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Teoria i praktyka

Modern technologies in social security systems

**Digital transformation in public administration
European experiences: Poland, Finland, Italy, Ukraine**
- **e-administration**
- **digital government**
- **information and communication technologies**
- **platformization**
- **datafication**
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The digital transition of social security in Finland. Frontrunner experiencing headwinds?

Digitalization transforms our societies in a profound way. Public administrations and social security institutions are at different stages in this process. Digitalization poses technological, legal, and organizational challenges. Finland has typically been a frontrunner in the adaptation of ICT. This case study critically assesses the current state-of-the-art in the field of digitalization in Finnish social security. The text singles out the projects that are on-going and those that are planned for the immediate future. The article shows that Finnish social security institutions have integrated digital processes into their operations, but legal and ethical challenges exist, especially in the use of artificial intelligence and automatic decision-making in social security.

Introduction

Digital platforms have become a common feature of our everyday life. Most of us communicate with our family and friends *via* messaging applications and order food by online platforms. It is normal to use bank services or buy clothes online. The global pandemic has further advanced this trend by forcing people to stay at home. People have had to adapt to new technologies that replace the need for physical presence. Digitalization changes the way we interact with each other.

Digitalization, understood in this text as the transformation of information into digital form and the use of digital technologies, changes modern societies in a profound way. Digitalization moves fast in some areas, and slower in others. Typically, the public sector, due to the strict regulations that govern its activities, is a latecomer to technological progress. At times government and public administration is seen as inimical to growth. The Finnish case shows that this need not to be the case, quite the contrary, public administration can be among the early adapters. It is widely accepted that digitalization of public services benefits individuals and businesses.[1] Therefore, digitalization will continue – more tasks will be processed in a digital way in future. It is important to adapt existing processes to these changes. Yet, digitalization is not a straightforward process: it advances faster in some areas and slower in other areas. Digitalization poses technical, organizational, and legal challenges.

This article looks at digitalization in one specific area and in one country: in the field of social security in Finland. Firstly, this text briefly describes the Finnish government policy towards digitalization and describes the national digital architecture. Secondly, the text points out the most important steps taken within the Finnish social security system in the field of digitalization. Thirdly, the article addresses some aspects as to why Finland is an interesting case study: Finland has been considered as a frontrunner in digitalization, and the social security is organised in a decentralized manner by public bodies and private-public partnerships.[2] The text can help to understand the enablers of digitalization and to disseminate some best practices as well as point out potential challenges in the field of social security.

Why is Finland an interesting case study?

Manuel Castells and Pekka Himanen[3] argue that one of the key features of Finnish society is a combination of an information society and a democratic welfare state that support and reinforce one another. Individuals have access to a large set of services and

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1 B.W. Wirtz, P. Daiser, *A meta-analysis of empirical e-government research and its future research implications*, "International Review of Administrative Sciences" 2018, No. 84(1).

2 For pensions see J.E. Johanson, V.P. Sorsa, *Pension governance in Finland, a case study on public and private logics of governance in pension provision*, Finnish Centre for Pensions, Reports, 2010, No. 2.

3 M. Castells, P. Himanen, *The Information Society and the Welfare State: The Finnish Model*, Oxford 2002.

benefits provided by public institutions and Finnish society, including public administration, eagerly adopts digital technologies. The change has been radical as only a few generations ago Finland was a poor rural country. Finland typically polls high in relation to trust in government or other State institutions. Finland is known for its good ICT (information and communications technology) infrastructure. Finnish e-government has ranked in top positions in international comparisons.[4]

Finnish social security is known for its innovative approach and experiment culture. The basic income experiment, that ran through the years 2017–2018, raised global media attention.[5] Another example stems from the early years of the Finnish welfare state. A maternity package, also known as the baby box, was introduced in the 1930s and has since then become a global success story.[6] Governments have backed the experiment culture in public administration.[7]

The method employed in this article is that of a case study.[8] The data has been retrieved from the available subject literature: previous research, newspaper articles, and the websites of social security institutions. In addition, one interview was conducted.[9] The aim of this article is to describe the state-of-the-art in the digitalization of Finnish social security.

Social security in the Finnish welfare state

The Finnish welfare state is typically classified as Scandinavian or Nordic.[10] Mikko Kautto, Matti Heikkilä *et al.*[11] summarize the key features of the Scandinavian model as emphasis on full employment, a tripartite negotiation mechanism, a wide range of free or heavily subsidized social benefits and services available to all and a high share of GDP social expenditure.

The organization of social security and health care in Finland is decentralized. Municipalities are responsible for basic healthcare services and jointly responsible (through

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4 J. Korhonen, *e-Government in Finland – success stories and lessons from Finland* [in:] *E-democracy, e-governance and public sector reform revisited – Experiences of The Main Themes of the PADOS project in Finland and Estonia*, ed. A. Temmes, 2016, https://um.fi/documents/35732/48132/e_democracy__e_governance_and_public_sector_reform_revisited___experiences_of (online access: 12.5.2021).

5 For more see O. Kangas, S. Jauhiainen *et al.*, *The basic income experiment 2017–2018 in Finland: Preliminary results*, Reports and Memorandums of the Ministry of Social Affairs and Health, 2019, No. 9.

6 See A. Koivu, Y. Phan *et al.*, *The baby box. Enhancing the wellbeing of babies and mothers around the world*, Helsinki 2020.

7 A. Hautamäki, K. Oksanen, *Digital Platforms for Restructuring Public Sector* [in:] *Collaborative Value Co-creation in the Platform Economy*, ed. A. Smedlund, A. Lindblom, L. Mitronen, 2018.

8 S. Crowe, K. Cresswell *et al.*, *The case study approach*, "BMC Medical Research Methodology" 2011, Vol. 100, 11.

9 The interviewee was an expert working in the field of digitalization and innovation at Kela. The interview took around 60 minutes and all the main topics of this article were discussed.

10 See G. Esping-Andersen, *The three worlds of welfare capitalism*, New Jersey 1990.

11 *Nordic Social Policy: Changing Welfare States*, eds. M. Kautto, M. Heikkilä *et al.*, London 1999.

hospital districts) for specialized healthcare services. Other social security benefits and services are administered by different providers.

The main institution is the Social Insurance Institution of Finland, Kela, that offers a large variety of benefits and services for Finnish residents. Kela insures against most social risks: old age, incapacity for work, illness, unemployment, childbirth, death of the family breadwinner, rehabilitation, or studies.

Besides Kela, there are many institutions in Finland that administer and pay out social security benefits.[12] A second tier exists for pension and unemployment benefits that are employment linked and earnings-related benefits paid by specialized funds. Thus, there is a need for cooperation and the exchange of data between different autonomous institutions.[13]

Juhani Korhonen[14] points out that the overall picture of public e-services remains somewhat fragmented due to the large number of institutions involved. The application of digital platforms does not cancel out this need but creates new kind of challenges.

Kela – the Social Insurance Institution of Finland

Kela offers services and benefits ranging from kindergarten to deathbed. It is an autonomous institution that operates directly under the Parliament of Finland (Eduskunta). Kela is an institution that is present through 145 customer service locations across the whole country.

Innovation has become an important part of Kela's work. According to its strategy, Kela aims to be a frontrunner in digitalization. Kela has an in-house innovation unit that was created at the beginning of 2019. Its size is relatively small, only 13 people work at the unit. The total size of Kela staff is 8,095 persons, the majority of whom (5,290) work in benefit services. The aim of the unit is to study new emerging technologies and find ways to adapt them for Kela's processes, if they can be enhanced and made beneficial to the customer. Foresight work is conducted by scenario exercises that help to predict hypothetical situations and development paths. Innovation is considered as a strategic domain in the processes of Kela. Drivers for innovation and learning come from everyday situations and activities. One goal is to find ways to reduce the need for customers to take contact with the customer service. Kela has, as social security institutions typically have, large amounts of data on its customers. Finland has some 5.5 million inhabitants with Kela's e-services receiving some 64.4 million log-ins in 2020.[15]

In Finland, the relevant Ministry drafts the legislation, but social security institutions support that work with their expertise. Kela predicts potential pathways by the method of scenario exercises. Information from these exercises flows into the innovation processes. Foresight is a tool through which they can predict the need for potential changes in

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12 Understood here as all benefits that are under the EC regulation on social security 883/2004.

13 For the rest of the article, all references made to social security institutions refer to any or all of these institutions. If a specific institution is discussed that institution is addressed directly by name.

14 J. Korhonen, *op. cit.*, p. 2.

15 Kela, *Kelan vuosi 2020* [Kela's annual report 2020], https://www.kela.fi/documents/10180/17802081/ Kelan+vuosi+2020.pdf/0e40794f-3a1c-4d13–9d40-a8661c434f00 (online access: 16.5.2021).

legislation or new system requirements. Legislation has had a supportive role in Finnish development, while the legislation around e-government services is young.[16]

Enablers of digitalization

The position of frontrunner can be traced back to at least four different reasons.[17] Firstly, the information and communications technology sector has been an important part of the Finnish economy for decades. The most famous Finnish company, Nokia, was for a few years the global leader in mobile phone technology. Although Nokia later lost its position in mobile phones to competitors, still today, according to Eurostat, the ICT sector accounts for 4.85% of the Finnish GDP. Finland has had a supply of skilled personnel in the ICT branch. This trend might be reversed, though, as some studies suggest that Finland suffers from insufficient human capital in this field.[18] Still today, Finnish mobile game companies are known all over the world.[19] Finns are apt users of digital technology compared to the EU average.[20] The prevalence of telework is the fourth most common in the European Union (EU). Before the pandemic, in 2019, one third of the workforce teleworked at least occasionally.[21]

Secondly, Finland is a sparsely populated country. Finland has the least inhabitants per square kilometre of any country in the European Union. Digital services can offer new ways to facilitate access to public services in rural areas. Equally, Finland has one of the oldest populations of the European Union. Ageing of the population drives up the costs of major welfare state items such as pensions and long-term care as the old age dependency ratio weakens. In 2019 Finland's social spending totalled 24 percent as a proportion of GDP. This proportion was the biggest in Europe.[22] Digital platforms offer possibilities to provide services to rural areas where on-site services would be very costly, if not outright impossible, to offer. The average age is often higher in rural areas than in urban areas. The growth of ICT services, such as telemedicine, is partly driven by demand from rural areas with ageing populations.

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16 J. Korhonen, *op. cit.,* p. 2.

17 O.C. Osifo, *Examining digital government and public service provision: the case of Finland*, International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO), 2018.

18 University of Vaasa, *Vaasan Yliopistolle 455,000 Euroa ICT-Muutokouluksen Järjestämiseen* [450,000 euros to the University of Vaasa for ICT-retraining], 2018, http://www.uva.fi/fi/news/ict_muuntokoulutus/ (online access: 10.5.2021).

19 A recent success being *Angry Birds*, a game developed by Rovio, a Finnish mobile game company.

20 European Commission, *Digital government factsheet Finland 2019*, Available at: https://joinup.ec.europa.eu/sites/default/files/inline-files/Digital_Government_Factsheets_Finland_2019.pdf (online access: 25.5.2021).

21 S. Milasi, I. González-Vázquez, E. Fernandez-Macias, *Telework in the EU before and after the COVID-19: where we were, where we head to*, JRC Science for Policy Brief 2020.

22 Eurostat, *Government expenditure on social protection 2021,* https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Government_expenditure_on_social_protection (online access: 25.5.2021).

Thirdly, a large trust in public administration enables the development of digital infrastructure and the collection of individual data. People trust that the information will be protected and that the data will not be misused.

Fourthly, the large welfare state with its universal character has meant that social security has always been at the centre of societal development. Finland spends a lot on welfare, and social security institutions operate on large budgets. Institutions are large service providers for a large customer base. Unsurprisingly, social security institutions were among the first entities in Finland that started to use computers. Kela, had one of the first eight computers, an IBM 604, in 1960.[23] The Finnish Centre for Pensions (Eläketurvakeskus, ETK) that as a central organization is responsible for the central registers within the decentralized earnings-related pension scheme, obtained its first computer, a model IBM 1410, in 1961.[24] The institutions administering social benefits have large registers which has given room for innovation led development and the adoption of new technologies.

Thus, it is no surprise that Finland has been and aims to stay one of the top countries in information management of social and health care services and benefits in the public sector. Sakari Taipale[25] argues that

> Finland was one of the early-adopters of e-government. Its general atmosphere has been open to change, modernisation and technological innovations, as its citizens have been, on average, well-educated and technologically savvy (cit. OECD [Organisation for Economic Co-operation and Development], 2010).

Digitalization as a priority

Finland is a society based on trust and it is marked by large trust towards public administrations and its institutions. In a recent study by the OECD[26] some 81 percent of Finns declared that they trust the government. Only Norway and Switzerland polled higher numbers. It is commonly accepted that trust is a key component if public sector institutions want to develop their digital services. If people do not trust the institutions, it is improbable that they will start using their services or would be willing to give consent to data storage. Finland, together with the other Nordic countries, is known for its large centralized registers. On the other hand, as a counterbalance, in Finland a legally guaranteed public access to government documents exists.[27]

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23 P. Paju, *"Ilmarisen Suomi" ja sen tekijät* [Building "Ilmarinen's Finland": The Committee for Mathematical Machines and computer construction as a national project in the 1950s], Ph.D. Thesis, University of Turku 2008.

24 M. Wessmann, *Tietotekniikan pioneerit* [Pioneers of information technology] [in:] *Virastosta tietotaloksi* [Bureaucracy to knowledge centre], ed. J. Vauhkonen, Helsinki 2011.

25 S. Taipale, *The use of e-government services and the Internet: The role of socio-demographic, economic and geographical predictors*, "Telecommunications Policy" 2012, No. 37(4–5).

26 Organisation for Economic Co-operation and Development, *How's Life? 2020: Measuring Well-being,* 2020, https://doi.org/10.1787/9870c393-en.

27 P. Ahonen, T. Erkkilä, *Transparency in algorithmic decision-making: Ideational tensions and conceptual shifts in Finland*, "Information Polity" 2020, No. 25(4).

Finland has officially promoted the aim to increase the use of digital platforms in government services (e-government) for the last two decades. This strategy has received high-level backing and it has been among the priorities of successive governments. Many programmes have existed in this front: the first large national development programme on digitalization, the Action Programme on e-Services and e-Democracy, ran between 2009–2015.[28] Lately, many government-led initiatives have paid special attention to issues on algorithmic transparency such as establishing a systematic *ex ante* and *ex post* impact assessment of government artificial intelligence (AI).[29]

The promotion of the use of digital platforms in government services serves two main goals. Firstly, digitalization is meant to increase efficiency, to reduce costs, and secondly, to provide more targeted information so that individuals can make better choices and get better service. The wellbeing of individuals is a key driver in the increased emphasis on digital services.[30] Digitalization allows for a better customer reach through social media platforms. Most Finnish social security institutions are active on social media: for example, both Kela and ETK have accounts and they are active on Facebook, YouTube, Twitter, and Instagram.

Typically, the main motivation behind public sector reforms, if not to extend existing services and benefits or to innovate new ones, is to enhance efficiency, cut costs, deliver better service, increase transparency or strengthen citizen choice.[31] These aims are valid also for the process of digitalization.

The universal character of Finnish social insurance plays an important role: social security is visible in everyday life. Virtually all individuals are entitled to services or benefits from Kela at some point in their lives. Everyone has a vested interest in the development of social security. Institutions that administer social security are large service providers and they are known to Finnish citizens. There are clear-cut lines between the responsibilities of different actors and people know that the boundaries will be respected. Yet, challenges exist, especially in the field of rehabilitation where multiple institutions provide help to individuals in the return-to-work process. Partly overlapping responsibilities create administrative challenges and confusion in the eyes of individuals.[32]

The important role that social security plays in Finnish society is an important pull factor when social security institutions attract talents in Finland. Many individuals do want to work in social security because of the role it plays in society. Through innovation they can shape the lives of many people for the better. Therefore, social security institutions attract even the most tech savvy individuals because of the possibilities that working for these institutions offer.[33]

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28 J. Korhonen, *op. cit.,* p. 2.

29 P. Ahonen, T. Erkkilä, *op. cit.,* p. 5.

30 J. Korhonen, *op. cit.,* p. 2.

31 A. Hautamäki, K. Oksanen, *op. cit.,* p. 2.

32 J. Liukko, N. Kuuva, *Cooperation of return-to-work professionals: the challenges of multi-actor work disability management*, "Disability and Rehabilitation" 2017, No. 39(15).

33 It was stated in the interview that many individuals apply for developer jobs in Kela even when they could get better salaries elsewhere because they feel they can contribute more to the common good by working for Kela.

Central features of digitalization are analogous with the platform technology such as the algorithmic revolution, big data, and cloud computing.[34] The algorithmic revolution has brought data to the core of development. Social security institutions administer large registers, with data management being an essential feature of their daily operations. Public authorities need to ensure a secure and accessible infrastructure of digital services, a common pathway, to citizens. Public institutions can include and integrate their services to this common pathway.

National architecture builds the base

Digitalization has meant that the amount of data has increased exponentially. New data are generated and stored continuously. The existence of a national architecture for digital services is at the core of the development. Without such an architecture it would be hard for individuals, providers, and authorities to share information and data quickly in a secure manner. Therefore, Finland has developed a national architecture that consists of a few main gateways to which all citizens have access. These gateways form the basis of the national architecture for digital services. Finland adheres to the MyData principle that promotes individuals' ownership of the data and practicalities for the usage of the data.[35] Typically, platforms are accessed either with a certificate card, mobile certificate, or bank credentials.

The main digital gateway for social security in Finland consists of three different platforms. Central in these gateways is Suomi.fi[36] that is a comprehensive service platform, a sort of one-stop shop, for almost all the digital services of Finnish public services and government. It is the common platform for digital public services. The platform allows individuals to grant to and request mandates from different authorities. Equally, citizens can verify the data that have been registered in different public registers. Suomi.fi acts as a central hub through which citizens have access to the platforms of public institutions, including those of social security. Suomi.fi will be connected to the EU-wide portal in line with the EU's Single Digital Gateway (SDG) regulation.[37]

Another important platform is the Incomes Register (tulorekisteri.fi) that has been fully operational since the beginning of 2021. This platform covers all data on earnings, pensions and social benefits that have been paid to individuals. To ensure that the

34 A. Hautamäki, K. Oksanen, *op. cit.,* p. 2.

35 A. Knuutila, V. Kokkonen *et al.*, *MyData muutosvoimana: Julkishallinnon henkilötiedon ihmiskeskeisen hyödyntämisen mallit ja vaikutukset*, [Models and impact of MyData: Human-centric management and processing of public sector personal data], Publications of the Government's analysis, assessment and research activities, 2017, No. 67, https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/80615/61_MyData%20muutosvoimana.pdf?sequence=1 (online access: 15.5.2021).

36 Suomi is Finland in Finnish, so the site translates as Finland.fi in English.

37 J. Rinne, *EU's Single Digital Gateway and its implementation in Finnish eGovernment: A case study*, Master's thesis, Aalto University, 2019.

data is up to date there is an obligation on the payer to report all the payments to the register within five days. The payer has an obligation to ensure the validity of the data. The platform allows individuals and companies to access this information to verify the correctness of the data. If the data are not correct, an individual reports it to the payer who then corrects the data. The validity of the data is crucial, as Kela and other social security institutions use the data from the Incomes Register for decision making.

Thirdly, in social and health care Kanta (kanta.fi) is a service platform that stores medical records and prescriptions online. All prescriptions are issued and dispensed *via* the Kanta services. Certificates and reports issued by healthcare professionals needed for decisions on social security benefits can be forwarded to Kela for processing through this service. It is equally a data repository for patient data. In this way old patient data are archived through a centralized manner. In addition, it is a pharmaceutical database that contains the necessary information about medicines, their price and reimbursement status in terms of issuing and dispensing, and about interchangeable medicines.

There are some on-going projects related to the national architecture that are as yet not operational. Firstly, the national artificial intelligence programme AuroraAI has as its objective to offer citizens personalised services at the right time. This requires that public sector organisations must be interconnected through the AuroraAI network. As an example, a person changing jobs should be informed by different parties in this transitional process through the help of AuroraAI. This network should be operational at the end of 2022.[38]

Secondly, there is an on-going project by the public-private Findy cooperative that aims to develop a shared and secure network through which different institutions, and private entities, could ensure the authenticity of information required in e-services. This would reduce the need for centralized registers as institutions could verify the authenticity of data from other providers with the consent of the customer or organisation. The approach resembles that of a blockchain in which no central database is required.[39]

Projects related to services in social and healthcare

Being a major customer service provider, Kela answers some two million customer calls annually.[40] Kela is engaged in a project to advance conversational AI and to develop an intelligent chatbot technology platform. Kela aims to implement chatbots that under-

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38 Implementation of the national AuroraAI programme, https://www.europeanpensions.net/ep/Finnish-AI-successfully-identifies-future-retirees-facing-disability-pension.php (online access: 20.9.2021).

39 Findy – verifiable data network, https://findy.fi/en/ (online access: 20.9.2021).

40 Kela, *op. cit.*, p. 4.

The digital transition of social security in Finland. Frontrunner experiencing headwinds?

79

stand spoken Finnish and that can respond to customers in Finnish. These bots could be used in a phone customer service to reduce customer waiting time. The telephone waiting time for Kela customer services was six minutes in 2019. The chatbot, once implemented, would enhance operational efficiency, and leave more time for human-to-human interactions.

Kela has been active in developing its online process related to applications. This approach is based on need. Although it is possible to apply for benefits online, and 72 percent of application to Kela were filed online in 2020 which is an increase from 2016 when 64 percent applied online.[41] Despite this development, many customers still use paper applications and attachments. These are often sent to Kela by mail. Attachments include copies of documents needed for decisions (such as rental contracts). These copies include photos taken by mobile phones that are then printed on paper. The quality of the image varies significantly. To reduce the time needed for the personnel to go through different attachments, Kela has implemented an intelligent scanning process of the paper documents/attachments sent to it.

As part of this public-private partnership process, Kela has integrated a scanning program that identifies and interprets paper applications and attachments. After identifying the necessary information of the applications and attachments, the program then stores them in the right manner to the document management software. The program recognizes who has applied, what kind of benefit was applied for and what kind of attachments are included. Machine learning is used to enhance the quality of the software in recognizing different types of attachments. Previously the benefit handlers had to manually rotate, zoom, and read the attachments on their computers to be able to classify them in the right way. Digitalization has saved large amounts of time in customer service.

Kela has implemented an automatic decision-making (Robotic Process Automation – RPA) process for some benefits. The RPA process did not include any profiling of applicants. Yet, Kela received a notification from the Ombudsman that this process was not in line with the current legislation, but it was not against the law. The Ombudsman criticized that: "individual's right is that decisions are not based solely on automatic decision-making".[42] The main problem with automatic decision-making was that the method was not covered by valid legislation. This is against the Finnish Constitution that states that all exercising of public power should be based on an Act and that the laws should be strictly observed.[43] Currently, new legislation is being prepared which would allow for the use of automatic decision-making and clarify the outstanding issues related to transparency. Public administration institutions expressed their views that such a legislation is urgently needed as they planned to expand automatic processes. For Kela,

41 *Ibid.*

42 *Oikeusasiamies kieltäisi automaattiset viranomaispäätökset* [The ombudsman would ban automatic-decision making],"YLE news" 17.12.2019, https://yle.fi/uutiset/3–11122069 (online access: 21.9.2021).

43 P. Ahonen, T. Erkkilä, *op. cit.*, p. 5.

the aim was that the RPA would take over some routine tasks that would then liberate time for the personnel to concentrate on more complicated cases. Yearly, Kela makes some 19 million decisions and of those around half a million are given automatically without any involvement of persons, only by the use of IT.[44]

Another way to use AI is by algorithms that can serve as a support for decision making. In 2018, the Finnish Centre for Pensions tested a machine learning algorithm that used a self-learning statistical technique to predict whether an individual would retire on a disability pension within two years. The algorithm was created based on the data of 500,000 individuals. At the end of the process, the algorithm predicted correctly 78 percent of cases when an individual would retire on a disability pension. The data consisted of socioeconomic, earnings, and benefit information.[45] The extensive and centralized registers offer a good platform for the use of machine learning to identify risks. Since this experiment, the pension fund Varma has developed a forecast model that will help employers to identify potential cases of disability risk. This machine learning uses data on socio-demographic information as well as information on rehabilitation and benefits.

Questions of ethics and equality

New technologies create new possibilities and challenges. Big questions are related to ethics. Especially so in the use of algorithmic data. Other central ethical concerns around digitalization are issues related to privacy, autonomy, security, human dignity, justice, discrimination, and the balance of power.[46] These concerns need to be addressed in a way that represent the values that liberal democracies cherish, namely individual freedom, the rule of law and democracy.

Focus has been on privacy issues related to personal data and digital security. The main issue at this moment is the utilisation of information, especially the ownership of data. Individuals have access to their data and services should be integrated so that they can be utilized in the best possible manner. The correct usage of data makes it possible to take decisions at the right time.

Questions of big data, algorithmic profiling, the impact on equal treatment are growing issues for justice and balance of powers.[47] Hackers and criminals, if not foreign pow-

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44 P. Örnberg, *Mitä tarkoittaa, jos Kela myöntää automaattisesti jonkin etuuden?* [What does it mean if Kela automatically grants a benefit?], Kela blog 2020, https://elamassa.fi/pasi-ornberg/mita-tarkoittaa-jos-kela-myontaa-automaattisesti-jonkin-etuuden/ (online access: 10.5.2021).

45 T. Andrew, *Finnish AI testing successfully identifies future retirees facing disability pension*, "European Pensions" 17.4.2018, https://www.europeanpensions.net/ep/Finnish-AI-successfully-identifies-future-retirees-facing-disability-pension.php (online access: 10.5.2021).

46 L. Royakkers, J. Timmer *et al.*, *Societal and ethical issues of digitalization*, "Ethics and Information Technology" 2018, No. 20.

47 *Ibid.*

ers, might want to attack and paralyze platforms and services in exchange for a ransom. Institutions also hold large amounts of sensitive data that can be sold on internet black markets if retrieved by hackers or other criminals.[48]

People are willing to share private information on social networks such as Facebook or Twitter that are owned by private companies. Often there is considerable unclarity concerning the ownership of the data. Although data regulation requires people to give consent on the details of the data. Ângela Pereira, Alice Benessia, Paula Curvelo[49] argue that people are suffering from consent fatigue or do not understand what they consent to. Another worrying public example is that of the Chinese government that scores its citizens behaviour and awards those that achieve high scores.

An important matter for concern is the question of inequality. Social security institutions have as customers individuals from all walks of life, including marginalized groups, such as the long-term unemployed who might not have the best skills when it comes to information technology. Not all of us are equally digitally skilled. Typically, pensioners are less skilled with new technological tools and prefer more classical methods. According to a study by S. Taipale[50] rural people use e-services less than people in cities. Although there is an actual lack of physical service points in rural areas when compared to cities. This uneven usage is accentuated by the fact that people living in cities are more educated on average. Education and training are needed to increase the use of e-services

AI makes mistakes, just like humans: in the latter case the responsibility is clear but in the former it is more difficult. Currently, after the notification of the Ombudsman, Kela states in every decision the individual who is responsible for the decision. The use of AI does not change the legal responsibility for the decision. Yet, this case has highlighted the need for having relevant legislation in place. This is never self-evident. Therefore, as it was stated in the interview, Kela tries to hypothesize possible scenarios and provides help for the relevant Ministry in drafting the laws.

Public institutions collect large amounts of data on individuals and on their interactions with these institutions. The data are collected throughout individuals' life courses. To address this asymmetry of information that exists between individuals and public institutions, transparency on the utilization of data is needed. It is crucial that public institutions communicate openly about their processes and respond to criticism in an open manner. All social security institutions of Finland are active on social media and they test new ways to communicate with the public which increases such transparency.

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48 In 2020, a large data breach of a private psychotherapy center, Vastaamo, was reported to have occurred between 2018 to 2019. Vastaamo had been a service provider for Kela's rehabilitation services. The hackers leaked some information on discussion fora and tried to sell the data on the internet. The hackers were never caught. The leak was possible because Vastaamo had not sufficiently protected its database.

49 A. Pereira, A. Benessia, P. Curvelo, *Agency in the Internet of Things*, JRC Scientific and Policy Reports, 2013.

50 S. Taipale, *op. cit.*, p. 5.

Conclusions

Finland has long traditions in the utilization of information technology in public administration. Social security institutions were among the first to adopt computer-based technology in Finland. This trend has not subsequently been overturned; on the contrary, it has remained strong. There have not been major scandals, such as data breaches or leaks, in public institutions related to information technology. Neither has there been a retreat from this rather positive view on technology and its possibilities in creating value for customer service and operations within these institutions. Trust in the institutions and in the protection of the data has remained. The State has supported the digital development by creating common pathways that form the core of the national digital architecture. Lack of legal provisions has slowed down the adoption of AI in decision-making.

Therefore, the digitalization of Finnish social security is rather advanced. The administration of social security is fragmented but institutions cooperate enabling the adoption of new technologies. Currently, a reform commission (2020–2027) is preparing a comprehensive social security reform. One of the aims of the reform is to enhance cooperation and the mutual exchange of data to ensure better customer service. The main challenges are related to the legal framework that is not fully in line with the methods that the institutions wish to apply, as the example on automatic decision-making shows.

Social security institutions in Finland are big service providers and holders of registers. Both features contribute to the fact that digital services are well developed in the field of social security. The Finnish case is an example that decentralized systems do not cause a problem if the authentication of data is overcome. Everything does not need to be in one register, but registers need to be accessible. Currently, there are big on-going projects related to the automatization of processes. The next phase in digitalization might be the increased use of it in customer service.

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Transformacja cyfrowa zabezpieczenia społecznego w Finlandii – lider doświadczający przeciwności?

Cyfryzacja dogłębnie przeistacza nasze społeczeństwa. Administracja publiczna oraz instytucjne zabezpieczenia społecznego znajdują się na różnych etapach tego procesu. Proces cyfryzacji stawia wyzwania natury technologicznej, prawnej oraz organizacyjnej. Finlandia była zazwyczaj liderem w wykorzystywaniu technik informacyjnych (*information and communication technologies*, ICT). Artykuł korzysta ze studium przypadku, aby krytycznie przyjrzeć się obecnym postępom poczynionym przez Finlandię w procesie cyfryzacji sektora zabezpieczenia społecznego. W tekście wyszczególniono zarówno projekty bieżące, jak również te, których realizacja jest zaplanowana na najbliższą przyszłość. Artykuł pokazuje, że fińskie instytucje zabezpieczenia społecznego zintegrowały cyfrowe procesy ze swoimi działaniami, choć nadal napotykają problemy natury etycznej i prawnej, szczególnie w sytuacjach wykorzystujących sztuczną inteligencję oraz zautomatyzowane podejmowanie decyzji w zakresie zabezpieczenia społecznego.

Słowa kluczowe: platforma cyfrowa, cyfryzacja, Finlandia, administracja publiczna, ubezpieczenia społeczne