovation is a *way of work* to find new solutions to internal and customer challenges - small and large, and takes place everywhere in the organisation and through customer interaction. Leaders must lead the way.
   Roll out guidance with examples for all employees to clarify how everyone will benefit from applying innovation principles in their daily work

6. Remove the barriers:
   This challenge will be reached through a combination of recommendation 1 and 5

**Implementation process**

Implementation for each of the recommendations were allocated to the managers in the most relevant business unit. A clear timeframe was set on implementation, and a small team were allocated necessary resources. One of the recommendations required establishment of a new role within each of the business units, and as part of the implementation process, a role description was prepared, and candidates identified.

Since many employees in the organization had been involved in the process, they also had some expectations to be involved in both knowing of, and implementation of the recommendations. An internal newsletter was therefore issued, thanking everyone for their
effort, stating the recommendations, and presenting the implementation plan and those responsible for taking it forward.

**Challenges and funding**

*Contract phase*

The main challenge arose during the initial contract phase of the project. As part of conducting a survey, it was important to obtain information about employees of the company. The company naturally has a very strict policy for allowing any third parties with information about employee’s information that was necessary to identify the role and organizations of the respondents. Important in this aspect is to mention that the tool we use to collect responses is called Horizon and is developed by the Norwegian company Confirmit. The project was initiated at a time when the implementation deadline for GDPR was coming up, and very few companies had at that time established clear routines for how to ensure compliance with the regulation.

The solution was to establish a new data processing agreement between the Digital Innovation Hub and DNB, and between us and Confirmit. The last which also underwent strict scrutiny by the purchasing department of DNB. In the end this proved to be well invested time and effort for us as having in place a robust data processing agreement with DBB that was known for their strict compliance policy. This resulted in reducing the barriers for subsequent jobs.

*Survey*

When conducting a survey one always runs the risk of a bias in the answers related to be better than the neighbouring unit. It is also a challenge that leaders of business units want to look good towards their managers. This was mitigated in the way the survey was formulated. Quite a lot of effort was put into making the statements as neutral as possible, and the options for reply captured what type of activity the organization was supposed to perform rather than a scale ranging from “not satisfactory” to “very satisfactory”.

Another challenge with surveys like this is that employees tend to have a bias in their reply when statements focus around their own knowledge and impact. This was mitigated by only providing statements where they were challenged to reveal their impressions of the organizations rather than their own role. A third challenges is to balance the statements in such a way that it was clear to the respondents on what they were supposed to reply to, and this making the replies comparable, and at the same time providing statements and options for replies that would encourage discussions and reflection.

The path chooses was to have statements that would encourage discussions and an indicator of the success was that employees expressed that “finally we have an opportunity to have a meaningful discussion about what it means to be a digital company”

*Financing*

The project was funded in its entirety by the client through a commercial agreement

*Impact / benefits*

The main benefit of running this project in the organization were an increased and common understanding of what it takes to succeed in using digital technologies to improve performance and value creation to customers. Another benefit was to have concrete actions that a majority
of the organization could agree to, a realistic implementation plan and individuals responsible for implementations of the agreed recommendations.

More specifically, a new role as digital ambassador was described and implemented in each business unit, allowing for more opportunities and visibility for ambitious employees. An interesting perspective from the interviews was that although DNB is a big corporation in Norway, it is a small bank in world scale and is therefore considered to be well positioned as agile and forward-looking.

**DIH activities (if any)**
The DIG in this was us Digital Norway developing this service in its entirety and managed the process, prepared the survey, analyzed the results, conducted the interviews, conducted the management workshop and provided the final report with recommendations to top management of the business area.

**Further Improvements**
At an early stage it was decided that only a selection of employees should receive the survey, and that the results should be aggregated at level 2 in the organisation.

In a subsequent delivery to another large organization, all employees were given the opportunity to reply, and the results were aggregated to the 3rd level in the organization. This gave much more solid foundation to base the recommendations on and resulted in even more engagement in the organization.

**Digital maturity and assessment tools**
As part of the diagnosis phase, a digital maturity assessment tool was used to reveal how employees and managers view the digital maturity of the company. This assessment is based on 13 statements covering management, technological expertise, innovation and customers where the respondents are requested to provide their degree of agreement to each of the statements.

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<tr>
<th>Category</th>
<th>Statement</th>
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<tbody>
<tr>
<td>Introduction</td>
<td>To what extent will digital technologies affect the company over the next five years?</td>
</tr>
<tr>
<td>Introduction</td>
<td>To what extent will digital technologies affect the business area over the next five years?</td>
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<tr>
<td>Management</td>
<td>To what extent does your immediate superior promote innovation and explore the use of new technologies</td>
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<tr>
<td>Management</td>
<td>To what extent does business area have incentives (KPIs/measurement parameters) that promote innovation?</td>
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<tr>
<td>Technology</td>
<td>To what extent is digitalisation changing the competence needs of the section?</td>
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<tr>
<td>Technology</td>
<td>To what extent does the section have resources with expertise on the use of new technology (such as Blockchains, AI etc.) in business operations?</td>
</tr>
<tr>
<td>Innovation</td>
<td>To what extent is your section responsible for innovation (improvement of existing products and services and new business models)?</td>
</tr>
<tr>
<td>Innovation</td>
<td>In your opinion, to what extent does business area work systematically to eliminate manual and repetitive tasks (e.g. credit and KYC processes)?</td>
</tr>
<tr>
<td>Innovation</td>
<td>In your opinion, to what extent does business area capitalise on available data in the development of new customer solutions? (In this context, data means internal customer information and relevant data from external sources.)</td>
</tr>
<tr>
<td>Innovation</td>
<td>To what extent should business area explore solutions that compete with our existing business model?</td>
</tr>
<tr>
<td>Customers</td>
<td>To what extent does the section focus on understanding how customers are affected by technological developments?</td>
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**Customers**

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<tr>
<th>Customers</th>
<th>In your opinion, to what extent does the section involve customers in the development of new solutions?</th>
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<tbody>
<tr>
<td>Customers</td>
<td>How does business area distribute its products and services?</td>
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The result was collected and analyzed for each business unit. Examples below for the statements related to management:

*To what extent does your immediate superior promote innovation and explore the use of new technologies*

- 45% of respondents state that this is true to a great or very great extent
- However, the variation between sections is large, ranging from 25% in [one unit] to 64% in [another unit]
- Only 7% of respondents state that this is true to a little or no extent, but also here the variation is large, ranging from 1% in [one unit] to 14% in [another unit]

*To what extent does LCI have incentives (KPIs/measurement parameters) that promote innovation?*

- This is the question that has received the largest variation in responses. The impression from the interviews we have conducted indicates is that most KPI’s relate to quantitative measures, while KPI’s related to behavior and approach to innovation – that are more qualitative measures - seems to be lacking.

**Communication of the Case Study**

Digital Norway has developed article on the case study that will be published on its community which is national digital sharing and learning arena with over 2200 members working in the area of digitalization. Also, this article will be published on Digital Norway’s website, and various social media channels such as LinkedIn, Facebook and Twitter which has further reach of over 5000 users specifically aimed at DIHs and public authorities responsible for policy making. The same article and posts will be re-posted using the social media and website across other ongoing EU projects of Digital Norway and INNOCAPE social media channels.
About: DigitalNorway - Toppindustrisenteret AS
Is a non-profit industry-driven initiative for enabling Norwegian businesses to succeed in digitization. The initiative aims to become an arena that builds, connects and drives digitization projects across SMEs, institutes and industry giants. Digital Norway is the centre force and the hub for several expert networks. Together with Digital Norway there are 18 dedicated owners and strategic partners, as well as academia and strong regional innovation environments. These contribute to develop useful services and tools for digitization, as well as facilitate and build strong, professional networks across disciplines and industries.

Digital Norway has 18 committed owners and strategic members, as well as academia and strong regional innovation environments. These help to develop useful products, services and tools for digitization, and to facilitate the establishment of strong professional networks across disciplines and industries. It has an efficient and competent working environment with 16 full and part time employees based at the Research Park in Oslo. Digital Norway also has strong regional partners in the scaling mechanism that gives Digital Norway the power to reach out to businesses across the country. Digital Norway share expertise and experience on how digital technologies are used by SMEs and work together to provide services to this market.

Digital Norway’s roles are to ensure that all Norwegian companies have access to this knowledge and the network they need to work with digitization. Digital Norway believe this should be as simple and accessible as possible, for as many people as possible. Below are details of the arena and network, products, services and ongoing projects.

Need for Digital Transformation
Digitization is already becoming of great importance to both the social and business sectors. A characteristic feature of digitalization is that it happens and develops independently of traditional industries and sectors. It intervenes regardless of the way we as a society are organized. It intersects across. One cannot solve the challenges and exploit the opportunities by operating solely in parallel within the industries or organizations that are familiar with. This means that one must think differently about organization. Digital Norway is built on this need to build cross-cutting expertise, to develop cross-functional technologies, to develop cross-border businesses, to develop cross-border regulations and to make sure that the management can operate across. Digitization is an equally revolutionary force like electricity, the car and the phone were in their time. In the next five years, a number of established industries will be challenged, and new wineries will grow. Individual companies are usually unable to change the industry alone. But by playing teams with other business actors, universities and authorities, Norway can succeed in building the future of digital society and industry.

Digital Norway 's industry transformation is based on:

- Value creation will in the future increasingly take place in interacting ecosystems and the desire, will and ability to build such teams will be business critical the next five years in most industries and industries.
- Digital Norway will provide the necessary framework to create transformation as well as support and conduct the professional and administrative processes.
- Digital Norway will draw on Norway's leading digital competence, through the Executive Forum and Expert Network.
Digital Solutions and Projects

Arena and Network

Cross-sharing and learning is one of the main reasons for the creation of Digital Norway. The company works with both physical and virtual meeting places to facilitate knowledge sharing. Work related to networks is divided into three: Digital Norway Community, Digital Norway Networks.

- **Digital Norway Community**: A national digital sharing and learning arena and meeting place for anyone working on digitization. This is based on one of the basic ideas behind the creation of the company: Give everyone who needs the access to the network, knowledge and discussion partners they need to succeed in digitalization. The platform is open and free to anyone who wants to participate, but we look at different ways to commercialize parts of the offer. The community platform also has a course module, where we offer short training programs.

- **Digital Norway Network**: Network meeting for the owner companies in selected areas of expertise. The participants vary from network to network but are usually leaders with strategic and operational responsibility for the field. The goal is to build long-term networks that can also be useful outside of the meetings and in the long run create new collaborations. All subject areas will have their own group room in our new digital platform. In the long term, we envision that these networks will be opened to more people, and that the knowledge developed here can be shared with more through our digital platform. New networks are opened at the request of the owners.

Products and Services:

The service spectrum is an essential part of the services offered to the SME sector, and aims to provide practical targeted assistance to the SME sector.

Digital Norway today offers the following:

- **The Digitization Guide**: a simple digital guide that guides you through the various steps of a digitization process and provides you with the knowledge and tools you need in different situations. Users are directed into the Digital Norway Community for help when they are stuck.

- **Digital Maturity Indicator (DMI)**: an online survey where a management team answers a battery of questions and returns a report showing how they are compared to other companies and some recommended measures. Used as a discussion tool to arrive at measures for own organization. Can be taken independently and sold as a workshop or seminar for a group of companies. Also included in Competitiveness & Growth. There is also a version for entire companies, which is piloted at DNB and DNV GL. DMI will be further developed into a portfolio of data-driven diagnostic products. Digital Maturity Indicator (DMI) gives your insight into how well your business is ready to handle the changes your business faces. The service dives under the smoke from buzz words like AI, IOT, blockchain or machine learning. Instead, the service identifies the extent to which the business is able to renew expertise and business model so that it can reproduce itself in digital costume.

- **Competitiveness & Growth**: a two-day program for managers focusing primarily on the more formal aspects of governance, and to a limited extent provide expertise about strategic drivers in smaller companies. Participants first go through a series of mini
courses on relevant technologies, conduct a DMI and prepare a case to work with. In the first session, the training starts in innovation methodology and uses knowledge about their own company and the insights they have gained about technology to work with their case. After three weeks of self-employment, they meet again to continue their training. After the program, they receive an alumni group in the Digital Norway Community they can work on together. Such competence is important for strategy work, and to understand the need for necessary investments. Digital Norway develops a program that analyses and further develops the digital skills of the managers. The program can also be taken by members in nomination committees and in top management teams. The Digital Norway Competitiveness & Growth program focuses on how digitization affects the business, its environment, leadership requirements, and opportunities for streamlining operations. The control program acts as an optional module that can be linked to established drivers or taken as a standalone program for those who have been through other drivers. The program is suitable for all managers and offers a relevant range of modules that can be combined into a program that fits any board.

**Practical information**

The Competitiveness & Growth program consists of three modules and access to three of Digital Norway’s services.

- **iDMI** - Individual Digital Maturity Indicator to map the level of competence within digitization. This is a questionnaire based on self-assessment and can be performed as part of general board evaluation.
- **Workshop** - updates the managers of the most prominent digital technology drivers, coupled with discussion and reflection on relevant business examples. Workshop is adapted so that it can be taken as part of an extended board meeting.
- **Courses** - The course is designed as a workshop for managers. Duration is one day, and the course covers the most important digital technology drivers like digital business models, digital marketing, interaction and sales, digital platform economics and cybersecurity. The course is set up as a combination of lectures and case assignments. The main purpose of the course is to enable board members to ask the right questions to the administration in relation to digitization, as well as to understand how the technological forces affect the business.

In addition to the three above-mentioned modules, the managers will have access to experts from the Digital Norway Expert Network, as well as access to online resources through Digital Hub. The unique with Digital Norway board of directors is access to experience and case from the full width of Norwegian business, as well as access to experts in a wide range of digital technologies. The Competitiveness & Growth program is adapted to the needs of each company/individuals need.

- **Competence Network**: Digital Norway brings together Norway's leading expertise to advise on the future. Blockchain, Artificial Intelligence and the Internet of Things. Our digital technologies today challenge established processes and organizations. The expertise networks gather experts, suppliers, users, authorities and stakeholders to explore new digital technologies, platforms and business models. This creates
knowledge and competence with value both for participants in the Competence Network and for the owners, members and users of Digital Norway.

Competence networks will help to:
- Further develop insights into specific digital technologies.
- Establish best practices for procuring and using new technology.
- Build networks with experts and stakeholders across Norwegian business, academia and government.

The first competence network deals with blockchain and been launched recently. Through this forum, our goal is to connect organizations and people interested in Blockchain and Distributed Ledger Technologies (DLT) with experts, technology providers, technology seekers, regulators and enthusiasts, to develop an environment that fosters innovation. Our mission is to establish this forum as a place of conversation of Blockchain and DLT, and to provide relevant connections and information/updates in the field.

- **Digital courses:** an existing and growing offering of online training in digital technology and various topics related to digitalization. We do not have an ambition to follow companies closely over time, but to start them with digitalization and qualify them for greater lifting later. These promises we believe other providers, such as research communities and consulting companies, can handle. We have also piloted several other services and products, including a management program, but have so far failed to get a good enough scaling model in place.

**Industry Projects:**
Digital Norway is involved in projects assisting whole industries in their work to digitally transform industries. This work depends on a consortium of industry partners that lead the work, where our role is to facilitate change. Some examples of the projects.

- **National Projects:** Digital Norway’s position as an independent, inter-industrial arena with no heavy commercial interests has positioned us to be able to lift major change projects. Based on banking cooperation in Norway, we have developed a methodology that is now being used to initiate and launch and then implement initiatives in the petroleum industry and the power industry. The two ongoing projects are based on how companies and ecosystems in an industry work together and to exploit the opportunities provide for an entire value chain. Digital Norway is currently involved in two such projects:
  - **DataLink - the** oil and gas industry, with Equinor, AkerBP and a number of other participants from the industry. One of the ambitions has been to look at how standardized data exchange procedures can be created - making it easier to collaborate across companies on the Norwegian continental shelf. Three sub-projects are being worked on: data sharing in partner licenses, HSMS data and common APIs. At the same time, a bit more basic work is underway among the project participants in looking at what role the initiative will have in the future.
  - **DIGIN - in** the power industry together with Statnett and Lyse, we have matured a collaboration between all the leading network companies, which is first and foremost about establishing a common information
model. The overall goal is to reduce the costs in the industry and through the grid rent, which benefits Norwegian business and consumers.

- **EU Projects**
  - **TRINITY** - aims to create a network of multidisciplinary and synergistic local digital innovation hubs (DIHs) composed of research centers, companies, and university groups that cover a wide range of topics that can contribute to agile production: advanced robotics as the driving force and digital tools, data privacy and cyber security technologies to support the introduction of advanced robotic systems in the production processes. The result will be a one-stop shop for methods and tools to achieve highly intelligent, agile and reconfigurable production, which will ensure Europe’s welfare in the future. TRINITY network of DIHS will also offer training and consulting services, including support for business planning and access to financing. Services of participating DIHs and dissemination of information to wider public will be provided through a digital access point that will be developed in the project. Another important activity of the project will be the preparation of a business plan to sustain the network after the end of the project funding.
  - **DIGI-B-CUBE** - aims to establish a cross-border and cross-sectoral ecosystem that combines digital innovations from the IT sector with three key important industries (Bioimaging, Biosensing and Biobanking) within the health sector. This project brings together clusters from various sectors & focus areas such as Biopharma, IT, Biotech, Personalized Medicine & Digital Health, ICT, IoT & Cyber-security, Analytical Instruments & Medical Devices, Medical Materials, Optics & Automation, Micro & Nanotechnology, Automotive, Cleantech, Construction, Plastics, Food and Medical Technology, with active members from research institutes, hospitals and economic development support agencies from a range of European countries, DIGI-B-CUBE has the resources and network needed to reach a wider number of relevant SMEs from all ranges of size and applications.
As mentioned in InnoCAPE proposal…… To build a common understanding of the functioning of DIHs around the BSR and learn about practicalities of digitalisation of SMEs, case studies will be identified, and study visits will be organised by countries which are leading in terms of Industry 4.0. Study visits provide an opportunity for partners and key stakeholders to learn relevant, good development practices from their peers. Study visits allow for a high level of interaction among participants and exposure to the topic of study, can facilitate horizontal learning and networking between a range of people working on same topic at different levels.

DigitalNorway (DN) invites you to the first InnoCAPE study visit scheduled in Oslo @ 22-23 May 2019. The event comprises of

- case study presentations focusing on the DN’s digital transformation services and activities
- study visit to an organisation that received DN’s digital transformation services
- InnoCAPE’s second physical consortium meeting
# Participants

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<tr>
<th>Name</th>
<th>Organization</th>
<th>Country</th>
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<tr>
<td>Annika Koskela</td>
<td>SeAMK</td>
<td>Finland</td>
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<td>Christoffer Andresen</td>
<td>RISE Research Institutes of Sweden</td>
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<td>Sunrise Valley Science and Technology Park</td>
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<td>Alo Lilles</td>
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<td>Per Erik Aspen</td>
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<td>Helge Dahl-Jørgensen</td>
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<td>Eirik Andreassen</td>
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</table>
Agenda

22 May 2019 @ Meeting Room NIMBUS

09:45–10:00  REGISTRATION & COFFEE

10:00–10:45  Introduction and Visiting DigitalNorway Premises
             Tor Olav Mørseth, DigitalNorway, Norway

10:45–11:30  CASE 1 – Community
             Tor Olav Mørseth, DigitalNorway, Norway

             Annita Fjuk & Per E Aspen, DigitalNorway, Norway

12:15–13:00  LUNCH BREAK

13:00–13:45  InnoCAPE
             DIH knowledge gap analysis, SVSTP, Lithuania

13:45–15:00  InnoCAPE
             Defining DIH training programme, All partners

15:00–15:15  COFFEE BREAK

15:15–16:00  InnoCAPE
             DMA tool, Umea university Sweden

16:00–16:45  InnoCAPE
             Discussion, All partners

19:00–21:00  DINNER at Palmen Restaurant - Grand Hotel
             Karl Johans gate 31, 0159 Oslo
23 May 2019 @ Meeting Room AQUA

09:45–10:00 **COFFEE**

10:00–10:45 **CASE 3 – Digital21**  
Tor Olav Mørseth, DigitalNorway, Norway

10:30–11:15 **CASE 4 – DMI**  
Eirik Andreassen & Per E Aspen / Annita Fjuk, DigitalNorway, Norway

11:15–15:00 **Study Visit to DNB**  
Dronning Eufemias gate 30, 0191 Oslo

Agenda:

- 12.00 Welcome and intro to DNB and the partnership team  
- 12.30 How we work with innovation in consumer market – Kathy Hao-Hsuan Chang  
- 13.00 The fintech landscape – Erlend Nitter-Hauge  
- 13.30 InnoCAPE Intro – Evelina Kutkaityte/SVSTP

15:00–15:45 **CASE 5 - DIGIN & DataLink**  
Helge Dahl-Jørgensen, DigitalNorway, Norway

15:45–16:00 **EU Projects for SMEs**  
Gupta Udatha, DigitalNorway, Norway

16:00–16:15 **COFFEE BREAK**

16:15–17:00 **InnoCAPE**  
Competence database – first ideas & discussion, Seinajoki university, Finland

17:00–17:45 **InnoCAPE**  
InnoCAPE administration & reporting, SVSTP, Lithuania

17:45-18.00 **SUMMARY & SNACKS**
Recommended Hotel

Keeping in view the proximity to the city and public transport convenience, we recommend you to stay at the following hotel:

**Radisson Blu Scandinavia Hotel, Oslo**  
Holbergs gate 30, 0166 Oslo, Norway


Other Hotels

If you are looking for something luxurious, then we recommend:

http://www.grand.no/en/default.html

Budget friendly hotel:

[https://smarthotel.no/en/oslo](https://smarthotel.no/en/oslo)
● Guide to reach Radisson Blu Scandinavia Hotel from the Airport

**Step 1**
After a pleasant flight, you will land in Oslo Airport (Gardermoen). Once you take your baggage and Exit the belt area, please follow the signs towards Airport Bus platforms outside the Airport Hall - just a short walk.

**Step 2**
Purchase a ticket for Flybussen (Airport bus) – either online or from the bus driver. Take Flybussen FB2 or FB5 which usually depart from either Platform 11 or 10. Buy a ticket to Scandinavia Hotel. [Flybussen: fares and timetables](#)

The final stop for Flybussen FB2 or FB5 is at the entrance of Radisson Blu Scandinavia Hotel.

● Guide to reach DigitalNorway from Radisson Blu Scandinavia Hotel

**Step 1**
From Radisson Blu Scandinavia Hotel, the best way to reach DigitalNorway is by using public transportation. Behind the hotel, please find the Tram Stop ‘Holbergs Plass’. Take tram #17 or #18 towards the direction Rikshospitalet and get down at the tram stop ‘Forskningsparken’. DigitalNorway is just 4 minutes walking distance from the “Forskningsparken” tram stop as shown in the map below. You can buy the tickets at various small shops like, NARVESEN, 7-ELEVEN or online. There is a NARVESEN shop at Radisson Blu Scandinavia Hotel. See [RUTER travel planner](#) for details.

![Map](#)

**Step 2**
After you arrive at Gaustadalléen 21, please take help from the reception to reach respective meeting rooms – we will also place some signs!
Guide to reach DigitalNorway from the Airport

Step 1
After a pleasant flight, you will land in Oslo Airport (Gardermoen). Once you take your baggage and Exit the belt area, please follow the signs towards Airport Train Section in the Airport Hall - just a short walk.

Step 2
Purchase a ticket for Flytoget (Airport Express Train) – either online or at the ticket vending machines before you enter the platforms or by just swiping your credit card when you enter the Flytoget station area. Buy a ticket to Oslo S. Flytoget trains usually depart from either Platform 3 or 4. Flytoget: fares and timetables

Step 3
From Oslo S, the best way to reach DigitalNorway for new comers is by TAXI. Ask the driver to go to Gaustadalléen 21 – saying it is near Forskningsparken helps.

If you intend to use public transportation from Oslo S: See RUTER travel planner for details. Vending Machines are available at Metro stations and you can also buy the tickets at various small shops like, NARVESEN, 7-ELEVEN or online.

- Tram #17 or #18 towards the direction Rikshospitalet:
  4 minutes walking distance from the “Forskningsparken” tram stop
- Metro (T-bane) #4 or #5 towards Vestli or Ringen:
  4 minutes walking distance from the “Forskningsparken” metro stop

Step 4
After you arrive at Gaustadalléen 21, please take help from the reception to reach respective meeting rooms – we will also place some signs!
DigitalNorway Community

An innovation journey
May 22nd 2019
Our goal:
Give all Norwegians access to the information, network and discussion partners they need
We wanted to help people looking for new insights, inspiration, network and tools

Communication should be efficient and easy
- A shared space where conversations are organized and accessible, and everyone feel connected regardless of the geography

Collaboration should be easy
- Meet and interact in channels, collaborate on tasks, share knowledge and discuss ideas in groups or community-wide

Answers you need should be easily found
- A searchable archive across posts, articles, conversations, groups, events, brands, decisions and work

DigitalNorway
DigitalNorway is an arena where everybody who works with digitalization in Norway come together

∞ A professional arena where people learn from each other
  ∞ Increase you digital competence
  ∞ Learn from others’ experiences, get access to practical tools and methods
  ∞ Explore and join discussions on new fields of expertise
  ∞ Be inspired to act

∞ A campfire where you meet others like yourself
  ∞ Expand your network and make new connections
  ∞ Find new partners

∞ Volume – building a strong and self-reinforcing network
How to grow a network
Our community is part of an eco system to attract and retain users

- We have started with building blocks that can trigger users to enter the community platform from different starting points:
  - The homepage or the weekly newsletter
  - Social Media (e.g. case triggers)
  - Learning platform/modules such as Digitaliseringsguiden
  - Physical events
  - Through partner networks
Ukens Bits & Bytes

Følgelige fartdumper. Facebooks fortsatte fall.
Fremtidens er 5G. Her er ellers snakker, arbeidstaker - og at du trenger for å skinne på morgenmøtet.

Dette leser vi

ENERGITEMNØY – 03.12.2019

Connected Drone klar til innsetting

Etter et trevlig forskningsprosjekt kan

Norwegian Digitalisation

Jon Elvind Thrane in Agile arbeidsformer

Noen ganger er det de tilsynelatende små tingene som hindrer oss. Som f.eks. når forskjellig forståelse av begreper skaper skinn- enighet som ikke oppdages før folk har blitt skikkelig frustrerte. "Agile" er et sånt begrep, og som trenger en definisjon spesielt når det brukas i nye samanhengar som "agile organisasjoner". See More

Tor Olav Morseth in Eierkontakter

Laster opp presentasjonen som ble gjennomgått i møtet forrige uke

https://xd.adobe.com/view/
How do we build volume
Content is king – we need to build a critical mass of contributing members

- User generated content delivered by moderators and participants in the community
- Active mobilization of high-performing members and groups of members
- Employees dedicated to mobilizing and supporting members of the community
- Around 1000 members and growing
- Last week, 20% of registered users logged on at least five times
Gamification driving desired behaviour

The User

Make Actions
- Posts
- Articles
- Likes
- Comments
- Connections

Receive Points and Badges

Gain Reputation

Get Privileges
- Prices
- Premium Features
- Moderator Access
- Higher Ranking
- Etc.
The community is our hub, and enables existing and new activities.
We are working on new functionality to increase value

- Learning Module
- Market Place
- Badges and gamification
- Live chat for support
A learning module to provide simple courses
A marketplace to monetize our users
Live chat to improve customer service
Get Started

Connect, learn and contribute on DigitalNorway, and receive rewards in form of badges, reputation and privileges for the actions you make.

LEARN MORE

Start Now

Later
Let’s take a look

DigitalNorway Community
DigitalNorway
– shifting the mindset of an entire country

May 22nd
Tor Olav Mørseth
Digitalization ...

... is about using the possibilities digital technologies gives us to improve, renew and create.
Understanding of technology

×

Ability and willingness to change
The Economist

Immigration: Obama gets it right
The rift between China and North Korea
Can Egypt’s revolution be rescued?
How to reform America’s lawyers
The mystery of the Bermuda Triangle

The next supermodel

Why the world should look at the Nordic countries
A 34-PAGE SPECIAL REPORT
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Source: BCG Analysis, BCG e-Intensity Index
We are too small by ourselves
DigitalNorway was created to increase Norwegian competitiveness
The beginning – «Jumping to the next curve»
- a challenge for one of the major Norwegian enterprises
DigitalNorway was created to increase Norwegian competitiveness

Through launching select collaborative projects that move entire industries
DigitalNorway was created to increase Norwegian competitiveness through launching select collaborative projects that move entire industries. Through giving SMEs access to some of the capabilities and networks of large organizations.
This is who we are

- A non-profit founded by 15 leading Norwegian companies to increase the pace of digitalization in Norway
- Built on a premise that we share where we may and compete where we must
- Work with sharing knowledge and competence through networks and services, run selected projects and is secretariat for Digital21
- SMEs are main focus
We create value for Norwegian business through...

... making sure knowledge is shared

... being an integrator that brings relevant parties together with a common purpose

... giving advice to the Norwegian government through Digital21

... deliver practical, scalable services and products to SMEs at costs they can afford

... initiate and launch major projects that affects Norwegian competitiveness
Select projects to move entire industries
The government launches Digital21 – a body that will advise government on how to enable businesses to develop and utilize new technology.
DIGIN – digitalizing the Norwegian electrical grid

- DigitalNorway did a project together with Statnett and Lyse to see how digital technologies may affect the Norwegian electrical grid.
- As a result, the industry has come together and is now working with a joint information model as an important first step in their collaboration.
DataLink – enabling data sharing on the Norwegian continental shelf

- All major oil&gas companies are part of a collaboration that aims to build a framework for data sharing.

- Three use cases are nearing completion:
  - Common open APIs
  - Data sharing within license
  - Collaboration on HSE data
Omstillingsmotoren – enabling SME digitalization

- Supported by Innovation Norway, we offer specialized assistance to SMEs all over the country

- Through *Clusters as a catalyst for change*, SMEs may access the full knowledge base of NCE iKuben, NCE Systems Engineering and NCE Smart Innovation Norway
Practical programmes to help SMEs get started
Say hello to Anne – an intrapreneur

Anne needs knowledge, courage and the tools to make things happen
The Guide to Digitalization will give her all of that – for free

The guide will take Anne through the challenges of digitalization – step by step. On each of these steps she will find relevant information, articles and cases, as well as simple and concrete tools and templates that shows her how to get things done.

The guide is created to give as many as possible access to curated, high quality information. The goal is to make it simpler to use digital technology to improve, renew and create.
A national arena for knowledge and discussions about digitalization

DigitalNorway Community is an arena for everyone interested in or working with digitalization across companies and across industries – and in both the private and public domain.

This is where Anne meets people like herself and make connections she would not otherwise have access to. The platform is filled with knowledge from expert users and people seeking advice.
Assessing your own digital maturity

• A survey where SME managers answer a series of questions and get a report that helps them get started with digitalization

• A practical discussion tool
Training of SME managers

- **Competitiveness & Growth** is a two-day program for managers where they bring in their own case, learn how they may use technology to solve it and are training in innovation methodology.
We have entered the international arena to learn from some of the best and make sure knowledge is transferred back to Norwegian SMEs.
Innocape - the greatest project ever formed
TRINITY

- Digital Technologies, Advanced Robotics and increased Cybersecurity for Agile Production in Future European Manufacturing Ecosystems

- 16+ million euros funding under H2020 program
- 17 use cases
- 8 mill + funding for SMEs
Digital Enterprise Innovations for Bioimaging, Biosensing and Biobanking Industries

- 5+ million euros funding under H2020 program
- 2.5 million euros as vouchers for SMEs that want to work with the consortium
Making it easier to succeed for Norwegian businesses
Content

Why did we do it?
How did we do it?
Your reflections?
Customer focus as the key to digitalization

“Technology transforms the way we live, act and make decisions at unprecedented speed. And because customers, cultures and markets are changing fast, companies that want to pull ahead of the mainstream must use customer focus to guide everything they do: from operations to product development.”

– Google Digital Academy
SMEs challenges

- Limited resources to further education
- Reduced access to training customized for the SMB context
- Lack experience and confidence to start doing

Learning from the frontrunners

Offering the SMEs the same approaches and tools, but customised for their needs

Sources: Digital maturity data, N>1500
Change behaviour through creating role models

**CONTEXT**

**BEHAVIOUR**
Show through practice. Empower intrapreneurs and change agents to become role models in the company.

**MINDSET**
Experimentation. Fail fast.

Sources:
Ismail M. Jr: Exponential organisation
Telenor Group People
We will help Anne to succeed as role model of practicing intrapreneurship and innovation in the SME

- Step-by-step process guidance in her own language
- Inspiration cases on usage of digital technology, and of which she can relate
- Tools and methods that make it easier to start practicing and to secure anchoring in own organisation
COMPAS FOR DIGITAL TRANSFORMATION AND INNOVATION
Step-by-step guidance

Visual approach (Videos)

Focused text in a simplified language.

Step-by-step guidance to methods
INSPIRATION CASES

Using cartoons to communicate complex stories and cases in a pedagogically and user-friendly way
Tools and methods

Dybdeintervju

- 30-60 minutter pr intervju
- Ta opp og passe til gjerne lydopptakere og kamera
- Så mange intervjuobjekter du vil ha

Hva
Et spiskestueintervju med personer i målgruppen for produktet eller tjeneisen du skal forbedre eller skape

Hvorfor
Dybdeintervjuer bruker du for å gå i dybden på brukerens/kundenes behov, forventninger, opplevelser og utfordringer. Dybdeintervjuer gir innsikt i generelle holdninger og hvordan en bruker/kunde tenker rundt et problem eller en utfordring på en annen måte enn markedsundersøkelser.

Hvordan


2. Finn et sted hvor dere får sitte i fred i en hyggelig atmosfære. Bygg lett gjennom å vise interesse og engasjement.

3. Husk at det er intervjuobjektet som skal snakke, ikke du. Her er noen tips på veien:
   - Snu intervjuobjektet fortelle historier (først meg om første gang du...? Hva skjedde da da?...)
   - Forsøk å få dem grunnleggende årsakene til et problem eller en utfordring (hva er årsaken til at...? Hvordan er det slik? Hva kan du bruke metoden...? Hvordan?)
   - Hvis de snakker for vilt eller ikke foretar sitt selv
   - Undersøk lydopptak og oppførte glemte personlig refleksjon (først meg om den bevissterne opplevelsen med...? Hvordan reagerer... på dette? Hvordan er den liksom viktig for deg?...)
   - Spør inn noen av (hva er enere mon det?)
   - Undersøk tenker med spørsmålet som har avlyis du om...? Hvordan inn du...? Hvordan for in du...?

4. Dokumenter underveis. Her kan du eneste bruke en lydopptaker eller at dere er to stykker hvor den ene spør og den andre tar notater. Ta gjerne et bilde av intervjuobjektet. Dette bruker du i oppsummeringen.

5. Skriv ut spørsmålu og sør fra intervjuere, og lag i tillegg en kort oppsummering med de viktigste svarene du fikk sammen med et bilde av personen.

Hva får du ut av det
Dypere innsikt i behov, utfordringer og opplevelser til personer i målgruppene. Dette er viktig for å konstati hvilken jobb du skal gjøre for dem.
Here is the guide – try it yourself!

https://digitalnorway.com/digitaliseringsguiden/
Digital21
Enabling Norwegian businesses to develop and utilize new technologies

InnoCAPE
Oslo, May 23rd 2019
Agenda

• About Digital21

• The recommendations

• This has been done so far
The government establishes Digital21

- Norwegian companies need to increase their competence
- We must utilize the technological opportunities out there, and we must do it quickly
- The challenges are found both in businesses ability to utilize new technology and their ability to develop new knowledge

- Monica Mæland, Minister of Trade
The mandate: Across businesses

- Digital21 on a country tour
  - 600 participants
  - 11 locations

- Directed dialogue with business and government entities

- Input from other 21-processes

- 60 experts in 6 expert groups
Agenda

• About Digital21

• The recommendations

• This has been done so far
Digitalization affects everything - across industries – that is at important part of the conclusions
Digital21 – a strategy with five tasks to solve

1. Establish a relevant base of knowledge and technology and develop new business opportunities
2. Secure access to needed competence
3. Ensure cyber security is at the basis of everything we do
4. Make data resources available and develop a business-oriented infrastructure
5. Develop a public framework to stimulate innovation and digitalization

64 recommendations to solve these tasks

Many players need to effectuate the recommendations to pull in the same direction
Digital21 – a strategy with five tasks to solve

1. Establish a relevant base of knowledge and technology and develop new business opportunities
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21 recommendations

Develop technology and knowledge
- Deep knowledge – four strategic long-term areas of focus
  - FND centres – «national teams»
  - Continuity in research funding
- Broad knowledge – other enabling technologies
- Develop deeper knowledge on the effects of digitalization
Digital21 – a strategy with five tasks to solve

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21 recommendations

Develop technology and knowledge
- Deep knowledge – four strategic long-term areas of focus
  - FND centres – «national teams»
  - Continuity in research funding
- Broad knowledge – other enabling technologies
- Develop deeper knowledge on the effects of digitalization

Utilize technology and knowledge
- Simplification, predictability and clout
- Facilitate increased speed from funding agencies
- Near-market innovation – building businesses
A snapshot: How to make strategic choices
Gartner’s Hype Cycle – a starting point for discussing digital technologies

- Connected Home
- IoT-platform
- Smarte roboter
- Edge Computing
- Digital tvilling
- 5G
- Kunstig intelligens - Dyp forsterket læring
- Kunstig intelligens - Generell
- Kunstig intelligens - Dysplæring
- Kunstig intelligens - Maskintæring
- Autonome systemer
- Kunstig intelligens - Kognitiv analyse
- Blokkjede
- Kommersielle droner
- Kunstig intelligens - Kognitiv ekspertise
- AR
- Utvidet virkelighet
- VR
- Virtuell virkelighet
- Cloud Computing
- 3D printing

PLATÅ VIL NÅS INNEN:
- Mindre enn 2 år
- 2 - 5 år
- 5 - 10 år
- Mer enn 10 år
### Important industries
(GDP, export, societal challenges)

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#### Basisteknologier

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<td>Sensorer</td>
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<td>Stordataanalyse</td>
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</tbody>
</table>
That’s why we talk about an industrial revolution.
We can’t be good (best) at everything!
What criterias do we base our strategic choices on?
Løpende basispriser

Verdiskaping

(GDP contributions)

Change in value added

Verdiskaping snitt 2014-17

Løpende basispriser

Olje og gass m. tjenester og rørtransport

Helse og omsorg

Eiendom/er

Varehandel

Bygg og anlegg

Finans

info. og komm.

Reiseliv

Endring, i verdiskaping


(faste 2005 priser)
Norsk eksport - 2017 - 843 mrd NOK

- Olje og gass: 424,6
- Fastland: 418,7

- Sjømat: Export value 80,0
- Maskiner: Export value 80,0
- Øvrig: Export value 80,0
- Kjemiske produkter: Export value 60,0
- Andre metaller: Export value 40,0
- Ferdigvarer: Export value 20,0
- Råvarer: Export value 20,0
- Jern og stål: Export value 20,0
- Metallvarer: Export value 20,0
Criteria for strategic priorities

Impact in important Norwegian industries

Width of impact - the eco system

Strong Norwegian research-and tech base

International market potential
## Strategic priorities

<table>
<thead>
<tr>
<th></th>
<th>Impact in important Norwegian industries</th>
<th>Width of impact - the eco system</th>
<th>Strong Norwegian research- and tech base</th>
<th>International market potential</th>
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<td>3</td>
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<tr>
<td>4</td>
<td>![Icon]</td>
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</tr>
</tbody>
</table>

- **Green** = Stort samsvar mellom kriteriet og teknologiområdet
- **Yellow** = Samsvar mellom kriteriet og teknologiområdet
- **Red** = Ikke noe samsvar mellom kriteriet og teknologiområdet
Digital21 – a strategy with five tasks to solve

1. Establish a relevant base of knowledge and technology and develop new business opportunities

2. Secure access to needed competence

3. Ensure cyber security is at the basis of everything we do

4. Make data resources available and develop a business-oriented infrastructure

5. Develop a public framework to stimulate innovation and digitalization

Secure access to needed competence:

13 recommendations along three categories:

- More efficient competence building
- Increase capacity and flexibility in ICT education
- Strengthen digital in general education
Digital21 – a strategy with five tasks to solve

1. Establish a relevant base of knowledge and technology and develop new business opportunities
2. Secure access to needed competence
3. Ensure cyber security is at the basis of everything we do
4. Make data resources available and develop a business-oriented infrastructure
5. Develop a public framework to stimulate innovation and digitalization
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Digital21 – a strategy with five tasks to solve

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2. Secure access to needed competence
3. Ensure cyber security is at the basis of everything we do
4. Make data resources available and develop a business-oriented infrastructure
5. Develop a public framework to stimulate innovation and digitalization

Three principles for the government

1. Innovation as a principle for procurement
2. Openness as a principle in data governance
3. Simplicity as a principle for regulation and cooperation
Digitalization affects everything - across industries— that is an important part of the conclusions.
Agendapunktter

- About Digital21
- The recommendations
- This has been done so far
Agendapunkter

• About Digital21

• The recommendations

• This has been done so far
What has been done so far?

• Many players want involvement from Digital21
What has been done so far?

• Many players want involvement from Digital21

• The government is doing their part
a stronger cross-departmental organization to solve needs and challenges that exist across ministries – a «CDO» with cross-departmental responsibilities and authority
strengthen the digitalisation directorate as a government integrator for tech-friendly regulation
Hva er gjort siden fremleggelsen i høst?

• Many players want involvement from Digital21

• The government is doing their part

• Businesses are doing their part

Four examples:
1. Digitaliseringsguiden
2. DigitalNorway Community
3. Cyber security – a low-threshold
4. Nærinsaktørene bruker 21-anbefalingne
1. Digitaliseringsguiden

Seks faser som hjelper deg med å lykkes


Målet med Digitaliseringsguiden er å veilede deg igjennom hele prosessen slik at du når dine mål raskere og på en best mulig måte. Her finner du metoder for å skape og teste nye ideer, presentere dem for ledelsen og tillegne deg verdifull innsikt om markedet du opererer i. Guiden er delt opp i seks ulike faser: Hvor du starter avhenger av hvor i prosessen din bedrift befinner seg. Finn ut hva du trenger ved å utforske de ulike fasene, og kom i gang!
2. DigitalNorway Community
Cyber security – solutions for SMEs

Digital21:
Motivate, enable and set clear demands to businesses

Recommendation #42:
• Give access to simple «health check» for SMEs

Recommendation #44:
• Set minimum standards for cyber security on all public contracts

DigitalNorway’s owners are picking up the glove:
• A group formed to operationalize the recommendation
• A simple health check product is being piloted
We read everything in Digital21 to calibrate our strategic direction. Harmonization with government strategies make it easier for us to succeed.

Kristian Steinsvik
R&D Manager, Havyard Group

HAVYARD – zero emission vessel

Prepared for Hydrogen

HVAC from shore in harbour

LNG

Cold Recovery from LNG

PM-Thrusters

Plug-in Batteries

Jacket Heat Recovery

Adaptive LED-lightening

Automated optimization of hull lines

Rederiet ønsker å utfordre:
- Korleis bli mest miljøvenleg langs Norskekysten?
In short, this is what we have achieved...

- A stakeholder approved plan with 64 recommendations for how businesses may work together with the government – tasks and responsibilities.

- Established an efficient channel for operationalizing a private-public partnership.

- The work has started – it is not finished...

- The work has started – both within the government and within private businesses.
Digital21 is a strategy ...

... with many specific recommendations. The totality brings us in the right direction
Do we really need another Digital Maturity Indicator?

Eirik Andreassen – DigitalNorway
InnoCAPE Study Visit #1 in Oslo
23 May 2019
COMPAS FOR DIGITAL TRANSFORMATION AND INNOVATION
Digital Maturity: Ability to adopt digital technologies to create increased competitiveness and growth
Why is it so difficult for established companies to apply digital technologies in their business processes?
What do companies say about these challenges?

1 – Leadership – How to manage the transition from being a decision maker to becoming a facilitator?

2 – How to become a data driven company?

3 - Manager lack experience about the future, and must behave differently to gain new experience about the business they are in

4 – Understanding of end user behaviour becomes even more central – independent where in the value chain the company is

5 - The more complex the world becomes, the more important network arena and collaboration become when trying to make sense of what is going on
The challenge lies in balancing the need to develop today's business (exploit) while adapting to changing boundary conditions (explore)
Experience based

Business plan
Risk averse
Internal focus
Driven by quantitative metrics
Internal subject matter experts
Hierarchical

LEADERSHIP

WAY OF WORK

BEHAVIOR

EXPERTISE

Data driven

Learning by doing
Sharing
Building on others ideas
Collaboration
Autonomous teams
Use of external experts
Partnerships

AMBIDEXTROUS ORGANISATIONS
What is the Digital Maturity Indicator?

- One of the biggest challenges is the ability of ambidextrous leadership
- Therefore, we have chosen to create a scale for each statement that runs between
  - Exploit: effectively leading and developing today’s business
  - Explore: adapting to changing framework conditions [and applying new technology]
- But remember, it’s all about the balance

- DMI is a qualitative examination of Norwegian companies’ digital maturity
- It consists of 22 statements within 5 categories that challenge the business to reflect on what digitalization means and its own ability to change
- It indicates (but does not provide definite answers) how ready a company is to adopt digital technologies in their own business
Why have we made it?

- To provide a practical, simple and convenient tool for the width of Norwegian SMES that
  - Increases awareness of what digitalization means for leaders
  - Create a common language that simplifies exchanging experiences from digitizing businesses across industries
  - The basis of a common understanding in leadership groups for opportunities and threats
  - To have an efficient channel into our services

- KEYWORDS
  - Accessible
  - Thought provoking
  - Demystifying
  - Collaborative
What does the respondents say?

1. I believe Norwegian companies in general have to realign themselves as a result of digitization over the next five years to remain competitive. 86%

2. Digital Technologies will create new opportunities for your business over the next five years. 76%

3. Your business providers offer solutions that use digital technologies in new ways. 46%

N~1500
How have we made it?

- DMI is inspired by the following
  - David L Rogers: The digital Transformation Playbook
  - Translated into Norwegian, simplified, and continuously adapted based on feedback from users
Experiences

- Leaders are generally very happy with digital maturity in their own company. They score themselves high.
- The survey helps companies better understand what digitalization means.
- The survey enables companies across industries to share their experience, and find common ground for collaboration.
- Replies from management groups show great variation in how they respond – which indicates very little alignment within the team of the subjects.
Some examples of the variations of reply within the same company?
Some examples of responses to individual statements
Available data and insights from internal and external sources are applied when the business takes strategic decisions.

The company explores actively how internal and external data sources can form the basis for new insights that contribute to better strategic decisions.
The business emphasizes qualitative and forward-looking indicators to drive change and improvement.

To drive change and improvement, the business relies primarily on quantitative indicators related to increased efficiency, increased market share/sale, or reduced costs.

To drive change and improvement, the business relies on qualitative forward-looking indicators related to collaboration, sharing, and working in agile innovation cycles.
The business involves external partners in product and service development

The company has only internal processes to drive innovation

Cooperation with external partners, competitors, startups, and/or academic institutions is established to get new perspectives on product and service innovation
How do DigitalNorway utilise the DMI?
How do DigitalNorway utilise the DMI?

Digital Diagnosis

- for industry organisations and seminars
- for Courses and Clusters managing their members
- for Boards and Management team
- for managers and employees

DMI Presentasjon Discussion topics
DMI Presentasjon Roadmap
DMI Presentasjon Workshop guide
DMI Interviews Workshops Recommendations Roadmap
How can the InnoCAPE project utilise the DMI?
How can the InnoCAPE project utilise the DMI?

- Available at [dmi.digitalnorway.com](http://dmi.digitalnorway.com)
- ...in Norwegian only, but we can translate it and make available an English version
- ...We use an internationally renowned company (Confirmit) for data collection, protection and storage,
- ...we and have been developing our Data Processing Agreement (GDPR)
Industry projects
- Digital collaboration within industries

23th May 2019
Helge Dahl-Jørgensen
We create value for Norwegian business through...

... making sure knowledge is shared

... being an integrator that bring relevant parties together with a common purpose

... giving advice to the Norwegian government through Digital21

... deliver practical, scalable services and products to SMEs at costs they can afford

... initiate and launch major projects that affects Norwegian competitiveness
**Viktige næringer**
(BNP, eksport, samfunnsutfordringer)

<table>
<thead>
<tr>
<th>Olje og gass</th>
<th>Sjømat</th>
<th>Prosess</th>
<th>Bygg og anlegg</th>
<th>Varehandel</th>
<th>Maritim sektor</th>
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<td>Jordbruk</td>
<td>Maskiner</td>
<td>anlegg</td>
<td>Finans</td>
<td>Havrommet</td>
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<td>Transport</td>
<td>Turisme</td>
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### BASISTEKNOLOGIER

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<tr>
<th>Kunstig intelligens</th>
<th>Algoritmer</th>
<th>Konnektivitet</th>
<th>3D-printing</th>
<th>Blokkjede</th>
<th>Visualisering</th>
<th>Sensorer</th>
<th>Stordataanalyse</th>
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#### Analyses
- Technology by technology
- Sector by sector

#### Clarity evolves:
- *All technologies have impact*
- *All sectors are effected*
This is why we are talking about digital transformation.
Digital transformation in sectors

- New industry processes
- New relations between companies
- New business models in the value chains
The world’s most valuable resource

Data and the new rules of competition
Where do we compete? Where can we create structured collaborations?

**Industry value chain**

**Value realization from digitalisation**
- Process efficiencies
- Scale effects
- Analytics/Optimisation
- New solutions

**Enablers for digitalization – The digital foundation**
- Standards
- APIs
- Sharing infrastructure
- Rules
Where do we compete? Where can we create structured collaborations?

<table>
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<tr>
<th>Synergies/dependencies</th>
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<tr>
<td>Solved individually</td>
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<tr>
<td>Solved in the same way</td>
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<tr>
<td>Solved together</td>
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</tbody>
</table>
«Banking is necessary; banks are not»

Bill Gates, 1994
Collaboration on digitalisation - What can we learn across industries?

Banking - Common operative payment infrastructure

Utilities - Common standards and information models

Oil and Gas - Collaboration on enablers for sharing of data

Construction - Common standards, open BIM and digital roadmap
What will push digitalization of an entire sector?
– alignment and collaboration across private and public, across incumbents and new players
Role of DigitalNorway in industry projects – high level

- Industry coalition
- Industry associations
- Authorities/ regulators
- Initiative PMO
- SMEs
- Other initiatives

- Facilitator/advisor
- Policy/mandates
- Stakeholder management
- Communication- and interaction platform
EU Projects for SMEs

InnoCAPE Study Visit #1 • Oslo, Norway • 22-23 May 2019

D.B.R.K. Gupta Udatha
Special Advisor & Head of EU Projects, DigitalNorway
Director (Digital & EU), Oslo Cancer Cluster
Oncology focused research and industry cluster dedicated to accelerate the development of new treatments and diagnostics.

Focus on innovation, startup support, global partnerships, knowledge sharing and educational initiatives.
Value Creation in an Ecosystem
DigitalNorway provide services within three main areas

**Build** awareness and competence
- Digital maturity
- Digitalisation for managers

**Sharing** of knowledge
- Collaboration Platform
- Networks
- Conferences and seminars

**Apply** experience and competence
- Industry projects
  - Power transmission
  - Oil & Gas
- Public Projects
  - Digital21
  - Omstillingsmotor
Call - For a better innovation support to SMEs H2020-INNOSUP-2018-2020

DT-ICT-02-2018: Robotics Digital Innovation Hubs (DIH)

TRINITY

DIGI-B-CUBE
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 825196

Digital Technologies, Advanced Robotics and increased Cyber-security for Agile Production in Future European Manufacturing Ecosystems
Three thematic areas

**INTERNET OF THINGS**
Industrial Internet of Things, digital twins, digital tools & platforms

**ROBOTICS**
Interaction/ collaboration & system reconfiguration

**CYBERSECURITY**
Trust, data sharing, data privacy & system error recovery

@DBRK_Gupta
TRINITY:
Digital Technologies, Advanced Robotics and increased Cyber-security for Agile Production in Future European Manufacturing Ecosystems

<table>
<thead>
<tr>
<th>Participant Organisation Name</th>
<th>Country</th>
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<td>Tampere University of Technology</td>
<td>Finland</td>
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<tr>
<td>Centria University of Applied Sciences</td>
<td>Finland</td>
</tr>
<tr>
<td>UiT – The Arctic University of Norway</td>
<td>Norway</td>
</tr>
<tr>
<td>Jozef Stefan Institute</td>
<td>Slovenia</td>
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<tr>
<td>LMS University of Patras</td>
<td>Greece</td>
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<tr>
<td>Budapest University of Technology and Economics</td>
<td>Hungary</td>
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<td>Fraunhofer Gesellschaft</td>
<td>Germany</td>
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<td>Flanders MAKE</td>
<td>Belgium</td>
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<td>Elektronikas un datorzinatnu instituts</td>
<td>Latvia</td>
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<td>Leuvens Security Excellence consortium</td>
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<td>European Association of the Machine Tool Industries</td>
<td>Belgium</td>
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<td>DIGITALNORWAY Toppindustrisenteret AS</td>
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</table>

Approx.
16 Mil EUR
8 M 7 M 1 M

Open Call for SMEs
15 Partners & Use-cases
For DigitalNorway

@DBRK_Gupta
Consortium

- Coordinator: Tampere University

- 16 partners from 10 countries:
  - 5 universities
  - 3 Research & Technology organisations
  - 2 companies
  - 4 industry/technology associations
  - 2 technology broker SMEs
Digital Innovation Hubs

- One-stop-shop
- Provide access to industry to technology, expertise, testing, training, networking, funding…
- Technical and non-technical services
- Focus on SMEs/Midcaps

What DIH Deliver…

https://www.eu-robotics.net/sparc/upload/Newsroom/Press/2017/DIH_in_Agile_Production_FINAL.pdf
TRINITY structure

• Link existing networks

• Centralised digital point to access knowledge & network

• Provision of modules
Digital access point

Allowing you to connect to the network & access its knowledge
What is in it for you?

- Access to solutions adapted to your needs (modular approach)
- Access to wide network, expertise and knowledge through the TRINITY network and digital access point
- Shorter time to market
- Funding opportunities through open calls - Help us to shape the call topics to meet your needs
Open calls

First open call

2019

Second open call

2021

- At least 30 company demonstrators to be funded
- Experiments in industrial environments
- All thematic areas covered
- Calls open for 3 months after publication
- Up to EUR 300,000 funding per demonstrator
DIGI-B-CUBE

Digital Enterprise Innovations for Bioimaging, Biosensing and Biobanking Industries

(May 2019 – April 2022)

Dr. Gupta Udatha
Coordinator, DIGI-B-CUBE

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 824920
## Consortium & Geographical Overview

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Members</th>
<th>Total reach</th>
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<tbody>
<tr>
<td>Oslo Cancer Cluster SA</td>
<td>Norway</td>
<td>90</td>
<td>500</td>
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<tr>
<td>DIGITALNORWAY Toppindustrisenteret AS</td>
<td>Norway</td>
<td>300</td>
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<td>Cluster für Individualisierte ImmunIntervention (Ci3) e.V.</td>
<td>Germany</td>
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<td>INFOPOLE Cluster TIC</td>
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<td>Southern European Cluster in Photonics and Optics</td>
<td>Spain</td>
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<td><strong>Total</strong></td>
<td></td>
<td><strong>2,996</strong></td>
<td><strong>10,150</strong></td>
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Achieving successful digitalisation hinges on how SMEs exploit the potential of innovation projects into large-scale demonstrations or pilots and further integrate that knowledge to develop products and services and formulate new business models in order to generate growth.

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<thead>
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<th>Number of enterprises</th>
<th>Number of employees</th>
<th>Value added</th>
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<tbody>
<tr>
<td></td>
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<td>EU-28</td>
</tr>
<tr>
<td></td>
<td>Number</td>
<td>Proportion</td>
</tr>
<tr>
<td>Micro</td>
<td>259,250</td>
<td>91.8%</td>
</tr>
<tr>
<td>Small</td>
<td>19,597</td>
<td>6.9%</td>
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<tr>
<td>Medium-sized</td>
<td>2,930</td>
<td>1.0%</td>
</tr>
<tr>
<td>SMEs</td>
<td>281,777</td>
<td>99.8%</td>
</tr>
<tr>
<td>Large</td>
<td>615</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total</td>
<td>282,392</td>
<td>100.0%</td>
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</table>

These are estimates for 2013 produced by DIW Econ, based on 2008–11 figures from the Structural Business Statistics Database.
DIGI-B-CUBE aims to establish a cross-border and cross-sectoral ecosystem that combines digital innovations from the IT sector with three key important industries (Bioimaging, Biosensing and Biobanking) of the health sector, in lockstep with the Smart Specialisation Strategies.

To foster the creation of digital innovation solutions that will increase agility, efficiency and accuracy in the Medical Diagnostics value chain through digital transformation of SMEs.

To increase the competitiveness of SMEs through development and implementation of innovation services accelerating the rate of adoption of advanced technologies and business models.

To make IT solutions available and compelling for Bioimaging, Biosensing and Biobanking SMEs across the EU and associated countries through a cross-border and cross-cluster approach.

To support SMEs in securing new funding streams and facilitate synergistic cooperation between digitally advanced & digitally non-advanced regions in the EU and Associated Countries.
CROSS-SECTORAL CONTEXT

DIGI-B-CUBE

SMEs

Funding Agencies & Investors

Intermediaries & Stakeholders

Clusters

Bioimaging

Biosensing

Biobanking

Automation & Robotics

Information Technology

Digital Innovations

BioRobotics

Medical devices and diagnostics

Automated Preventive Medicine

Healthcare Services

Drug Discovery and Research

Precision Medicine

Lifestyle management and monitoring

Smart Care

Wearables and virtual assistants

mHealth

Smart Health
INNOVATION SUPPORT TO SMEs

<table>
<thead>
<tr>
<th>Type</th>
<th>Value (€)</th>
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<tbody>
<tr>
<td>Travel Voucher</td>
<td>up to 2,000</td>
</tr>
<tr>
<td>Prototyping Voucher</td>
<td>up to 20,000</td>
</tr>
<tr>
<td>Customised Solution Innovation Voucher</td>
<td>up to 50,000</td>
</tr>
<tr>
<td>Co-working Disruption Lab Voucher</td>
<td>up to 10,000</td>
</tr>
</tbody>
</table>

Preparation of Digital Transformation Services; 280,175.00 € ; 6%
Follow-up Coaching: 252,000.00 € ; 5%
Open Call, Voucher Awarding and Monitoring: 275,125.00 € ; 5%
Matchmaking Activities: 389,575.00 € ; 8%
Collaborative Platform Development: 411,462.50 € ; 8%
Vouchers: 2,700,000.00 € ; 54%
Project Management and Dissemination; 680,862.50 € ; 14%

Total requested funding = 4,989,000 €
DIGI-B-CUBE ONLINE PLATFORM

Agreement

Non Blockchain world

Drag-and-drop Process Designer

A Smart Contract code generator

A Smart Contract that describes the process

End User interface
to participate in running processes

Role mgmt. and Security

Process Analytics

Simple and robust Business Process Execution engine

Data

Blockchain (cash ledger) or another system

@DBRK_Gupta
DNB intro

- Norwegian Bank, head office in Oslo
- Owned by 34 % by the Norwegian state
- Employees full-time basis: appr. 9 000 (11 000)
- Good grading:
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Strong industry knowledge

**Global scope**
- Power & Renewables
- Shipping & Logistics
- Oil related
- Seadfood

**Selective international scope**
- Healthcare
- Communications and Technology
- Service
- Manufacturing industries

**Nordic scope**
- Real estate and construction
- Retail industries
- Financial Institutions
- Public sector
Strategic Partnerships

ACCELERATING INNOVATION
### DNB’s approach to Strategic Partnerships

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- Rune Bjerke
Compete when you should
partner when it's valuable

Frenemies
Bygde bistandsløsning med blockchain-teknologi på 24 timer

– Startet dere virkelig på denne løsningen i gående spørre dommeren DNB-laget som vant Human Impact Hackathon i Oslo rett før påske. Det er et kompliment.

Payment experiment
Self-service
Facial recognition
DNB NXT ACCELERATOR 3.0
powered by StartupLab
Bank, Fintech, You & Me

Kathy Chang
Senior Manager in Strategic Partnership Manager of DNB
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Our API products

Whether you want to design the future of payment systems or just build your own personal finance manager, we've got you covered. Our range of APIs will enable you to build services making the life of your customers better, smarter or just more fun.

Live APIs

Currencies

Get a list of currency rates for 50+ currencies, updated once daily

Read more

Available in live mode
API Labs

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   [Link]

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7. Acorns partners with Sharecare

8. B2C Lending

9. Challenger Bank

10. P2P Lending

11. MoneyTransfer

12. Interest

13. Payment Gateway

14. Payment

15. SME Lending

Become a Partner - Raisin
[Link]

Raisin enables banks to expand or diversify billions in multi-currency funding to our 49 partners

Spotcap partners up with major bank to offer same-day financing

German mobile bank N26 to launch in Britain, U.S. in 2018. CEO says...
[Link]

Nutmeg partners with challenger bank
By Dylan Lobo / 11 Jul, 2017
Collaboration Models Between DNB & Fintech

Knowledge Sharing & Exchange

The Provider

Satellite

Distributor

Co-Developer

collibra

payr Foundry

FUNDING PARTNER
dealflow

PayPal

vopps
PayPal’s headquarters in San Jose, Calif. Foto: AP Photo/Jeff Chiu, File

**DNB enters into payment cooperation with the web giant PayPal**
Take control of the economy

Payr ensures that you always have the best suppliers and you pay all your bills with a few keystrokes. Whichever bank you have.

Enter your phone number and we'll send you a download link:

+47 12345678  SEND
Better funding - Better returns

FundingPartner connects people who want good and stable returns with companies that need loans

Invest directly in loans to profitable Norwegian companies

✓ Get 5-20% interest ^
✓ Receive interest and installments every month

Get mediated loans to your company from hundreds of lenders

✓ Loans 100,000 to 10,000,000
✓ Loan period from 6 months to 5 years
CURRENT LOANS

Apple garden development outside Oslo
REI 10 A5

Loan: 100%
Amount: SEK 1,200,000
Duration: 1 year (12 months)
Interest: 11.0% p.a.
Risk profile: C

Reallocation of property in Lørenskog (part 1)
LAW 20 A5

Loan: 100%
Amount: SEK 600,000 kr
Duration: 6 months
Interest: 11.0% p.a.
Risk profile: C

Reallocation of property in Lørenskog (part 2)
LAW 20 A5

Loan: 100%
Amount: SEK 1,000,000
Duration: 6 months
Interest: 11.0% p.a.
Risk profile: C

Reputable film company will build liquidity buffer
The Spy A5

Loan: 100%
Amount: SEK 3,000,000
Duration: 1 year (12 months)
Interest: 10.0% p.a.
Risk profile: B
Future Bank

“In the future—
wherever the money goes, wherever the bank is.”

Phase Five: Renewal (2027+)

When we get to truly open platforms and marketplaces of APIs, apps and analytics, then we can start to fully integrate banking and FinTech and BigTech.

Finally, when that is completed, we will no longer talk about banks versus FinTech or even banking and FinTech. We will just talk about finance over the network, as it will be fully integrated as one seamless, frictionless system, internet-enabled, global and real-time.
Thank you!

Kathy.h.h.chang@dnb.no
INNOVATION IN THE PRIVATE CONSUMER MARKET
The customers use our bank in new ways

75 % fewer bank branches since 2010
(Number of DNB-branches in Norway)

The mobile bank has sky rocketed
(Million visits to the digital bank)
You are shamefully outdated and old-fashioned!
The new mobile bank will be the core of our retail banking service offering

The vision is a smarter, more personal and simpler banking experience. This will help us earn the customer relationship in fierce competition with other players.

Everyday banking is our main focus at first. The mobile bank will also give customer’s a holistic overview of all their products and services in one place.

Our long-term goal is building Norway’s best mobile bank, both for DNB and non-DNB customers, with DNB and non-DNB products.
We have only just begun – journey ahead will be exciting!
5 big «must-win» subjects for the mobile bank

- Best at daily banking
- ID and security (authentication, profile)
- Aggregation / distributor platform
- Personalized and relevant user experience
- Drive digital sales
What are the results so far?

<table>
<thead>
<tr>
<th>Year</th>
<th>Online bank</th>
<th>Mobile bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>73</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>83</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>85</td>
<td>9</td>
</tr>
<tr>
<td>2013</td>
<td>86</td>
<td>49</td>
</tr>
<tr>
<td>2014</td>
<td>83</td>
<td>113</td>
</tr>
<tr>
<td>2015</td>
<td>92</td>
<td>156</td>
</tr>
<tr>
<td>2016</td>
<td>83</td>
<td>200</td>
</tr>
<tr>
<td>2017</td>
<td>80</td>
<td>243</td>
</tr>
<tr>
<td>2018</td>
<td>76</td>
<td>281</td>
</tr>
<tr>
<td>2019e</td>
<td></td>
<td>2019e</td>
</tr>
</tbody>
</table>
Key principles of our Way of Work in the Mobile Bank team

- We focus on personal **competences**, not adherence to role descriptions.
- Value creation through **ships**, and the ships are our primary means of day-to-day steering.
- Each ship has strong **autonomy**, product ownership and all necessary competences to deliver.
- Cross-ship **collaboration** is facilitated through chapters and dedicated chapter leads.
- Light management-layer secures **alignment** to long term direction and both business and IT strategy.
History of mobile payments

- PayPal (2007)
- Alipay (2008)
- m-pesa (2009)
- Starbucks Coffee (2010)
- WeChat (2011)
- Swish (2012)
- MobilePay (2013)
- Vipps (2014)
- Apple Pay (2015)
«I can transfer the money to you. Could you please send me your account number?»

«I will Vipps you»
Race to a million users
One year

Six months

Advocacy ranking 2018

vппps

Netflix

YouTube

Google
We have done a lot to increase innovation power in DNB the past years.
DNB Way of Innovation

**SYSTEM**
- STRATEGY
- MANAGE
  - PRACTICE

**SKILLS**
- **HOW?**
- **WHO?**
- **WHY?**

**EFFECTS**
- % Hit-rate of Ideas
- 😊 Value of Ideas
- $ Cost of Ideas
- -> Speed of Ideas

* DNB Way of Innovation
<table>
<thead>
<tr>
<th>IRL</th>
<th>Definition</th>
<th>Key Question</th>
<th>Outcome</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Innovator on a mission</td>
<td>Who is the innovator?</td>
<td>Specific innovator with a mission to test specific idea or problem card.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The Customer Need</td>
<td>Q1 Who is the customer? Q2 What is the problem or need?</td>
<td>Qualitative evidence of problem or need of profiled customer segment.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The Idea</td>
<td>Q3 How can we solve the customer problem or need?</td>
<td>Qualitative evidence that the idea is solving the identified problem or need.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Team on a Mission</td>
<td>Q4 How do we offer and create customer value?</td>
<td>Evidence that the team setup can drive growth.</td>
<td>Evidence that we have capabilities needed to develop it.</td>
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<tr>
<td>5</td>
<td>The Product / Solution</td>
<td>Q5 How do we capture value? Q4 How do we offer and create customer value?</td>
<td>Evidence based cost / income projections.</td>
<td>Evidence that we have capabilities needed to develop it.</td>
</tr>
<tr>
<td>6</td>
<td>The Business Case</td>
<td>Q8 Is the envisioned product worth developing? Q7 Is the envisioned product</td>
<td>Evidence based business case.</td>
<td>Evidence that we are unlikely to lose our banking license.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>legal, compliant, and secure? Q6 Can we develop the envisioned product?</td>
<td>Evidence that the team setup can drive growth.</td>
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<td>Team on a Mission</td>
<td>How fast can we develop it? What is the best way to launch?</td>
<td>Fully-functional product in the market.</td>
<td>Evidence that the team setup can drive growth.</td>
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<td>8</td>
<td>The Operating Model</td>
<td>Q11 How is this organized? Q10 What is the cost structure?</td>
<td>Evidence that the team setup can drive growth.</td>
<td>Evidence that we have capabilities needed to develop it.</td>
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<td>9</td>
<td>Traction / Growth</td>
<td>Q12 How can we maximize the growth rate?</td>
<td>Evidence that the team setup can drive growth.</td>
<td>Evidence that we can continuously grow the product.</td>
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<td>Q13 Invest or divest?</td>
<td>Evidence based business case.</td>
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We have high ambitions in DNB
«Culture is not about being better than those around you. It is about helping those around you achieve more»
In 2018 DNB held an internal Digital Maturity survey in the Large Corporates segment in cooperation with Digital Norway.

- The purpose was to define a **baseline, challenges / opportunities, and actions** related to our digital ambition.
- The DMS included an **online survey, in-depth interviews and workshops** with representatives from all parts of the organization.
Key findings from the Digital Maturity survey

1. Focus on how clients are affected by technology is primarily related to risk
   - «Potential to connect the insight we get to assess risk in developing new products and services»

2. What does innovation and the digital ambition mean for me in my role?
   - «We want to embrace the digital ambition, but do not quite know how»

3. We lack KPI’s that drive innovation
   - «We are working in the same way as before, and have no incentives to change our tools»

4. «Information overload»
   - «Facebook@work has too much information, hence success stories tend to drown in information overload»
What will have changed in a year?

How can we foster and benefit from synergies between the industries?

What can we learn from other industries?

“Involvement from the whole organization is imperative if we are to reach our goals and vision.”

“Hence, we have decided to implement the concept of "Digital Ambassadors"
Hvordan henge med i det digitale kappløpet: Et analyseverktøy

Om Digital Modenhetsindikator
Thank You
Welcome to DNB!

Digital Norway – Inncape 2019.05.23
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ACCELERATING INNOVATION
# DNB’s approach to Strategic Partnerships

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Frenemies

- Compete when you should
- Partner when it’s valuable

«Fremtind» er Sparebank 1 og DNB sin nye forsikringsgigant

Finanstilsynet godkjenner forsikringsfusjonen. Det nye selskapet vil hete Fremtind Forsikring, og vil fra dag én være landets tredje største forsikringsselskap.
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Read more

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worldremit

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Apr 13, 2018 - N26 will partner with a bank in the United States because its license isn't valid there, Staff said. 'The plan is to bring our product to the market at...

Nutmeg partners with challenger bank

By Dylan Lobo / 11 Jul, 2017

Robo-Adviser Scalable Hits $1.2 Billion by Joining With Banks

Nutcap

Nutcap

Nutcap

Fintech

Fintech

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Fintech

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Collaboration Models Between DNB & Fintech

Knowledge Sharing & Exchange

The Provider

Satellite

Distributor

Co-Developer

Colibra

Payr Foundry

Funding Partner
dealflow

PayPal

vopps
DNB enters into payment cooperation with the web giant PayPal
Take control of the economy

Payr ensures that you always have the best suppliers and you pay all your bills with a few keystrokes. Whichever bank you have.

Enter your phone number and we'll send you a download link:

+47 12345678  SEND
Better funding - Better returns

FundingPartner connects people who want good and stable returns with companies that need loans

Invest directly in loans to profitable Norwegian companies

✓ Get 5-20% interest
✓ Receive interest and installments every month

Get mediated loans to your company from hundreds of lenders

✓ Loans 100,000 to 10,000,000
✓ Loan period from 6 months to 5 years
CURRENT LOANS

1. Apple garden development outside Oslo
   REI 10 AS
   - Amount: SEK 1,200,000
   - Duration: 1 year (12 months)
   - Interest: 11.0% p.a.
   - Risk profile: C

2. Reallocation of property in Lørenskog (part 1)
   LAW 20 AS
   - Loan Amount: 600,000 kr
   - Duration: 6 months
   - Interest: 11.0% p.a.
   - Risk profile: C

3. Reallocation of property in Lørenskog (part 2)
   LAW 20 AS
   - Loan Amount: SEK 1,000,000
   - Duration: 6 months
   - Interest: 11.0% p.a.
   - Risk profile: C

4. Reputable film company will build liquidity buffer
   The Spy AS
   - Loan Amount: SEK 3,000,000
   - Duration: 1 year (12 months)
   - Interest: 10.0% p.a.
   - Risk profile: B
“In the future— wherever the money goes, wherever the bank is.”

Phase Five: Renewal (2027+)

When we get to truly open platforms and marketplaces of APIs, apps and analytics, then we can start to fully integrate banking and FinTech and BigTech.

Finally, when that is completed, we will no longer talk about banks versus FinTech or even banking and FinTech. We will just talk about finance over the network, as it will be fully integrated as one seamless, frictionless system, internet-enabled, global and real-time.
Thank you!

Kathy.h.h.chang@dnb.no
INNOVATION IN THE PRIVATE CONSUMER MARKET
2005

2019
The customers use our bank in new ways

75 % fewer bank branches since 2010
(Number of DNB-branches in Norway)

The mobile bank has sky rocketed
(Million visits to the digital bank)
You are shamefully outdated and old-fashioned!
The new mobile bank will be the core of our retail banking service offering

**The vision** is a *smarter, more personal and simpler banking experience*. This will help us **earn the customer relationship** in fierce competition with other players.

**Everyday banking** is our main focus at first. The mobile bank will also give customer’s a holistic overview of all their products and services **in one place**.

Our long-term goal is building Norway’s best mobile bank, **both for DNB and non-DNB customers**, with DNB and non-DNB products.
We have only just begun – journey ahead will be exciting!

New mobile bank
(core: Everyday banking)

Personal Finance Management
Unsecured credit
Insurance
Account aggregation
ID
Web
PISP
Funds and stocks
Saving goals, rules and motivation
Personalised communication
Become new customer
Houses and properties
Cars and vehicles
Continuous improvement and development
5 big «must-win» subjects for the mobile bank

Best at daily banking

ID and security (authentication, profile)

Aggregation / distributor platform

Personalized and relevant user experience

Drive digital sales
What are the results so far?
Key principles of our Way of Work in the Mobile Bank team

- We focus on personal **competences**, not adherence to role descriptions.
- Value creation through **ships**, and the ships are our primary means of day-to-day steering.
- Each ship has strong **autonomy**, product ownership and all necessary competences to deliver.
- Cross-ship **collaboration** is facilitated through chapters and dedicated chapter leads.
- Light management-layer secures **alignment** to long term direction and both business and IT strategy.
History of mobile payments
«I will Vipps you»

«I can transfer the money to you. Could you please send me your account number?»
Race to a million users

One year

voppss

Six months

Advocacy ranking 2018

voppss

One year

Six months

voppss

Advocacy ranking 2018

Netflix

YouTube

Google
We have done a lot to increase innovation power in DNB the past years

Group Project Innovation Speed
Ramp-up Service Designers
DNB NXT Accelerator
Innovation Power becomes a focus area in 4TF
New Business New SO
«Nøkkeltteam» Innovasjon og nye forretnings-modeller
Digital Floor
Innovation Units in BUs
Beat The Bank
New Tech Lab + Partnership + Accelerate innovation
Tech recruitment
DNB Ventures
Digital House
DNB Way of Innovation

**SYSTEM**
- STRATEGY
- MANAGE

**SKILLS**
- Practice

**EFFECTS**
- % Hit-rate of Ideas
- 😊 Value of Ideas
- $ Cost of Ideas
- -> Speed of Ideas

**HOW?**

**WHO?**

**WHY?**
PRACTICE

STRATEGY

MANAGE

BOARD

The thesis, portfolio, and decision guide are examples of ENABLERS.

MANAGER

Action plan, pipeline, and dashboard are examples of ENABLERS.

TEAMS

Process & Toolbox

Exploring, validating, growing, and improving ideas continuously.

ENABLERS

A collection of tools and processes to support strategic decisions and practice.
<table>
<thead>
<tr>
<th>IRL</th>
<th>Definition</th>
<th>Key Question</th>
<th>Outcome</th>
<th>Deliverables</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Innovator on a mission</td>
<td>Who is the innovator? Which idea or problem card?</td>
<td>Specific innovator with a mission to test specific idea or problem card.</td>
<td></td>
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<td>2</td>
<td>The Customer Need</td>
<td>Q1 Who is the customer? Q2 What is the problem or need?</td>
<td>Qualitative evidence of problem or need of profiled customer segment. Profile of the customer segment.</td>
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<td>3</td>
<td>The Idea</td>
<td>Q1 Who is the customer? Q2 What is the problem or need?</td>
<td>Qualitative evidence that the idea is solving the identified problem or need.</td>
<td></td>
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<td>4</td>
<td>Team on a Mission</td>
<td>Q3 How can we solve the customer problem or need?</td>
<td>Specific team with a mission to validate or invalidate the idea.</td>
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<td>5</td>
<td>The Product / Solution</td>
<td>Q4 How do we offer and create customer value? Q5 How do we capture value?</td>
<td>Qualitative evidence that we have capabilities needed to develop it. Quantity evidence of value creation (e.g. revenue) and early traction. MVP in the market and evidence* based product roadmap. (*quantitative evidence of product addressing the customer needs)</td>
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<td>6</td>
<td>The Business Case</td>
<td>Q6 Can we develop the envisioned product? Q7 Is the envisioned product legal, compliant, and secure? Q8 Is the envisioned product worth developing?</td>
<td>Qualitative evidence that we are unlikely to lose our banking license. Qualitative evidence that we have capabilities needed to develop it. Evidence based business case.</td>
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<td>7</td>
<td>Team on a Mission Development &amp; Launch</td>
<td>How fast can we develop it? What is the best way to launch?</td>
<td>Fully-functional product in the market.</td>
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<td>8</td>
<td>The Operating Model</td>
<td>Q9 What is the infrastructure? Q10 What is the cost structure? Q11 How is this organized?</td>
<td>Evidence that the team setup can drive growth. Quantitative evidence of what are the key cost drivers. Quantitative evidence that we can continuously grow the product.</td>
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<td>9</td>
<td>Traction / Growth</td>
<td>Q12 How can we maximize the growth rate? Q13 Invest or divest?</td>
<td>Evidence based cost / income projections. Quantitative evidence of profitability and traction.</td>
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<td>10</td>
<td>The Operating Model</td>
<td>Q11 How is this organized? Q10 What is the cost structure? Q9 What is the infrastructure?</td>
<td>Evidence that the team setup can drive growth. Quantitative evidence of what are the key cost drivers. Quantitative evidence that we can continuously grow the product.</td>
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<td>11</td>
<td>The Operating Model</td>
<td>Q8 Is the envisioned product worth developing? Q7 Is the envisioned product legal, compliant, and secure? Q6 Can we develop the envisioned product?</td>
<td>Evidence based business case. Qualitative evidence that we are unlikely to lose our banking license. Qualitative evidence that we have capabilities needed to develop it.</td>
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<td>12</td>
<td>The Operating Model</td>
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We have high ambitions in DNB
«Culture is not about being better than those around you. It is about helping those around you achieve more»
In 2018 DNB held an internal Digital Maturity survey in the Large Corporates segment in cooperation with Digital Norway.

The purpose was to define a baseline, challenges / opportunities, and actions related to our digital ambition.

The DMS included an online survey, in-depth interviews and workshops with representatives from all parts of the organization.
Key findings from the Digital Maturity survey

1. Focus on how clients are affected by technology is primarily related to risk

   «Potential to connect the insight we get to assess risk in developing new products and services»

2. What does innovation and the digital ambition mean for me in my role?

   «We want to embrace the digital ambition, but do not quite know how»

3. We lack KPI’s that drive innovation

   «We are working in the same way as before, and have no incentives to change our tools»

4. «Information overload»

   «Facebook@work has too much information, hence success stories tend to drown in information overload»
Digital Transformation

«Involvement from the whole organization is imperative if we are to reach our goals and vision.»

«Hence, we have decided to implement the concept of «Digital Ambassadors»

- What will have changed in a year?
- How can we foster and benefit from synergies between the industries?
- What can we learn from other industries?
Hvordan henge med i det digitale kappløpet: Et analyseverktøy

Om Digital Modenhetsindikator
## INNOCAPE STUDY VISIT #1 @ OSLO (22-23 MAY 2019)

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DigitalNorway
Dear All,

I would like to send a quick note about the InnoCAPE project event scheduled for 22-23 May 2019. The partner organisations involved in the project will be around during the two days of the event. See the list of partners here: [https://projects.interreg-baltic.eu/projects/innocape-184.html](https://projects.interreg-baltic.eu/projects/innocape-184.html)

If you would like to meet them for a specific discussion, please drop me a line.

For the colleagues that will be delivering the presentation at the event, this email is also a gentle reminder to make your ppt files ready by Monday night.

Enclosed herewith is the agenda of the event.

Thank you very much for all the team members for helping me with the practicalities of the event.

Best Regards,

D.B.R.K. Gupta Udatha
DigitalNorway Toppindustrisenteret AS
Oslo Science Park, Gaustadalléen 21
0349 Oslo, Norway

+47 45534627 • gupta.udatha@digitalnorway.com
A national arena for knowledge and discussions about digitalization

DigitalNorway Community is an arena for everyone interested in or working with digitalization across companies of all sizes, industries — and in both the private and public sectors.

This is where Anne meets people like herself and others who share her concerns and who are seeking advice.

This is who we are

A non-profit founded by 15 leading Norwegian companies to increase the pace of innovation in Norway.

Built on a premise that we thrive when we may and compete where we must.

Work with sharing knowledge and competence through networks and services. Supported projects and activities.

SMEs are main focus.