

# Learning for everyone in a digital society

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## Preface

This report is the result of a process in which a Nordic working group discussed how and why NVL should work with questions related to digitalization. The idea is that this report should work as a starting point for further discussions in each Nordic country as well as for a Nordic debate. These are scheduled to take place during 2020, with the aim to look for common issues and jointly agreed challenges related to digitalization where NVL could make a difference. The events are coordinated and moderated by NVL. If you are interested to co-organize such an event, or to participate in one, please get in touch!

The report is public and you are invited to read, distribute and discuss it. As it is a working paper the content should not be considered to represent the formal view of NVL.

You are also invited to send us your comments, thoughts and ideas.

Helsinki, 20.02.2020

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## Executive summary

Nordic Network for Adult Learning (NVL) supports Nordic co-operation in a lifelong learning perspective, facilitates the exchange of experience and innovations, and supports the development of policy and practice of adult learning. Digitalization and digital integration of the Nordic region is a priority area in the Nordic co-operation, as expressed in the Presidency Programs over several years. In 2019, NVL decided to make a new effort in this area in line with Nordic strategies. A working group was established to analyse the current situation and policies, and make specific proposals for NVL's future efforts in the field of digitalization and lifelong learning.

The results of the working group's efforts are described in this report, together with a review of strategies, plans and research on Nordic and partly national levels about digitalization and learning. Some relevant UN initiatives, as the Sustainable Development Goals, are also included. The working group has formulated the challenge in the following sentence: "How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values" and suggested a process model for initiating the work.

Several research reports describe how digitalization is a driver for development, and digital competencies are becoming increasingly more important. Yet, it is a part of the population that does not have sufficient digital competencies. Although the Nordic region has a high level of formal education, there is still a considerable need for new competencies in the years to come. One of the goals of the Nordic program for education and research 2019-2023<sup>1</sup> is "promoting the development and use of new teaching and learning methods, for example through a closer focus on creativity, innovation, and digitalization". Learning and digitalization are included in all areas of society today. A large number of stakeholders and target groups are involved.

The working group has assessed several different approaches and working methods for an NVL focus on digitalization and learning. After thorough assessments, the working group recommends that the issue of digitalization and learning in a lifelong perspective should be brought out to all the Nordic countries and self-governed areas. A wide range of stakeholders should be invited to work sessions in conferences, seminars or other types of consultations. where the main theme is addressed through the question "How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values?" The sessions must be well planned and moderated in order to get a list of challenges, problems, suggestions, advices, and recommendations collected from each country and self-governed area. Based on these results common Nordic challenges/problems/possible focus areas should be extracted.

The working group recommends that the work should be organized according to a four-phase model, where the mentioned work sessions with discussions and exchange of experience are the first phase of the work, the *Problem identification* phase. The next phase is *Developing solutions*, which means working with the material from the first phase to find

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<sup>1</sup> <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1365368&dswid=3589>

solutions. In the third phase, the *Intervention phase*, the solutions will be tested. The fourth phase is the *Evaluation phase*. The evaluation phase will show the results that have been achieved and what new challenges need to be addressed in a new problem identification phase.

## 1. Introduction

### 1.1. WORKING GROUP

An NVL working group<sup>2</sup> was established in February 2019 to make specific proposals for NVL's future efforts in the field of digitalization and lifelong learning. Group members were selected following a thorough internal discussion process within NVL and with the help of NVL Distans acting as a consultation body. The final selection was made based on three criteria. A wide range of expertise in different areas related to digitalization and learning was the most important criteria. A wide Nordic representation was the second, and group dynamics the third defining criteria. The group ended up meeting face-to-face four times and online several times.

The members of the working group:

**Mie Buhl**, Professor, PhD, Aalborg University, Department of Communication and Psychology, Denmark

**Tapio Huttula**, Senior advisor, PhD, The Finnish Innovation Fund, Sitra, Finland

**Torunn Gjelsvik**, Secretary General, International Council for Open and Distance Education - ICDE, Norway

**Ebba Ossiannilsson**, Professor, Dr., Swedish Association for Distance Education, ICDE EC; ICDE OER Advocacy Committee, Sweden

**Johanni Larjanko**, NVL-coordinator, Finland

At the end of October 2019 NVL engaged Torhild Slåtto as a rapporteur to compile a report to summarize the work and to propose further actions. The working group identified four levels needed in the report.

### 1.2. REPORT OUTLINE

- a. To identify what the Nordic minister in each country has submitted/suggested/discussed related to work/processes/initiatives/strategies on digitalization to be worked on at a Nordic level (if any).
- b. To describe existing (if any) Nordic vision(s) and strategies on digitalization produced by the Nordic Council of Ministers.
- c. To write a paper based on the question **How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values?** and the descriptors developed by the working group, and relate it to the possible Nordic visions and strategies.
- d. If time allows: Identify and collect from each Nordic country their respective strategies for digitalization. Possible deeper focus: future competencies as they are

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<sup>2</sup> The NVL working group on digitalization, in this report referred to as "working group".

described here, and WHY it is important to have these competencies.

### 1.3. THE STRUCTURE AND CONTENT OF THE REPORT

The report consists of four levels as defined by the working group, see chapter 1.2. These are covered in six chapters. Regarding task a. and b.: Ideas and initiatives of Nordic cooperation are elaborated by the Nordic meetings of senior officials and channelled through the Presidency programme. As a result, it has been expedient to discuss the first two parts of the task description, point a. and b., together.

Chapter 2 is a mapping exercise describing existing Nordic visions and strategies on digitalization produced by the Nordic Council of Ministers, as well as main statements from the Presidency programmes 2018-2020. Some European and international strategies are also included: the UN 2030 Agenda for Sustainable Development, Education 2030, and the UNESCO Futures of Education initiative. NVL and two of the NVL networks that are working with competencies and sustainability are included in the chapter along with a reference to the NVL report on basic digital skills for adults.

Chapter 3 presents the main problem statement from the working group, “How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values?” with their approach, suggestions and recommendations, and with a reference to the Nordic intentions and goals. Some Nordic regional cases of digital transformation and recommendations are presented at the end of the chapter.

Chapter 4 presents the last part of the problem statement: “... based on democratic and inclusive Nordic values”.

Chapter 5 presents the working group’s recommendation for a new and intensified Nordic focus on learning in a digital society.

Chapter 6 presents a short overview of strategies for digitalization in the Nordic countries, which covers the part d. of the working group’s task description.

### 1.4. DIGITIZATION, DIGITALIZATION AND DIGITAL TRANSFORMATION

The terms digitization, digitalization, and digital transformation are closely connected to each other, and could be explained in a simple way by saying that **digitization** is the process of converting information from a physical format into a digital one. When this process is leveraged to improve information, communication, business processes, public services etc. it is called **digitalization**. The results of this process are called **digital transformation**.<sup>3</sup>

The term **digitalization** is often used synonymously with **digital transformation**, which may well be the case in this report too. Some more supplementary explanations of the terms are given by Netguru.<sup>4</sup> A practical approach to the term **digitalization** is expressed in the

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<sup>3</sup> <https://workingmouse.com.au/innovation/digitisation-digitalisation-digital-transformation>

<sup>4</sup> <https://www.netguru.com/blog/what-is-the-difference-between-digitization-digitalization-and-digital-transformation>

*Digitalization circular*<sup>5</sup> from the Norwegian Prime Minister's office December 2019: "Digitalization is about using technology to innovate, simplify and improve. It's all about providing services that are easy to use, efficient and reliable."

## 2. Digitalization – mapping of Nordic visions, strategies and efforts

In the following sub-chapters, the structure of the Nordic co-operation, the Vision 2030 and MR-Digital are explained. Next, a short description of vital issues in the presidency programmes of 2018, 2019 and 2020, followed by a reference to State of the Nordic Region by Nordregio, the Nordic co-operation program for education and research 2019-2023 and the Nordregio report on governing the digital transition in Nordic regions with a focus on the human element. Sub-chapter 2.12. has a brief description of international digitalization and sustainability initiatives. At the end of the chapter NVL networks and NVL activities relevant to this report are described.

### 2.1. THE STRUCTURE OF THE NORDIC CO-OPERATION

Nordic co-operation is based on official agreements and programmes<sup>6</sup>. The Nordic Council of Ministers and the Nordic Council are the main forums for official Nordic co-operation, which involves Denmark, Finland, Iceland, Norway, Sweden, the Faroe Islands, Greenland and Åland. The Nordic Council of Ministers is the forum for inter-governmental co-operation, and the Nordic Council for inter-parliamentary co-operation.

The Presidency of the Nordic Council of Ministers rotates between the five Nordic countries and is held for a period of one year. The Presidency alternates in accordance with an agreed rota which begins with Denmark, followed by Finland, Norway, Sweden and Iceland. The Nordic meetings of senior officials are also chaired by the country presently holding the Presidency. The Presidency actively leads the work in the areas of co-operation. To support this a Programme for the Presidency is drawn up in which the political priorities for inter-governmental co-operation during the year to come is presented.<sup>7</sup> The programme is prepared by the country holding the Presidency.

### 2.2. DIGITALIZATION IS ONE OF THE POLICY AREAS

The co-operation in Nordic Council of Ministers takes place in twelve policy areas, of which digitalization is one. It is presented as follows: <sup>8</sup> "The Nordic countries work together on digitalization. The goal is to turn the Nordic/Baltic region into a coherent and integrated digital region. Working together provides benefits for the people, businesses and public sectors of the Nordic and Baltic countries." Occasionally declarations on specific topics are adopted.

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<sup>5</sup> <https://www.regjeringen.no/no/dokumenter/digitaliseringsrundskrivet/id2683652/>

<sup>6</sup> <https://www.norden.org/en/information/formal-nordic-co-operation>

<sup>7</sup> <https://www.norden.org/en> (7.11.2019)

<sup>8</sup> <https://www.norden.org/en/digitalisation> (19.12.2019)

### 2.3. NORDIC NETWORK FOR ADULT EDUCATION (NVL)

NVL was established in 2005 by the Nordic Council of Ministers (NCM). Co-operation in the adult education sector takes place under the auspices of two NCM's programs: Nordic Network for Adult Learning and the Nordplus Adult Program.

NVL<sup>9</sup>

- supports Nordic co-operation in a LLL perspective;
- facilitates exchange of experience and innovations;
- supports the development of policy and practice;
- highlights Nordic expertise within priority areas like adult education competence development, validation of prior learning, digital support to learning, workplace learning;
- is a meeting place for Nordic adult learning and supports networking.

### 2.4. THE VISION 2030 OF NCM

The Nordic Council of Ministers has formulated a forward-looking and ambitious vision:

**The Nordic region will become the most sustainable and integrated region in the world.**<sup>10</sup>

It is said that the co-operation in the Nordic Council of Ministers must serve this purpose.

The former general secretary Dagfinn Høybråten said in an interview with DialogWeb in 2017<sup>11</sup> that the Nordic Council of Ministers has increased the Nordic collaboration on digitalization. He referred to the «Nytt Norden-reformen», which was a revitalization of the Nordic cooperation in 2014.

### 2.5. AD HOC COUNCIL OF MINISTERS FOR DIGITALIZATION - MR-DIGITAL

During the Norwegian chairmanship of the Nordic Council of Ministers in 2017, the ad hoc council of ministers for digitalization (MR-Digital) was established for the period from 2017 to 2020, which laid the foundation for increasing co-operation on digitalization in the Nordic regions.

A joint declaration for digitalization, *The Nordic-Baltic Region: A Digital Frontrunner*, was signed by Nordic and Baltic ministers at a ministerial meeting during the Digital North conference in 2017. MR-Digital has set specific goals: A digital single market in the Nordic and Baltic countries, deepened digital collaboration, and the development of a cohesive digital infrastructure for the region's citizens, businesses, and administrations.<sup>12</sup> A number of projects have been initiated, none of them particularly on digitalization and education or digitalization and adult learning.

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<sup>9</sup> <https://nvl.org/Om-NVL/In-English> (02.11.2019)

<sup>10</sup> <https://www.norden.org/en> 02.11.2019

<sup>11</sup> <https://nvl.org/content/tillit-det-nordiske-gullet>

<sup>12</sup> <https://www.norden.org/en/information/nordic-co-operation-digitalisation>



## 2.6. SWEDISH PRESIDENCY 2018

“An inclusive, sustainable, innovative, secure and open Nordic region is the starting point when Sweden assumes the Presidency of the Nordic Council of Ministers in 2018.

Digitalization is a recurrent theme.” (The Swedish Presidency Programme 2018, quotation from the greetings given by the Prime Minister and the Minister for Nordic co-operation)<sup>13</sup>

According to the programme<sup>14</sup> “Digitization is the most revolutionary change in society since industrialisation. The developments that have taken place mean a whole new set of preconditions, needs and conditions for individuals and society, for the private and public sector, for working life and education and for civil society. ... During 2019, the Swedish Delegation would like the Nordic Council to continue to work to ensure that increased digitization occurs in a user-friendly way, with a focus on the citizens, and where consideration is taken of the parts of population that cannot deal with various digital systems.”

Two relevant questions were raised by the Swedish Presidency:

- ▶ What needs to be done to ensure that the citizens are able to contribute to and participate in the digital society?
- ▶ How do we increase the incentives to continuously develop the digital skills and abilities that are needed for participation in working life and in the digital society?

These two questions highlight the challenges of today and must be considered when it comes to a possible new priority area and tasks for NVL. The expressions “contribute to” and “participate in the digital society” will be taken into account in the discussion under part c. in this report. Next, a discussion of incentives to develop digital skills and abilities is also highly relevant and will also be included in part c.



## 2.7. ICELANDIC PRESIDENCY 2019

Youth, sustainable tourism and the marine environment are the priority areas under the Icelandic Presidency of the Nordic Council of Ministers in 2019. Nordic priorities for gender equality, digitalization, sustainable development and the UN’s global goals are integrated

<sup>13</sup> <http://norden.diva-portal.org/smash/get/diva2:1151389/FULLTEXT01.pdf>

<sup>14</sup> From the Swedish Presidency Programme 2018, Digitisation and digital skills - new preconditions for democracy, <https://www.norden.org/en/information/swedish-presidency-nordic-council-2019>

into the projects of the Presidency.<sup>15</sup> The Presidency programme 2019 has got the headline “A COMMON PATH”.<sup>16</sup> Digitalization is mentioned in the chapter of sustainable tourism (page 15): “Digitalization of the Travel Industry is aimed at increasing the ability of smaller travel service companies to take advantage of digital technology in their daily operations and marketing. A needs analysis will be carried out focusing on the expertise and capacity of small businesses to utilise digital technology, e.g. to manage the number of travellers in specific areas.”

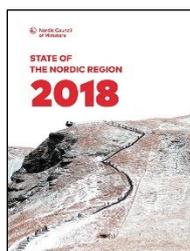


## 2.8. DANISH PRESIDENCY 2020

Working Together on Solutions for the Future is both the title and the ambition for the joint Danish, Greenlandic and Faroese Presidency of the Nordic Council of Ministers 2020. The programme seeks to implement the Council of Ministers’ new Vision 2030, i.e. to make the Nordic region the most sustainable and integrated region in the world.<sup>17</sup>

The Programme was launched with these words: “The new Presidency will seek to consolidate social cohesion and co-operation and to make the most of the region’s potential. It underpins the three strategic priorities outlined by the Council of Ministers’ vision – a green, competitive and socially sustainable Nordic region – all of which also contribute to achieving the UN Sustainable Development Goals.

Nordic cohesion is based on shared values such as trust, democracy and gender equality. However, this cohesion is threatened by encroaching globalisation. The programme for the Presidency sees education and culture as positive platforms for efforts to preserve and enhance social cohesion and knowledge of the Nordic languages”<sup>18</sup>.



## 2.9. STATE OF THE NORDIC REGION 2018

Nordregio makes a biannual report on the state of the Nordic Region. In the 2018 report chapter 12 deals with digitalization, *Digitalization for a more inclusive Nordic Region*.<sup>19</sup> According to the report “The Nordic Region is already one of the most digitised parts of the

<sup>15</sup> <https://www.norden.org/en/norden2019>

<sup>16</sup> <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1258270&dswid=-3310>

<sup>17</sup> <https://www.norden.org/en/news/new-presidency-focuses-vision-2030>

<sup>18</sup> Presentation of the Danish Presidency, <https://www.norden.org/en/news/new-presidency-focuses-vision-2030>

<sup>19</sup> *State of the Nordic Region 2018*. Link to download the report at <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1180241&dswid=1852>

world. High digital penetration rates in society relating to digital government initiatives (i.e. eGovernment), clearly demonstrate the region's maturity in terms of digital readiness, placing it in the top tier of adopters among its international peers (European Commission, 2017). Since the 1990s, the Nordic governments have made a considerable effort to both realise and optimise the benefits of ICT and to integrate it into public sector reforms as, for instance, with the development of ICT infrastructure and investments in digital service delivery. Public sector institutions, citizens and businesses have greatly benefitted from these investments leading to better and more efficient welfare services, improved business competitiveness, social inclusion and economic growth.”

*State of the Nordic Region*, chapter 12, p. 167:

“Recent surveys (table 12.1) show that there is still a part of the population that has never used the Internet. The figures indicate that there is still a need for a more accessible digital infrastructure and for the further development of digital skills, even though the results highlight a better situation in the Nordic Region than in Europe more generally.”

The table 12.1 (p. 168) shows that it varies between one to eight percent of the population in the different regions of the Nordic countries that never used the Internet. The corresponding number in EU is 14 percent of the population (average).

These numbers show that most people in the Nordic region have access to digital tools and use them. But there is still some percentage of the population that have not access to Internet, and still a few percent that are not familiar with digital tools at all. See table 12.1 from *State of the Nordic Region 2018* below (page 168).

The table is based on a 2016 survey. The situation is changed to some extent by now. A 2019 EU survey<sup>20</sup> shows that 98 to 99 percent of individuals aged 16-74 of the Nordic countries use Internet at least once a week. It means that it is just one to two percent that do not use Internet.

95 to 98 percent of individuals aged 16-74 in the Nordic countries are frequent Internet users (every day or almost every day).

The 2020 edition of *State of the Nordic Region* is just published, February 2020.<sup>21</sup>

From Nordregio's *State of the Nordic Region 2018*:

Table 12.1. Nordic NUTS2 regional scoreboard for two indicators, in 2016. Survey with results in percentage of individuals 16-74.<sup>22</sup>

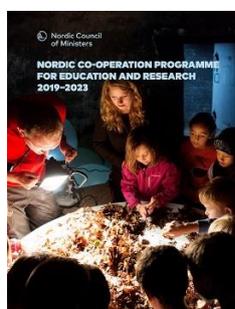
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<sup>20</sup><https://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries>

<sup>21</sup><https://pub.norden.org/nord2020-001/>

<sup>22</sup><http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1180241&dswid=1852>

Country	Region	Individuals who submitted a completed form on the Internet (%)	Individuals who never used the Internet (%)
Denmark	Hovedstaden	73	1
	Sjælland	69	3
	Syddanmark	69	4
	Midtjylland	72	2
	Nordjylland	70	3
Finland	Länsi-Suomi	57	5
	Helsinki-Uusimaa	68	2
	Etälä-Suomi	59	4
	Pohjois- ja Itä-Suomi	55	7
Norway	Oslo og Akershus	68	1
	Hedmark og Oppland	58	1
	Ser-østlandet	62	3
	Agder og Rogaland	62	2
	Vestlandet	53	1
	Trøndelag	67	0
	Nord-Norge	59	4
Sweden	Stockholm	54	1
	Östra Mellansverige	44	1
	Småland med åarna	42	5
	Sydsverige	56	2
	Västsverige	47	3
	Norra Mellansverige	35	6
	Mellersta Norrland	47	8
	Övre Norrland	42	1
Iceland	National (2014)	67	1
EU average		31	14



## 2.10. NORDIC CO-OPERATION PROGRAMME FOR EDUCATION AND RESEARCH

The co-operation program for education and research 2019-2023<sup>23</sup> sets the direction for the co-operation at ministerial level on education, research and languages. Ten themes are described to which the ministers wish to devote particular attention. Theme 1, “Improving basic skills and knowledge of girls and boys, women and men”. Subparagraph c) suggests: Promoting the development and use of new teaching and learning methods, for example through closer focus on creativity, innovation and digitalization.

The tenth theme, “Working together on the digitalisation of education”, is explained as “e.g. through exchanges of good practice in new pedagogy and information about educational opportunities, in order to promote a more open and flexible approach to learning in the Nordic region.”

<sup>23</sup> <http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1365368&dswid=7140>

### 2.11. “GOVERNING THE DIGITAL TRANSITION IN NORDIC REGIONS: The human element”

A Nordregio report published in 2019<sup>24</sup> analyses how Nordic front-runner regions work with digitalization. One of the objectives of the study was to identify the focus areas and approaches of the different front-runner regions and to reveal the challenges and opportunities. Five case studies have been analysed. One of the findings is that digital success in the public sector is 80 percent about people and only 20 percent about technology. It requires that employees are flexible, curious and constantly willing to learn new things. Fear of change is among the main difficulties or barriers to digital success.

One of the conclusions in the study is: “Digitalization is not the responsibility of a single department or unit in the municipalities or regions but is embedded in the work of all departments and transcends policy areas. Hence, digitalization calls for the engagement of key people from all levels of the organisation in the process.

Another conclusion was that “This study demonstrated that there are a variety of approaches to digitalization at the regional and local levels, and that digitalization is a cross-cutting issue across the departments and policy areas. Despite the relevance of national steering, this study revealed the importance of local embeddedness of digitalization to truly become a driver for change.”

### 2.12 GLOBAL INITIATIVES

Some initiatives by the United Nations in the field of lifelong learning, information and communication skills and sustainable development are mentioned in this subchapter.



#### UN 2030 Agenda for sustainable development<sup>25</sup>

The United Nations Sustainable Development Goal 4 aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” SDG 4 is made up of 10 targets. One of them is target 4.7: “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, ...”

The SDGs have indicators to measure the success of the goals.<sup>26</sup> Indicator 4.4 says: “By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.” Further, indicator 4.4.1: (substantially increase) “Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill.”

#### SDG and the Nordic countries

Denmark conduct a national project involving all citizens and entitled: *Our goals, working on*

<sup>24</sup> Randall, L. and A. Berlina (2019): *Governing the Digital Transition in Nordic Regions: The Human Element*, Nordregio Reports, Nordregio, Stockholm, <https://doi.org/10.6027/R2019:4.1403-2503>

<sup>25</sup> <https://news.un.org/en/story/2015/12/519172-sustainable-development-goals-kick-start-new-year>

<sup>26</sup> <https://sustainabledevelopment.un.org/content/documents/11803Official-List-of-Proposed-SDG-Indicators.pdf>

*developing Danish indicators of SDG 4*<sup>27</sup>. Sweden has described the SDG activities in the report *Sverige och Agenda 2030* and in four implementation briefs. Norway has placed the responsibility of SDG with the Minister of Local Government and Modernisation and actions are being planned.

### **Education 2030 Incheon Declaration**

The Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4 says in target 4.3, point 43:<sup>28</sup> “A well-established, properly regulated tertiary education system supported by technology, open educational resources and distance education can increase access, equity, quality and relevance, and can narrow the gap between what is taught at tertiary education institutions, including universities, and what economies and societies demand. The provision of tertiary education should be made progressively free, in line with existing international agreements.”

It should be noted that Open Educational Resources (OER) are mentioned as an enabler for inclusive quality education and this has been reinforced by the newly adopted UNESCO OER Recommendations in November 2019.<sup>29</sup>

### **UNESCO initiative Futures of Education**

The UNESCO initiative Futures of Education was launched September 2019.<sup>30</sup> It is a global initiative to reimagine how knowledge and learning can contribute to the common good of humanity. The vision statement is: “Knowledge and learning are humanity’s greatest renewable resources for responding to challenges and inventing alternatives. Yet, education does more than respond to a changing world. Education transforms the world.”

Technology is a crucial part of the context, and knowledge and education are a response to the challenges. An ethical concern is expressed:<sup>31</sup> “Advances in digital communication, artificial intelligence, and biotechnology have great potential but also raise serious ethical and governance concerns, especially as promises of innovation and technological change have an uneven record of contributing to human flourishing.”

### **Commonwealth of Learning (COL) and SDG4**

The Ninth Pan-Commonwealth Forum (PCF9) on Open Learning was held in September 2019. President of COL, Asha Kanwar, said in her opening remarks: “Lifelong learning is no longer an option, but an imperative for sustainable development. We need to change the business-as-usual approach and the brick-and-mortar mindset if we want to achieve SDG4.” With the brick-and-mortar mindset she hinted to the classroom education.

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<sup>27</sup> <https://www.dst.dk/da/Statistik/Sdg> <https://www.voresmaal.dk/>

<sup>28</sup> [http://uis.unesco.org/sites/default/files/documents/education-2030-incheon-framework-for-action-implementation-of-sdg4-2016-en\\_2.pdf](http://uis.unesco.org/sites/default/files/documents/education-2030-incheon-framework-for-action-implementation-of-sdg4-2016-en_2.pdf)

<sup>29</sup> <https://en.unesco.org/news/new-unesco-recommendation-will-promote-access-educational-resources-all>

<sup>30</sup> <https://en.unesco.org/futuresofeducation/initiative>

<sup>31</sup> <http://en.unesco.kz/unesco-launches-futures-of-education-at-the-united-nations-general-assembly>

### 2.13. NVL NETWORKS - DISTANSNETTVERKET

Let us now go back to the Nordic region and some of the networks and activities carried out by NVL within digitalization.

NVL had a network on distance education, established in December 2005 and closed in December 2019, called *Distansnettverket*. The network had its own web page<sup>32</sup>, where the network is presented as follows: “NVL Distans is an ambassador for increased use of ICT methods and tools in adult learning. We will create meeting places and exchange of experience for organizations, projects, politicians and networks that are engaged in education and development activities in this area. The network's value proposition is *Distance - enriching adult learning with interactive and creative technologies.*”

### 2.14. NVL NETWORKS – COMPETENCE DEVELOPMENT IN AND FOR WORKING LIFE

The Nordic expert network *Competence development in and for working life* was established in 2018 and focuses on the question “What should and can the development of skills in a constantly changing working life look like for companies and employees?” As part of their work, the network organized a seminar entitled *Digitaliseringsresan (The Digitalization Journey)*. They invited external lecturers from the working community and the education sector to give examples of how digitalization has affected their skills development efforts. Some important inputs in the seminar are disseminated in an NVL article, *Digitaliseringsresan*.<sup>33</sup>

The network highlights the importance of continuing efforts to improve basic digital skills at the workplace. The network also focuses on how digital tools can contribute to more efficient, flexible and accessible skills development. In addition, focus on how digital skills can contribute to a more efficient working community. A new NVL network or initiative on digital transformation would gain from cooperating with the competence development expert network.



### 2.15. NVL REPORT – BASIC DIGITAL SKILLS FOR ADULTS

The NVL Basic Skills for Adults Network has published the report *Basic digital skills for adults in the Nordic countries*.<sup>34</sup> The report provides an overview of the Nordic situation on the topic of basic digital skills and summarizes opportunities and challenges in a Nordic SWOT analysis. Based on the analysis, a number of recommendations are formulated that address the policy level in the Nordic countries. Examples from all Nordic countries are presented.

<sup>32</sup> <https://nvl.org/Content/Distansnatverk>

<sup>33</sup> Thomson, Ida: *Digitaliseringsresan – För och med de anställda*. Article, NVL, 2019

<https://nvl.org/Content/Digitaliseringsresan-For-och-med-de-anstallda>

<sup>34</sup> <https://nvl.org/content/basic-digital-skills-for-adults-in-the-nordic-countries>

The report states that “Many opportunities for more flexible and adaptive teaching and training are offered and learning technology for adults is undoubtedly a market that more developers should explore, in particular when it comes to adults with basic skills needs. Efficient use of the new technologies, however, depends on a thorough analysis of the didactic changes they represent, and much better preparation of teachers and trainers than we have seen thus far.”

The mentioned SWOT analysis (p. 12) indicates the challenges of learning, and as a result of the analysis six recommendations are formulated:

1. Increase the participation of low-skilled adults in basic digital skills learning
2. Renew all efforts to bridge the digital divide and promote digital inclusion
3. Increase efforts to create and maintain a lifelong learning system
4. Promote the development of education technologies for adults
5. Enhance the digital competence of teachers in adult education and training
6. Enhance national measures dealing with cyber security

## **2.16. NVL, TARGET GROUPS AND THE MESO LEVEL**

Digitalization is a driver for change on a macro, meso and micro level. In research macro level is used to look at societies at large. Meso level involves groups, communities, and institutions. Micro level focuses on the social interactions of individuals or very small groups.<sup>35</sup> The vision of Nordic co-operation is based on a macro level, and so is the digitalization goal,<sup>36</sup> but it also includes the micro (people) and meso level (businesses and public sectors) in the last sentence:

“The Nordic countries work together on digitalization. The goal is to turn the Nordic/Baltic region into a coherent and integrated digital region. Working together provides benefits for the people, businesses and public sectors of the Nordic and Baltic countries.”

Most of NVL's work and activities are at the meso level. The working group has in their discussion pointed to several target groups for NVL's new digitalization and learning efforts: “Management within adult learning institutions, HR, civil servants tasked with education policy etc.”<sup>37</sup>.

## **2.17. OTHER RELEVANT DOCUMENTS AND REPORTS**

*The Digital Competence Framework for Citizens*

<https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106281/web-digcomp2.1pdf> (online).pdf

*Lifelong Learning concepts, Issues and Actions*. Report on Lifelong Learning, ILO

<http://fowiberoamerica.com/wp-content/uploads/2019/07/Final-LLL-Concept-Paper.pdf>

*Ett gott liv i et hållbart Norden. Nordisk strategi for hållbarhet 2013-2025,*

<http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A1292584&dsid=-4661>

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<sup>35</sup> <https://www.coursehero.com/sg/introduction-to-sociology/macro-level-meso-level-and-micro-level-analysis/>

<sup>36</sup> <https://www.norden.org/en/digitalisation>

<sup>37</sup> Minutes, 26-27 August 2019, the working group.

*Catching up with society. A DIGITAL reality check for Nordic NGOs.* Accenture  
[https://www.accenture.com/\\_acnmedia/PDF-38/Accenture-Digital-Reality-Check-for-NGOs-Full-Size.pdf#zoom=50](https://www.accenture.com/_acnmedia/PDF-38/Accenture-Digital-Reality-Check-for-NGOs-Full-Size.pdf#zoom=50)

*New OER recommendations, UNESCO:* <https://en.unesco.org/news/new-unesco-recommendation-will-promote-access-educational-resources-all>

*What is the fourth industrial revolution?* World Economic Forum, Global Agenda  
<https://www.weforum.org/agenda/2016/01/what-is-the-fourth-industrial-revolution/>

## 2.18. CONCLUDING COMMENTS

The mapping of Nordic visions, strategies and efforts in the domain of digitalization shows a primary focus on digital skills development, including digital literacy and citizenship, digital infrastructure and business development and digital service delivery. The mapping shows that there is a gap in the Nordic focus regarding digitalization related to education and learning. However, there is an integrated perspective on new learning and teaching methods and digitalization of education under point 2.10, which is the Nordic co-operation program for education and research, with a potential to build on. Furthermore, digitalization is also underlined as a transversal element: "Digitalization is not the responsibility of a single department or unit ... but is embedded in the work of all departments and transcends policy areas."

The mapping points towards a more action-oriented conclusion that a new initiative under NVL and digitalization should cover the identified gaps and build on the integrated perspective of digitalization related to new learning and teaching methods transcending all policy areas. The working group wants to engage people across the Nordic region in exploring what NVL can do to enable learning for everyone in a digital society. See chapter 5.

## 3. "Enable learning for everyone in a digital society"

The NVL working group summarized the work to be done in a single question:

**How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values?** Since everyone may have a slightly different understanding of each concept in that question they have been defined below.

Here and in the following chapters 4 and 5 the question raised by the working group will be discussed with reference to Nordic and international strategies for education, lifelong learning and digitalization. It concludes with a set of recommendations including task, methodologies and activities for a new NVL focus on digitalization and learning (chapter 5).

### 3.1. DEFINITIONS AND DESCRIPTORS

**Adult learning** is defined in many different ways. According to Wikipedia it is "a practice in which adults engage in systematic and sustained self-educating activities in order to gain new forms of knowledge, skills, attitudes, or values".<sup>38</sup> It could be formal, nonformal and

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<sup>38</sup> [https://en.wikipedia.org/wiki/Adult\\_education](https://en.wikipedia.org/wiki/Adult_education)

informal learning. **Lifelong learning** has a wider definition. According to Dictionary.com it is “the provision or use of both formal and informal learning opportunities throughout people's lives in order to foster the continuous development and improvement of the knowledge and skills needed for employment and personal fulfilment”<sup>39</sup> Eurostat’s definition: **Lifelong learning** encompasses all learning activities undertaken throughout life with the aim of improving knowledge, skills and competencies, within personal, civic, social or employment-related perspectives.<sup>40</sup>

The NVL working group connects the expression **enable learning** to “guidance, supervision, facilitation, moderation, OER (Open Educational Resources), reskilling, upskilling, knowledge, competencies, Nordic “bildung”, personal development and to the idea that learning is social”.

The expression **everyone** here includes “equity, gender, religion, age, geography, ethnicity, all income levels, equality, attainment level, second chance, drop- outs, integration of newly arrivals”.

**Digital society** includes “public digital services, social media, network society, effects of the 4th industrial revolution, (work, live, learn, communicate, perform, relate etc)”.

Digital society is used with different connotations in different contexts. An explanation of digital society by Librere research group:<sup>41</sup> “The notion of **digital society** reflects the results of the modern society in adopting and integrating information and communication technologies at home, work, education and recreation. Digital innovations are reshaping our society, economy and industries with a scale and speed like never before.”

### 3.2 INTENTIONS AND GOALS

The Nordic region has great intentions, strategies and goals when it comes to digitalization and making the citizens more digitally competent, see chapter 2. Nordregio has studied the digitalization initiatives and strategies in the Nordic countries<sup>42</sup> and found that there is a horizontal priority that cuts across different policy areas, ministries and levels of government: Digitalization of public services, followed by accelerating the digital transformation of the business sector. Digitalization is referred to as a driver for growth and competitiveness. The third most common focus area in the Nordic national digitalization strategies is facilitating development of digital competencies and skills, according to Nordregio.

The Nordic Council of Ministers have underlined digital integration in their vision. “Together we will promote green growth in the Nordic region based on knowledge, innovation, mobility and digital integration.”

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<sup>39</sup> <https://dictionary.com/browse/lifelong-learning>

<sup>40</sup> [https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Lifelong\\_learning](https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Lifelong_learning)

<sup>41</sup> <https://libreresearchgroup.org> > digital-society

<sup>42</sup> Randall, L. and A. Berlina (2019): *Governing the Digital Transition in Nordic Regions: The Human Element*, Nordregio Reports, Nordregio, Stockholm, <https://doi.org/10.6027/R2019:4.1403-2503>



*An explanation of the green part of the Nordic Council's vision.*

The Swedish presidency 2018 raised the most relevant question: “What needs to be done to ensure that the citizens are able to contribute to and participate in the digital society?” There was no answer to the question, and the operationalisation of an answer to this question has not yet been decided. NVL, dedicated to adult learning, is now presented with a golden opportunity to contribute to activities that make citizens able to participate in the digital society. The challenges faced now are how to operationalize and find the best solution that leads to results.

The Nordic region has clear intentions, defined goals, a digitalization declaration and good discussions. Now it is time to focus, prioritize and to achieve the goals.

### **3.3. THE WORKING GROUP'S APPROACH AND SUGGESTIONS**

How can a new NVL network or initiative support the Nordic and national goals of digital competencies and digital inclusion? The question is a very complex one and resulted in deep discussions regarding the best working methods, the focus areas, and the scope of the work. One reflection is how digitalization in general affects and changes jobs leading to a need for new types of competencies. We need to consider and reflect on the matching between jobs, development of competencies and lifelong learning. Issues such as learning design, teacher competencies and learner prerequisites could for example be addressed. This includes how to accommodate for the variance in technological knowhow among adult learners, their ability to learn, and their motivation.

One approach focused on “how the 4th industrial revolution affects/changes the way we work, live, relate to each other, communicate etc., but also how technology changes the way we learn (and thereby also the educational system).”

What emerges are several issues that could be taken into consideration and approached<sup>43</sup>:

- Who are the providers for education in the future? The learning landscape is changing, are we ready for it?
- If we accept that we learn everywhere we need shared rules for the identification and recognition of competence acquired in various ways.
- The Nordic dimension, and how that is affected by cultural change, norms and value-based approaches. Where does quality assurance, privacy protection, AI, ethical complexity etc. belong?

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<sup>43</sup> The following passages are taken from the notes and minutes of the working group, archived in Google Drive, Digitaliseringsgruppen. <https://drive.google.com/drive/u/0/folders/1Qyov4wx4hgPBnvc-4UGl8gnAXYlgsaU0>

Several possible tasks/actions were also identified (not listed as prioritized):

- 1) NVL can initiate a think-tank, focusing on what it means to be human in the digital age.
- 2) NVL can develop scenarios based on the understanding that digitalization is about values, attitudes, ways of thinking and not primarily technology. What does this mean and what are the consequences?
- 3) NVL can develop descriptions of possible Nordic models for coping with learning processes, society, working life, e.g. through digitalization.
- 4) NVL can look at how learning in work life and the education system can be brought together, and how must both be changed or adapted?
- 5) NVL could develop common criteria/dimensions to help implement digital solutions (values, concept of knowledge, etc.) or how we deal with change processes.

About 1) and 2): This is connected to the working group's underlining of the human element of digitalization, "it is about people, not technology". Or as it is quoted in the Nordregio report 2019:4, page 58 <sup>44</sup>: "... a digital transformation is only 20% technology and 80% organizational development".

About 4): The working group has discussed learning at the workplace and the need for new types of competencies: Here it should be mentioned that the NVL expert network *Competence development in and for working life* (Kompetensutveckling i och för arbetslivet) focuses particularly on this issue. This network was established in 2018 and has organized a seminar about digital competencies and workplace, "Digitaliseringsresan".

About 5): The issue of developing common criteria/dimensions to help implement digital solutions is not discussed further according to the working group's minutes.

### 3.4. NVL AND TARGET GROUPS

NVL cooperates with a great number of local, regional and national associations, organizations and institutions that are involved in many different adult and lifelong learning activities. The NVL networks are based on cooperation with these types of organizations and institutions, and they are all NVL target groups.

As previously stated the recommended target group of a new network or new activities on digitalization and learning should be at the meso level which also corresponds to NVLs main target groups. Examples include: "Management within adult learning institutions, HR, civil servants tasked with education policy, implementation, planning, development, funding, other NVL networks, possible the labour market in general social partners). To be excluded: Learners, other civil servants, teachers."

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<sup>44</sup> <https://www.nordregio.org/publications/governing-the-digital-transition-in-nordic-regions-the-human-element/>



### 3.5. EXPERIENCES FROM DIGITALIZATION OF ADULT- AND FURTHER EDUCATION

One part of digital transformation and learning in the digital society is digital teaching and learning. Denmark's Evalueringsinstitut has published an inspiration catalogue with recommendations that can improve the quality in digital learning, *Experiences from digitalization of adult- and further education. Inspirational catalogue with seven proposals that may enhance quality in digital learning.*<sup>45</sup>

The catalogue presents seven recommendations that may enhance quality of digital learning:

1. Clarify the prerequisites for participating in a digital learning process.
2. Give participants a thorough introduction to the virtual space.
3. Create strong relationships between educators and participants in virtual spaces.
4. Support relationships between participants.
5. Provide participants with professional support.
6. Use learning activities that activate the participants in the learning.
7. Support teachers in developing digital learning processes.

Flexible Education Norway has provided a guide to online teaching and learning, *A Guide to Quality in Online Teaching and Learning*<sup>46</sup>. The guide is developed “to ensure that learners get the best support for their learning process, through good and relevant tuition, learning activities and assessment. There are many possibilities in online education, but there are also pitfalls”, it is said in the preface.

### 3.6. NVL AND ITS NETWORKS

According to NVL’s own presentation NVL “promotes lifelong learning by focusing on cross-sectoral cooperation in the priority areas defined by the Nordic Council of Ministers”. When the Nordic Council of Ministers gives priority to green growth, competitiveness and social sustainability, these priorities colour the activities of NVL. Regarding competitiveness NVL established *The Nordic expert network Competence development in and for working life* in 2018. See chapter 2.14.

Another NVL network focuses on sustainability and “the green transition of the societies and work”, namely the network for Sustainable Development. The working group concludes that there is a need for a more intensified focus on learning in a digital society in the Nordic context.

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<sup>45</sup> <https://www.eva.dk/voksen-efteruddannelse/tiltag-oege-kvaliteten-digitale-laeringsforloeb>

Poster: <https://www.eva.dk/voksen-efteruddannelse/7-veje-bedre-digitale-laeringsforloeb>

<sup>46</sup> [https://issuu.com/fleksibel\\_uddanning\\_norge/docs/quality\\_education\\_netversion](https://issuu.com/fleksibel_uddanning_norge/docs/quality_education_netversion)

### 3.7. CONCLUDING COMMENTS

As digitalization is a cross-cutting issue, it seems obvious that there is a need for a particular network to focus on the different perspectives and approaches of digitalization related to learning and education in the Nordic countries. The development “of digital competencies and skills”, see 3.2, is a part of this, but is a too narrow approach. Collaboration between a new digitalization and learning network, the competence development expert network and the network for sustainable development might provide rich outcomes.

## 4. “... based on democratic and inclusive Nordic values”

There is a consensus on the importance of democratic and inclusive Nordic values in the approach to digitalization, digital transformation and digital knowledge, skills and attitudes. This is addressed in the question “How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values?”

### 4.1. NORDIC VALUES - DESCRIPTORS

The descriptors given by the working group:

**Democratic:** open elections, free press, freedom of speech, participation, independent legal system, citizenship, protection against hate speech, equality, tolerance of minorities, individual rights and obligations, human rights, social justice

**Inclusive:** everyone, diversity

**Nordic values:** tri-partite system, triple Helix, sustainability, “the good life”, allemansrätten, ombud, organized society, Grundtvig, folkbildning, Nordic bildung, democracy, peace, free education, stable economy, trust, sharing, innovation, critical thinking, flat organisation, civil activism, individualism. Informal society, first name basis. “Kaffe och fika”, Nordic model<sup>47</sup>.

One emerging question concerns the “democratic” concept. The Nordic region is scarcely populated, how can we ensure that everyone have the same access to education? The NVL Distance network focused on this issue for two years, summarized in the report “Utdanning skaper utvikling i utkantsområder”. Some of the findings might be relevant for the new network. The former Secretary General, Dagfinn Høybråten, defined the Nordic values in one of his blog posts: Democracy, freedom of speech, equality, mutual respect, and trust.<sup>48</sup> “Our shared Nordic values provide a strong foundation for our societies”, he says.

### 4.2. CONCLUDING COMMENTS

The Nordic values are present in all Nordic cooperation, probably because Nordic citizens have grown up with these values. The values may appear to be under pressure today, if we look at issues like mutual respect in social media or people’s trust in politicians and business. When NVL wants to contribute to learning in the digital society, it will be important to include the Nordic values as a compass for the direction of the work.

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<sup>47</sup> [https://en.wikipedia.org/wiki/Nordic\\_countries#Nordic\\_model](https://en.wikipedia.org/wiki/Nordic_countries#Nordic_model)

<sup>48</sup> <https://niva.org/nordic-values-%E2%80%8B%E2%80%8Bcan-make-world-difference/>

## 5. NVL - new and intensified focus on learning in a digital society

Learning in a digital society might be viewed from different angles. Should we try to change or develop our society so that we all can have better services, participate and contribute, etc.? Or, should we try to help individuals to survive in a digital society? In both cases there is a need of digital competencies. The working group's approach is: "How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values". This has an implicit understanding of developing our society, based on the Nordic values, so that everyone can learn and be able to participate and contribute. This is also well expressed by the Swedish Presidency 2018: "What needs to be done to ensure that the citizens are able to contribute to and participate in the digital society?"

The discussion of this issue should lead to a new and intensified focus on learning in a digital society, channelled through an NVL network or initiative. To simplify the descriptions in the following, the new network/initiative/think tank/expert group will be hereinafter known as NVL-Digital.

### 5.1. RECOMMENDATION

The working group has had extensive discussions about digitalization and learning. The members have gone through many aspects and angles of lifelong learning and the digital divide in a Nordic context seen in the light of Nordic strategies and initiatives. They have searched for a way to contribute to learning for everyone and bridging the digital divide. Several alternatives of activities for a new NVL network have been discussed. However, due to the complexity of adapting to a "moving target", such as digitalization and the digital transformation, and how this affects the way we learn, work and live, an extended debate is required.

The working group's final recommendation is thus to involve a wider range of stakeholders and lifelong learning experts to take part in the discussion and identify the concrete activities and solutions.

The recommendation is described in a four phases model:

- Problem identification
- Developing solutions
- Interventions
- Evaluation

An adapted 4-phase implementation circle method (The Aalborg Copenhagen Circle, DBR-model<sup>49</sup>) is used to describe the different steps and phases, see figure 1.

The question/challenge is:

**How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values?**

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<sup>49</sup> The model is inspired by Amiel, T., & Reeves, T. C. (2008). Design-Based Research and Educational Technology: Rethinking Technology and the Research Agenda. *Educational Technology & Society*, 11 (4), 29–40.

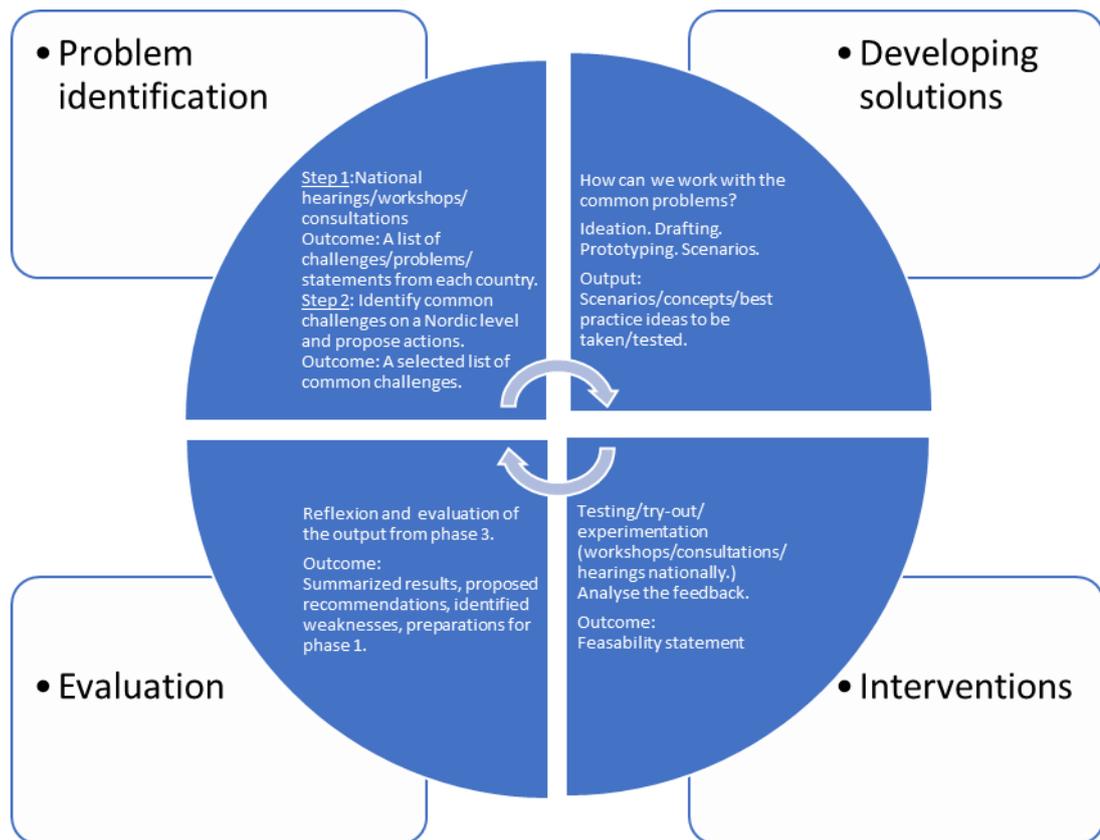


Figure 1. Process model for NVL's future efforts in the field of digitalization and adult learning. Problem/challenge is: How can we enable learning for everyone in a digital society based on democratic and inclusive Nordic values?

Description of a recommended methodology in the following phases 1 to 4:

### PHASE 1: Problem identification

Step 1:

Challenge: Lifelong learning for everyone in a digital society based on democratic and inclusive Nordic values?

Activities: Organize national facilitated hearings/workshops/consultations with moderation. Take our question as a starting point. Hearings/workshops/consultations to be conducted in all Nordic countries and self-governed areas.

Our goal: To create a situational overview/framework/roadmap.

Questions to be discussed:

- Where are the gaps?
- Who is included, excluded?
- What is needed?

Stakeholders (not exhaustive): Civil society organisations, adult learning organisations, student organisations, labour unions, social partners, senior associations, private and public companies, libraries, ministries of Education, municipalities, universities, learner unions, ministry of labour and other ministries, accreditation institutions, non-formal adult education, Nordregio, NordForsk, research centres, Business Finland, business councils,

Företagarna, edTech clusters, National Board of Education, consumers education, OER movement, public service, broadcasters, banks, open governance partnership etc.

Step 2:

Activities: Bring the results to a Nordic level, identify common challenges, propose actions. Methods may include peer learning.

Outcome: **A list of challenges/problems/statements from each country and self-governed area and a selected list of common problems.** Also, a list of country specific problems. Ideally to identify the intended stakeholders for the pilot phase. Added benefit: the possibility to exchange experiences and to engage in peer learning.

### **PHASE 2: Developing solutions**

Challenge: How can we work with these challenges/problems/statements? How can we address them? How concrete are the challenges identified? What would be a way to test implementations and methods to address them/improve the situation? Or on a more general level: What should the tested approach consist of?

Methodology: This can be done through ideation, brainstorming, and other creative methods

Activities: The results from phase 1 are put into a production process to develop a model/pilot/method/app/behaviour. This is being discussed and analysed by the intended stakeholders/target groups, before being tested. Here a mapping exercise is also possible to conduct to see what is already there. A public idea contest is also a good model.

Outcome: **Scenarios/concepts/best practice ideas to identify actions to be taken/tested.**

Follow-up: Communicate the results. Possibly a mapping exercise to see what is already there.

### **PHASE 3: Interventions**

Activities: Testing/try-out/experimentation or proof of concept (based on output phase 2).

Methodology: Testing/try-out in workshops, consultations, discussions, hearings, etc.

Outcome: **Feedback from the stakeholders (national level) after testing/try-out, etc.**

Follow-up: Analyse the results. Communicate the results.

### **PHASE 4: Evaluation**

Challenge: Are we closer to “enable learning for everyone in a digital society based on democratic and inclusive Nordic values? What is next step?

Outcome: **A report that includes and summarizes results, propose recommendations, identified weaknesses, suggestion of new areas towards a new Phase 1, process evaluation.**

Follow-up: Communicate the results.

## 6. Strategies for digitalization

The working group has formulated a part d. of this report:

”If time allows: Identify and collect from each Nordic country their respective strategies for digitalization. Possible deeper focus: future competencies as they are described here, and WHY it is important to have these competencies.”

### 6.1. STRATEGIES FOR DIGITALIZATION IN THE NORDIC COUNTRIES AND SELF-GOVERNING AREAS

Nordregio’s report 2019:4<sup>50</sup> *Governing the Digital Transition in Nordic Regions: The Human Element* has a comprehensive overview of the digitalization policies and strategies in the Nordic countries and self-governing areas in chapter 2.3, page 21, table 2. National strategies and agendas with main themes and focus areas and regional agendas are mapped.

With permission from Nordregio this table is cited below:

Table 1. Digitalisation policies in the Nordic countries: An overview

Country	Relevant agendas and programmes (for a full list, check each country separately)	Main themes and focus areas	Regional agenda
<b>Denmark</b>	<i>Digital Strategy 2016–2020: A Stronger and More Secure Digital Denmark</i> <i>Strategy for Denmark’s Digital Growth (2018)</i>	Boosting growth (trade and industry) Effective and user-centric public sector and services to businesses and citizens Digital skills for all	Regional digital agendas contribute to national goal setting. These are often sector-specific, e.g., regarding e-health Support for digital enhancement of small-to-medium enterprises (SMEs) (SME: Digital) and digital skills development in the fields of science, technology, engineering and mathematics
<b>Finland</b>	The Finnish Government Programme (2015) <i>Digital Agenda 2011–2020: Productive and Inventive Finland</i>	Digitalised public services Growth environment for future digital businesses; includes information security	No push for special regional digital agendas from the national level. Some regions and municipalities have drawn up digital agendas by their own initiative

<sup>50</sup> Randall, L. and A. Berlina (2019), *Governing the Digital Transition in Nordic Regions: The Human Element*, Nordregio Reports, Nordregio, Stockholm, <https://doi.org/10.6027/R2019:4.1403-2503>.

Country	Relevant agendas and programmes (for a full list, check each country separately)	Main themes and focus areas	Regional agenda
<b>Iceland</b>	<p><i>Iceland 2020</i></p> <p><i>National Cyber Security Strategy 2015–2026</i></p> <p><i>Green Paper on Statistics, Registration and Information (2018)</i></p>	<p>Focus on e-participation and e-government</p> <p>Better and more digital public services</p> <p>Digital infrastructure including interoperability between IT systems</p>	<p>No specific focus on digitalisation in the municipalities, but high-speed broadband for everyone by 2020 is a priority.</p>
<b>Norway</b>	<p><i>Digital Agenda for Norway: ICT for an Easier Everyday Life and Increased Productivity (2016)</i></p> <p><i>White Paper 27 (2016–2017): The Industry—Greener, Smarter and Creative</i></p> <p><i>Digitalisation Strategy for Municipalities and Counties 2017–2020</i></p> <p><i>Digital21 (2017–2018)</i> is the government’s cross-sectoral expert group, recommending strategies for furthering digitalisation in the area of growth in industry and businesses</p>	<p>Digital public services and efficient public sector</p> <p>Develop the digital technological infrastructure that the business sector will require in the future</p> <p>Digital competencies and skills</p> <p>Cybersecurity</p>	<p>The Association of Local and Regional Authorities has encouraged municipalities and regions to formulate digital strategies individually or in collaboration. Regional or municipal digital agendas contribute to national goal setting</p>
<b>Sweden</b>	<p><i>Digital Agenda, For a Sustainable Digitalised Sweden (2017)</i></p> <p><i>Digital First Policy for the Digitalisation of the Public Sector (2015–2018)</i></p> <p><i>Digital Agenda, ICT for Everyone (2011)</i></p> <p><i>Digilyft (2016–2019)</i> stimulates increased digitalisation of SMEs in the industrial sector</p>	<p>Digital skills</p> <p>Digital security</p> <p>Digital innovation</p> <p>Digital management</p> <p>Digital infrastructure</p>	<p>Regions were encouraged to develop their own digital agendas drawing from the 2011 National Digital Agenda, and almost all regions have done it. Regional agendas’ biggest priority areas lay in infrastructure and e-services</p>
<b>Greenland</b>	<p><i>The Digital Society: National Digitalisation Strategy 2018–2021</i></p>	<p>Digitalisation of public services to promote quality of life and business development</p> <p>Security and privacy</p> <p>One IT architecture</p>	<p>The implementation of the digitalisation strategy is expected to lead to increasing connectivity and accessibility of services and increasing digital opportunities for citizens and businesses across Greenland</p>

Country	Relevant agendas and programmes (for a full list, check each country separately)	Main themes and focus areas	Regional agenda
<b>The Faroe Islands</b>	<i>The National Digitalisation Programme of the Faroe Islands</i> (2015)	Digitalisation of public services Increasing efficiency in the public sector Increasing the competitiveness, growth, and production strength IT architecture	Digitalisation efforts in the municipalities are focused on addressing the demographic changes and promoting growth in the IT industry
<b>Åland Islands</b>	<i>The Digital Agenda</i> (2012) <i>The IT Strategy</i> (2018) <i>The IT Strategy 2018–2020 for the Education Sector on Åland</i>	E-administration and digitalising public services Co-operation in IT support and IT services Green IT and developing digital infrastructure	Digitalisation is seen as a tool to increase the attractiveness of the Åland Islands in general, including e.g., young people

Source: Randall, L. and A. Berlina (2019), *Governing the Digital Transition in Nordic Regions: The Human Element*, Nordregio Reports, Nordregio, Stockholm, <https://doi.org/10.6027/R2019:4.1403-2503>

## 6.2. NORDIC PRIORITIES

Supplementary information about the agendas and programmes are described in the Nordregio report 2019:4, pages 23-34. A few issues about digitalization, digital skills and learning are cited below.

### DENMARK

With the *Strategy for Denmark's Digital Growth*, the government establishes directions and priorities. The third objective of the strategy says that it is «a goal for the Danish people to become the most digitally prepared within the EU, ready to operate in the digital transformation, with education and continuous training to ensure that everyone is ready for the labour market of the future.» (Nordregio report 2019:4)

### FINLAND

«Work with digitalisation is divided into two key projects: 'Digi 1', which focuses on digitalising public services and 'Digi 2', which focuses on creating a growth environment for digital business operations. In addition, digitalization is mentioned as a cross-cutting theme in the *Government Programme*.” Further it is said: “Even though an all-encompassing digitalisation strategy does not yet exist, digitalisation is a priority in sectoral strategies (e.g., education). Digitalisation is seen as a great opportunity, with the Finnish attitude being ‘full speed ahead’.” (Nordregio report 2019:4)

### ICELAND

Digital services and digital infrastructure is important in the Icelandic strategies. In a regional perspective access to broadband is an important issue: “Given its sparsity, connectivity is key issue in Iceland and having high-speed broadband for everyone by 2020 is a priority. Many communities are lagging behind in this regard. Another concern is to ensure that rural areas

can benefit (or at least not lose) from the broader changes brought about by digitalisation.” (The Nordregio report 2019:4)

## NORWAY

The White Paper *The Industry - Greener Smarter and Creative*<sup>51</sup> “emphasises the cross-sectoral nature of digitalisation and its impact on the labour market, as it calls for a stronger focus on the development of skills and competencies required for the future labour force to maintain a competitive Norwegian industrial structure”. (Nordregio report 2019:4). A strategy for higher education: *Digitaliseringsstrategi for Universitets- og Høgskolesektoren 2017-2021*<sup>52</sup>. The importance of lifelong learning for restructuring and competitiveness: *NOU 2019:12 Lærekräftig utvikling – Livslang læring for omstilling og konkurransevne*.<sup>53</sup>

## SWEDEN

According to the digital strategy, *För ett hållbart digitaliserat Sverige – en digitaliseringsstrategi (For Sustainable Digital Transformation in Sweden)*.<sup>54</sup> The strategy sets the direction for the government's digitalization policy. To achieve the overall goal, the strategy includes five sub-goals of digital competence, digital security, digital innovation, digital management and digital infrastructure. The sub-goals explain how digitalisation can contribute to a positive social development. According to Nordregio report 2019:4 “The overall goal is to establish itself as a world leader in harnessing the benefits of digitalisation. ... The strategy argues that there is a need to promote not only smart cities but also sustainable rural areas through digitalisation, and stresses the importance of enhanced local and regional commitment to and engagement in digitalisation”.

More relevant documents:

Sweden's digitalization policy<sup>55</sup>

The Sustainable Digital Transformation in Sweden, factsheet<sup>56</sup>

Digital management<sup>57</sup>

Swedish National Agency for Education, digitalization plan<sup>58</sup>

Action plan, *Handlingsplan Agenda 2030 2018–2020*<sup>59</sup>

*Sverige och Agenda 2030 — rapport till FN:s politiska högnivåforum 2017*<sup>60</sup>

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<sup>51</sup> *The Industry—Greener, Smarter and Creative* (Meld St. 27 2016–2017)

<sup>52</sup> <https://www.regjeringen.no/no/dokumenter/digitaliseringsstrategi-for-universitets--og-hoyskolesektoren---/id2571085/?ch=1>

<sup>53</sup> <https://www.regjeringen.no/no/dokumenter/nou-2019-12/id2653116/>

<sup>54</sup> <https://www.regeringen.se/regeringens-politik/digitaliseringsstrategin/>

<sup>55</sup> <https://www.regeringen.se/regeringens-politik/digitaliseringspolitik/>

<sup>56</sup> <https://www.regeringen.se/informationsmaterial/2017/05/for-ett-hallbart-digitaliserat-sverige---en-digitaliseringsstrategi/>

<sup>57</sup> <https://www.regeringen.se/regeringens-politik/digitaliseringsstrategin/digital-ledning/>

<sup>58</sup> <https://www.skolverket.se/om-oss/var-verksamhet/skolverkets-prioriterade-omraden/digitalisering/skolverket-framjar-skolasendets-digitalisering>

<sup>59</sup> <https://www.regeringen.se/49e20a/contentassets/60a67ba0ec8a4f27b04cc4098fa6f9fa/handlingsplan-agenda-2030.pdf>

<sup>60</sup> <https://www.regeringen.se/49f006/contentassets/f883444856cd40838e69a22d5da2beed/sverige-och-agenda-2030--rapport-till-fns-politiska-hognivaforum-2017-om-hallbar-utveckling.pdf>

## GREENLAND

One of the six focus areas of the *National Digitalisation Strategy 2018–2021* is digital competencies: “As Greenlandic citizens are lagging when it comes to digital competences initiatives will be implemented to enhance digital skills.” (Nordregio report 2019:4)

## THE FAROE ISLANDS

The Faroe Islands addresses demographic challenges: “Depopulation has been a challenge for the Faroe Islands for a long time. In general, digitalization of the public system is expected to facilitate creation of new jobs, including on the remote islands.” (Nordregio report 2019:4)

## THE ÅLAND ISLANDS

Digitalization is employed as a means through which to realize the goal of developing a sustainable society in Åland Islands by 2051: “To adapt to labour market changes, the government is investing in IT training at the higher education level, as well as actively trying to make Åland attractive for young people who have left the territory to study elsewhere.” “In schools, the *IT Strategy 2018–2020 for the Education Sector on Åland* is driving the use of digital technologies as a tool to support skill development in areas such as reflection, analysis, problem solving and flexibility.” (Nordregio report 2019:4)

### 6.3. FUTURE COMPETENCIES

“The future does not just appear out of thin air. It is created. The aim is to prepare children and young people for the future even though nobody knows quite what it will look like. Education and training are the keys to the competencies of the future. We want everybody in the Nordic Region to have the knowledge and skills to cope with a more complex future.” This is an introduction given by the Nordic Council of Ministers for Education and Research<sup>61</sup>. The Nordic Council of Ministers for Education and Research is working to develop the competencies of the future<sup>62</sup>, expressed in ten prioritized areas:

1. Research
2. Promoting early, intersectoral and inclusive initiatives in the education system
3. Lifelong learning
4. Entrepreneurship and innovation
5. Democratic competencies
6. Digital literacy
7. Sustainable development
8. Language understanding
9. Mobility
10. Recognition of qualifications

When it comes to more specific types of competencies that will be demanded in future there are national analysis, for example *NOU 2019: 2 Fremtidige kompetansebehov II - Utfordringer for kompetansepolitikken*<sup>63</sup> and *NOU 2020:2 Fremtidige kompetansebehov III* —

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<sup>61</sup> <https://www.norden.org/en/competencies-future>

<sup>62</sup> <https://www.norden.org/en/information/10-priorities>

<sup>63</sup> <https://www.regjeringen.no/no/dokumenter/nou-2019-2/id2627309/?ch=1>

*Læring og kompetanse i alle ledd*<sup>64</sup>. A Nordregio report published in 2019 has mapped the skills policies in the Nordic countries and self-governed areas: *Skills Policies - Building Capacities for Innovative and Resilient Nordic Regions*<sup>65</sup>

#### **6.4. CONCLUDING COMMENTS**

In 6.1. and 6.2. just a few of the national strategies and priorities are mentioned and they mainly cover digitalization in broad. Strategies specifically targeted towards how digitalization affects education/learning and if/how education and learning should change, are not included. A more thorough mapping would present an abundance of relevant materials. Descriptions of future competencies analyses in the Nordic countries and self-governed areas and answers to the question raised by the working group, *why is it important to have these competencies*, would take more time than what is allocated for this report. Just a few references are mentioned in 6.3. Once NVL Digital is established, one can decide whether it is useful to have a more thorough mapping of national strategies and future competence needs.

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<sup>64</sup> <https://www.regjeringen.no/no/dokumenter/nou-2020-2/id2689744/>

<sup>65</sup> <https://www.nordregio.org/research/skills-policies-building-capacities-for-innovative-and-resilient-nordic-regions/>