Baseline study on cross-border data exchange in the Nordic and Baltic countries

The Finnish Digital and Population Data Services Agency, Finnish National Agency for Education, Finnish Institute for Health and Welfare, and Ministry of Justice

Executive summary

Background and objectives

Finland holds the Presidency of the Nordic Council of Ministers in 2021. The Presidency Project aims to achieve the best mobility and everyday life in the world the Nordic-Baltic region by means of a common and shared data exchange model. The project will last for thee years (2021-2023) and it is divided into **three work packages:**

1. **Studying in another Nordic or Baltic country**
2. **Use of healthcare services and supporting data exchange**
3. **Versatile use of the Nordic and Baltic legal databases**

The aim of the Presidency Project is to enhance the current cross-border data exchange in the Nordic and Baltic countries and to produce a better and more generic solution model for data exchange.

First step of the project is to conduct an analysis on the current situation of data exchange in the Nordic and Baltic countries. The countries in scope are: Denmark, the Faroe Islands, Greenland, Estonia, Finland, the Åland Islands, Iceland, Latvia, Lithuania, Norway, and Sweden.

Methods and data gathering

The baseline study was completed during February-August 2021.

The data gathering in the study was conducted through

- workshops,
- online surveys, and
- interviews targeted to key stakeholders in each work package. Additionally, existing documentation was analysed.

The Finnish Digital and Population Data Services Agency, the Finnish National Agency for Education, the Finnish Institute for Health and Welfare, and the Ministry of Justice in Finland were responsible for procuring the baseline study.

Key findings per studied topic

- **General track:** Cross-border data exchange already exists on some level between certain administrative registers.
- **Work package 1:** The level of digital maturity varies notably between the countries in scope. Therefore, it is a challenge to develop unified cross-border solutions for data exchange.
- **Work package 2:** There are differences in how different countries specify, collect and use health care data. Also, the manual processes in updating and compiling health care data affect the quality and amount of data available.
- **Work package 3:** Language barriers and the lack of commonly used metadata standards, thesauri and data formats induce challenges in cross-border legal data interoperability and access.

Main recommendations for future study

- To increase overall knowledge sharing between the countries on different development targets as well as available funding options
- More detailed requirements analysis of the proposed solutions and development activities
- Mapping of the predicted costs and potential benefits
- Detailed analysis of the technical solutions and infrastructure, including the systems and databases, interfaces and integrations, data models and formats as well as data privacy and information security aspects
- All implementation requirements of the single digital gateway regulation are recommended to be ascertained regarding all uses cases in the three work packages.

Challenges in cross-border data interoperability and exchange

In this study, political interoperability and data exchange barriers have been included under the organisational barriers.

Legal

Legal interoperability is about ensuring that organisations operating under different legal frameworks, policies and strategies are able to work together

Organisational

Organisational interoperability refers to the way in which public administrations align their business processes, responsibilities and expectations to achieve commonly agreed and mutually beneficial goals

Semantic

Semantic interoperability ensures that the precise format and meaning of exchanged data and information is preserved and understood throughout exchanges between parties

Technical

Technical interoperability factors cover the applications and infrastructures linking systems and services

Factors slowing, constraining, or preventing cross-border data interoperability and exchange

- Tackling legal barriers is the basis for all future work: solving legal restrictions and that way enabling data exchange works as a motivator for the next steps as well

- Different legislation considering what data can be transferred, between which parties and how

- Legislation related to data privacy, data protection, and overall cyber security of the information that is exchanged

- Lack of joint frameworks, interoperability requirements, and agreed rules

- The political will and motivation

- Different starting points and priorities for development of digital services

- Need for international guidance to boost national development.

- A great number of parties that need to work in collaboration towards the desired outcome.

- In order to gather sufficient funding, a joint political ambition is required from all participating countries

- Lack of
  - translations
  - commonly used metadata standards
  - commonly used thesauri/vocabularies

- Different data formats, data models and technologies

- Varying digital maturity levels in the Nordic and Baltic countries

- Data security and privacy issues are highly critical and must be aligned

Recommendations for future study

Legislation

- The current **legal basis** for cross-border data exchange is recommended to be investigated further
- It is recommended to study further, what would be the **basic data privacy and security requirements** for different actors to exchange their data across borders

Smooth cooperation through clear commitment, and strong motivation

- It is recommended to ensure that **mutual understanding of the goals exists** between the countries involved in each project.
- A crucial factor for the success of the whole Presidency project is **to find the key representatives** from each country to participate in the process
- **To ensure motivation** of the project participants**, cost-benefit analysis**, and **active communication** of the significance of the project are highly recommended
  - The predicted benefits and costs should be **mapped through specific business cases** to ensure the designed solutions provide actual value

Shared priorities for funding opportunities

- To enable on-going discussions and setting the vision and priorities, Nordic-Baltic **collaboration should be increased** in international forums such as standards organisations which facilitate semantic interoperability, per prioritised working topics
- **Common prioritisations** between the Nordic and Baltic countries that could work as a basis for EU funding

Further technical analysis

- Detailed analysis of the **current technical solutions and infrastructures**
- More detailed **requirements analysis of the proposed solutions and development projects**
- Progress in the implementation of the Single Digital Gateway, the recently proposed European Digital Identity and other EU standards and development projects should be analysed and considered.