



NORDIC SMART GOVERNMENT

Implementation Plan 2021-2024

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* NSG - Nordic Smart Government

Foreword: Increasing the competitiveness of the Nordic SMEs

There are about 2 million SMEs in the Nordic region. They comprise of more than 90 pct. of our businesses, and thus form cornerstones in our societies and foundation for our future welfare. The Nordic societies and businesses have high levels of digital innovation, digital competences and application of digital services,* which give us a competitive advantage in the data economy. However, as the digital services are employing different incompatible data formats, even digital SMEs still struggle with administrative processes, handling paper-based invoices or electronic invoices with different standards, both when they operate within a country as well as across the Nordic region. There is a huge potential in connecting digital systems and services, both on national and Nordic level, so that information can be used more efficiently without typing data manually, from one system into another.

The true gem is the value that lies in the utilisation of structured and standardised business data. This can be realised by using compatible formats of business documents when buying and selling goods and services – which is achieved when the businesses use compatible electronic invoices, receipts, orders, catalogues etc. By making digital systems and services interoperable, sharing and using data efficiently in a Nordic governmental and business context, the Nordic SMEs will be supported as product management, orders, invoicing, bookkeeping, reporting and inventory management can be done in near real-time in connected systems.

Cross-border collaboration has become increasingly important as our trade and markets have become more international. The Nordic market is substantial for all the Nordic countries, and inter-Nordic trade accounts for about 20 pct. of the export.

Therefore, it is important that SMEs can easily handle electronic invoices and receipts, not only within national borders, but also across the Nordic region.

Efficient sharing of real-time business data can be applied in new tools and services for the Nordic SMEs. This will provide the SMEs with better services such as real-time overview of cash flow and liquidity and quicker credit assessments. The potential value for SMEs in new services has been estimated to be 14 billion EUR annually by 2027 (EY 2017). This includes access to smaller loans and thus a higher amount of liquidity in the market.

An important part of a well-functioning and viable market is, that the customer can freely change service provider and choose new services. This is dependent on the interoperability of systems and services, and the possibility to bring the users data from one system and into a new system (portability). This will promote the uptake of data services among the SMEs, their digital transformation and use of data is expected to strengthen our businesses, and their ability to transform, adapt and meet new challenges. Furthermore, it will support the development of government services and system, thus enhancing the reporting and use of data.

Interoperability and portability will also allow service- and systems providers to enhance their business and make it easier for new entrants on the market and support specialization. This is positive for the innovation, growth and international competitiveness of the Nordic fintech and business service industry. Hence creating mutual benefit for both SMEs as well as an advanced market also for service and systems providers specialization.

The Nordic added value: Strong collaboration is the key to further integration

The collaboration on Nordic Smart Government was started by the General Directors of the Nordic Business Registries in 2016. With the support from Nordic Innovation a strong collaboration in NSG has been established. The collaboration now includes all Nordic Tax Authorities and an increasing number of other authorities. We have pooled our competencies and built on our different national strengths.

In dialogue with key stakeholders, we have achieved a common vision, aims and solutions to our common challenges. In 2020 we proposed a common Roadmap for realising a Nordic ecosystem for sharing of business data. The Roadmap was politically agreed upon by the Nordic Ministers for Trade and Industry on 1 September 2020. With this agreement we have a strategic plan for alignment and synchronization of our efforts. The collaboration is unique, both in terms of the close collaboration, the high strategic importance it has among the partners, the extent of the work and the benefits, not only for SMEs, but for all stakeholders. General stakeholder feedback is that NSG is valuable and important, and they wish to take part in the realisation.

NSG is now entering a new phase, where Nordic business and tax authorities together have founded a strong governmental commitment and partnership to realise the vision of becoming a digitally integrated region. The implementation of the Roadmap requires a closer collaboration with private actors. A successful implementation requires changes in systems and services – and not least in SMEs administrative processes and practices.

We are thus dependent on strategic collaboration on a high level with key actors representing the SMEs and other private and public actors which are significant players in this field.

It is therefore necessary to develop and professionalise the organisation and communication, so that we are able to lead the transformation. On a more tangible level, financial support for Nordic collaboration is necessary to establish the new Nordic organisation with professional tools to support communication, documentation, finance co-creation of deliverables, travels and meetings.

Ultimately, it is our cooperative spirit that will help us realise the Nordic Prime Ministers' vision of becoming the most integrated region in the world and becoming a frontrunner for the European community on fair and efficient share and use of business data. By working together in our region, we can test international standards and European building blocks for interoperability and efficient cross border data flows, and we can agree on principles for interoperability, standardisation and joint formats. This requires strong commitment and close collaboration between public authorities, SMEs and key stakeholders from the Nordic region.

With Nordic funding we can keep focus on interoperability standards and cross-border perspective in the design and promotion of digital services and prevent that new digital barriers arise when SMEs are doing business across borders.

The Nordic added value, is in effect working together on the Nordic level, leveraging on the support by the Nordic Council of Ministers and Nordic Innovation. Bottomline, this is important for our economies.

Executive Summary (1/2)

Political decision to launch the NSG Roadmap (2021-27)

On 1 September 2020 the Nordic Ministers for Trade and Industry approved the *Roadmap for realisation of the Nordic Smart Government ecosystem (2021-27)*. The Nordic Ministers decided to continue the investments in Nordic Smart Government and allocated 27 MDKK for implementation of the Roadmap in 2021-24 (norden.org). The NSG Roadmap is the conclusions of NSG 1.0, 2.0 and 3.0, which defines the requirements which enable the NSG ecosystem.

This application covers the first implementation period, from 1st March 2021 to 30th June 2024, which is the first implementation phase of the Roadmap.

The vision of NSG is to create value for the SMEs by making real-time business data accessible and usable for innovation and growth across the region, in an automatic, consent-based and secure manner. The NSG Roadmap defines the milestones which are identified as required to realise the vision:

- By 2021, a public-private advisory board has been established to support the implementation of the NSG roadmap
- By 2022, 70% of the Nordic SMEs use a digital business system
- By 2023, SMEs can freely choose to move business data between business systems
- By 2023, sales and purchases can be handled digitally by default in compatible formats across the Nordic region systems
- By 2023, 80% of the Nordic business systems have implemented common tools (APIs), so service providers can access an SME's data with appropriate consent
- By 2024, 80% of the invoices sent in the Nordics are digital
- By 2025, the Nordic SMEs have saved 500 million EUR by using smart services and real-time data

- By 2027, the Nordic countries are the most integrated region in the world

The six solution areas in the Roadmap:

The six solution areas are defined to realise the value for the SMEs embedded in the vision. The solution areas have the SMEs needs and working processes in focus. The six solution areas are:

1. *Increase the Adoption of Digital Business Documents*
2. *Digital Product Information included in Business Documents*
3. *Open Accounting – Sharing Bookkeeping Data*
4. *Simplified Reporting*
5. *SMEs are Born Digital*
6. *Access to Data Services to verify Reliability and Data Quality*

The application describes for each solution area:

- Scenario
- Deliverables;
- Key Performance Indicators
- Internal dependencies and
- Core elements for achieving Nordic interoperability

These are fundamental requirements to reach the milestones and to realise the benefits of the six solution areas. In addition, supplementary milestones have been added for the programme period. The application describes the Nordic organisation needed, as well as working methods and collaboration models with private sector.

Executive Summary (2/2)

NSG 4.0 is a Change Programme

NSG 4.0 has in focus the changes required to share and use business data, which include regulatory, behavioral, structural and technical changes. As such, this is not an IT implementation project, but a complex programme involving many actors, in public and private sector and not the least the Nordic SMEs.

NSG 2.0 and 3.0 have proved the concepts of automatic real time flow of business data between SMEs, public authorities and private service providers; the value for the SMEs; and defined the requirements needed for enabling the data flows. This is all collected in the Roadmap and its appendix, and thus provides the basis for implementation in NSG 4.0.

The work ahead is complex and is dependent on close collaboration with the stakeholders in the ecosystem. At the core of this work are campaigns to increase the SMEs use of digital business documents, Nordic pilots with service providers to detail requirements for exchange of data and first implementations to kick-off the market. The pilots are based on cross-Nordic user journeys and involves SMEs in tests and evaluations. The outcome is documentation and recommendations for development of new services in the market, in particular for the SMEs. This will be followed up by mobilisation of the SMEs to employ the new opportunities.

Much of this mobilisation must be done on the national level, but cross Nordic interoperability also requires a Nordic organisation which is transparent and can work smoothly and professionally across countries, languages and institutions.

Nordic integration through coordinated national implementation

Reaching the roadmap milestones and the additional milestones in this application is dependent on the national engagement and the successful implementation on national level. The role of the Nordic collaboration and organisation is to ensure interoperability and synchronisation in development across national implementations of the Roadmap. This involves establishment of Nordic working groups collaborating in the common activities to ensure necessary actions and services to enable Nordic interoperability. Success is dependent on national implementation. Therefore, each country will, or have established, a national team responsible for implementation of a national action plan aligned with the NSG Roadmap milestones.

Budget

- Total budget: 101,7 MNOK
- Funding applied for: 38,2 MNOK
- National co-funding: 63,5 MNOK

This application is made on the basis of:

- The NSG Roadmap
- Collaboration in work groups, digital programme meetings and reviews in Q3-Q4 2020
- Recommendations from the Expert Panel (2020)
- Evaluation of NSG 3.0 (EY 2020)

Part 1: Introduction

- Programme Data and Public Sector Programme Participants
- Vision and Mission
- Current situation
- Challenges experienced by Nordic SMEs
- Mission: Automatic flow of real time Business data
- NSG Ecosystem
- NSG 4.0: A Nordic Change Programme
- Scope: Six solution areas
- Technological principles

1.1 Programme Data

Title: Nordic Smart Government 4.0

Start / end: 1 March 2021 – 30 June 2024 (40 months)

Funding applied for: 38,2 MNOK / Co-funding: 46,5 MNOK

Programme partners:

The Danish Business Authority

The Finnish Tax Administration

The Danish Tax Agency

The Norwegian Tax Administration

The Swedish Tax Agency

Iceland Revenue and Customs

The Brønnøysund Register Centre, Norway

The Finnish Patent and Registration Office

The Swedish Companies Registration Office

In collaboration with other government authorities and private sector.

Steering Group and Programme Owners:

Katrine Winding, General Director, The Danish Business Authority, Chair

Markku Heikura, General Director, The Finnish Tax Administration

Thomas Hjortenbergt, Deputy Director General, The Danish Tax Agency

Nina Schanke Funnemark, General Director, The Norwegian Tax Administration

Katrin Westling Palm, General Director, The Swedish Tax Agency

Snorri Olsen, General Director, Iceland Revenue and Customs

Lars Peder Brekk, General Director, The Brønnøysund Register Centre, Norway

Antti Riivari, General Director, The Finnish Patent and Registration Office

Annika Stenberg, General Director, The Swedish Companies Registration Office

Change Advisory Board: Acts on behalf of the Steering group concerning request for change. Chaired by The Danish Business Authority.

Programme Management: Programme Manager from The Danish Business Authority, in collaboration with the Programme Management Organisation (PMO), consisting of the five national team leads.

National team leaders are responsible for the national development. Formal national agreements are subject to national need.

1.2 Public sector programme participants in the implementation of the NSG Roadmap



DENMARK

- The Danish Business Authority
- Statistics Denmark
- The Danish Tax Agency



SWEDEN

- The Swedish Companies Registration Office
- The Swedish Tax Agency
- Statistics Sweden



NORWAY

- The Brønnøysund Register Centre
- The Norwegian Tax Administration
- Statistics Norway
- The Norwegian Agency for Public and Financial Mgm
- The Norwegian Digitalisation Agency



FINLAND

- Finnish Patent and Registration Office
- Finnish Tax Administration
- State Treasury
- Statistics Finland



ICELAND

- Iceland Revenue and Customs
- Ministry of Finance and Economic Affairs
- Ministry of Industry and Innovation
- Statistics Iceland

Private participants will be presented as part of the programme initiation. Other Government authorities are welcome.

1.3 Vision and mission

The Nordic Prime Ministers have a common vision of making the Nordic region the most sustainable and integrated region in the world by 2030.*

NSG supports this vision by setting the framework for aligning the digital infrastructure between businesses, service partners and authorities, in order to make life easier for businesses in the Nordics. On 1 September 2020, the Nordic Ministers of Business and Industry approved and launched the *Roadmap for realisation of the Nordic Smart Government ecosystem (2021-27)*** and decided to continue the investments in Nordic Smart Government (norden.org).

The vision of NSG is to create value for the SMEs by making real-time business data accessible and usable for innovation and growth across the region, in an automatic, consent-based and secure manner.

The core idea is that structured and standardised business data can be shared automatically and thus replace burdensome manual handling of data exchange. This involves alignment of digital systems and services, as opposed to digital silos, and therefore collaboration across sectors using the business data.

The mission is thus not to implement a centralised IT-system, but to enable and facilitate a transformation of the Nordic ecosystem and business processes, both nationally and across the Nordic borders.

* [The common vision was adopted by the Nordic Prime Ministers on August 20, 2019.](#)

** [Roadmap for realisation of the Nordic Smart Government ecosystem](#)

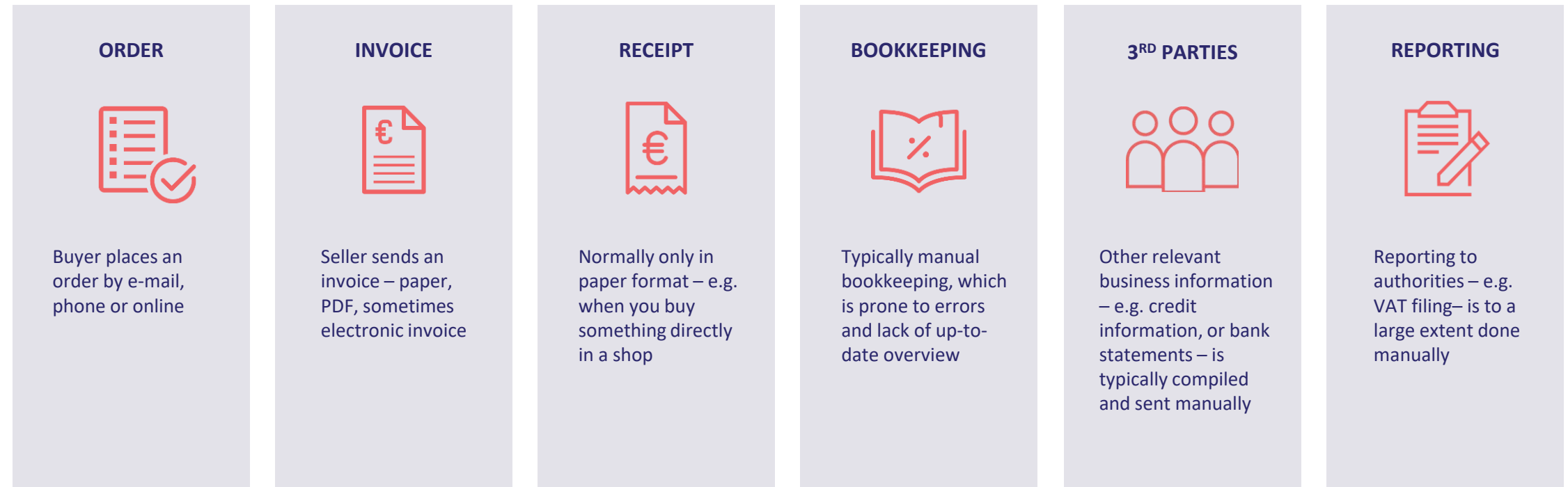
Keywords and significant markers:

- Collaboration across borders and sectors based on common interests
- Focus on SME business scenarios and benefits
- Reuse of concepts, solutions etc. and loosely coupled building blocks
- Government driven standardisation
- Market driven implementation
- Technology neutral interoperability
- Future proof results
- Based on values shared by Nordic countries: openness; trust and collaboration
- Agility, peer reviews and continuous adjustments and alignment

Preconditions for success:

- Active stakeholder involvement
- National commitment and participation
- Public private partnership
- National and Nordic pilots and cross border testing

1.4 Current situation: Buying and selling is a chain of manual processes in more or less digital silos - and they are rarely compatible



1.5 Challenges experienced by the Nordic SMEs - as identified in NSG 3.0

In 2019, the NSG programme conducted workshops and in-depth interviews with 50 SMEs across the Nordic countries. The aim was to identify barriers and obstacles experienced by SMEs in their day-to-day processes. The findings and possible solutions have been verified in dialogues with banks, business systems vendors and other third-party service providers, whose customers are SMEs.

Key findings

- SMEs work with paper-based processes – even if they use digital tools
- SMEs cannot transfer their accounting data and choose new services
- SMEs lack information on potential business partners' trustworthiness
- SMEs experience time-consuming credit assessments
- SMEs lack an overview and easy control of cash flow and liquidity
- SMEs are uncertain about formal requirements when going Nordic

These findings are all connected to the same basic problems: Transactions that are handled via paper documents, systems that cannot exchange data, and a tendency in the public sector of developing stand-alone solutions that do not fully accommodate the basic business administration processes.

Based on workshops and interviews, NSG has identified user needs and formulated user principles to guide the future work. The purpose is to ensure that the SMEs' needs are prioritised, increasing the likelihood of support for the NSG vision. The NSG User Principles are found [here](#).

The Pains of Nordic SMEs

SMEs often do administrative work in evenings and weekends. This also involves hours spent on manually typing data into digital self-service systems when reporting to the government. Much typing is necessitated by poor interoperability between systems. The manual entries also result in errors that would be avoided if administrative tasks, such as bookkeeping and reporting, to a higher degree were automated. The manual work of typing hinders the SMEs in getting real-time insights into their current financial situation. They often worry about whether they have money to pay their employees, about their liquidity, and how they are doing compared to competitors.

Testimonials from in-depth interviews:

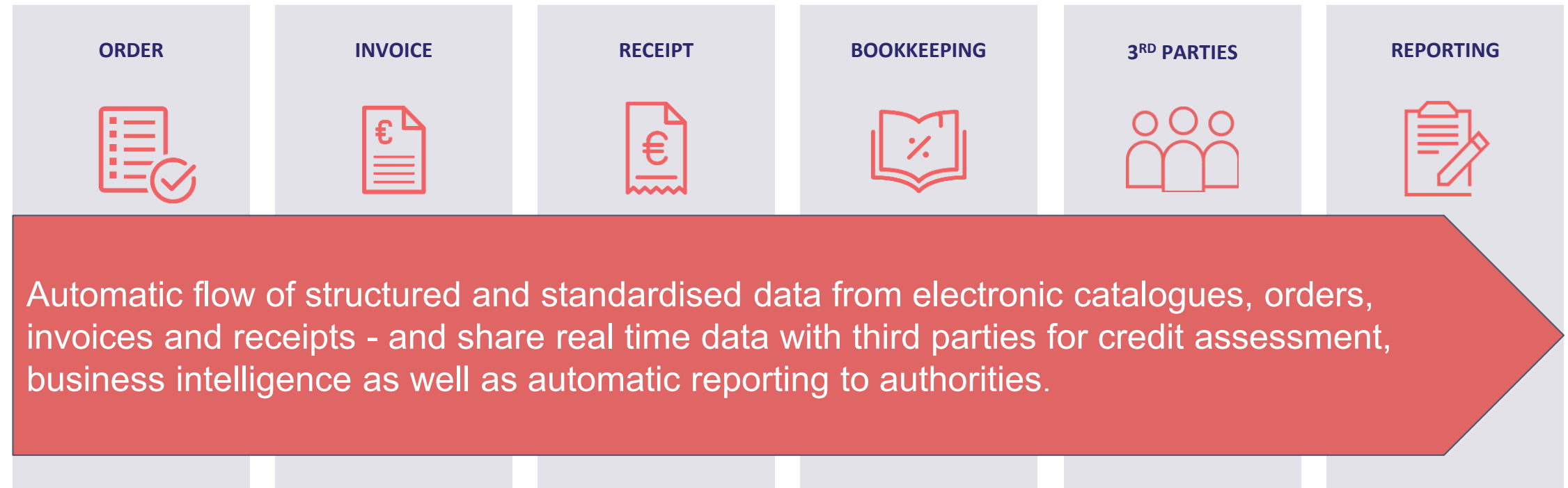
"I've heard since 1983 that everything is going to be simpler, but so far it has only become more complicated" (SME, NO)

"I wish I had an instant overview of my business financial statement" (SME, DK)

"Systems that could help are too expensive and it takes too much time to switch from the old systems to new ones" (SME, FI)

"I need a strategic overview of liquidity, VAT and the accounts when I have a need for major investments" (SME, DK)

1.6 Mission: Automatic flow of real time business data by aligning the the digital systems in an ecosystem, in order to make business data accessible and usable across the Nordics



1.7 The NSG Ecosystem: Distributed systems and decentralised data

The NSG ecosystem is not a platform, but an open system and service environment covering actors in both public and private sector.

The NSG ecosystem will enable more automatic sharing and utilisation of structured data in a secure way. The SMEs should be in control of their data and have the legal and technical means to share their data in an easy and secure manner, to the benefit of the SMEs.

The data is not contained in closed systems, or in one central database, but is distributed in various systems and services. Efficient and secure exchange of data presupposes that the systems and services have implemented the relevant standards and capabilities.

Systems, services and actors will be dynamic and vary over time and are likely to be part of other ecosystems as well.

The ambition of Nordic integration means that data and services should be accessible across borders.

In order to identify specific needs to enable interoperability and realise solution areas, pilots will be developed together with private and public actors. This will assure identification of dependencies, handling of prerequisites and ensure coherence across services.

Framework, building blocks and standards deriving from initiatives on EU, Baltic and Nordic level will be applied in the ecosystem.

The NSG ecosystem requires a governance framework for coordination and collaboration between stakeholders and interaction between systems and services to ensure necessary alignment.

This includes*:

- Description of actors, services and systems
- Stakeholder management
- Communication, material and processes for mutual interaction
- Cooperation model
- Rules, Legal framework and standards
- Agreements
- Fair data principles
- Architectural principles and architecture
- Capability requirements
- Audit schemes and certification, when applicable
- Development strategies and plans
- Value creation model and benefits realisation

*Necessary elements, but not necessarily sufficient

1.8 NSG 4.0: A Nordic Change Programme to realise the NSG-Ecosystem

The NSG Roadmap is a strategic plan for interoperability which sets milestones, defines capabilities and proposes a set of actions for aligning the digital infrastructure in the Nordic region to realise benefit for the SMEs and the stakeholders.

The NSG Roadmap has in focus the alignment of national initiatives and on benefitting from reuse and enforcement of ongoing pan-European standardisation activities as well as digital infrastructure already implemented on a national level in the Nordic countries. It sets a direction for Nordic digitalisation and collaboration over the coming years. It involves development in co-creation with the private sector, as well as with relevant standardisation and governance bodies. It aims at building, together with stakeholders, a future-proof and flexible ecosystem for both national and cross border business interaction, collaboration and service exchange.

NSG 4.0 is thus a strategic change programme, rather than an IT implementation project. Focus is on the changes required to share and use business data, which include regulatory, behavioral, structural and technical changes.

Participants from all Nordic countries and more than 10 authorities have worked together over the last months of 2020 to describe and plan the realisation of the Roadmap, as described in this application.

Programme characteristics:

- Originated from the Nordic Smart Government collaboration (2016) and based on the *Roadmap for realisation of the Nordic smart Government ecosystem*, with its appendix and other deliverables made in the collaboration.
- The Roadmap is focusing on the requirements needed to enable the Nordic SMEs to share and use their data in a secure, efficient and consent-based manner.
- The underlying thesis is that Nordic collaboration creates better conditions for national success and is necessary for alignment.
- The activities aim at integrating, aligning and synchronising development on a Nordic level, and the creation of a common Nordic motivation for national decisions and national implementation.
- The success of the programme relies on national implementation, planned, managed and executed nationally, with respect of national circumstances, as well as aligned with the Nordic Smart Government implementation strategy.
- The success relies on a developing and changing market for business systems and services, with new products and adaptation over time, which support development of cross border services and motivate service providers to expand their services both within and beyond the Nordic market
- Pilots and first implementations are used to demonstrate how and to incentivise the market to move in the direction envisioned
- Close collaboration with the private sector is essential for the outcome of NSG 4.0. Campaigns for mobilisation of SMEs will be applied, progress will be monitored and incentives for change will be considered.

1.9 Scope: The Roadmap identifies six solution areas to support the realisation of the vision



Digital Business Documents

High-quality data is the foundation for a future ecosystem of data-driven services. Data is generated in the daily business processes of sales and purchases, but to get the benefits of high-quality, structured data, SMEs must use digital business documents (such as e-orders, e-invoices, e-receipts, etc.) in standardised formats. This will reduce manual and paper-based processes and save time for SMEs.



Product Information

Many small companies, even when using digital business documents, make invoices that include free-text descriptions without product codes. Detailed and structured product information is often lacking, preventing the development of automated accounting and VAT postings. In addition, machine-readable product information and codes may be used directly by different applications, for example in warehouse management.



Open Accounting

Open Accounting is, by use of standardised content and interoperable interface solutions, a secure way for the SMEs to voluntarily give service providers access to financial information from their bookkeeping. Open Accounting also enables portability, ie the transfer of historic data from one system into another, which means it will be easier for SMEs to change service provider without losing historic data. Open Accounting will thus increase the consumers' protection, foster innovation and competition.



Simplified Reporting

SMEs make different kinds of financial reports to authorities, but the basis of such reports is always the business transactions. For example, reporting VAT to tax and reporting net sales or import/export figures to the national statistics agency is based on the very same transactional data from sales and purchases. While the data source is the same, the burdens related to calculation and submission process is quite different from one authority's solution to another.



Born Digital

Today, SMEs grow into the digital domain, but new companies should from the very start use digital business systems that ensure consistency, digital processing of business documents and support compliance with law. Increased use of business systems will contribute to increased adoption of digital business documents and ultimately enable new types of services and service providers.



Reliability and Data Quality

Realising NSG is dependent on high quality bookkeeping data. Unless the data is correct and reliable, it cannot be used in automated processes and shared with confidence in real time. Governments, by their role in society, have authoritative information about businesses and that is relevant for verification purposes. Reliable bookkeeping data can be supported by public registries, such as verification of the identity of business partners through registration number and business register data.

1.10 Technology principles

Nordic Smart Government is based on the following principles regarding technology:

- Apply and support Pan-European standardisation activities and commonly used standards, such as (but not limited to) CEF (*Connecting Europe Facility*), CEN (*The European Committee for Standardisation*) and Publication Office standardisation activities and UBL (*Universal Business Language*), Peppol (*Pan-European Public Procurement Online*) and GS1 (*an international standardisation organisation for business communication*) semantic models and standard formats.
- Establishment of a flexible and future proof interoperability structure, based on building blocks for business data, transaction, security and back-end integration.
- Exploiting existing digital solutions, data formats, e.g. message exchange infrastructures, as a starting point for cross border alignment and interoperability.
- Respect of national sovereignty: Necessary national implementations are subject to national decision.

The aim is to enable Nordic interoperability by employing architecture flexible enough to interconnect current national infrastructures regardless of their technological platform, open enough to cater for implementation of new technological solutions and simple enough to provide affordable off the shelf solutions to small and medium sized enterprises.

This implies defining, designing and implementing essential building blocks required to implement cross border interoperability in the Smart Government ecosystem.

The widespread use of other formats for eg invoices, such as EDIFACT and Finvoice, is recognised and expected to be in continued use. Interoperability does not mean that only one standard can be applied, as mapping (“translations”) can be done between different formats. Mapping requires continuous maintenance - a change in one standard will induce changes in the mapping. It is therefore important to limit the number of standards and formats applied to reduce the risk of mistakes.

The aim is to facilitate an alignment of national initiatives of digitalisation, based on coexistence of existing and future implementations. An alignment respecting technological deviance and national standards without compromising on quality, security and business value will be sought applied.

The key to succeed this alignment is:

- Clear distinction between the different interoperability layers
- Building blocks as basis for implementation
- High level of security, as required to protect confidentiality and data integrity, and avoid loss of information
- Use of open standards and free of charge specifications
- Transparent and predictable change management of specifications in production

Part 2. Overview Capabilities and Milestones

- Capabilities and Milestones
- Overview of Roadmap Capabilities
- Roadmap Milestones 2021-27
- High level Progress plan with Critical Milestones
- NSG 4.0 Milestones 2021-22
- NSG 4.0 milestones 2023-24

2.1 Capabilities and Milestones

The Roadmap presents capabilities and main areas of alignment from 2020-27, as well as milestones for the same period. This is presented in the next two slides, and thereafter additional milestones for the next phase (2021-24) are presented. The critical timeline summarises the milestones from the roadmap and highlights the critical dependencies to reach these.

Capabilities

As stated in the Roadmap, the capability areas include many discrete elements (technical, legal, and/or organisational changes and actions). The areas comprise over 100 possible actions, which may be employed in order to implement the capabilities (presented in the *Bundled actions* in the appendix of the Roadmap)

“Capability” is a technical term, but the roadmap translates it into easy-readable descriptions of solutions that relate to capabilities. The diagram on the following slide merely offers an approximate visualisation of the steps that need to be taken for each of the six solution areas

The actions necessary to achieve each of the steps might vary from country to country.

Milestones in the Roadmap 2021-27

The primary target group of this programme is the Nordic SMEs. Thus, to monitor the success of the programme, some major milestones/targets are expressed as e.g. percentage of uptake of solutions and services. These are milestones in the Roadmap. Some of the milestones express direct results of the NSG collaboration, other milestones are targets which we need to reach in order to realise the vision, such as a high number of SMEs using digital business systems. This is obviously a goal which cannot be achieved by NSG public partners alone, but as many other needed changes, must be pursued in collaboration with private parties.

High level Progress plan with critical milestones

To measure the progress in programme activities year by year.

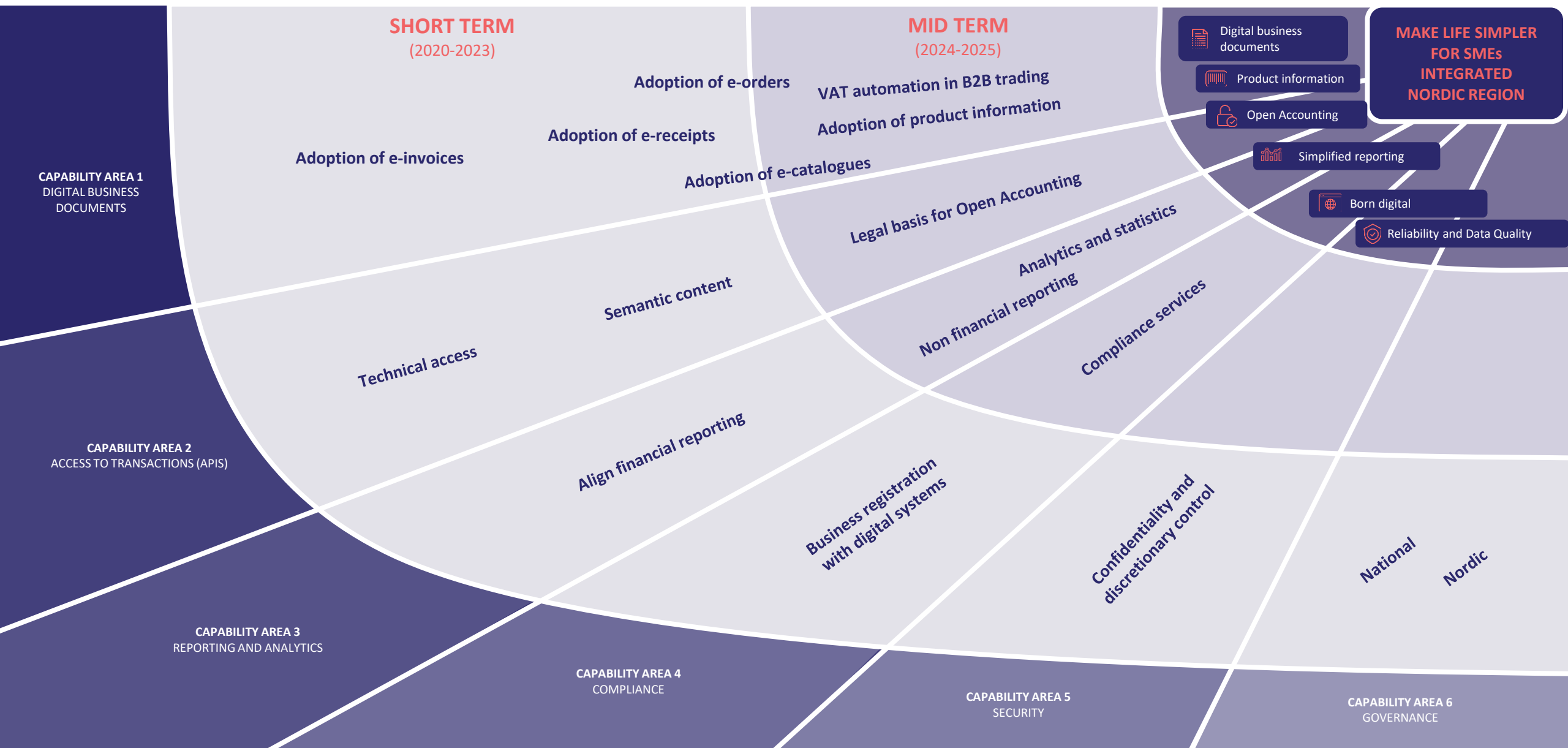
Milestones 2021-24 (NSG 4.0 programme)

The SMEs use of services is dependent on a developing market, and to push this development, pilots and first implementations are important. Pilots demonstrate what is needed to implement new services, and first implementations are first movers in the changing market, towards increasing interoperability and automation.

Several milestones are defined for the solution areas to monitor the progress of the deliverables.

2.2 Overview of the Roadmap capabilities and main areas of alignment needed to reach real time interoperability at the Nordic level

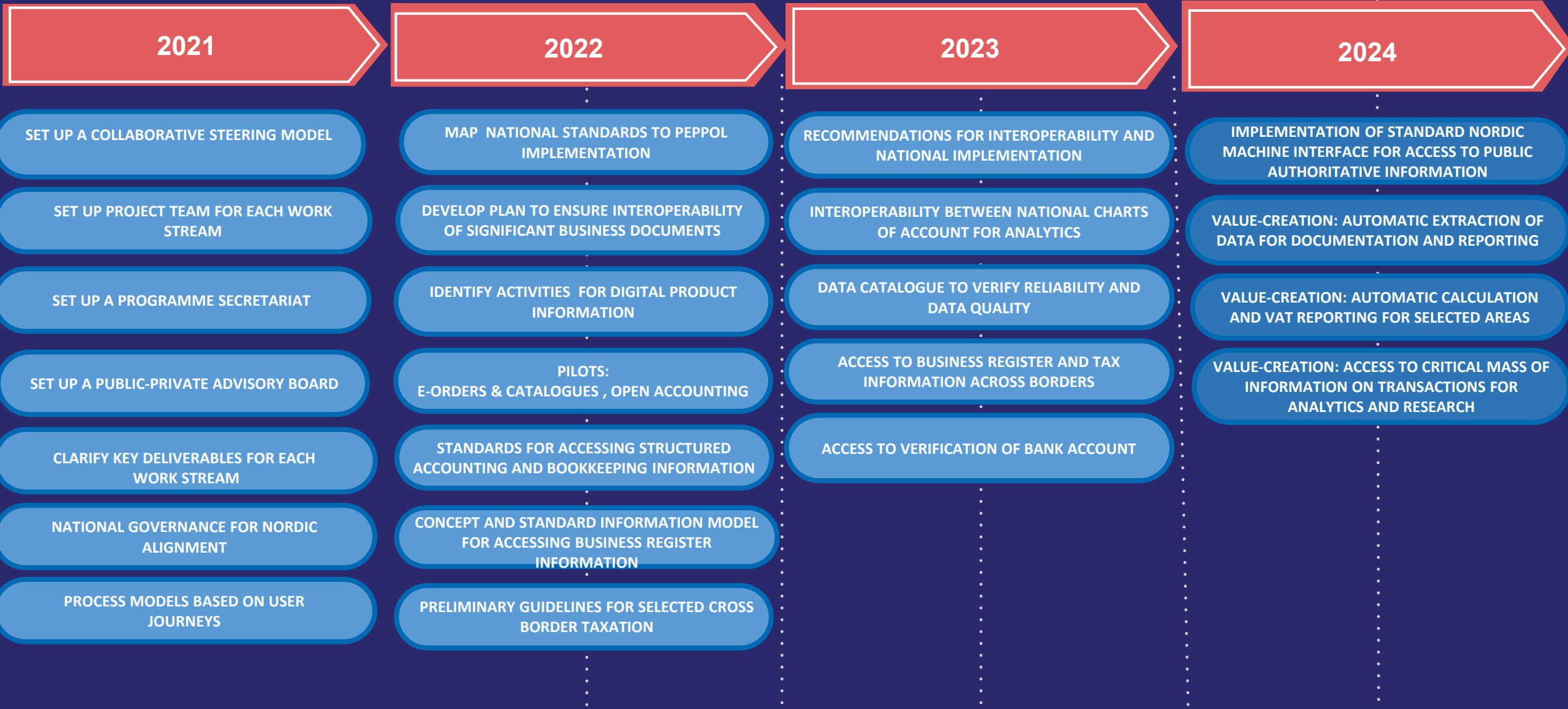
Timing is approximate, and subject to yearly evaluation and prioritisation



2.3 Milestones in the Roadmap (2021-27)

- **By 2021**, a public-private advisory board has been established to support the implementation of the NSG roadmap
- **By 2022**, 70% of the Nordic SMEs use a digital business system
- **By 2023**, SMEs can freely choose to move their business data between business systems
- **By 2023**, sales and purchases can be handled digitally by default in compatible formats across the Nordic region
- **By 2023**, 80% of the Nordic business systems have implemented common tools (APIs), so service providers can access an SME's data with appropriate consent
- **By 2024**, 80% of the invoices sent in the Nordics are digital
- **By 2025**, the Nordic SMEs have saved 500 million EUR by using smart services and real-time data
- **By 2027**, the Nordic countries are the most integrated region in the world

2.4 High level Progress plan with Critical Milestones



2.5 Milestones 2021-22

By Q2 2021,

- **Nordic public-private partnership in place**
 - A Nordic public-private advisory board has been established
 - Nordic Public-private cooperation model established to develop pilots and services together
- **Programme organisation set-up implemented**
 - Communication organisation and channels established
 - National teams affirmed

By Q4 2021,

- **Analysis and principles in place**
 - Analysis on alignment of B2G reporting with business processes on national and Nordic level initiated
 - Fair Data Principles recognised by public and private stakeholders
 - Digital process model for SME start up and registration is delivered in at least Finland, Iceland, Sweden and Norway
 - Nordic interdependencies for SMEs born digital identified
- **Strategies developed**
 - Strategy for required infrastructure implementation for Peppol compliance agreed
 - Strategy for implementation and dissemination of product information developed
- **Pilot plans and pilots in place**
 - Pilot implementation plans for product information in place
 - Nordic Peppol network compliance demonstrated
 - First accounting system doing automatic verification of bank-account number belonging to a company [NO]

By 2022,

- **Nordic target state for more effortless reporting established**
- **Preliminary guidelines for selected cross border taxation based on product information in place**
- **Pilot accomplished for accessing standardised and structured product information by SME in B2B-transactions in selected sectors**
- **First implementation in production for**
 - eOrders and eCatalogues in all Nordic countries
 - Open Accounting with at least one book-keeping system
 - Open Accounting based reporting to Government
 - Open Accounting based credit service
 - End-user registration service for SMEs provided by private actor
 - Financial sector digital services for confirming financial information
- **Services established**
 - National business registries in three countries offer standard Nordic machine interface providing official data about the registered business applicable for instance in KYC and checking of business partner [NO, DK, FI]
 - Minimum set of digital services (e.g. APIs) that supports registration available from selected business registries

2.6 Milestones 2023-24

By 2023

- **Business interoperability capability implemented in at least two Nordic countries**
 - VAT and tax registration and information on tax debts available in at least two countries
 - SMEs can freely choose to move business data between business system
- **Nordic Interoperability in place**
 - Sales and purchases can be handled digitally by default in compatible formats across the Nordic region
 - First Implementation of cross border use of eReceipt in place
 - First value added service benefiting from cross-Nordic interoperability in Open Accounting
 - Product look-up capabilities is in production and used by business systems across the Nordics
 - Services for verifying bank account belonging to a company in four out of five Nordic Countries available
 - National business registries in all Nordic countries offer the standard Nordic machine interface
 - Public data from other relevant governmental agencies included in processes across the Nordic countries
 - High level interoperability between national charts of account established across the Nordics for analytics

By 2024

- **Programme result institutionalised and in production**
 - Revised guidelines for selected cross border taxation based on product information in place
 - SMEs given green light for starting operation when all requirements are met
 - Automatic calculation and VAT reporting, including cross border trade, enabled for selected areas
 - Enabled access to critical mass of information on transactions for analytics and research
 - Plan for next phase of the NSG Roadmap implementation (2024-27)

Part 3. The six solution areas - organised in 3 work streams

- Three work streams for the six solution areas
- Use Cases and deliverables
- Key performance indicators
- Internal dependencies
- Core elements for achieving Nordic alignment

3.1 The six solution areas in the Roadmap will be organised in three work streams. This is to ensure sufficient coherence and alignment, handling of dependencies and reducing risks.



Digital
Business
Documents



Digital Product
Information



Open Accounting
Sharing
Bookkeeping
Data



Simplified
Reporting



Born
Digital



Reliability and
Data Quality

3.2 Increase the Adoption of Interoperable Digital Business Documents



Scenario

SMEs can send and receive invoices and receipts, and issue and receive orders to and from their Nordic trade partners in a way that makes it possible to automatically process for e.g. bookkeeping, payment, and VAT-calculation. The automation helps SMEs to have real-time updates on their bookkeeping and financial status, simplify reporting to governments and to ensure up-to-date forecast of inventory and payments. The use of digital business documents will also save time for the SMEs, as well as give them the opportunity to work with data-driven business development.

Deliverables:

- A roadmap on how to ensure interoperability of significant business documents to common European standards (UBL/BIS3 format)
- Mapping of the national standards to PEPPOL implementation
- Prioritised overview of formats in scope for piloting
- Cross-border pilots for prioritised formats
- Outcome reports & recommendations from pilots
- Implementation of eReceipt in standard eInvoice format
- National Adoption Plan for prioritized business documents

Key Performance Indicators

By 2022

- 70% of the Nordic SMEs use a digital business system
- 50% of digital business systems are able to process cross-border eInvoices

By 2023

- 50% of digital business systems are able to process cross-border eReceipts

By 2024

- 80% of invoices sent in the Nordics are digital
- 20% of receipts sent in the Nordics are digital

Internal Dependencies

- The product information solution area relies on digital business documents to be widespread.
- Automated calculation of VAT in business systems and the possibility to develop VAT reporting is dependent on usage of digital business documents with good quality structured data

Core elements for achieving Nordic interoperability

- On time interoperability on Nordic level, [near real time data exchange]
- National eAddress registry/ service for endpoint lookup
- Document standards needed to be compatible with European standards
- Interoperability with the Peppol eDelivery network
- Low-cost implementation and operation for SMEs

3.3 Digital Product Information included in Business Documents



Product Information

Scenario

SMEs can across the Nordic borders use standardized product IDs in business documents they receive for automatic calculation of VAT, product specific fees, inventory etc., but also in documents connected to e.g. e-orders, e-catalogues that they send to their customers. Standardized information on products also enables SMEs to automatically fulfil product-specific documentation and reporting requirements on e.g. pesticides, chemicals, goods in food production

SMEs can easily add green data on e.g. ecological or FSC certificates to their e-invoices and other e-documents. The tagging of this additional data is integrated in the invoicing process, together with other types of transparent green data, such as Total Cost of Ownership. The business systems have integrated tools that allow SMEs to comply with non-financial reporting requirements on e.g. the waste directives related to EU Circular Economy.

Deliverables

- Analysis and documentation of the current situation
- Mapping of selected cross border tax implications
- High-level ambitions and strategic roadmap for implementation and dissemination
- Stakeholder map and implementation plans for the pilots
- Pilot outcome publication
- Implementation of product look-up capabilities in business systems

**NORDIC SMART
GOVERNMENT**

Key Performance Indicators

By 2022

- Pilot accomplished for accessing product information
- Preliminary guidelines for cross border taxation based on product information in place

By 2023

- Product look-up capabilities is in production and used by business systems across the Nordics

By 2024

- 50% of the SMEs can apply standardised and structured product information through their business systems

Internal Dependencies

- Use of standardised digital business documents
- Supports Simplified reporting
- Supports Open Accounting

Core elements for achieving Nordic interoperability

- On time interoperability on Nordic level
- Commonly agreed methodology and process for labelling required at Nordic Level (preferable aligned at European level)
- Alignment with ongoing European standardisation activities
- Peppol BIS alignment and collaboration

3.4 Open Accounting – Sharing Bookkeeping and Transactional Data



Open Accounting

Scenario

SMEs can provide third parties, banks, trade partners and public authorities access to real-time bookkeeping information, ie. transaction data as well as aggregated data. The data is delivered in a standardized and structured format which enables automated processes with banks, brokers, auditors and other service providers, hence offering the SMEs better services at a lower cost. The transfer of standardised transaction data enables the SMEs to change service provider and business system, without losing essential historical data

Deliverables:

- Analysis of initiatives similar to Open Accounting, i.e. Open Banking/PSD2
- Risk Analysis for the core use cases
- Define Nordic target state for Open Accounting
- Formulate Fair Data Principles relevant for Open Accounting for core use cases, based on existing principles (national and EU)
- Standardisation: Methods, formats, and security-mechanisms (including authentication and authorisation mechanisms) for accessing structured accounting and bookkeeping information (standard APIs)
- Design and plan for further development of the Nordic ecosystems support for Open Accounting, including interoperability between national formats and charts of accounts, validation service, lookup-service, authentication, authorisation and consent
- Pilot implementations:
 - Open Accounting by one business system
 - interoperability based on Open Accounting; a value added service consuming data through Open Accounting mechanisms, preferably credit service
 - portability based on Open Accounting

Key Performance Indicators

By 2022

- First Implementations in place
- First transfer of data between two bookkeeping systems (portability)

By 2023

- Open Accounting available to minimum 25 % of SMEs
- 80% of the Nordic business systems have implemented common tools, enabling service providers to access SME's data with appropriate consent

By 2024

- 50% of SMEs can freely choose to move their business data between business systems, seamlessly (portability)
- businesses can seamlessly and simultaneously use different kinds of business systems from different vendors (interoperability)

Internal Dependencies

- Simplified Reporting and the milestone of pilot-implementation of Open Accounting based reporting to National Statistical Institute
- Enable simplified reporting using open accounting principles.
- Digital business documents in standardised format applied

Core elements for achieving Nordic interoperability

- Nordic standard for access to machine readable transaction data
- National eAddress registry/ service for endpoint lookup
- Mechanisms for authentication and authorisation, including mechanisms for providing consent

3.5 Simplified Reporting

Scenario

SMEs can automatically aggregate and report accurate information on e.g. annual accounts and tax declaration to public authorities using standardized exchange of information (e.g. through API connections) and data formats in the companies' business systems. This reduces manual filing of reports, errors and misunderstandings.

SMEs can also give access to public authorities to extract data for e.g. statistical surveys, analytics and, in a longer perspective, research, from their business systems. Automation, including mutual information and rule sharing, ensures accuracy and quality of data and enables better policy-making based on up-to-date, detailed data about the current business situation, e.g. when unforeseen disturbances in the economy occurs, such as the current Covid-19 pandemic.

Deliverables:

- Pilot implementation of reporting to statistics for at least one report, based on Open accounting
- Compiled list of existing reports where manual forms can be replaced by use of Open Accounting
- Pilot for Tax authorities to expose taxonomies, standards and rules concerning VAT
- Analysis of B2G-reporting requirements for alignment with business processes, B2B reporting, and recommendation for simplified reporting

Key Performance Indicators

By 2021

- National governance for alignment of reporting requirements established

By 2023

- High level interoperability between national charts of account established across the Nordics for analytics

By 2024

- Automatic extraction of data for documentation and reporting of financial information and information on products, enabled for selected areas
- Automatic calculation and VAT reporting, including cross border trade, enabled for selected areas
- Enabled access to critical mass of information on transactions for analytics and research

Internal Dependencies

- Supported by Open accounting
- Digital product information required for automatic VAT calculations

Core elements for achieving Nordic interoperability

- Business confidentiality must be secured.
- Standard Business Reporting
- Identity, power and mandate management
- Coordinate VAT with digital documents and product information

3.6 SMEs are Born Digital

Scenario

SMEs can be established and registered digitally in one coherent process, where the companies receive guidance regarding requirements in order for the businesses to be compliant. The SMEs also receive confirmation that they have fulfilled the different steps identified throughout the start-up and registration process, and are ready to go into operations. The result of the registration process is a digital company, with all the relevant capabilities available to benefit from the NSG Ecosystem, i.e. sending and receiving digital business documents, access to product information, Open Accounting mechanisms for easy and secure sharing of data etc.

Deliverables

- Overall process model and solution architecture for minimum NO, FI, SE and IS, including legal analysis.
- Analysis of inter-dependencies across the Nordic countries.
- Checklist for capabilities needed by SMEs at start-up to enable the NSG ecosystem.
- Necessary services for registration, from relevant parties (e.g. Business Register, Tax Authority, banks), provided through standardized machine-to-machine interfaces.
- Implementation plans, guidelines and services for businesses delivering the start-up process as a digital solution for SMEs.

Key Performance Indicators

By 2021

- Digital process model for start-up and registration is delivered in at least Finland, Iceland, Norway and Sweden

By 2022

- First financial sector digital services confirming financial information
- First end-user registration service for SMEs provided

By 2023

- Public services from other relevant governmental agencies included in process
- Services for 3rd party confirmations available

By 2024

- SMEs are given green light for starting operation when all requirements are met
- In FI, SE, IS and NO: At least 70% of new SMEs are born digital, with no extra steps needed

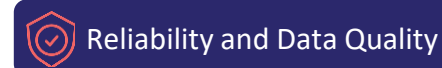
Internal Dependencies

- Supported by Open Accounting and Digital Business Documents
- Supports Reliability and quality data

Core elements for achieving Nordic interoperability

- Reuse of existing Nordic, Baltic and EU-initiatives (e.g. BRIS/SDGR/DE4A/NOBID)
- Further needs for cross border support must be estimated.

3.7 Access to Data Services to verify Reliability and Data Quality



Scenario

SMEs can validate their trading partners' bank account and VAT registration information in integrated business systems. SMEs can also evaluate their national and Nordic trading partners in terms of financial stability and reliability, using official information on their business enterprise, i.e. legal registration, business status, VAT and tax registration and payment, overview of shareholders and board members, as well as the business change history.

Deliverables

- Recommendation on which information to make available, based on use cases and analysis of importance and availability
- Nordic concept- and information model for the recommended information elements, based on related EU-work (BRIS, TOOP-project, SDGR)
- Specification of standard Nordic machine interface for the different information sources
- Implementation of the standard Nordic machine interface, relevant for Business Registries, Tax Authorities and Banks
- "Data Catalogue", including lookup-service to where you can access the actual data

Key Performance Indicators

By 2021

- National business registries in three countries offering standard Nordic machine interface

By 2023

- Services for verifying Bank-account belonging to a company implemented in four out of five Nordic countries
- National business registries in all Nordic countries offer the standard Nordic machine interface
- VAT and tax registration and information on Tax debts available in two countries

By 2024

- 60 % of SMEs have access to functionality utilising authoritative information from public and private sources when doing cross-border business

Internal Dependencies

- Supports SMEs are Born Digitally and Simplified reporting
- Access to up-to-date information about Beneficial Owners might require solution for online books for shareholders, provided as part of "Born Digital"

Core elements for achieving Nordic interoperability

- Reuse of existing Nordic, Baltic and EU-initiatives (e.g. BRIS/SDGR/DE4A/NOBID)
- Real time integration cross-border

Part 4. Programme Governance

- Roles and competences
- Organisation
- National teams, responsibilities and Nordic alignment
- Working methods
- Main activities 2021
- Collaboration with private actors
- High-level budget and funding principles

4.1 Roles and competences

Key principles:

The overarching principles in the organisation of Nordic Smart Government 4.0 programme activities are to facilitate progression and quality of outcome by competence based delegation of roles and responsibility.

Cross nordic coordination, communication and dissemination of results are core element in succeeding, and the need for strong skills at within these areas is evident. This need will be met by programme management, delivery management and secretary functions, populated with required skills. Much of the success lies in the ability to support the alignment of all activities to avoid development in silos and especially to facilitate governance and communication cross Nordic and cross solution areas.

Key competences needed:

- Collaborative mindset
- Understanding of private sector drivers and services
- Programme management, administration, controlling and reporting
- Solution management and technical alignment
- Strategic communication and mobilisation
- Workstream leadership (chairs and co-chairs)
- Strategic vision and leadership for development and implementation
- Business domain, operational, legal and technical expertise

Key factors required to succeed:

- Strong programme management organisation with communications and leadership skills as well as strong IT-development experience
- Good interaction skills, planning and practical cooperation skills
- In-depth knowledge of the European environment regarding electronic documents and cross-border transactions
- Thorough understanding of digitalisation processes and change management in public and private environments
- High level of professional expertise in the national teams as well as in the shared workgroups
- Adequate amount of time for key resources is allocated
- Close collaboration between end users, service providers and government authorities

Required toolset and support mechanism

- Process methods and tools for competency mapping in use
- Stakeholder collaboration model
- Communication process methods and tools, easy to access

4.2 Organisation

Key principles:

The organisation is based on experience from the previous NSG collaboration, recommendations provided by the Expert panel assigned to the NSG 3.0 programme by Nordic Innovation, as well as the evaluation of the organisation, communication and culture of NSG 3.0 (EY 2020).

Working closely in a cross-border, cross-institutional, cross public-private sector, as well as in an interdisciplinary set-up, requires on the individual level, a strong collaborative mindset and engagement to realise common goals.

The core principles for organising the programme are as follows:

- The programme is governed in collaboration; with a Nordic Programme Management Organisation (PMO) consisting of national team leads and the Programme Manager
- The Programme will apply a Change Management Framework, as eg. ADKAR (Awareness, Desire, Knowledge, Ability and Reinforcement)
- The organisation must support progress and Nordic alignment, as well as ownership and implementation on national level
- Active engagement of stakeholders in private and public sector
- The working groups must be organised, sized and populated in order to ensure progression and quality of work, preferable counting few, but dedicated resources
- Expert panels and public reviews must be performed to ensure technical quality, business value, legality, and commitment

Organisational units required to succeed:

- Steering Group
- Change Advisory Board
- Public-Private Advisory Board
- Programme management and administration
 - Programme Manager
 - Programme Management Organisation (National team leaders)
 - Operations office: Communication manager, solution architect & technical support manager, programme administration, controller and secretary
- Three work stream teams organised according to solution areas:
 - Chair and 2-3 co-chairs for each work stream, from different countries
 - Specialists from relevant business domains
 - Involvement of relevant private and public actors
- Review teams: various experts from public and private sector
- National teams with national team leaders

Required toolset and support mechanism

- Nordic collaboration and publication platform
- Shared platform for reporting, resource allocation and progress monitoring
- Consolidated registration of resources, cost and expenses covered by the programme

4.3 National teams, responsibilities and Nordic alignment

Key principles:

Reaching the roadmap milestones and the additional milestones in this application is dependent on the national engagement and the successful implementation on a national level.

Therefore, each country will, or have established, a national team responsible for the national implementation of the roadmap aligned with the common Nordic efforts. This is necessary in order to reach cross-Nordic interoperability.

The national teams are responsible for:

- Provision of national action plans aligned with the roadmap milestones
- Alignment and quality assurance of national pilots documentation and execution
- Provision of yearly short report on progress and challenges, as well as risk and mitigative actions

The national team leader is member of PMO and reports to the programme manager and national superiors as decided by each country.

Required commitments needed to succeed:

- Establishment of national teams with sufficient resources and right competences
- Team members working in the relevant Nordic and national activities to assure efficient sharing of knowledge

Required toolset and support mechanisms

- Reporting templates
- High level risk mitigation strategy and escalation path
- Tools relevant for nationally decided activities

4.4 Working methods

Key principles

User journeys: are applied to identify actual needs of the SMEs and other stakeholders.

The cross border perspective: is essential in all types of activities for the NSG 4.0.

Agile: Development of specifications and artefacts will be organised in a semi-agile set-up, as NSG 4.0 will adapt the methods applied in NSG 3.0. All draft deliverables will be presented for open reviews with experts from both public and private sector, thus ensuring relevant and competent feedback. Retrospective evaluations of working methods will be performed to ensure efficient work processes.

Pilots: Proof of concepts has already been conducted in NSG. Now production pilots will be prioritised, as the detailed requirements for exchange of data must be described and documented before implementation. Pilot work means testing data flows and mechanisms, in order to detail requirements. As the NSG ambition is to ensure uptake of new services, the general ambition is to make pilot which result in documentation which is ready for production.

Transparency: Is essential to efficient, creative and trust-based collaboration and change. Working documents, reviews, documentation and results will be public.

Working language: English. All working documents and publications are in English, if not otherwise agreed upon.

Procedural requirements needed to succeed:

- Results developed in the programme will be publicly available free of charge
- Crossborder user journeys for SMEs as basis for pilot activities
- Standardised submission of results
- Periodically submission of cost and time spent
- Periodically standardised reporting of progress, risk and issues
- Consolidated documentation and management of risk and issues
- Notification principles based on openness and efficiency
 - Request for review based on push not pull
 - Dissemination of results based on pull not push
 - Access to centralised publication as distribution principle

Required toolset and support mechanisms:

- Open work space to be implemented for development and maintenance of specifications
- Showroom and reference implementation for pilots and communication
- Collaboration platform for sharing work in progress, request for information, preliminary results
- Tool for centralised registration of time and cost
- Detailed overview of the Nordic landscape of NSG related standardisation and digitalisation activities

4.5 Main activities 2021

Phase 1 (3 months)/ 2021:

Implementation of programme administration, organisation and communication

- Mobilisation: Organisation set-up with chairs and working groups, CAB, PMO, national teams and Advisory Board.
- Kick-off and onboarding of programme participants
- Administrative structure in place: reporting, budget, risk, secretariat
- Cross Nordic information sharing system and agile management toolbox defined, documented and implemented, including digital community for co-creation and reviews in place
- Planning of phase 2

Stakeholder management

- Stakeholder management and communication plan in implementation: Mobilisation/onboarding of public and private actors, including digital NSG-community,
- Model for monitoring of market developments in place
- Model for monitoring and influencing on the surrounding landscape in place: EU, OECD, Nordic, Nordic-Baltic, etc
- Strategy for coordination of initiatives on EU-level eg. regulatory needs regarding Open Accounting
- Kick-off with stakeholders

Phase 2 (3 months) / 2021:

Plan and prepare analysis, development, piloting and implementation

- Analysis to establish overarching principles and models initiated
- Strategy and plans to ensure uptake and transfer of digital business documents in place
- Pilot strategies and plans in place
- Introduction to pilot activities and expected outcome published
- Acquisition of external resources in place
- Programme Meeting with retrospective and review
- Advisory Board meeting and review
- Planning of phase 3

Establishment of National initiatives and collaboration foras

- National governance model in place
- Meeting strategy, frequency and collaboration model in place
- Strategy for national implementation, depending on national circumstances, e.g. need for pilots and dissemination of building blocks

4.6 Collaboration with private actors

Key principles:

A successful and valuable result of Nordic Smart Government 4.0 is dependent on a high level of participation and contribution from private actors, and a structured approach for involving private actors, as well as other public sector bodies, in all kinds of project activities. Vital to this collaboration are service providers and SMEs.

NSG 4.0 will facilitate a playground and an environment as a basis for development of well-functioning services in the Nordic market.

Private actors participate on a voluntary basis. The programme will, in general, not finance such participation directly.

General involvement and knowledge sharing will be handled through establishment of national and Nordic reference groups and advisory boards and open reviews.

Direct participation in programme activities will be open for any private actor, and NSG 4.0 will be fully transparent and share all results derived from the programme openly - to anyone interested.

Pilot participation is organised in independent groups at national or Nordic level and will not be funded by the programme. Development of specifications and shared components used in more than one pilot can be partly funded by the programme, given that they are made public available (open Source) and that immaterial property rights (IPR) for those are held by the programme.

Required activities needed to succeed:

- Identification of all stakeholders and segmentation.
- Create awareness and support amongst decision makers through conferences, publications, dialogues and meetings
- Create a digital NSG development hub (community) where stakeholders by agreeing on shared principles, can be involved in co-creation: pilots, technical discussions, reviews, considerations on business value etc.
- Facilitate knowledge sharing between the actors during piloting, building on trust building activities and guidance from national and Nordic management

Required toolset and support mechanisms:

- Test environment (reference implementation) and showroom established in NSG 3.0
- Structured methodology and organisation for development, piloting and test
- Centralised publication of quality assured specifications and guidelines

4.7 Risk assessment and mitigation (1/2)

Risk analysis, evaluation and mitigation will be conducted periodically both at national and Nordic level. Major risks are reported to the steering group. Below are the essential elements in the risk documentation and an overview of risks identified. Risk ownership, status and responsible actor will be included in the NSG 4.0 risk template as well.

Risk	Consequence if it occurs	Mitigation	Probability (1-5)	Consequence (1-5)	Risk value
Involvement and/or contribution from public and/or private actors is insufficient or too late	The market develops in various directions on Nordic level, without employing common standards and formats. Thus, interoperability is not achieved and benefits for the SMEs are not realised.	Immediate start-up of NSG 4.0 with sufficient resources. Professional involvement of private actors in the Advisory Board and in the work. Timely and clear communication, efficient digital working space in place for collaboration and transparency, aligned between Nordic and national level.	2	5	10
Recommended solutions not compliant with GDPR and EDPB (European Data Protection Board) recommendations	Personal information is accessible or transferred to a third country (outside EEA) without adequate level of data protection of privacy and integrity (e.g. in solutions and by cloud services with ownership in the US)).	Recommendations are GDPR compliant and adequate safeguard measures must be implemented according to recommendations from EDPBs. Raise awareness among public and private actors.	2	5	10
Work streams not sharing the same vision	Deliverables are not aligned	Sufficient resources in the Nordic organisation and high attention and close collaboration between workstream chairs and PMO.	2	5	10
Insufficient allocation of key resources	Deliverables not up to standard and/or not on time. Private actors are implementing slowly. Milestones are not reached.	Precise requirements. Commitment from participating organisations.	2	5	10

4.7 Risk assessment and mitigation (2/2)

Risk analysis, evaluation and mitigation will be conducted periodically both at national and nordic level. Major risks are reported to the steering group. Below are the essential elements in the risk documentation and an overview of risks identified. Risk ownership, status and responsible actor will be included in the NSG 4.0 risk template as well.

Risk	Consequence if it occurs	Mitigation	Probability (1-5)	Consequence (1-5)	Risk value
Onboarding process ineffective	Slow start-up process. New participants are not productive.	Well prepared descriptions of programme environment, activities and expectations. Sufficient communication.	2	4	8
Security breaches decrease trust in digitalisation and data sharing	Not sufficient trust from Nordic SMEs in the digital systems and data sharing, and the benefits for SMEs are not realised	Ensure attention on security aspects by both system vendors and SMEs.	2	4	8
The national implementation is not aligned with the Nordic	The Nordic integration is limited and cross border trade is not made easier	Active monitoring of national implementation plans	2	4	8
SMEs do not apply NSG capabilities	SMEs do not experience the value of NSG	Monitor the uptake. Campaign for the benefits of applying digital business documents. Minimise direct transaction costs for digital business documents. Engage business system providers, large corporations, service providers and banks in marketing of benefits for SMEs. Other compliance mechanisms, as found appropriate on national level.	2	4	8

4.8 High-level budget and funding principles

Key budget principles for funding:

Programme runs over 40 months - expected 1 March 2021 - 30 June 2024

30 working months for PMO and working groups.

Covered by NI-programme funds are:

- Nordic management, Nordic communication and coordination
- Consultants for common Nordic communication, analysis, infrastructure components and documentation

Covered by NI-funds as well as own contribution are:

- National management and participation in PMO, chairs and co-chairs
- Nordic meeting costs (e.g. programme meetings, PMO and chair meetings)
- Travel costs
- Development of specification and shared open-source components

Covered by own contribution:

- National teams, mainly working hours
- National implementation pilots and building blocks, as needed

Distribution of budget between the Nordic countries and authorities is dependent on the actual allocation of human resources.

Total Budget: 101,7 MNOK

All numbers in MNOK.

Budget Item	NI funded	Own contribution
Salaries incl. overhead	24,1	60
External services	9,5	0
Equipment and material	,5	,5
Travels and meeting	3	2,0
Communication	1,1	1
Total in million NOK	38,2	63,5

Without Nordic funding of the Nordic collaboration, there is no organisation to ensure Nordic interoperability and further integration - and the vision will not be realised.

1 full time man year is rated 1 MNOK - same in all countries.

Budget details

Salaries

ITEM	Estimate (MNOK)
Programme manager*	3,0
Central organisation and secretariat*	6,0
Communications manager*	3,0
PMO in five countries	5,1
Chairs for three work streams	3,0
Two co-chairs per work stream	4,0
TOTAL	24,1

- PMO-members are national team leads and are responsible for coordination on Nordic level. Funded with 50 pct from NI programme funds and expected to spend 70 % of their time on NSG.
- Chairs and co-chairs are managing the work streams and are expected to spend minimum 60 pct. of their time on NSG, on both Nordic and national efforts. 40 pct is funded from NI programme funds.
- Own experts and project assistants in the works streams are covered by own national contribution.
- National implementation requires activities dependent on national circumstances and total national own contribution is expected to be beyond budget estimate.
- External costs are subject to more detailed project plans in the work streams and thus are likely to be adjusted within the total budget frame.

* 100 pct Nordic roles are 100 pct financed by NI-programme funds.

External costs

ITEM	Estimate (MNOK)
External Agility coach	0,8
Occurring external costs	0,3
Expert audits	0,6
Promotion material - Digital documents	0,3
Development and mapping of standards	3,2
Study on product catalogues	0,3
Study of PSD2 for Open Accounting	0,6
Analysis of consent mechanisms	0,4
Nordic information models and lookup services	1,1
Reference implementation	1,4
Assist first implementations	0,5
TOTAL	9,5

Part 5. Appendix

5.1 Appendix

- NSG Roadmap:
https://nordicsmartgovernment.org/sites/default/files/2020-11/Samlet%20NSG%20roadmap%20og%20appendix_0.pdf
- Expert panel recommendations 2020:
<https://docs.google.com/presentation/d/19khf6UcujNV-elbvPfnRRaWN1b8J6Ha/edit#slide=id.p1>
- Evaluation of NSG 3.0 (EY 2020):
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