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Foreword

The Nordic countries are among the most advanced regions in the world when it comes to digitalisation. To fully participate in the society, it is necessary to be a part of the digital society as well. But not everyone has the resources to benefit equally from digitalisation: for example, some immigrant groups are at risk of being digitally excluded. Digital inclusion is therefore a crucial part of successful integration into the Nordics.

This report summarises and builds on results from the Nordregio research project <u>Digital Inclusion in Action</u>, which aims to develop an understanding of digital inclusion in the Nordic and Baltic region. This report also incorporates new empirical material to provide a more focused analysis on the digital inclusion of immigrant women.

Immigrant women are, according to research, one of the groups that have a higher risk of becoming digitally excluded. While not all immigrant women are at risk, we have learned that newly arrived and refugee women with limited national language proficiency or lower socioeconomic backgrounds face the biggest challenges.

The report is divided into two parts. Firstly, it explores the national policies of digital inclusion in the Nordic countries and how they address the needs of immigrant women. Secondly, the report sheds some light on barriers that prevent immigrant women from fully accessing and engaging in the digital society.

With this report we want to highlight the strong link between digital inclusion and migrants' integration to society, wellbeing, and potential to contribute to the new country. The Nordic countries have a common challenge of ensuring that refugees and immigrants establish themselves in their new societies. Without digital capabilities and access to the digital world it is difficult to fully participate – to receive public information and services, to study, to find a job, and even to build and maintain social relationships.

It is our hope that the efforts presented in this report will offer inspiration and learnings across the Nordic countries on how national, regional, local, and civil society actors can promote digital inclusion of migrant women. Closing the digital divide is a key factor in achieving a socially sustainable, cohesive, and resilient Nordic region.

This study is a collaboration between the Nordic Welfare Centre and Nordregio and a part of the Nordic co-operation programme on integration, initiated by the Nordic Council of Ministers. We would like to thank the researchers Maja Brynteson and Sigrid Jessen at Nordregio for their hard work on the report, and all informants for their contributions.

For more information about Nordic co-operation on integration and inclusion, please visit the Knowledge bank at www.integrationnorden.org.

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Executive summary (English)

Despite the high level of digitalisation in the Nordic region, certain population groups face challenges in accessing and utilising digital services. Immigrant women, and more specifically newly arrived and those with limited local language proficiency and lower socioeconomic or educational backgrounds, are identified as a digitally vulnerable group. Digital inclusion is crucial for the integration of immigrant women in the Nordics, as it ensures access to essential services, education, and employment opportunities. Conversely, digital exclusion can lead to social isolation and hinder the ability to fully participate in society.

This study explores digital inclusion of immigrant women in the Nordics, focusing on the policy landscape, barriers for digital inclusion, and practices for promoting digital engagement. The study employs a qualitative research design, including policy analysis, document review, and interviews with civil society actors from Finland, Norway, Sweden, and Denmark. Previous research has identified the central role of civil society in promoting digital inclusion of groups at risk of digital exclusion. Other support channels also exist.

Our findings highlight that the policy landscape for digital inclusion varies across the Nordic countries. Norwegian policies explicitly identify immigrant women as vulnerable, while other countries address broader immigrant challenges without a specific focus on women. Most policies recognise common barriers such as lack of language skills and low digital literacy, and adopt a 'common challenges, common solutions' approach. This approach aims to address similar challenges faced by various groups at risk of digital exclusion by developing comprehensive solutions that benefit a broader range of people and use resources more efficiently. What is more effective for combating digital exclusion – targeted policies or broader policies – is too early to determine.

Immigrant women is a heterogenous group, but common barriers to digital inclusion include limited language proficiency, low digital skills, and low trust issues in technology, the system and their own abilities. These issues are similar to those faced by other groups at risk of digital exclusion. What is notable for immigrant women is that they often encounter a combination of challenges and may also face systemic challenges such as cultural differences, lack of "domain knowledge", and systemic barriers such as discrimination, family responsibilities, and limited access to childcare and education.

Practices promoting digital inclusion in the digitalisation policies involve developing user-friendly eIDs, investing in digital skills for those with low digital literacy and providing digital assistance for those in need, and offering services in multiple languages.

NGOs have first-hand knowledge about their target group and can provide tailored digital literacy courses and create supportive environments. NGOs can act as bridges between immigrant women and the public sector, helping to build trust and provide clear, accessible information and offer knowledge about their target group.

NGOs report that strategies that work well to engage and enable participation include:

- Anchoring solutions within the target group to match their needs, involving participants in the design of the support.
- Tailoring support by offering childcare, multilingual services, courses at different skills levels, and programmes for women to meet and discuss.
- Addressing digital and social barriers through a holistic approach, including language education, community building and democratic participation together with digital literacy.

Digital inclusion is essential for integrating immigrant women in the Nordic countries. Although digital innovations provide significant benefits, they also pose challenges to integration, making it a double-edged sword. This study underscores the need for new and creative strategies and initiatives to promote digital inclusion and integration.

Sammanfattning (Svenska)

Trots den höga nivån av digitalisering i Norden stöter vissa befolkningsgrupper på utmaningar när det gäller att få tillgång till och använda digitala tjänster. Utrikesfödda kvinnor identifieras som en särskilt sårbar grupp för digitalt utanförskap, särskilt nyanlända och de med begränsade kunskaper i det lokala språket och lägre socioekonomisk eller utbildningsbakgrund. Digital inkludering är avgörande för integrationen av invandrare i Norden, eftersom det säkerställer tillgång till viktiga tjänster, utbildning och arbetsmöjligheter. Omvänt kan digital exkludering leda till social isolering och begränsa möjligheterna att delta fullt ut i samhället.

Denna studie undersöker digital inkludering av utrikesfödda kvinnor i Norden, med fokus på det politiska landskapet, hinder för digital inkludering, samt olika sätt att främja digitalt engagemang. Studien använder en kvalitativ forskningsdesign, inklusive policyanalys, dokumentanalys och intervjuer med några civilsamhällesorganisationer från Finland, Norge, Sverige och Danmark. Tidigare forskning har identifierat civilsamhällets roll i att främja digital inkludering av grupper som riskerar digital exkludering. Det finns även andra stödkanaler.

Våra resultat visar att det politiska landskapet för digital inkludering varierar mellan de nordiska länderna. I norsk politik identifieras invandrarkvinnor uttryckligen som sårbara, medan de andra nordiska länderna snarare arbetar bredare med invandrarutmaningar, utan särskilt fokus på kvinnor. De flesta policyer visar på gemensamma hinder, som bristande språkkunskaper och låg digital kompetens, och antar en "gemensamma utmaningar, gemensamma lösningar"-strategi. Syftet är att utveckla övergripande lösningar som gynnar en bredare grupp människor och använder resurser mer effektivt. Vad som är mest effektivt för att råda bot på digitalt utanförskap - riktad politik eller bredare politik - är ännu för tidigt att avgöra.

Utrikesfödda kvinnor är en heterogen grupp, men vanligt förekommande hinder för digital inkludering är begränsade språkkunskaper, låg digital kompetens och låg tilltro till tekniken, systemet och den egna förmågan. Dessa problem liknar dem som andra grupper som riskerar att hamna i digitalt utanförskap ställs inför. Anmärkningsvärt för invandrarkvinnor är att de ofta möter en kombination av utmaningar, och kan även möta systemiska utmaningar som kulturella skillnader, brist på kunskap och förståelse för välfärdssystemet, tjänsterna och byråkratin samt systemiska hinder som diskriminering, familjeansvar och begränsad tillgång till barnomsorg och utbildning.

I digitaliseringspolicyerna främjas digital inkludering bland annat genom att utveckla användarvänliga e-legitimationer, investera i digitala färdigheter för personer med låg digital kompetens, tillhandahålla digitalt stöd till behövande samt erbjuda tjänster på flera språk.

Civilsamhällets organisationer har förstahandskunskap om sin målgrupp och kan tillhandahålla skräddarsydda kurser i digital kompetens och skapa stödjande miljöer. Organisationerna kan fungera som broar mellan invandrarkvinnor och den offentliga sektorn och kan hjälpa till att bygga upp förtroende och tillhandahålla tydlig, tillgänglig information och erbjuda kunskap om sin målgrupp.

Civilsamhällets organisationer rapporterar att strategier som fungerar bra för att engagera och möjliggöra deltagande inkluderar att:

- Förankra lösningar inom målgruppen för att matcha deras behov, involvera deltagarna i utformningen av stödet.
- Skräddarsy stödet genom att erbjuda barnomsorg, flerspråkiga tjänster, kurser på olika kompetensnivåer och program där kvinnor kan träffas och diskutera.
- Ta itu med digitala och sociala hinder holistiskt, genom att brett främja språkutbildning, samhällsbyggande och demokratiskt deltagande tillsammans med digital kompetens.

Digital inkludering är avgörande för att utrikesfödda kvinnor ska integreras i de nordiska länderna. Även om digitala innovationer ger betydande fördelar innebär de också utmaningar för integrationen, vilket gör den till ett tveeggat svärd. Denna studie understryker behovet av nya, innovativa och kreativa strategier och initiativ för att främja digital inkludering och integration.



1. Introduction

1.1 Background

In today's digitally interconnected world, access to technology and digital literacy is essential for full participation in society. Digital proficiency is crucial, as it enables individuals to search for jobs, enrol in education, navigate healthcare systems, and maintain connections with family and friends (e.g., Chohan & Hu, 2022). While the Nordic countries are among the most digitalised nations globally, certain population groups remain digitally excluded (Nordic Council of Ministers, 2022; Wendt-Lucas et al., 2024).

Simultaneously to the digitalisation of the Nordic societies, the share of the population with immigrant backgrounds in the Nordic countries has increased notably in the last twenty years, ranging from 9% in Finland, 14% in Denmark, and 17% in Norway to 22% in Iceland and 20% in Sweden in 2023 (Heleniak, 2024). Previous research has shown that some groups of immigrants are at risk of digital exclusion for various reasons, such as language barriers and disparities in digital literacy (e.g., Coles-Kemp et al., 2018; Jessen et al., 2024).

Specifically, certain groups of immigrant women face challenges of digital inclusion. These groups include newly arrived women, such as refugees, asylum seekers, and those with limited national language proficiency or lower socioeconomic and educational backgrounds^[1] (Buchert et al., 2023; Kluzer & Rissola, 2009). Research from the Nordic countries has demonstrated that these immigrant women have disproportionate health challenges and limited access to healthcare services due to their lower socioeconomic status (Funge et al., 2020; Debesay et al., 2022). They also have lower labour market participation rates compared to their native-born counterparts (Calmfors & Gassen, 2019; Spehar, 2021). All these factors are impacted by the individuals' digital competencies, which studies have found to be lower among immigrant women (e.g., Papazu et al., 2024). The highly digitalised nature of the Nordic societies (Heponiemi et al., 2020) exacerbates these challenges. Given that digital aspects are deeply embedded in daily life in the Nordic countries, possessing digital skills and literacy is crucial for successful integration into society (Hoffmann et al., 2022). Digital exclusion risks exacerbating inequality and increasing social isolation (Fung et al., 2025).

It is important to clarify that in referring to 'immigrant women', this paper specifically addresses
those groups that previous research has identified as digitally vulnerable. These include newly
arrived, refugees, asylum seekers, and individuals with low educational or socioeconomic
backgrounds or limited national language proficiency, rather than all immigrant women.

Despite the growing recognition of the importance of digital inclusion for immigrant women, relatively little is known about the Nordic strategies and initiatives to address the issue. This research project aims to shed light on the Nordic political strategies on digital inclusion of immigrants in general and immigrant women specifically. Furthermore, the research aims to shed light on barriers that prevent these women from fully accessing and engaging in the digital society.

The project will delve into the current policy landscape^[2] and existing initiatives for the digital inclusion of immigrant women, and analyse user challenges, needs, and potential solutions. The project will emphasise the work of civil society actors and NGOs, because they are argued as particularly important for digital inclusion in the Nordic countries (Jessen et al., 2024; Wendt-Lucas et al., 2024), but also regarding the integration of immigrants in the Nordic societies since they have first-hand knowledge of challenges and needs (Karlsdóttir et al., 2020). The research project seeks to identify lessons learnt and practical approaches to include immigrant women in the digital society.

Fact box: Digital Inclusion

Several definitions of digital inclusion exist (Wendt-Lucas et al., 2024). A common dominator is that the definitions all tend to be related to the interplay between digital accessibility and digital capabilities barriers (Jessen & Vasilevskaya, 2025). Digital accessibility barriers refer to barriers in access to e.g., hardware, software, and internet (Digital Europe, 2024). Digital capabilities barriers, on the other hand, relate to the capabilities of the user, e.g., digital skills, dyslexia, mistrust in public institutions, unwillingness, language barriers, and more (Digital Europe, 2024). The digital accessibility and capabilities barriers are often intertwined and differ from each individual at risk of digital exclusion.

Today it is largely acknowledged that while certain groups are more likely to be at risk of digital exclusion, that digital exclusion tends to be a context-specific and intersectional phenomenon (e.g., Park, 2022; Tsatsou, 2022). This refers to the fact that digital exclusion is likely to be more prevalent if several factors are present. For example, immigrant women in general are not necessarily digitally excluded. However, the risk of digital exclusion increases if the immigrant woman is an older adult, with socio-economically weaker backgrounds, living in rural regions. Furthermore, digital inclusion tends to be largely context-specific, meaning that an individual may be digitally excluded, e.g., in terms of usage of eID, and still be comfortable in using, e.g., social media.

With the term policy landscape, we refer to the overall framework of policies, regulations, and guidelines that shape and govern a particular area or sector, influencing decision-making and implementation processes.

1.2 Aim & Research Questions

The study aims to understand the landscape of digital inclusion policies related to immigrant women in the Nordics. Furthermore, the aim is to understand the barriers hindering the full digital inclusion of immigrant women in the Nordic countries and identify practices and approaches for promoting their access and engagement in the digital society.

The research will explore:

- To what extent do current national digitalisation/digital inclusion policies in the Nordic countries specifically address the needs of immigrant women?
- What are the possible barriers that hinder certain immigrant women from fully accessing and engaging in the digital society in the Nordic countries?
- What initiatives and policies in the Nordic countries exist to promote the digital inclusion of immigrant women, and how can these practices be further improved?

1.3 Methodology

This study builds on the results from the Nordregio project <u>Digital Inclusion in Action</u>, which aims to develop a comprehensive understanding of the key aspects of digital inclusion in the Nordic and Baltic region and assess their impact on various societal groups. The Digital Inclusion in Action project, running from October 2022 to October 2025, is financed by the Nordic Council of Ministers (MR-DIGITAL). It encompasses a variety of activities and outreach efforts, examining such aspects as the policy landscape of digital inclusion (Wendt-Lucas et al., 2024) and the role of civil society actors in digital inclusion (Jessen et al., 2024) within the Nordic and Baltic regions. The current study builds upon these findings but specifically focuses on the sub-group of immigrant women.

This study employs a qualitative research design, using policy analysis, document analysis, and semi-structured interviews. The first analytical phase of this study is a policy overview examining the status quo of the policy landscape concerning immigrant women and digital inclusion in the Nordic countries. The policy overview takes the starting point in the policy overview report – *National digital inclusion initiatives in the Nordic and Baltic countries* – that Wendt-Lucas et al. (2024) produced in the project of Digital Inclusion in Action. The current policy review builds upon Wendt-Lucas et al. (2024) by including digitalisation/digital inclusion policies published during 2024, after the study's publication. Several national policies were published in 2020–2024, a period when digital inclusion gained increasing attention in the Nordic countries. To add to this, the study also considers policies published before 2020 still in effect. In total, 17 digitalisation/digital inclusion-related policies were reviewed, including documents from all five

Nordic countries (for a complete list of these policies, see <u>Appendix 1</u>). Hence, this current study provides an overview of digitalisation/digital inclusion policies and explicitly focuses on immigrant women in these policies.^[3]

The second phase draws on semi-structured interviews with civil society actors, highlighting the digital inclusion of immigrant women in a Nordic context. As mentioned above, studies indicate that Nordic civil society actors play a vital role in promoting digital inclusion (e.g., Jessen et al., 2024; Wendt-Lucas et al., 2024) and in facilitating the integration of immigrants into Nordic societies (Karlsdóttir et al., 2020). Civil society actors, including NGOs (non-governmental organisations), provide one avenue of support for addressing digital issues among various societal groups. Other channels are also available (see Section 2.3).

The aim of the interviews with the NGOs was to shed light on the challenges and barriers immigrant women face in achieving digital inclusion, the solutions and initiatives currently in place, areas for improvement, and future needs. Based on their work and specific focus areas within digital inclusion of immigrant women, one civil society actor each was selected from Sweden, Norway, Finland, and Denmark was selected. Due to time constraints, it was not possible to engage with an Icelandic NGO. [4] Some of the NGOs solely focused on immigrant women, while others focused on immigrants in general and also offered various activities specifically for women. During the interview phase, desk research involving document analysis was also conducted to complement the interview data. All interviews took place online during 2024. Please see the information boxes below to learn more about the NGO selected for each country.

Information box: Introduction to the Danish NGO interviewed

In Denmark, various actors provide targeted support to immigrants, including digital inclusion initiatives. Collaborating with civil society organisations and frontline employees is seen as beneficial, as they possess first-hand knowledge of participants' challenges and needs, enhancing the overall knowledge base (The Danish Agency for Digital Government, Local Government Denmark & Danish Regions, 2024; Integrationsviden, n.d.).

In this study, we focus on one NGO that has created a network of women with ethnic minority backgrounds in Denmark. These women are primarily anchored in various associations or groups across the

^{3.} This project has only included digitalisation and digital inclusion policies. Due to time constraints, the project has not included integration, social affairs, or public health policies. These could be an interesting pathway for future research.

^{4.} We were in contact with NGOs which offered some access to computers and basic digital skills and groups for women. However, they did not have a specific focus on digital inclusion issues. Due to the timeframe of the project, we could not include an Icelandic NGO.

country, with around 50 groups operating under association-like principles. These women have learned to navigate Danish society and are eager to pass on their knowledge to newly arrived or isolated women in their communities. The NGO, in turn, offers education and training for the women, who can then pass the knowledge further.

Information box: Introduction to the Finnish NGO interviewed

While the Finnish state and municipalities provide assistance services to ease integration, NGOs also play a crucial role in addressing the specific needs of immigrant communities, offering tailored support, bridging gaps and providing activities, services, and promoting diversity in the workplace (Digital and Population Data Services Agency, 2024; Ministry of Economic Affairs and Employment, n.d.).

In this study, we take a closer look at a Finnish NGO that is dedicated to enhancing digital inclusion for immigrant women and facilitating their integration into Finnish society. The organisation actively promotes the social and economic empowerment of female immigrants, helping them to improve their position within the community. The NGO was founded by immigrant women primarily to support and empower other immigrant women in employment, education, and overall societal participation.

Information box: Introduction to the Norwegian NGO interviewed

Norway has a fair number of NGOs that offer services aimed at improving and acquiring the skills needed to navigate the digital society digital skills, most commonly to improve people's basic digital skills. Some NGOs focus on providing support for immigrants and their efforts of becoming part of the Norwegian society (Ministry of Local Government and Modernisation, 2021).

For this study, we look at one Norwegian NGO which focuses on empowering families from diverse backgrounds, working to bridge both cultural and digital divides in Norway. The NGO offers support both to immigrant women and to immigrant parents and families. Established to improve cooperation between home and school, the

NGO has since expanded its mission to empower through digital skills training. By offering tailored digital skills training and resources, the NGO helps, among others, immigrant mothers to overcome barriers to digital inclusion, fostering greater independence and participation in society.

Information box: Introduction to the Swedish NGO interviewed

NGOs are important for the digital inclusion of immigrants in Sweden, for they offer tailored training and support that complements public services, facilitating immigrants' access to and use of digital tools and services (Swedish Post and Telecom Authority, 2024a).

The Swedish NGO chosen for this study enhances digital inclusion for immigrant women by providing opportunities to acquire everyday digital skills and by offering advanced IT training for further development. Technology is seen as a tool for integrating female immigrants into Swedish society and for encouraging greater participation of immigrant women in the ICT sector. Their mission is to accelerate the integration of these women into society by providing them with essential digital education and skills. This initiative is also crucial because women, particularly those from immigrant backgrounds, are significantly underrepresented in the tech sector.

While this study provides valuable insights into the experiences of civil society actors working with immigrant women and digital inclusion, it is important to acknowledge potential limitations. The small sample size of one civil society actor per Nordic country limits the generalisability of the findings. There is also a risk of selection bias if the chosen organisations do not represent the full range of experiences and approaches in the region. To mitigate these limitations, we have strived to select diverse organisations and triangulate the findings from interviews with document analysis. Importantly, however, a central aim of this qualitative research is to learn about the individual experiences from specifically selected Nordic NGOs. Therefore, the research does not aim to be representative beyond the specific setting.

Furthermore, this study primarily reviews digitalisation-related policies, without addressing integration policies which could encompass digital inclusion perspectives. An interesting point of departure for future research would be to incorporate and evaluate integration policies alongside digitalisation-related policies, and to compare various support channels.



2. Setting the scene: Promoting digitalisation in the Nordic countries

2.1 Digitalisation of the Nordic societies

In this study, we take the empirical point of departure from the five Nordic countries: Denmark, Finland, Iceland, Norway, and Sweden. Each country is highly digitalised (Nordic Council of Ministers, 2022) and has increasingly digitalised public sectors (DESI, 2024). At the same time, these five countries have also seen a rapid increase in the population with foreign-born backgrounds in recent years (Heleniak, 2024). However, national differences exist between the five countries in terms of policy approaches to digitalisation, digital inclusion, and integration, making these five countries an interesting empirical point of departure for this type of research.

The rapid digitalisation of the public sector in the Nordic societies also entails that those individuals not yet digitalised risk being digitally left behind and unable to participate in society. While intertwined and significantly context-specific, several groups are viewed as being at risk of digital exclusion in the Nordic region, ranging from some rural populations, some people with disabilities, some older adults, some low-income individuals, and some immigrants, facing various types of barriers (Jessen et al., 2024). As noted above, a common denominator in the definition of digital inclusion is the interplay between digital accessibility and capabilities barriers (Jessen & Vasilevskaya, 2025). Figure 1 illustrates these different types of barriers. These barriers are often intertwined and vary for each individual at risk of digital exclusion (Digital Europe, 2024).

Access to the internet Access to a digital device Complex digital services Digital skills Literacy/dyslexia Language difficulties Lack of "domain knowledge" and/or "public language" Unwillingness due to mistrust, insecurity etc.

Figure 1: Common barriers to digital inclusion (adapted from Digital Europe, 2024, p.9).

2.2 Civil society and volunteerism in the Nordic societies

Civic engagement through organised volunteerism has previously been associated with something unique for the Nordic region and has been linked to the development of the Nordic welfare societies (e.g., Arnesen et al., 2016; Henriksen et al., 2019). In the Nordics, NGOs have an important role in advancing digital inclusion for immigrant women (as well as other groups in society) due to their direct access to and contact with target groups, making them a vital source of knowledge about the challenges and needs these groups face. The NGOs can act as a bridge between the public sector and the target groups, engaging in advocacy and influence work. Additionally, NGOs focus on capacity building, helping the target groups develop necessary skills and capabilities (Jessen et al., 2024). National authorities in the Nordic countries emphasise the importance of NGOs as cooperation partners due to their ability to reach hard-to-reach groups and their in-depth understanding of their target groups' challenges and needs (Digital and Population Data Services Agency, 2024; Ministry of Economic Affairs and Employment, n.d.; The Danish Agency for Digital Government, Local Government Denmark & Danish Regions, 2024).

This study examines the role of NGOs in promoting digital inclusion for immigrant women in the Nordic countries, highlighting their access to the target group, their tailored support services, and their capacity to act as intermediaries between public authorities and immigrants. An overview of other support avenues for digital inclusion is provided in <u>Section 2.3</u>.

2.3 Channels for digital inclusion support for immigrant women in the Nordic societies

As noted above, different support pathways are available in the Nordic countries for immigrant women, immigrants in general, and other societal groups seeking assistance with digitalisation-related issues. In addition to civil society actors, these pathways include national introduction/integration programmes^[5] often implemented locally by municipalities, covering all aspects of becoming a member of Nordic society. Libraries, welcome houses, and community services also typically offer digital support to anyone in need.

Below is a description of the range of support channels available in each Nordic country. Please note that this is not an exhaustive list of all possible support options.

Information box: Channels of support for digital inclusion in Denmark

The Danish Agency for International Recruitment and Integration is responsible for managing introduction programmes for immigrants in Denmark. SIRI operates under the Ministry of Immigration and Integration and oversees various aspects of the integration process, including language courses, cultural orientation, and employment support (The Danish Agency for International Recruitment and Integration, n.d.).

Many municipalities in Denmark include digital skills training as part of their introduction programmes for immigrants. These programmes aim to help immigrants integrate into Danish society by providing essential skills (see e.g. Aalborg Kommune, n.d.; Københavns Kommune, n.d.). There are also welcome houses, where immigrants can get help with digital tools and services (Welcome House, n.d.). Additionally, community services (e.g. Borgerservice) offer personalised help with digital solutions in the public sector. At borger.dk you can book an appointment to visit the municipality's citizen service (Borger, n.d.). Some initiatives also aim at ensuring that all residents, including immigrants, can access and use public digital services, e.g., the Network for Digital Inclusion (The Danish Agency for Digital Government, 2024).

Local libraries in Denmark offer IT courses and free courses and workshops on digital skills, including basic computer use, internet navigation, and using digital services (see e.g. Aarhus Bibliotekerne, n.d; Københavns Biblioteker, n.d.).

^{5.} Please note that this project has not reviewed the national integration or immigration policies of the Nordic countries. The information provided in the boxes in section 2.3 offers a brief and broad overview of the entities responsible for integration in each country. Since municipalities often oversee the implementation of integration programs, some examples are included to provide context.

There are also websites that provide information about life in Denmark, including guidance on, for example, digital services:

- Life in Denmark, the official website for newly arrived in Denmark, contains public information and self-service, including information on digital services (https://lifeindenmark.borger.dk/).
- Integrations viden.dk is a knowledge portal providing information, guidance, tools, and inspiration for use in integration efforts in Denmark (https://integrationsviden.dk/).

Information box: Channels of support for digital inclusion in Finland

In today's digitalised society, Finnish policies recognise digital inclusion as part of broader integration efforts (Ministry of Economic Affairs and Employment, 2024). The Ministry of Economic Affairs and Employment oversees integration policy, while the KEHA Centre monitors effectiveness and supports skills development. ELY Centres promote integration and good relations at the regional level (Ministry of Economic Affairs and Employment, n.d.).

From 1 January 2025, with the implementation of Finland's new Integration Act, municipalities are responsible for local integration efforts, including planning and developing integration services and fostering good relations between population groups, and public employment services (Ministry of Economic Affairs and Employment, n.d.). Integration services strive to equip immigrants with the necessary skills and training (such as digital skills and literacy) to become active, fully integrated, and contributing members of Finnish society (City of Helsinki,2025).

The municipalities and cities offer integration services, such as International House (see e.g. Jyväskylä, n.d.) and special services for immigrants (see e.g. City of Helsinki, n.d.), aiming to support them in all aspects of integration into Finnish society, including digital inclusion. Local municipalities and cities across Finland also offer digital assistance through libraries, community centres, and social workers to help residents with online services and increase digital skills to promote integration (see e.g. City of Helsinki, 2021). Specific details are available on municipal websites or community service pages (see, for example, Helsinki libraries, which offer digital literacy training (Digitaalinen Helsinki, n.d.)).

The Digital and Population Data Services Agency gathers information about digital support, such as learning and support material, and opportunities for digital support, open for all, see: https://dvv.fi/en/digital-support

There are many places where people can visit and receive help with digital issues. Places that provide digital support across Finland can be found here (only available in Finnish):

https://www.suomi.fi/kartta/palvelupaikat/sivusto-haku?lat=6959887&lon=463836&zoom=1&sl=false&q=digituki

Information box: Channels of support for digital inclusion in Iceland

The Ministry of Social Affairs and Labour is the primary authority on integration policy in Iceland, overseeing the main legal framework for integration. The Directorate of Labour, the Icelandic public employment service, funds essential services such as language training, counselling, and lifelong learning, all provided free of charge to the unemployed and refugees (OECD, 2024). The Directorate of Labour also helps immigrants to make their first steps in Iceland easier, for example by offering personalised advice, assistance with attending courses, and social education (Directorate of Labour, n.d.).

Municipalities provide a broader range of services to immigrants. Depending on the municipality, these can include Icelandic language and civic integration courses, cultural orientation, and information about the Icelandic society, including digital courses (OECD, 2024).

The Ministry of Social Affairs and Labour also manages the Multicultural Information Centre for Immigrants, which offers accessible advice, toolboxes on life in Iceland, guidance, and information on necessary services, rights, and obligations for immigrants (Multicultural Information Centre, n.d.).

The Education and Training Service Centre (ETSC) provides education and opportunities and supports adult education to enhance workforce competence (Fræðslumiðstöðin, n.d.). The 14 regional centres offer various programmes aimed at improving digital skills. The courses aim to enhance information and cultural literacy in Iceland by training participants to use computers and smart devices for gathering information, job searching, and responsible citizenship. It emphasises electronic citizenship, the Icelandic labour market, and effective communication, with instruction available in multiple languages (Framvegis, n.d.).

Information box: Channels of support for digital inclusion in Norway

The Department of Integration within the Ministry of Labour and Social Inclusion oversees integration policies and programmes in Norway (Regjeringen, n.d.), while the Directorate of Integration and Diversity (IMDi) implements these policies and supports municipalities (IMDi, n.d.). Municipalities handle local integration programmes, including housing, education, and employment services. Key tools include the introduction programme and training in Norwegian language and social knowledge, which emphasise digital skills for immigrants (Norwegian Association of Local and Regional Authorities, n.d.a). Adult education for immigrants specifically highlights the importance of digital skills for navigating and participating in Norwegian society (Direktoratet for høyere utdanning og kompetanse, n.d.).

The Digihjelpen project, launched in 2017, aims to enhance digital inclusion by providing low-threshold guidance services in specific physical locations within municipalities (Norwegian Association of Local and Regional Authorities, n.d.b). Digihjelpen collects information about necessary digital tools and services in Norwegian society. It is open to all individuals facing challenges with digital tools and services, with some municipalities focusing specifically on immigrants (see e.g., Norwegian Association of Local and Regional Authorities, 2022). A list of Digihjelpen service locations can be found here: https://www.ks.no/fagomrader/digitalisering/digital-kompetanse/digihjelpen/eksempler-fra-kommunene/kart-over-veiledningstilbud-i-kommunene/

Many Norwegian municipalities offer low-threshold guidance service where citizens with little or no digital skills can receive help and guidance in using digital tools and digital services (Digdir, 2024). In Norway, public libraries also play a key role in the municipalities' focus on digital skills, serving as low-threshold places where individuals with little or no digital skills can receive help and guidance (Bibliotekutvikling, 2023).

Information box: Channels of support for digital inclusion in Sweden

The Ministry of Employment is responsible for Sweden's integration policies and for ensuring that immigrants can participate in society (Ministry of Employment, n.d.). The Swedish Public Employment

Service manages the Introduction Programme (Etableringsprogrammet), which helps immigrants find jobs, learn Swedish, and integrate into society (Swedish Public Employment Service, n.d.).

Municipalities play an important role in integration, as they are responsible for teaching language courses (i.e. SFI – Svenska för invandrare), social and civic orientation, and other adult education for immigrants (The Swedish Migration Agency, 2022). Municipalities and cities offer civic orientation activities, including digital skills courses, for people participating in the establishment programme, (see e.g. Göteborgs stad, n.d.). Integration centres, citizens' offices and welcome houses are also available in several municipalities, usually offering digital support (see e.g. Stockholms stad, n.d.; Göteborgsregionen, 2022).

Many libraries in Sweden offer free digital literacy courses and workshops. These cover a wide range of topics, from using the internet and email to more advanced topics like online banking and egovernment services (see e.g. Stockholms Stadsbibliotek, 2023).

There are also various avenues of support that are open to all members in society who struggle with digital tools or services. For example, Digitalhjälpen from the Swedish Post and Telecom Authority (PTS) is a webpage with guides for various digital services (Swedish Post and Telecom Authority, 2024b). The objective is to provide learning material to help digital beginners understand and use digital services and tools in their everyday lives (see https://www.pts.se/digital-inkludering/digitalhjalpen/).

Digidel is a network and knowledge bank promoting digital inclusion. DigidelCenters (run under municipal management) are physical learning spaces for both digitally experienced and novice users, open for all (Digidel, 2024). These centres usually have drop-in times and regular support opportunities where participants can learn about eID, and different e-services (see a list of DigidelCenters' location here: https://digidel.se/digidelcenter/).



3. Overview of Nordic digitalisation and digital inclusion-related policies

Digitalisation is a key focus in the public sectors of the Nordic countries. This overview discusses the most relevant policies published since 2020, shaping the future of digital inclusion in the Nordic region. It examines the current status of digitalisation and gives special attention to the digital inclusion of immigrant women, analysing whether and to what extent the policies take this group into account.

3.1 Digital inclusion of immigrant women: The Nordic way?

All Nordic countries have policies on digitalisation, and most have developed strategies to address challenges related to digital inclusion. However, the extent to which these policies specifically discuss the digital inclusion of immigrant women (or immigrants at large) varies significantly.

Only a few policies directly address digital inclusion related issues focusing on immigrant women. For instance, the Norwegian digitalisation strategy *Digital throughout life* identifies 'first-generation non-Western immigrants, especially women' as one of the most vulnerable groups and at risk of digital exclusion (Ministry of Local Government and Modernisation, 2021, p. 7). The strategy maps out several actors, such as civil society actors and NGOs (non-governmental organisations) which offer digital competency training for digitally vulnerable groups, including immigrant women (Ministry of Local Government and Modernisation, 2021).

Norway's *Digital throughout life – action plan* stresses that immigrant groups differ in their risk of digital exclusion. Well-integrated immigrants generally have a lower probability of digital exclusion, while young students and poorly integrated immigrant women are at higher risk of not being able to use digital services. Four main factors affecting the degree of digital vulnerability are identified: access barriers, digital skills, bureaucratic competence, and health and life situation (Ministry of Local Government and Regional Development, 2023a).

More policies touch upon immigrants at large, focusing on the broader challenges immigrants may face. *Digital inclusiveness in Finland* highlights that immigrants may face cultural, language, and skills challenges, as well as barriers in accessing digital services. It notes that all societal groups, including immigrants, are heterogenous, and emphasises the importance of recognising this diversity in addressing digital exclusion (Government Office, 2022).

In Sweden, A changing society – input for the government's strategic priorities^[6] notes that some groups in society are at risk of digital exclusion and that 'there is a need to target digitally vulnerable groups such as the elderly, migrants, and the low-skilled' (Agency for Digital Governance, 2024, p. 76). The National roadmap for the digital decade outlines that the share of basic digital skills is comparatively low among people with a migrant background, both compared to other groups in Sweden and compared to similar groups in other EU countries (Agency for Digital Government, 2023).

Norway's *Digital throughout life – action plan* also identifies barriers to digital inclusion for immigrants in general (but also for immigrant women specifically, as discussed above), such as low trust, language, social, and cultural challenges. Immigrants with limited digital education or knowledge of Norwegian society face greater difficulties using digital services. Trust issues, language, and cultural barriers hinder their use of digital solutions, while social aspects such as family, finances, and housing impact their digital access (Ministry of Local Government and Regional Development, 2023a).

The issue of electronic IDs (eID) is discussed in several policies: accessing and using eID can be a challenge for some immigrant groups. Norway's *National strategy for eID in the public sector* highlights that current eID solutions do not meet the needs of all user groups, leading to challenges in accessing public digital services. Immigrants and refugees face specific issues, such as inconsistent practices among banks for issuing BankID (Norwegian electronic ID solution) and the inability to obtain eIDs without valid ID papers. Common barriers include language and digital competence, particularly for those new to Norway (Ministry of Local Government and Regional Development, 2023b).

Most reviewed policies did not specifically highlight target groups but rather referred to 'digitally challenged' or 'vulnerable groups' and focused on challenges that span various societal groups. For example, many Danish digitalisation policies have applied the 'common challenges, common solutions' approach. The 2024 strategy, *Principles for digital inclusion*, outlines six key principles aimed at promoting responsible and inclusive digitalisation in Denmark, ensuring that all citizens, also those facing digital challenges, can access and benefit from digital services. These challenges include digital literacy, accessibility, trust and security, language barriers, and usability (The Danish Agency for Digital Government, Local Government Denmark & Danish Regions, 2024).

^{6.} In two of its publications – A changing society – input for the government's strategic priorities and the National roadmap for the digital decade – the Swedish Agency for Digital Government outlines key actions to be considered in the development of Swedish digitalisation policy for 2025–2030 and its digital development by 2030. Although neither document is a policy in effect, they provide the direction of Sweden's future digitalisation journey.

The Icelandic *Digital policy* discusses the importance of meeting the needs of different groups in society and notes that digital public services should be based on user needs and be accessible to society as a whole. They must therefore be adapted to the needs of different groups in society (Digital Iceland, 2021).

Similarly, the digital Norway of the future notes that some groups in society experience digital barriers and digital exclusion. It is estimated that around 20% of the adult population are vulnerable when using public digital services. Individual challenges such as lack of digital competence, administrative skills, trust, and confidence create barriers to using digital solutions. Additionally, issues with the solutions themselves, such as poor universal design, user interface, complexity, or lack of cohesion can hinder their use. Technological barriers can thus exacerbate digital exclusion (Norwegian Ministry of Digitalisation and Public Governance, 2024).

Denmark's National strategy for digitalisation – Together in the digital development" from 2022 identifies groups at risk of digital exclusion as digitally challenged. While this group remains undefined, various common barriers are mentioned, such as lack of language skills and digital skills, or cognitive or physical disabilities (Danish Ministry of Finance, 2022). The Danish Digitalisation with care stresses the importance of understanding that the challenges are many and complex and cut across the public and private sectors alike. Some people need help using smartphones or tablets, others need assistance with services like eID or online banking, and some struggle with navigating the public sector and understanding bureaucratic language. Therefore, there is no single solution, and different groups may face similar challenges across the groups (Ministry of Digitalisation and Equality, 2023).

Furthermore, Finland's *Digital compass* refers to 'special groups' and points out that there are variations within the populations' digital literacy levels. It highlights that a key aspect of fostering digital inclusion is to take into consideration those with challenges and low digital literacy when developing new digital solutions (Finnish Government, 2022). Table 1 presents the reviewed digitalisation policy documents from the Nordic countries, highlighting whether they focus on immigrant women, immigrants in general, the general population, or common challenges, as different groups might face similar challenges across the groups. For more details and links to the documents, see Appendix 1. Most policies adopt a 'common challenges, common solutions' approach. This approach and the proposed solutions and methods for enhancing digital inclusion are further discussed in <u>Section 5.1</u>.

Table 1: Overview of reviewed digitalisation policy documents.

Country	Name	Responsible institution(s)	Publication date	Focus
Denmark	Digitalisation with care	Ministry of Digitalisation and Equality	2023	Common challenges
Denmark	National strategy for digitalisation – Together in the digital development	Ministry of Finance	2022	Common challenges, digitally challenged
Denmark	Denmark's Digitalisation strategy – Responsibility for the digital development	Ministry of Digitalisation and Equality	2023	General population, digitally challenged
Denmark	Digitalisation that lifts society – The Joint Government Digitalisation Strategy 2022–2025	Ministry of Finance, Local Government Denmark & Danish Regions	2022	General population
Denmark	Principles for digital inclusion	The Danish Agency for Digital Government, Local Government Denmark & Danish Regions	2024	Common challenges
Finland	Government report: Finland's digital compass	Finnish Government	2022	Common challenges
Finland	Digital inclusiveness in Finland	Government Office	2022	Immigrants
Finland	Finland's digital compass – Implementation plan	Finnish Government	2023	General population
Iceland	Digital policy	Digital Iceland	2021	Common challenges
Iceland	Information policy of the Government	Government of Iceland	2022	General population

Norway	Digital throughout life – National strategy to improve digital participation and competence in the population	Ministry of Local Government and Modernisation	2021	Immigrant women
Norway	One digital public sector – Digital strategy for the public sector 2019–2025	Ministry of Local Government and Modernisation	2019	General population
Norway	Digital throughout life – Action plan for increased inclusion in a digital society	Ministry of Local Government and Regional Development	2023	lmmigrant women Immigrants
Norway	National strategy for eID in the public sector	Ministry of Local Government and Regional Development	2023	Immigrants
Norway	The digital Norway of the future – National digitalisation strategy 2024–2030	Norwegian Ministry of Digitalisation and Public Governance	2024	Common challenges
Sweden	National roadmap for the digital decade (Government assignment to prepare a proposal for a national strategic report for the digital decade (Fi2023/01494))	Agency for Digital Government	2023	Immigrants
Sweden	A changing society – input for the government's strategic priorities	Agency for Digital Government	2024	Immigrants



4. Discussion: Barriers to digital inclusion of immigrant women in the Nordic countries

The following section is an analysis of the identified barriers to digital inclusion of immigrant women in the Nordic countries. Immigrant women are a large and heterogenous group. Not all experience challenges of digital exclusion. Yet for those who face such challenges, some similar barriers across the Nordic countries have been identified through the interviews with NGOs^[7] and the policy review.

The most commonly discussed barriers to digital inclusion among immigrant women in the Nordic countries, as identified by the interviewed NGOs and the reviewed policies, are a lack of national language proficiency, low digital skills, cultural differences in technology use, unfamiliarity with the digital landscape and issues of trust. These encompass lacking trust in technology, the system, and the immigrant women's own abilities. These issues are further compounded by systemic barriers such as discriminatory practices, family responsibilities, and limited access to childcare and education (Interviewee 3).

One of the most pervasive challenges is the language barrier. The NGOs in this study experience that several of the immigrant women they meet have limited proficiency in the local language, which can hinder their ability to access digital services. The Danish NGO found that this is compounded by the complexity of digital platforms and the technical and bureaucratic language often used in public services and official documents (Interviewee 4). For instance, the NGO in Finland reports that the lack of Finnish language skills among immigrant women makes it difficult for them to use online services and fill out applications (Interviewee 1).

Another significant barrier is the varying level of basic digital skills. Interviewees noted that some of the women they meet lack digital literacy and basic digital skills, such as using a computer, accessing online services, or navigating apps

Interviewee 1: representative from Finnish NGO
 Interviewee 2: representative from Norwegian NGO
 Interviewee 3: representative from Swedish NGO
 Interviewee 4: representative from Danish NGO

and managing email. This digital divide is exacerbated by lacking resources and opportunities to learn these skills (Interviewee 1). However, those with high digital skills and experience in the ICT sector can also face challenges, mostly connected to entering the Nordic ICT sector and labour market. The reasons differ, ranging from a lack of professional network and connections in the ICT sector to challenges with translating their credentials and certificates (Interviewee 3).

Throughout the research it became evident that trust also poses a challenge. Trust in the system can be a significant issue, particularly for those who are not used to the Nordic system and welfare model or have negative experiences. Mistrust can be exacerbated by past negative interactions with public authorities, both in the participants' countries of origin and with local authorities (Interviewee 1 & 4). Trust in technology refers to confidence that digital tools and systems are reliable, secure, and protect the user's privacy. Lastly, some women the NGOs meet feel uncomfortable or fearful about entering the digital world, perceiving it as too difficult and overwhelming. This is often linked to a lack of confidence and the fear of making mistakes (Interviewee 2 & 3).

The Finnish NGO also highlights the risk of *digital control* or *digital violence* in the recently digitalised society. This can be seen as a new form of control in which others control access to resources and information, which can create further isolation (Interviewee 1). A lack of "domain knowledge," such as understanding the Nordic welfare system or public sector, knowing where to find the right public information and services, and comprehending the bureaucratic public sector language, also contributes to the challenges of digital inclusion (Interviewees 1 & 2). Consequently, there are cultural challenges to digital inclusion, which involve varying use of technology, unfamiliarity with the digital landscape and adapting to the norms and practices of the digital world. These challenges can include understanding the local digital culture, navigating online platforms, and feeling comfortable with the digital communication style prevalent in the Nordic countries (Interviewees 3 & 4). Addressing these cultural barriers is essential for fostering a more inclusive digital environment and ensuring that everyone can benefit from digital advancements.

When discussing the various barriers, the representative from the Finnish NGO explained, "Many of the people we meet lack basic skills, such as how to use a computer, access different services, use Word, and complete online applications. It's not just the language barrier; it's also about having the fundamental digital skills and being able to navigate and trust the digital society" (Interviewee 1). Figure 2 depicts the barriers to digital inclusion for immigrant women in the Nordic countries, as identified in this research.

As noted above, most reviewed policies focus on digitally challenged groups in general. They mention common barriers such as language skills, digital skills, and cognitive or physical disabilities, without delving into the challenges faced by specific groups (The Danish Agency for Digital Government, Local Government Denmark & Danish Regions, 2024; Digital Iceland, 2021; Norwegian Ministry of Digitalisation and Public Governance, 2024; Danish Ministry of Finance, 2022;

Finnish Government, 2022). Furthermore, some policies in the Nordic countries address common challenges faced by immigrants in general, rather than focusing specifically on immigrant women. For instance, policies in Finland (Government Office, 2022) and Sweden (Agency for Digital Governance, 2024) discuss broader issues faced by immigrants, such as cultural, language, and skills-related barriers, without specifically targeting immigrant women. These policies highlight the diversity within immigrant groups and the importance of recognising their varied needs to effectively tackle digital exclusion. Importantly, immigrant women are not an isolated group with unique challenges. The issues they face, such as language barriers, digital skills gaps, and trust, are similar to those encountered by other groups at risk of digital exclusion, as highlighted in this study and in previous research (e.g., Jessen et al., 2024).



Figure 2: Common barriers to digital inclusion for immigrant women in the Nordic countries (based on the findings of the working paper).

The interviewed NGOs emphasised the importance of digital inclusion from an integration perspective. They unanimously argued that digital skills and literacy are essential for participating in Nordic society, as more and more aspects of daily life now require digital competence. Accessing jobs and education, healthcare services, and financial activities all depend on digital skills. Communication with authorities, banks, and schools also takes place online. As the Finnish NGO representative said: "Integration also means being integrated into the digital society... However, it's not made sure that everyone really has these (ed. digital) skills, so it is hindering their integration progress" (Interviewee 1). This implies that digital exclusion risks further increasing inequality and raising the risk of social isolation.

Discussing the consequences of digital exclusion, the representative from the Norwegian NGO noted that "We work on the digital inclusion of some of the most vulnerable in society. Over the last few years, we have had many people come to us saying they can't pay their bills, or they can't access their medical records, because both things should be done digitally. The reasons vary, some have had children or their husband helping them, but maybe they got divorced or the child moved out, and then they can't do it alone" (Interviewee 2).

The interviewed NGOs note challenges in their work that may impact the type and extent of support opportunities they can provide. For instance, the need for long-term financial support affects their ability to plan and offer continuous support services (Interviewee 2). Additionally, these NGOs must adapt to evolving community needs and the changing landscape of digital services (Interviewee 4), while often shouldering responsibilities without feeling they receive adequate funding or resources to do so (Interviewee 1 & 3).



5. Discussion: Ways to promote digital inclusion of immigrant women

In the Nordic countries, various initiatives have been implemented to promote the digital inclusion of immigrant women and immigrants in general. These efforts are multifaceted and involve a range of actors, including government policies, integration programmes, municipal efforts, library activities, and the active participation of NGOs. This study focuses on the roles of government policies and NGO activities in promoting digital inclusion.

5.1 Policy initiatives to promote digital inclusion

The digitalisation policies in the Nordic countries address the needs of immigrant women to varying extents. For example, some Norwegian policies specifically identify immigrant women as a vulnerable group at risk of digital exclusion and outline measures to support them, such as mapping digital support providers and tailoring services to improve digital competencies (Ministry of Local Government and Modernisation, 2021; Ministry of Local Government and Regional Development, 2023a).

More broadly, the Nordic countries have introduced several policies aimed at enhancing digital infrastructure and inclusiveness. These policies propose strategies and ways forward to promote digital inclusion of immigrant women, immigrants in general, and digitally vulnerable groups overall, through various methods. Some propose developing user-friendly eIDs for individuals without a national identity number to prevent digital exclusion and ensure access to essential public services (Ministry of Local Government and Modernisation, 2019; Ministry of Local Government and Regional Development, 2023b).

There is also a focus on investing in digital skills for people with low digital literacy and providing digital assistance and opportunities for digital skills development (Agency for Digital Government, 2023; (Ministry of Digitalisation and Equality, 2023). The policies highlight the importance of designing inclusive solutions, involving citizens early in the design process of a new digital solution and considering accessibility from the planning stage (Finnish Government, 2022; The Danish Agency for Digital Government, Local Government Denmark & Danish Regions, 2024).

Collaborating with civil society organisations and frontline employees can be beneficial, as these have first-hand knowledge of their participants' challenges and needs, which can enhance the knowledge base (The Danish Agency for Digital Government, Local Government Denmark & Danish Regions, 2024). Offering services in multiple languages is also a key component for inclusiveness (Finnish Government, 2022; Ministry of Local Government and Regional Development, 2023a).

These proposed solutions and strategies aim to address digital inclusion from multiple angles to ensure no one is left behind. However, it is argued that there is no single solution (Ministry of Digitalisation and Equality, 2023). Instead, there is a need for a comprehensive approach involving better access and opportunities to help, better access to digital training and a stronger knowledge base about the challenges people face (The Danish Agency for Digital Government, Local Government Denmark & Danish Regions, 2024; Finnish Government, 2022).

Hence, while some policies provide a more targeted approach to the digital inclusion of immigrant women, others address the issue within the broader context of immigrant challenges or digital vulnerability in general. The proposed implications of this 'common challenges, common solutions policy approach' include recognising that several sub-groups at risk of digital exclusion face similar challenges. Therefore, the approach encourages the development of more comprehensive solutions that can address multiple issues simultaneously, benefiting a broader range of people. By targeting common and shared challenges, the idea is that resources can be used more efficiently, when efforts are not duplicated across different groups.

It is too early to determine what is more effective: targeted policies which address the specific needs and challenges of particular societal groups, or broader policies which focus on common challenges and the digitally vulnerable as a whole. Targeted policies can provide tailored solutions that directly address the unique barriers faced by specific groups. On the other hand, broader policies can create a more inclusive framework that benefits a wider range of individuals, promoting overall digital inclusion. The effectiveness of these approaches may vary depending on the context, the specific challenges faced by different groups, and the resources available for implementation. Further research and evaluation are needed to assess the long-term outcomes and to identify the most effective strategies for promoting digital inclusion.

5.2 NGO initiatives to promote digital inclusion

The interviewed NGOs support the digital inclusion of immigrant women through various targeted programmes and services. All NGOs interviewed in this study offered some kind of digital skills or literacy course, covering basic to advanced IT skills, such as using computers and accessing and navigating digital services. Most often, these courses are tailored to the participants' levels and needs (Interviewee 1, 2, 3 & 4). The Swedish NGO shared their experience with programme design and emphasised that creating relevant and effective solutions requires listening to and understanding the specific challenges and

requirements of the target group, rather than imposing preconceived notions of their problems. Co-creating the programmes and courses with the participants ensures that the initiatives are truly beneficial and aligned with the participants' real needs, fostering a sense of ownership and relevance (Interviewee 3).

In addition to these digital literacy courses, some NGOs also offer complementary training programmes, such as those available at the Finnish NGO, which runs employment and education projects to improve women's employability and educational opportunities (Interviewee 1). Similarly, both the Norwegian and Swedish NGOs provide support and courses on Norwegian/Swedish society and digital skills, recognising that these areas are often interconnected (Interviewee 2 & 4).

Additionally, enabling participation by identifying and addressing hindrances is crucial. For example, the NGOs in Finland and Sweden both provide childcare services during sessions to enable women with young children to participate in courses and activities. The benefits of this approach were expressed by the Finnish NGO representative:

"One of our biggest advantages is really considering who our target group is and what their needs are. In our case, it's really the childcare. Offering a place for their children while the mothers are attending the digital course was a key factor for the mothers to be able to participate"

(Interviewee 1)

All NGOs underline that offering services in multiple languages is another crucial aspect to ensure inclusiveness and create a supportive environment (Interviewee 1, 2, 3 & 4).

Offering mentorship programmes, networking opportunities, and employing digital ambassadors can create a ripple effect, which reaches a broader audience. For instance, the Swedish NGO's strategy includes mentorship programmes and networking opportunities, in addition to partnering with tech companies to provide training and job opportunities, thereby bridging the gap between education and employment (Interviewee 3). Conversely, the NGO in Denmark focuses on training local women to become digital ambassadors who, in turn, support their communities. The Danish NGO approach is highly localised, with trained digital ambassadors in various regions offering tailored support to women in their communities. The NGO stressed the benefits of this approach:

"Our digital ambassadors are spread across the country and can assist others with their questions, whether it's about booking healthcare appointments, explaining elD, or providing guidance and advice on digital habits. Our role is to train our ambassadors so that they, in turn, can support those who need help. This way, we reach more people, creating a ripple effect"

(Interviewee 4)

All interviewed NGOs agree that creating a supportive environment is key to successful participation in their courses. This can be achieved by offering support in multiple languages, but also by forming groups for women of similar backgrounds, fostering a sense of security and belonging (Interviewee 1 & 3). The representatives from the Swedish and Danish NGOs discussed the approach of gender-specific support groups, noting that while these groups focus on similar aspects of community support and digital inclusion, they cater to different target audiences with similar barriers to digital inclusion. It was emphasised that unique dynamics and benefits arise when women meet with other women, and men meet with other men, to discuss their feelings and experiences. This creates safe and open environments, and they noted that mixed groups can sometimes create barriers (Interviewee 3 & 4).

Furthermore, creating engagement through offering further development opportunities keeps participants motivated and invested in their digital education journey. This was emphasised by the Swedish NGO representative:

"We offer IT courses for all levels, from beginners with no prior IT training to those seeking advanced knowledge. In our introductory course, we see that some are satisfied with gaining the basic IT skills needed for their daily tasks. However, others become interested during the course, which leads them to want to learn more, take our more advanced courses, and gradually introduce themselves to the IT industry"

(Interviewee 3)

Hence, when people start learning, it sparks an interest in the digital and IT world, motivating them to further develop their skills. It can be about both upskilling and re-skilling, as individuals see it as an opportunity to either take on new tasks at their current workplace or change career paths and enter the IT sector.



6. Concluding remarks and lessons learnt

This study set out to understand the landscape of digital inclusion policies related to immigrant women in the Nordic countries. Furthermore, the study set out to understand barriers hindering the digital inclusion of immigrant women (more specifically, those with low local language proficiency, low socioeconomic or educational background, newly arrived, and refugees) in the Nordic countries and identify practices for promoting their access and engagement in the digital society.

We learned that while not all immigrant women are at risk of digital exclusion, some immigrant women face a range of challenges that may hinder their digital inclusion. These challenges include language barriers, making it difficult to navigate digital public services and understand important information. Also, there are varying levels of digital skills, and these skills are essential for accessing vital services and fully participating in society. Issues of trust, both in the system and in their own abilities, further complicate their digital inclusion. Additionally, a lack of domain knowledge, such as understanding the Nordic welfare system, and cultural barriers such as varying previous use of technology, unfamiliarity with the digital landscape, and adapting to digital norms and practices, contributes to digital inclusion challenges.

These barriers are not unique for immigrant women. They can be seen among immigrants in general and other groups in society which have been identified as being at risk of digital exclusion, such as the elderly and people with disabilities (Jessen et al., 2024; Wendt-Lucas et al., 2024). What is notable for immigrant women is the multifaceted nature of the barriers they face. Immigrant women often encounter a combination of challenges and may also face systemic challenges such as discriminatory practices, family responsibilities, and limited access to childcare and education.

In today's digitalised society, addressing digital inclusion as part of broader integration efforts is essential. The 'common challenges and common solutions' approach explored in the digital policy section emphasises the importance of addressing shared barriers across different vulnerable groups. This approach suggests that by identifying and targeting common challenges, such as language barriers, digital literacy gaps, and trust issues, policies and initiatives can be more inclusive and effective. What is more effective for combating digital exclusion – targeted policies or broader policies – is too early to determine.

While the Nordic states have implemented numerous policies and strategies to foster digital inclusion for all members in society, previous studies show that NGOs in these countries also play a role in meeting the specific needs of immigrant communities by providing tailored support and bridging gaps. The interviewed NGOs support the digital inclusion of immigrant women through targeted programmes and services, including digital literacy courses that range from basic skills to advanced IT training, often combined with local language education and understanding the welfare system. These courses are tailored to participants' levels and needs, they are available in multiple languages, and sometimes they are supplemented with individual sessions. NGOs also offer complementary courses focusing on employment, education, and societal integration, providing a safe space for women to discuss personal and societal issues.

While this research has helped shed light on several dynamics of the digital inclusion of immigrant women in Nordic countries, several questions remain unanswered and would be relevant to investigate in future research avenues. It would be interesting to untangle the relationship between different policy approaches, such as common-challenges-common-solution or more targeted policies, and the digital exclusion for specific groups, e.g., immigrant women. It would also be relevant for future research to build upon this study and include more NGOs, as well as Icelandic NGOs, and to also include national integration policies in the policy analysis. For practitioners, it would be relevant to begin digital inclusion monitoring, to understand and track the development of digital accessibility barriers, digital capabilities barriers, situations where digital exclusion arises for specific groups, and the consequences of digital exclusion for specific groups. This would allow for better digital inclusion support for different groups, such as immigrant women.

This study highlights the critical role of digital inclusion in the integration of immigrant women in the Nordic countries. Digital innovations can both hinder and enable integration, making it a double-edged sword. On one hand, innovative digital tools and services can bridge the gap between immigrant women and the digital society, ensuring they have access to vital resources, education, and employment opportunities. On the other hand, the rapid digitalisation of society can exacerbate existing inequalities and create new barriers for those who lack digital skills or access to technology. The study emphasises the need for new, creative and effective strategies and initiatives to promote digital inclusion and integration in the Nordic region. By leveraging new and innovative approaches, such as user-friendly eIDs, tailored digital literacy courses, childcare and multilingual support, it is possible to address common barriers like language proficiency, digital skills gaps, and trust issues. These solutions empower immigrant women to navigate the digital landscape, fostering their social and economic integration and reducing the risk of social isolation.

Key takeaways from this study include:

- The digitalisation-related policies in the Nordics vary in their focus on immigrant women. The policies promote strategies such as user-friendly elDs and significant investment in digital skills for those with low digital literacy and providing digital assistance and opportunities for skills development.
- Common barriers to digital inclusion among immigrant women in the Nordic countries include a lack of national language proficiency, low digital skills, and issues of trust in technology, the system, and their own abilities. Cultural differences, lack of domain knowledge, and systemic barriers such as discriminatory practices, family responsibilities, and limited access to childcare and education further exacerbate these challenges. Addressing these barriers is crucial for fostering a more inclusive digital environment and ensuring that immigrant women can fully participate in society.
- NGOs can act as bridges between immigrant women and the public sector. They can help to build trust, provide clear, accessible information, and offer knowledge about their target group. The question is: How to engage and enable participation reported by the NGOs? The following practices have shown to be successful:
 - Anchor the planned solutions and support within the target group to match their challenges and needs and include participants in the design of the support from the very beginning. This includes tailoring the support and identifying enabling factors for participation, such as offering childcare services, multilingual support, courses tailored to different skills levels and having programmes where women can meet and discuss with other women.
 - Addressing both practical and social barriers is crucial. A holistic approach that includes language support, digital literacy, and community building can help immigrant women feel less isolated and more empowered. This comprehensive strategy should address various aspects of life, including democratic participation, financial independence, and digital inclusion.

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List of interviewees:

Interviewee 1: Manager of Finnish NGO working with immigrant women. Conducted in 2024.

Interviewee 2: Manager of Norwegian NGO working with immigrant families. Conducted in 2024.

Interviewee 3: Manager of Swedish NGO working with immigrant women. Conducted in 2024.

Interviewee 4: Project leader of Danish NGO working with immigrant women. Conducted in 2024.

Appendix 1: Reviewed digitalisation/digital inclusion-related policies/strategies

Denmark

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Norway

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