



Evaluation of e-Cohesion 2014-2020

In-depth case study – e-Toetus Estonian e-Cohesion system

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Glossary of terms

e-Procurement	Electronic exchange system/portal for public procurement in Estonia
Estonian ID-card/e-ID	State-issued digital identity in Estonia
e-Toetus	e-Service portal
Keep.eu	A platform that allows users to access information on Interreg programmes, projects and partners
Mobile-ID	Option for to use electronic identification using e-ID and smartphone, which enables authorisation and e-signature.
Smart-ID	Option for electronic identification using e-ID and an application, which enables authorisation and e-signature

List of abbreviations

AA	Audit Authority
CA	Certifying Authority
CF	Cohesion Fund
CPR	Common Provisions Regulation
EGF	European Globalisation Adjustment Fund
ERDF	European Regional Development Fund
ESF	European Social Fund
EU ETS	European Union Emissions Trading System
FEAD	Fund for European Aid to the Most Deprived
GDPR	General Data Protection Regulations
IB	Intermediate Body
MA	Managing Authority
OP	Operational programme
SAP	Unified Accounting System
SFC	Structural Funds Management system
SFCS	Structural Funds Coordinating System
SFMIS	Structural Funds Monitoring Information System
SFOS	Structural Funds Operating System

1. Introduction

The over-arching aim of this in-depth case study is to provide other member states (MS) inspiring examples of good practices and lessons learnt, intending to facilitate policy-learning and provide useful information which should inform and underpin efforts to set up and/or improve e-Cohesion systems in the 2021-2027 programming period. **The Estonian e-Cohesion system, e-Toetus, was chosen for this in-depth case study due to its high level of interoperability, the reported high levels of beneficiary user satisfaction, and the emphasis put on user experience and feedback.** This report will examine these good practices further, about the system's development process, key features, user-friendliness, usefulness, and performance, and identify and examine any barriers and challenges faced. The data that informs this report comes from semi-structured interviews with authority representatives (including those who use the system in an institutional capacity, i.e., 'institutional users' and those responsible for system management and development) and survey results from beneficiary respondents. They have used e-Toetus to apply for funding under Estonia's Operational Programme for Cohesion Policy Funding 2014-2020.

Estonia has a centralised approach to the electronic exchange of information with one e-Cohesion system for the management of European Structural and Investment (ESI) funds, of which it covers the European Regional Development Fund (ERDF), the European Social Fund (ESF), and the Cohesion Fund (CF). E-Toetus covers the single national operational programme Estonia has for the 2014-2020 programming period and does not cover any Interreg programs. Nonetheless, the system coverage is substantial; e-Toetus is used for the management of several other EU instruments and schemes, such as the Fund for European Aid to the Most Deprived (FEAD), European Union Emissions Trading System (EU ETS (co2)), European Globalisation Adjustment Fund (EGF). In addition, the system is used for the management of EEA and Norway Grants and many national funds and grants, for which the MA is actively seeking to incorporate as many as possible. The latest addition is Enterprise Estonia¹, which offers national (mostly business-related) grants. During 2020, approximately 3000 beneficiaries used e-Toetus.

Table 1. Introduction to e-Toetus

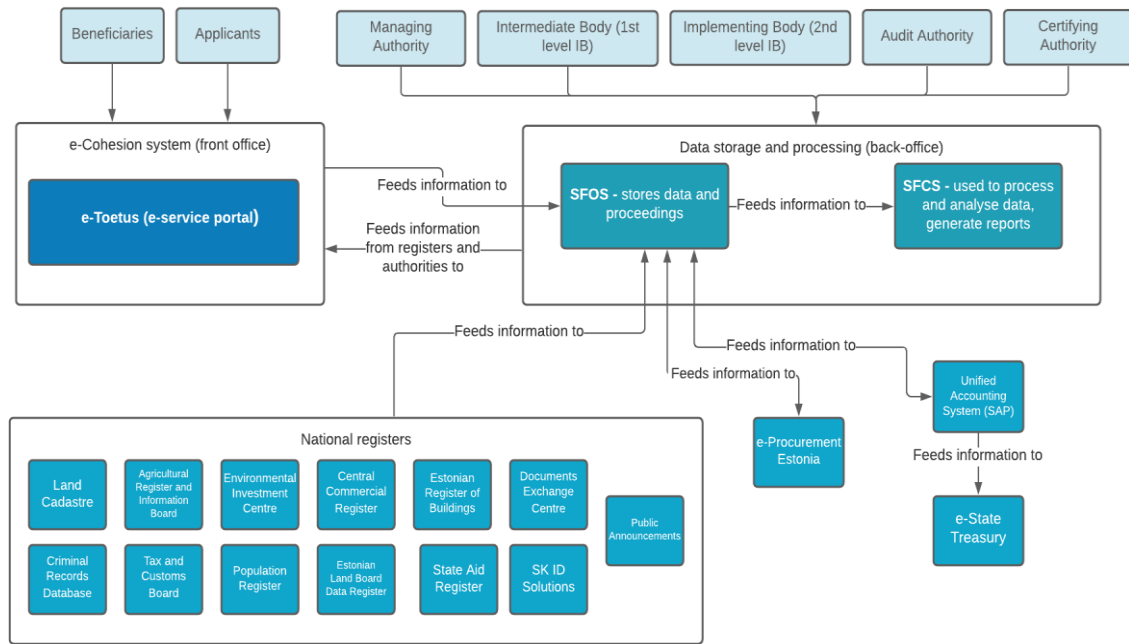
e-Cohesion system title	e-Toetus / e-Service portal
Years of operation	7 years (2015-2022)
ESI funds	ERDF, ESF, CF
Operational Programmes	Operational Programme for Cohesion Policy Funding 2014-2020 (CCI: 2014EE16M3OP001)

Source: PPMI consortium

The e-Toetus system refers to the e-Service portal beneficiaries, and applicants use it to exchange information and communicate with programme authorities. Thus, the e-Cohesion system constitutes the 'front-office'. The structural funds monitoring information system (SFMIS) used for ESIF management in Estonia gathers monitoring data and information. Programme authorities do not use e-Toetus, but instead access the information in e-Toetus through a structural funds operating system (SFOS), which stores all the data and proceedings collected in e-Toetus. They also use a structural fund's coordinating system (SFCS), which is used to process and analyse data, generate reports, etc. SFOS and SFCS together constitute the 'back office'. The three systems are integrated and connected by a central server. The structure of the Estonian SFMIS thus constitutes a decoupled IT model, where the system consists of separate yet interconnected entities.

¹ <https://www.eas.ee/eas/?lang=en>

Figure 1. Structure of Estonian structural funds Monitoring Information system (SFMIS)



Source: PPMI consortium

Due to the interconnectedness between all three parts of the SFMIS, we must sometimes understand the functioning of the back-office to understand the front-office fully. Thus, when we refer to the e-Cohesion system, we refer to e-Toetus. SFMIS refers to the system in its entirety (SFOS, SFCS, e-Toetus) and thus includes the overarching system's back-office and monitoring functionalities. However, whilst we strive for a comprehensive discussion of the system, the report's primary focus is e-Toetus and its usefulness from the beneficiaries' perspective.

2. Development and operation of e-Toetus

The foundation of the Estonian e-Cohesion system already began to take shape in 2003, in preparation for Estonia to join the EU in 2004. This early development should be understood against the backdrop of Estonia as an 'e-State'; this trajectory of digitalisation began in 1994 with the first draft of "Principles of Estonian Information Policy", which provided a strategic outline for Estonian IT development (ratified in 1998).² This was followed by the 'Tiger Leap Program' launch in 1996, a country-wide IT infrastructure development initiative. Successive governments have continued to enforce and strengthen the principles that underpin the epithet of **e-Estonia**.³ In the United Nations (UN) e-government survey 2020, which measures the 193 UN member states in terms of digital government, Estonia ranks 3rd in the e-Government development Index and 1st in the e-Participation Index.⁴ In the EU's 2020 e-Government Benchmark, which measures overall e-Government performance from 0% to 100%, Estonia is again at the forefront with an overall score of 92%.⁵

Indeed, the Estonian SFMIS was not developed in isolation but as part of a wider digitalisation agenda to facilitate citizen and state interactions and information exchange through electronic solutions. In 2004, the Estonian Ministry of Finance developed the systems for data collection and proceedings (SFOS) and compiling reports (SFCS). These were used by the relevant authorities managing ESI funds. Beneficiaries sent forms and documents to the authorities via email or post, then processed using these systems. This method had its obvious drawbacks, and national authorities expressed a demand to:

- Minimise the use of paper-based processes.
- Provide a single data and/or document exchange point between beneficiaries and administrators.
- Have a comprehensive database of information.
- Automate processes to reduce administrative burdens and time spent on data entry.

Due to these needs and demands, the e-Service portal for beneficiaries, e-Toetus, began its tentative development as early as 2007. The final version was launched in 2015, a slow and steady development process. E-Cohesion system development was predominantly financed by the technical assistance budget, supplemented by national funds used in proportion to the parts of the system dedicated to the management of national support schemes.

2.1. European and national legal framework

The legal and policy background of the Estonian e-Cohesion system consists of both European⁶ and national-level⁷ legislation, and the principles of interoperability guided its development, the only-once encoding principle (the elimination of requesting/submitted the

² Estonian Informatics Centre, 1998. Principles of Estonian Information Policy. <https://ega.ee/wp-content/uploads/2020/01/Eesti-infopoliitika-p-hialused.pdf>

³ <https://e-estonia.com/>

⁴ United Nations, 2020. United Nations E-Government Survey 2020 - Digital Government in The Decade Of Action For Sustainable Development. Department Of Economic and Social Affairs <https://www.un.org/development/desa/publications/publication/2020-united-nations-e-government-survey>

⁵ European Commission, 2020. eGovernment Benchmark 2020 - eGovernment that works for the people. <https://ec.europa.eu/digital-single-market/en/news/egovernment-benchmark-2020-egovernment-works-people>

⁶ 'Regulation 1303/2013 Article 122 and Article 125' (available at: <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32013R1303>) , 'Implementing regulation 1011/2014 Article 8 and 9' and 'Delegated regulation 480/2014 Annex III' (available at: <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32014R1011>)

⁷ '2014-2020 Structural Assistance Act' (available at: <https://www.riigiteataja.ee/en/eli/531102014003/consolide>) and decree of the Government 'Securities Register Maintenance Act' (available at: <https://www.riigiteataja.ee/en/eli/524072017013/consolide>)

same information twice), equating e-proceedings to physical proceedings, and the use of e-Identification and e-Signatures. According to MA representatives, the overall effort of the development of the system has been modest in scope, which may be indicative of the digital infrastructure already existent in Estonian public service. For example, the widespread use of digital authentication and e-signatures in Estonia meant that little effort was necessary to conform to data security requirements in the Commission's relevant legislation⁸. In Estonia, 98% of the population can authenticate themselves digitally and provide digital signatures using their ID-card, Mobile-ID or Smart-ID⁹. The latter two are offered by e-Toetus as options for authentications. In addition, the MA for the e-Toetus system has made significant strides in aligning digital authentication and e-signature procedures with the Regulation (EU) N°910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation), which is now an additional authentication method.

Figure 2. e-Toetus log-in page

Source: PPMI consortium

Indeed, the Estonian MA have focused on adapting the national legal framework regulating digital information systems connected to public services with EU regulations, rather than the horizontal requirements *per se*. The system and its regulatory framework change regularly. Hence, efforts to adapt and amend the national legal framework to correspond to the legal acts on EU-level is an ongoing process. Currently, the legal affairs department at the MA may need to implement further legal changes to update the national legal framework (e.g. Structural Assistance Act¹⁰ and Official Statistics Act¹¹), as the CPR framework for the upcoming (2021-2027) period states that all information on programme operations must be

⁸ European Commission (2014). Commission Implementing Regulation (EU) No 1011/2014 of 22 September 2014 laying down detailed rules for implementing Regulation (EU) No 1303/2013 of the European Parliament and of the Council as regards the models for submission of certain information to the Commission and the detailed rules concerning the exchanges of information between beneficiaries and managing authorities, certifying authorities, audit authorities and intermediate bodies. OJ L 286, 30.9.2014

⁹ <https://e-estonia.com/solutions/e-identity/id-card/>

¹⁰ Estonian Parliament (2014). Structural Assistance Act 2014-2020. <https://www.riigiteataja.ee/en/eli/531102014003/consolide>

¹¹ Estonian Parliament (2019). Official Statistics Act. <https://www.riigiteataja.ee/en/eli/ee/Riigikoju/act/517122019002/consolide>

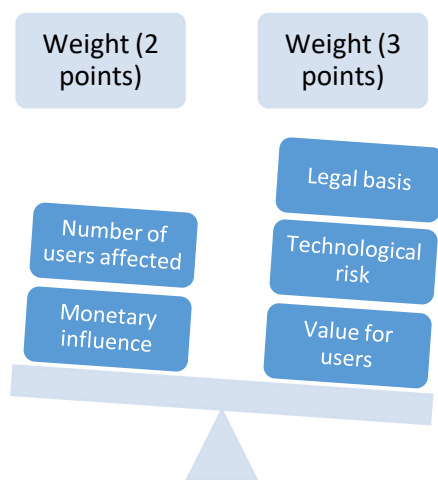
recorded and stored in the system (Article 72(1)(e)¹² (see *Barriers*). Whilst this requirement does not directly relate to e-Cohesion systems, i.e., e-Toetus, but rather the storage system, i.e., SFOS, it impacts the e-Cohesion system, as e-Toetus is the only viable source for collecting this information directly.

While the **e-Cohesion system is the only officially provided solution for beneficiaries, the system is not obligatory legally**. During interviews with representatives of the MA, it was made clear that such legislation is considered. Nevertheless, in their experience, there have been no such demands from beneficiaries to apply or implement their projects through alternative channels. Such legislation is possibly less relevant for such a digitally advanced country like Estonia, where e-Services are widespread and institutionalised.

2.2. Operational aspects in introducing and developing the system

The MA outsourced multiple aspects of the (individually tailored) development and implementation of the e-Toetus system to a private supplier. The tasks of the software development company comprised business process analysis and system analysis, second-level support and first-level testing. The MA handles everyday maintenance and hosting, such as business process engineering, gathering and defining business requirements, first-level support, system maintenance, acceptance testing, and end-user training.

Figure 3. Weighting of development criteria



The system's development process has been continuous since its inception. The MA even developed a methodology to prioritise tasks in the product backlog, i.e., tasks requested by institutional and beneficiary users or necessary due to novel regulatory requirements, technical issues, etc. Of course, it is not possible to implement all requests or developments at once. Therefore each task is prioritised based on the specific criteria developed, which are weighted according to their relative importance: value for users (3), legal basis (3), technological risk (3), monetary influence (2), and the number of users affected (2).

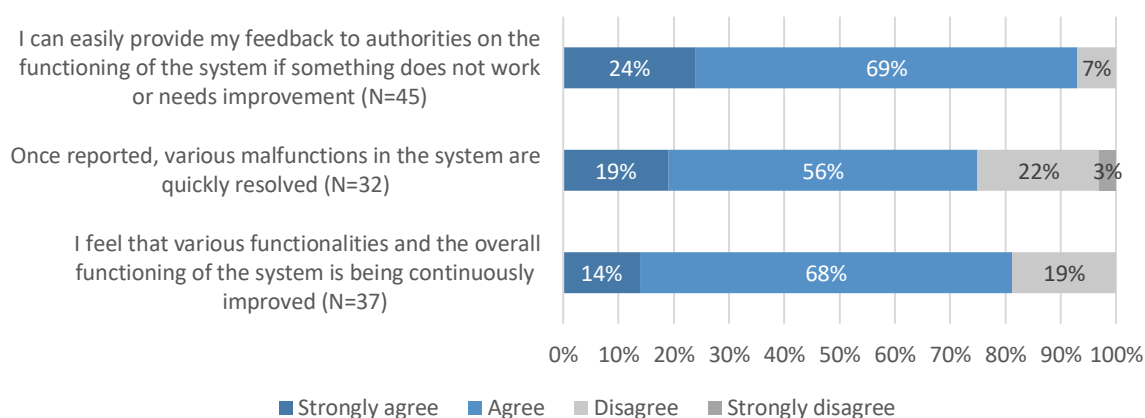
Source: PPMI consortium

Once a development aspect or added functionality is decided upon, the affected users and stakeholders (including beneficiaries) are routinely consulted through interviews, which showcases the **client-focus** of the system development process. Indeed, when developing the system, joint meetings and interviews were held with institutional users to define business requirement specifications. Also, prototypes of the system were made. Selected beneficiaries were asked to apply for funds using the prototype and then provide comprehensive feedback on how the application went, any issues encountered, bottlenecks, etc., and report to the MA. In this way, **user experience was considered and constituted an integral part of the software development process**.

¹² European Union (2021). Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy.

In terms of establishing procedures and processes required during the system's development and/or implementation stage, such as defining novel programme management processes, training internal human resources, and familiarising beneficiaries with new procedures, the overall perception is that its strain on the relevant authorities was manageable. **During the implementation stages, regular training took place where institutional users were taught how to use the system. This also provided an opportunity for users to provide feedback on the system to the MA.** Some initial difficulty was encountered by the 2nd level IBs when attempting to familiarise the beneficiaries with the system when it was first introduced. This was partly due to the vast number of IBs, all of which had their own operational processes that needed to be unified. Whilst this posed an initial challenge, the MA managed to standardise programme management processes by developing guidelines for IBs and beneficiaries. Also, it was well-received once the beneficiaries realised the system's benefits (e.g., shortened processing times, reduced administrative burden, and faster access to help and information). There are currently user manuals and help-desk services available for all types of users, and central training is provided for new institutional users.

Figure 4. Feedback functionality in e-Toetus



Source: PPMI Consortium – Beneficiary survey - Question 20: "Please assess the following statements on the collection of feedback by authorities and how it results in improvements of the electronic data exchange system."

User feedback is collected regularly to ensure a continuously client-focused development of the system. Beneficiaries get invited to participate in a survey twice a year regarding e-Toetus. This enables the MA and system developers to gauge the levels of user satisfaction and detect any unknown issues with the system. Similarly, administrative/institutional users are administered a survey on the SFOS system once a year. In addition, the affected users are also asked to test beta versions of the added feature and provide feedback ahead of any major system developments.

Box 1. User feedback feature in e-Toetus

Good practice: User feedback

E-Toetus is linked to a computerised feedback system, so the first time an applicant/ beneficiary has interacted with the system, an email is sent out to the relevant person asking for brief feedback consisting of a few short questions, such as asking them to rank their user experience from zero to ten. Each week, the MA receives aggregated user feedback reports from beneficiaries and their interaction with e-Toetus from the previous week. Once the applicant/beneficiary has received this email, they will not be asked for this information again but get invited to participate in the biannual survey for beneficiaries.

Source: PPMI consortium

3. Key features of e-Toetus

In the following sections, we will focus on the key requirements of e-Cohesion, derived from the mapping framework, which we developed based on the standards and requirements set out in Article 122(3)5 of the 2014-2020 Common Provisions Regulation,¹³ Implementing Regulation,¹⁴ and then further elaborated in various guidance documents.¹⁵ The mapping frameworks' description of the key features consists of four categories: principles, key processes, functionalities, and data security requirements, all of which contain several dimensions. To fully understand how the Estonian e-Cohesion system meets these key requirements and thus fulfil the objective of e-Cohesion (to provide beneficiaries with a system to allow submission of information in electronic form), we must also understand the functionalities and features of SFOS and SFCS which enable e-Toetus to function in accordance with the regulatory requirements. Table 2 describes each major user group and how they work in the system.

Table 2. Main activity in SFMIS for each major user group

Type of user	Main activity in the system
Applicants / Beneficiaries	Beneficiaries use e-Toetus to create, submit, modify, and check applications, payment claims, progress reports, and procurement and contract-related documents, all on structured forms.
Managing Authority (MA)	The MA encompasses many different departments and positions with varying tasks under MA responsibilities (e.g., legal affairs, software development, grants development, etc.). Therefore, Therefore, how the MA uses the Estonian SFMIS differs widely. In general, the MA has access to all data and functions and uses the system in a management capacity, e.g., to carry out regular quality checks for data, provide data corrections (if needed), manage administrative users, and manage the system's structure and settings. They delegate most 'everyday' tasks to the 2 nd level IBs, such as approving applications, modification requests, progress reports, and payment claims but are involved in these processes if needed.
Certifying Authority (CA)	The CA is part of the MA in the Grants Payment department; they use SFOS for collecting information needed to certify expenses and payment requests to the EC. Here, the CA requests information for a specific time, and the system automatically generates the financial data requested. CA's use SFCS to generate reports and payment applications to the EC based on the data stored in SFOS. If some expenses are irregular and financial corrections must be made, the report will show this. However, these must be detected manually upon analysis of the report.
Audit Authority (AA)	SFMIS is an everyday working tool for the AA, used as a planning tool for annual work plans, system audits, etc. The AA collect data stored in SFOS and use SFCS to carry out audit functions generate reports, analytics, and (automatic) calculations to carry out risk assessments. The AA exchanges information with CA and MA through the system to carry out extra controls on flagged beneficiaries - all follow-up procedures are in the system, whether issues have been resolved, the status of financial corrections, etc., so they can control and follow each case.

¹³ European Union (2013). Regulation (EU) No 1303/2013 Of the European Parliament and of the Council of 17 December 2013

¹⁴ European Commission (2014). Commission Implementing Regulation (EU) No 1011/2014 of 22 September 2014 laying down detailed rules for implementing Regulation (EU) No 1303/2013 of the European Parliament and of the Council as regards the models for submission of certain information to the Commission and the detailed rules concerning the exchanges of information between beneficiaries and managing authorities, certifying authorities, audit authorities and intermediate bodies. OJ L 286, 30.9.2014

¹⁵ European Commission (2017). Questions & Answers on e-Cohesion Programming period 2014-2020 (ERDF, Cohesion Fund and ESF), EGESIF_17-0006-00, 06/04/2017; Building Blocks for e-cohesion: good practices from Member States, regions and programmes.

Intermediate Body (1 st level IB)	The 1 st level IBs are responsible for the OP's rules and regulations. The main coordinator is the Ministry of Finance, but all line ministries must give their input on rules and regulations that impact their policy areas. They prepare strategic documents and plan targets, output and results indicators, specific selection criteria, organise monitoring activities and evaluations, plan and adapt the legal framework, the exact programme for project implementors, and state budgets. They use data stored in SFOS and use SFCS to analyse data and generate reports.
Implementing Body (2 nd level IB)	The 2 nd level IBs constitute the first point of contact for beneficiaries and work mainly in SFOS. They process and approve applications, payment claims, etc., and handle lower-level technical issues. They perform these tasks under the responsibility of the MA.

Source: PPMI Consortium

3.1. Key principles

Interoperability and only once encoding are the two key principles of the e-Cohesion initiative. The former refers to the minimum requirement that all bodies involved in implementing a programme should cooperate at the organisational and technical levels to ensure effective communication through the interconnection of computerised systems and facilitate the exchange and re-use of information. At the minimum level, all authorities involved in ERDF and CF interventions for one OP should have access rights to the e-Cohesion system. The Estonian e-Cohesion system adheres to this principle; all authorities involved with the Estonian OP have access to the SFMIS, based on their predefined user roles, which means that the data is shared in the capacity to which the different institutional users need it (i.e., all institutional users can see data and run predefined reports, whereas some users can, in addition, modify data, as well as create users and reports). Whilst not legally required, the principle of interoperability can be extended to the internal (i.e., national) and external (i.e., EU) levels. The latter relates to the connection to the central monitoring systems on a European level, such as SFC2014 and Interreg's keep.eu, and the former to the interconnections of external computerised systems on the national level, such as links with monitoring systems of different programmes, national/governmental registers and/or databases.

External interoperability is less developed in the Estonian system as e-Toetus is neither integrated with SFC2014 nor with Interreg's keep.eu, whilst, as shown in Figure 1, many national registers and databases are connected to SFOS, which is closely interlinked to e-Toetus. The MA representatives we interviewed explained that the reasoning behind not developing the external interoperability is related to cost-efficiency. For example, the requirements of information to be submitted to the SFC2014 during the 2014-2020 programming period were, in their view, limited. Thus, the cost of transferring the required information manually did not exceed the costs of establishing a connection between the two computerised systems to enable the automatic transfer of the required information. However, the MA representatives claim that the requirements are more extensive for SFC2021. Therefore, an interconnection between SFMIS and SFC2021 is under consideration for the 2021-2027 programming period, awaiting further specification from the Commission. Currently, there are no plans to integrate keep.eu.

Internal interoperability is the good practice that distinguishes e-Toetus. Of course, since there is only one OP, there is no need for cross-programme monitoring systems. However, the scope of the interconnections of computerised systems is extensive, with authorities and institutional users having access to and being able to share information amongst themselves and have access to data collected and stored by various national and governmental registers/databases (see Figure 1). We should understand this emphasis on internal interoperability in e-Estonia as a country with a well-developed, digital infrastructure

of public databases using nationally recognised standard protocols, which makes it easier to establish linkages between these computerised systems.

Table 3. Interconnection of computerised systems

Computerised system/databases connected to SFOS	
Central Commercial Register	Estonian Register of Buildings
Public Announcements	Criminal Records Database
Population Register	Estonian Land Board Data Register
SK ID Solutions	e-Procurement Estonia
Environmental Investment Centre	Land Cadastre
Documents Exchange Centre	Agricultural Register and Information Board
Tax and Customs Board	Unified accounting system (SAP)
State Aid Register	e-State treasury

Source: PPMI consortium based on information received from MA

This high level of internal interoperability brings on several significant benefits. First, various sources' availability of data and information enables authorities to cross-check and verify information submitted by applicants and beneficiaries. It also reduces the incidence of double-funding and fraud by detecting patterns between beneficiaries and potential red flags. For example, when assessing an application, the implementing bodies perform a compliance check, where applicants must meet different criteria to receive aid. Many of these are automatically checked with the information from interconnected systems. The example in Box 2 below is an excellent example of how interoperability can increase transparency and traceability.

Box 2. Criminal record compliance check in SFOS

One of the compliance checks that need to be made before an application can be approved is whether the beneficiary institution/entity applying for funding are associated with any crimes that would make them unsuitable to receive aid, such as those relating to fraud and corruption. This compliance check functions as follows:

1. Information on the legal persons/representatives of the applying entity is acquired from the Central Commercial registers (e-business register).
2. The names of the legal persons are then submitted to the Criminal Records database, and the administrative staff there checks if these legal persons are involved or have been convicted of any offences from a list of specific offences (entire criminal history is not revealed).
3. Any convictions from the list of offences and associated information are sent back to e-Toetus to see if the legal persons can receive funding.

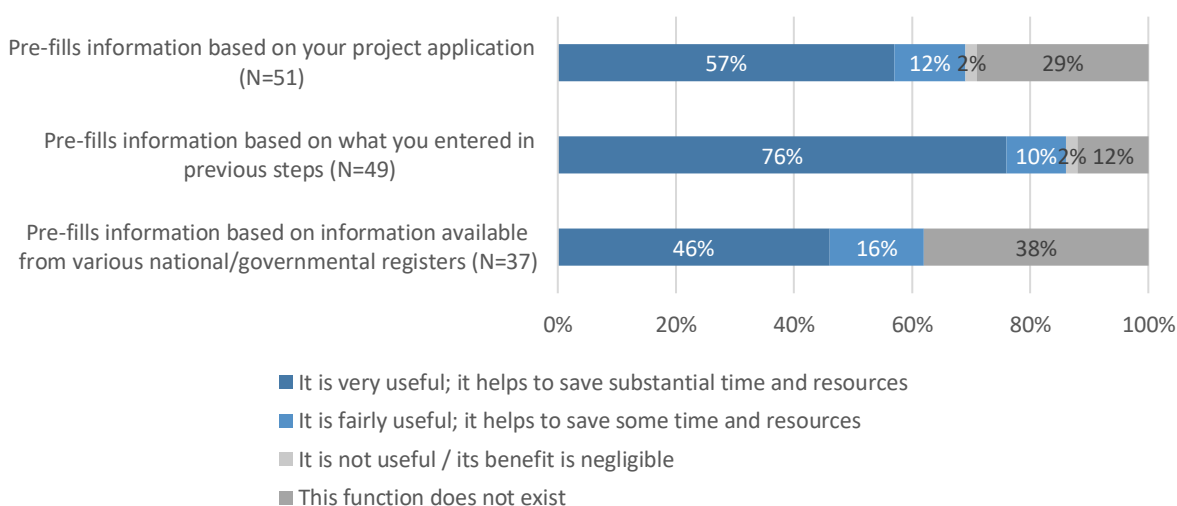
Source: PPMI Consortium

Another, more encompassing, benefit of interoperability in Estonia is the **'single source of truth'**, which functions as a logic of the Estonian digital information infrastructure, according to MA representatives. This means that **only one national database or register collects one type of information All other databases/systems/registers/ that needs to use this information shall only refer to and make sure their information is in accordance with the source.** For example, if a legal person says their company turnover for 2021 was X, but the e-Business register says Y, the latter is presumed to be correct. The e-Business register is the 'single source of truth', as this register is the only database that collects and stores this information. If the legal person claims that the information held in the e-Business register is incorrect, they must first arrange an update with the administrative staff at this

source. Only then can e-Toetus accept the application under this premise. In this way, no duplicate values or parallel sources of information exist that can distort the authenticity of the original source, and the accuracy and integrity of each source are increased by one another, rather than presenting conflicting information.

Another significant benefit of interoperability in Estonia is relevant to the second key principle of e-Cohesion; only-once encoding, which refers to the ability of beneficiaries to submit information and documents only once. This principle means that the system re-use information previously submitted by the beneficiary and automatically pre-fills fields/forms based on either the application process or during other stages of the project application. The only-once encoding principle can extend further to include re-using information stored in external but interconnected computerised systems. In this way, interoperability enables only-once encoding, which reduces the administrative burden for beneficiaries and institutional users alike. Indeed, the only-once encoding principle was an integral cornerstone in developing e-Cohesion in Estonia. The MA envisioned that its potential for simplification would promote the use of e-services amongst all stakeholder groups.

Figure 5. Re-use and pre-filled information in e-Toetus



Source: PPMI Consortium – Beneficiary survey - Question 13: “Does the electronic data exchange system re-use (pre-fill) some information that you have submitted previously, or obtain such information from other sources?”

According to our survey results, figure 5 indicates that most beneficiaries agree that e-Toetus enables all aspects of only-once encoding. The survey results indicate that information is more commonly pre-filled based on information previously inserted by the beneficiary (which, in this case, includes the application as it takes place in e-Toetus) than the information available in external systems. In comparison to the overall survey results on this question, the number of e-Toetus users that finds this functionality very useful is high (46% of e-Toetus beneficiary respondents versus 31% of all beneficiary respondents). Still, many beneficiary respondents argued that “This function does not exist”. When discussing these results with MA representatives, they were confused. They claimed no significant difference between different beneficiaries and the availability and source of pre-filled information. These conflicting results may be due to a lack of clarity regarding the source of pre-filled information, which is difficult for a beneficiary to know.

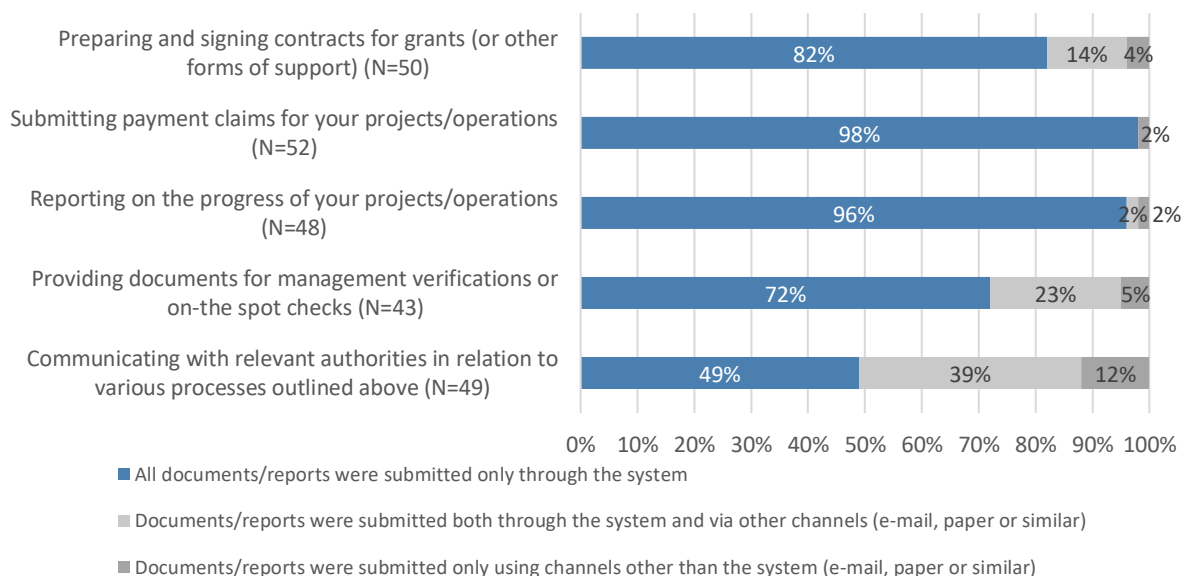
Indeed, through demonstrations of the system by institutional users, we can confirm that most factual, non-evaluative information is pre-filled; for some questions, this was in the form of suggestions of pre-filled answers that came up in a drop-down box from what was typed into the field, coming from information stored in the interconnected systems. It is also possible to insert data manually and not select a suggested option from the drop-down box,

but this information may require further verification. Pre-filled information comes from various sources; information on private enterprises, such as company address, yearly revenue, stakeholders, etc., is derived from the **e-Business register**, the **Population register** pre-fills information for adding project partners, such as ID code, date of birth, etc. Also, some information can be downloaded and retrieved within e-Toetus if the person has access to the registry code of the document. Examples include downloading invoices from the **unified accounting system (SAP)** or public procurement information (e.g., contracts) from **e-Procurement** (a computerised system for the electronic exchange of information related to public procurement). The ability to retrieve this information is particularly useful for beneficiaries who handle big projects and saves them time and effort in scanning and/or uploading large, cumbersome documents for submission of application, financial and other reports. The responsible administrator then controls the uploaded documents at the original source, saving time and effort on behalf of the institutional user.

3.2. Key processes

This category refers to the systems’ provision of the key processes to create, submit, modify, check, and approve applications, progress reports, modification requests, payment claims, and whether the e-Cohesion system is used to exchange information related to audits and management verifications. Although the 2014-2020 CPR requirements do not legally require the application process, it still constitutes a significant part of the electronic exchange of information. Therefore, we included this process in our analysis of key processes. All key processes, including applications, are supported by e-Toetus.

Figure 6. Extent to which beneficiaries use e-Toetus for key processes

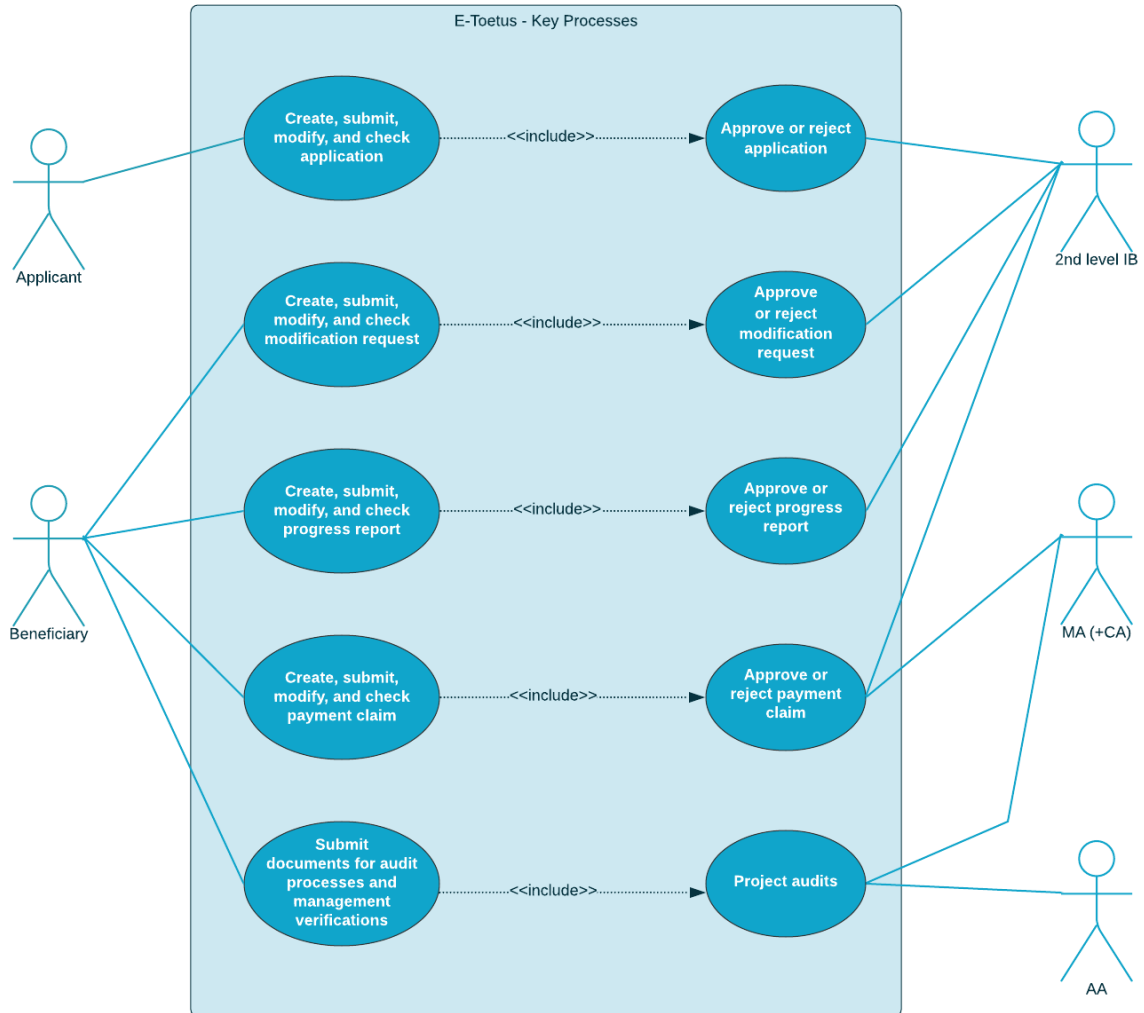


Source: PPMI Consortium – Beneficiary survey - Question 12: “When implementing your project/operation, to what extent did you use the indicated electronic data exchange system for the following processes:”

As can be seen from Figure 6, most beneficiaries indicate that these processes are predominantly carried out in the system, especially when submitting payment claims and progress reports, whilst other channels (such as emails) are used to some extent for signing contracts for financial support, providing documents for management verifications and on-the-spot checks. Even though there is a direct chat functionality within e-Toetus for beneficiaries to reach authorities, other channels (predominantly emails) are also used for communication purposes.

Figure 7 rudimentarily details the flow of information and decision-making in e-Toetus. Once an applicant's application for funds has been approved, the user becomes a beneficiary who can carry out all key processes in the e-Cohesion system. The authorities involved in the project use SFOS (mainly) and SFCS for their tasks related to these processes.

Figure 7. Simplified depiction of key processes in e-Toetus



Source: PPMI Consortium

Regarding payment claims, we can see that the process involves several actors, modules, and databases, which constitute a good example to highlight the good practice of interoperability in e-Toetus.

Box 3. Payment process from request to the transaction

1. The final beneficiary submits the payment claim to the 2nd level IB using the e-Toetus portal.
2. In SFOS, the IB administrators approve payment claims and determine the payment date (when the beneficiary shall receive payment).
3. If there were/are any financial irregularities in the project, the CA (Grants Payment department of MA) is involved in the approval of payment requests. First, the 2nd level IB marks down irregularities and send them to the CA/MA to check. Usually, the CA/MA have about two days to certify the project. If additional information is needed, the 2nd level IB may ask the beneficiary for additional information or send the payment request back to clarify unclear

aspects. When the payment request is approved, the payment is automatically sent to the Unified Accounting system (SAP), connected to SFOS on the project level.

4. Once the payment claim is sent from SFOS to SAP, the payment claim becomes a pre-registered document. The MA's national accounting unit controls the payment claim and makes the necessary bookkeeping entries. Once this is done, the accountant sends the controlled payment to the e-Treasury.
5. In the e-Treasury, which is essentially an internet-based payment programme, the MA manually inserts or download the outgoing payment details from SAP to make the payment to the beneficiary through the e-Treasury. The payment date is set by the IB or the CA/MA when they approve the payment application in SFOS, and this is when the e-Treasury makes the transaction. Unless irregularities are found, the CA/MA and AA do not receive data on the payments until after the payment transaction has been made to the beneficiary.

Source: PPMI Consortium

Before a payment claim is approved, it is rigorously checked and processed by all relevant authorities and computerised systems to ensure its correctness and the existence of an audit trail. According to AA representatives, **the system has improved legal security due to increased data availability and transparency. It enables** the AA to control invoices better and determine their eligibility. The system also streamlines information exchanges with the CA/MA to control flagged invoices and beneficiaries. The system's increasingly wide coverage of national and European funds has also allowed for better detection of double funding by detecting patterns and links between different beneficiaries. This also indicates **that the e-Cohesion initiative has had positive 'spill-over' effects. The e-Cohesion system functions so well that sources of funding outside ESIF are actively sought after and incorporated into it.**

An interesting feature of the Estonian e-Cohesion system that relates to payment claims and verification is a recently developed feature within the module for the CA/MA, which links suspended payments to each specific invoice. Before the CA/MA developed this feature, they could only suspend payments on the project level, which halted the entire payment due to one or a few incorrect invoices. **This feature has had significant results; the last accounting year before the CA/MA implemented this feature, the suspended payments amounted to EUR 25 million. The suspended payments amounted to EUR 2.3 million during the subsequent accounting year. Now,** payments are made with more speed and integrity to beneficiaries, and the administrative burden for the CA has been significantly reduced.

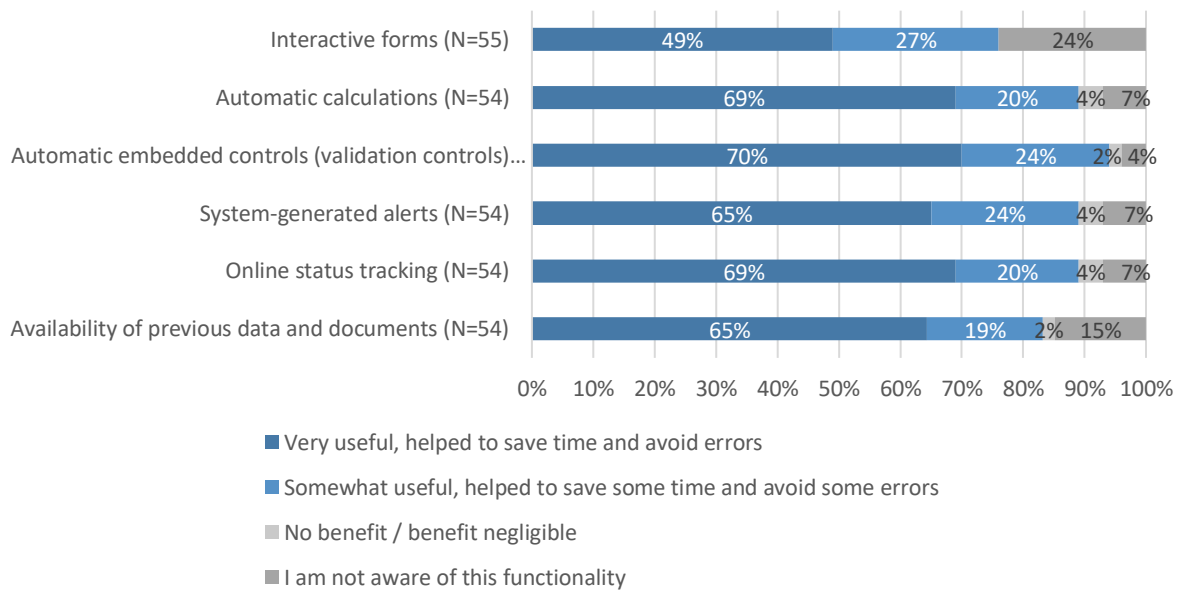
3.3. Key functionalities

The third key requirement category relates to functionalities that enable user-friendliness, usability, and accuracy. The e-Toetus system supports all required functionalities, and the level of usefulness assigned to these by beneficiary respondents in our survey can be seen in Figure 8. These functionalities include interactive forms (refers to various interactive elements of the system to help navigate it and makes it easier to use, such as pre-filled forms, tooltips, stepwise guidance Wizard, chat functionality, etc.), automatic calculations (e.g., for remaining budget, planned costs, actual financing, etc.) as well as automatic embedded (validation) controls (automatic checks for missing or incorrect data in fields and forms before submitting it).

According to our survey sample of e-Toetus beneficiaries, **automatic embedded (validation) controls** is the feature that is considered very useful in terms of time saved

and errors reduced by most beneficiary respondents. This finding is unsurprising, given that the only-once encoding principle and interoperability of external databases with the e-Cohesion system allow beneficiaries to see whether the inserted information corresponds to existing data. According to beneficiaries, this functionality reduces administrative burdens, as potential data issues are immediately discovered and confronted, rather than submitting and re-submitting information. This functionality also saves institutional users time and reduces their administrative burdens. Online status tracking and automatic calculations are also very appreciated by beneficiaries. Many beneficiaries find the budget and calculations aspects of project management challenging (according to comments received in open-ended survey questions), so **automatic calculations stick out as a particularly important functionality and automatic embedded controls/validation checks.**

Figure 8. Functionalities of e-Toetus



Source: PPMI Consortium – Beneficiary survey - Question 16: “How useful (or not) are the following functionalities of the electronic data exchange system you indicated above?”

3.4. Key data security requirements

The fourth and final key requirement category refers to the data security requirements denoted in CIR 2011/2014, which details data availability, integrity, and confidentiality requirements. E-Toetus is accessible through an interactive, web-based interface, which adequately fulfils these requirements; the SFMIS guarantees personal data privacy protection for individuals and commercial confidentiality for legal entities through transfer control for communication (HTTPS) password encryption. The SFMIS employs role model privileges, and two-factor authentication is obligatory to use the system. In addition, the SFMIS has a high level of availability (between 99% and 99,999%) and is operational during and outside standard office hours, except for technical maintenance activities. There is also a predefined process for incident management set out in MA procedurals.

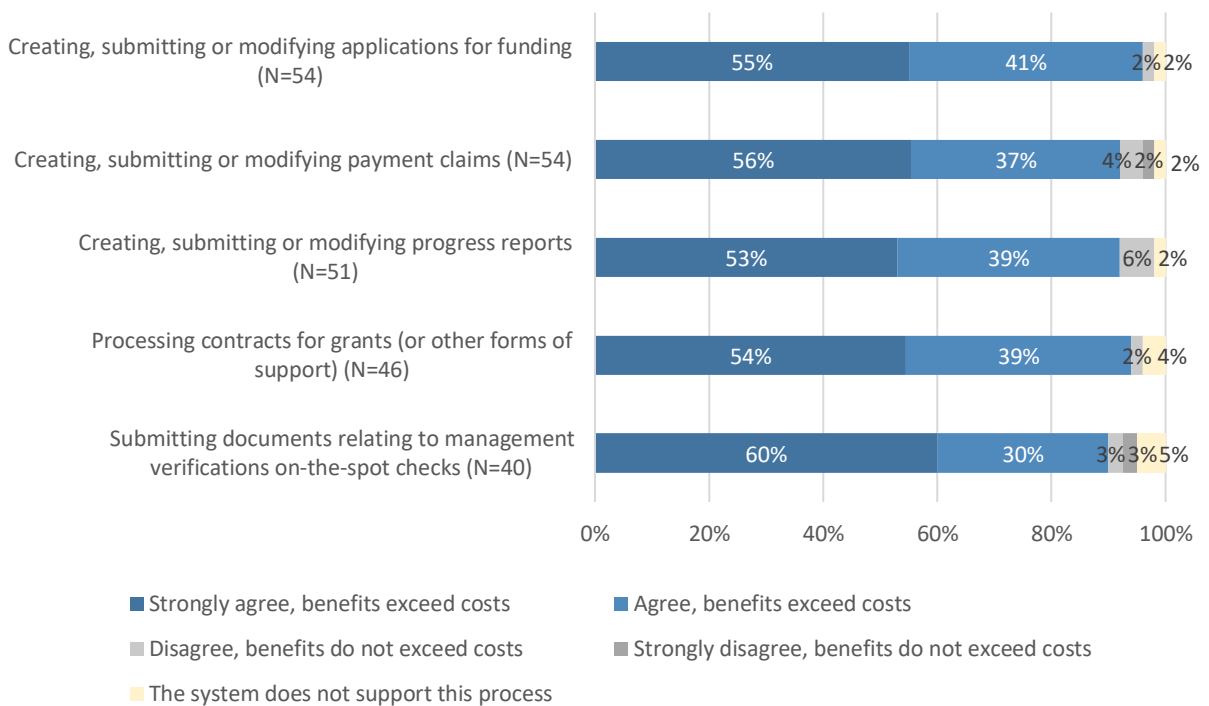
4. Usefulness and performance of e-Toetus

This section will attempt to gauge the impact that the introduction of e-Toetus has had on administrative burdens, resources spent, and time saved for beneficiaries and institutional users. Since no similar data exists before introducing the e-Cohesion system, such an impact is difficult to quantify; we can only estimate the effect based on the testimony of our interviewees and the survey data. Here, we will also outline the good practices and drawbacks of the system regarding its usefulness and user-friendliness.

4.1. Overall usefulness and performance

In terms of the key processes (see section 3.2), a large majority of e-Toetus beneficiary users participating in the survey responded that the introduction of the system has resulted in benefits, such as reduced administrative burden and simplified procedures, throughout the stages of project implementation. Over half of the respondents strongly agree that these benefits outweigh the associated costs of using the system for all key processes, such as time and effort spent using it (learn how to).

Figure 9. Beneficiary survey result on benefit vs. cost of key processes



Source: PPMI Consortium – Beneficiary survey - Question 15: "Please assess the following statement: the benefits (e.g., reduced administrative burden, simplified procedures) of the introduction of the electronic data exchange system between beneficiaries and authorities exceeds the associated costs (e.g., the time and effort required to use it) for the following processes:"

All key processes included in e-Toetus also makes it easier for institutional users to carry out their tasks almost completely within the SFMIS (using the back-offices, SFOS and SFCS). Many authority representatives surveyed and interviewed stressed the system's usefulness, especially in terms of **data and information availability**, both on the project level but also on the level of OP and EU structural funds (SFMIS contains information and data on funds, calls for proposals, authorities, project applications, reports, procurements, contracts, payments, irregularity reports, financial corrections, checks, and audits).

In the survey, beneficiaries were asked about the good practices that resulted in a considerable simplification of their work. This question was framed as an open question so that beneficiaries could answer freely. The most reoccurring themes relate to the ease of having a comprehensive overview of all documents and data in one place, the elimination of paper-based processes, which saves time and increases transparency, and highly efficient communication with authorities, both through direct correspondence as well as system notifications.

Box 4. Beneficiary quotes on good practices of e-Toetus¹⁶

Centralised provision and overview of data

- *“All info is in one place, and also a comprehensive overview of the reports submitted earlier, the project budget, proceedings and costs, etc.”*
- *“Constant and updated overview of - both project progress and project reporting.”*

Elimination of paper-based processes

- *“As the system is online and transparent to all those involved, there is no question of who sees what information - everything up there is seen for all parties involved and no one can say they're not aware.”*
- *“No need to gather and send paper documents.”*

Communication within the system and/or with authorities

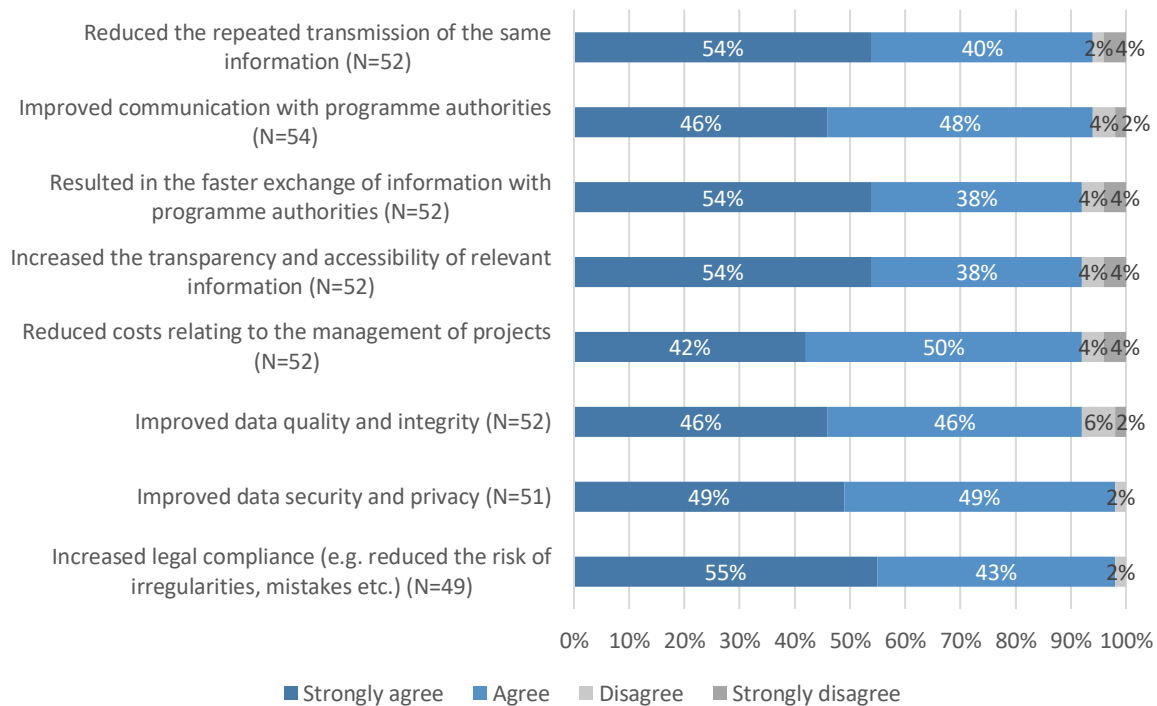
- *“Highly helpful notifications and exchange of information with the implementing agency. The entire correspondence remains on the project, and it does not need to be searched for later or to submit to the next handler or project manager. There is also a great feature of the history of the project, which will help to quickly find the documents submitted to the implementing agency, payment applications, etc. These notifications provide very important information on the person to the project, such as the project is declared, oriented, etc.”*
- *I get my answers very quickly.”*

Source: PPMI Consortium - Beneficiary survey - Question 21: “What would you indicate as examples of good practice in the electronic data exchange system we discussed in this survey? What are the specific features or functionalities that work really well, and result in a considerable simplification of our work?”

To gauge the impact of the introduction of the e-Cohesion system in Estonia, we asked **beneficiaries** what effect they believe the system has had on the following factors:

¹⁶ Included comments from categories that were mentioned at least twice, i.e., these comments reflect individual views and opinions. Quotes have been corrected and condensed for spelling and grammatical mistakes to enhance clarity.

Figure 10. Impacts made by the introduction of e-Toetus



Source: PPMI Consortium – Beneficiary survey - Question 19: “Please assess the following aspects and the impact of exchanging data using the electronic system, compared with paper-based processes or email exchanges. Has using the electronic data exchange system led to improvements in the following areas:”

The impacts of the introduction of e-Toetus are overwhelmingly positive and correspond well to the answers given by the authority respondents to the same line of questioning.

4.2. Drawbacks to usefulness and performance

Despite high satisfaction levels among beneficiaries and authorities alike, there are some drawbacks to the e-Toetus system, most notably mentioned by beneficiaries in an open-ended question on system weaknesses in our survey. Some reoccurring themes emerged more than once, which were categorised as follows:

- **Complex requirements** - Some beneficiaries respondents from our survey reported that the e-Toetus system is complex in terms of comprehensibility of the eligibility rules. These are primarily related to national legislation and the specific, sometimes multiple, requirements for certain measures or open calls decreed by the ministry or government. We received similar comments during our interviews with beneficiaries, such as confusing wording of questions, rules, not knowing where to insert what information, etc. This issue is less to do with the system than the gold plating-like national adaptation of European legislation. Indeed, MA representatives recognise this caveat (see section 5.2.)
- **Insufficient help functionality in the system** – Some beneficiaries did not consider the help functionality (e.g., tooltips) within the system satisfactorily useful
- **Lack of flexibility** – Some beneficiaries wished that the order of steps undertaken should be more flexible and not already prescribed by the system, i.e., the beneficiary cannot move on to a certain task before they have finished the previous one.

Box 5. Beneficiary quotes on weaknesses of e-Toetus¹⁷

Complex requirements

- *“With the execution of the application, the wording, including additional information, is confusing and allows for a variety of misunderstandings.”*
- *“Field content description information is sometimes incomplete and unclear.”*

Insufficient help functionality in the system

- *“If any help is needed then usually it can be solved via personal contact (e-mail, phone) the system does not always provide helpful guidance.”*
- *“Explanations/instructions under question marks could be more explanatory and detailed, it seems to repeat the question and not provide additional information...”*

Lack of flexibility

- *“When submitting an application, the system determines the sequence of steps - before you can move on to the next page as mandatory fields are met. I would like to pass the steps to pass the steps by personal preferences. For example, the documents need to be added yet, but I can write about the content (saving time).”*
- *“Order of procedures (e.g., payment claim before the report) could be functionally structured in the correct way.”*

Source: PPMI Consortium - Beneficiary survey - Question 22: “What does not work, or requires further improvement, regarding the electronic data exchange system we discussed in this survey? What are the main weaknesses of the system?”

Interestingly, **the themes of drawbacks emanating from the open survey question corresponds well to the survey results**; survey questions that relate to how easy the system is to use and navigate (e.g., ‘System is clear and self-explanatory’ or ‘The system’s interface is easy to operate’), help-functionalities in the system (‘The help functionality within the system and user documentation are useful’), and the flexibility of workflow (‘The system does not prescribe the order of steps; I can carry out steps in the workflow in a flexible way according to my own preferences’) are those questions that the most beneficiaries disagreed with (see Figure 11). Around one-fifth of beneficiaries disagreed with these statements, which shows that there are some drawbacks to the usefulness and user-friendliness of the system regarding its complexity, help-functionalities, and lack of flexibility.

We received information on the drawbacks of the back-office systems (SFOS and SFCS) through in-depth interviews with various authority representatives. The most prevalent and significant weaknesses include:

Continued use of Excel alongside system

- Excel is used to collect data on ESF beneficiaries/participants, which is collated from various government registers by the national statistical board in Excel spreadsheets, which is then given (in an anonymised and aggregated form) to the system administrators. SFOS is not designed to accommodate the detailed information required for ESF projects (e.g., educational background, employment status, etc.), nor has its collection been compatible with General Data Protection Regulations (GDPR).

¹⁷ Included comments from categories that were mentioned at least twice, i.e., these comments reflect individual views and opinions. Quotes have been corrected and condensed for spelling and grammatical mistakes to enhance clarity.

- SFMIS does not allow compiling reports (e.g., for Annual Implementation Reports) at aggregated levels higher than project-level (neither for priority axis nor at indicator level) as the system does not support adding and processing qualitative data at a higher level than a single project (which is instead managed through emails and Excel in a parallel process).
- The system does not allow financial planning for budget processes, nor provides the environment to process evaluation findings, so the relevant users must use Excel for this.

Lack of automatic features for financial data

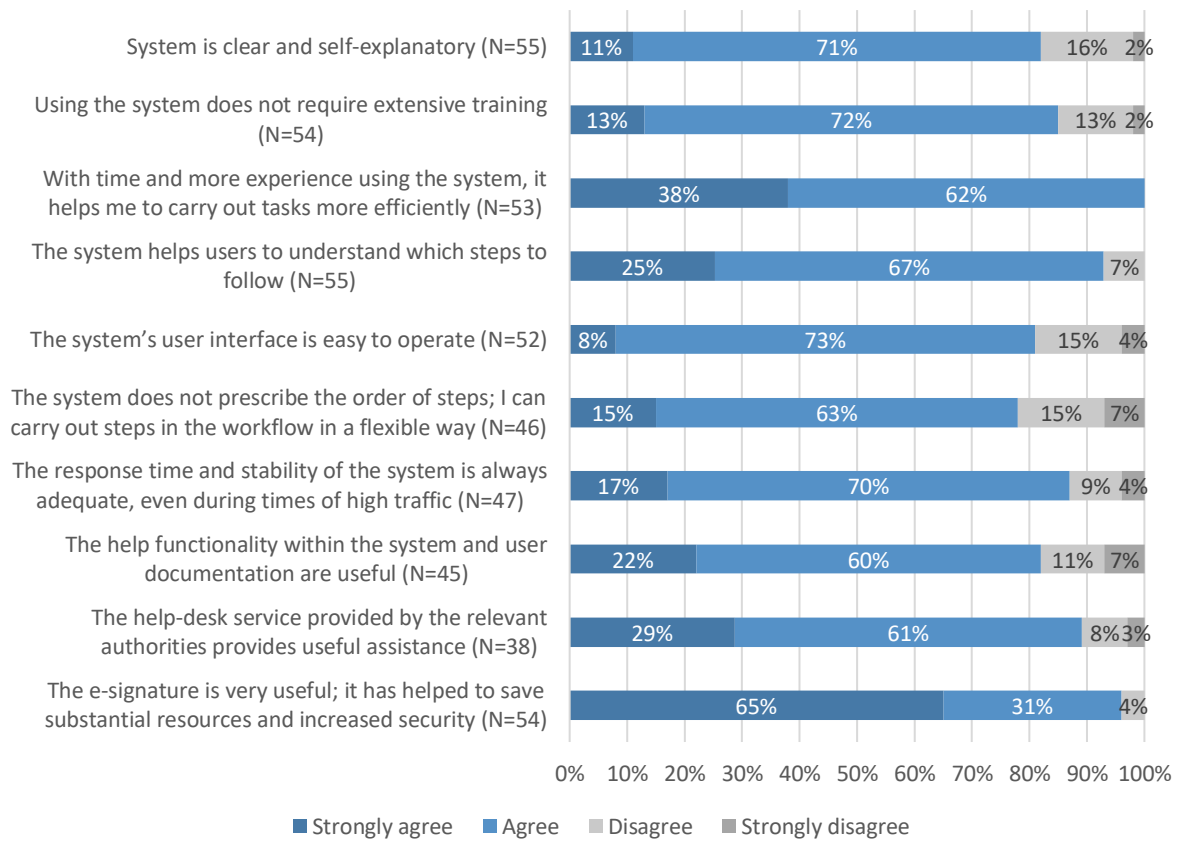
- Outside the automatic controls and calculations made by e-Toetus when a beneficiary submits a payment claim, financial irregularities are not detected by the system itself; they must be put into the system by the AA.
- Once the AA has inserted their findings and/or made a financial correction, the CA must manually free the suspended sum since their module is not linked to audits.

While the use of Excel in ESF reporting is outside our evaluation's scope (which focuses on ERDF and CF), the prevalence of this issue warrants its inclusion (mentioned by most authority interviewees and in authority survey). Added functions for indicators and target management and increased automatisations of accounting features are areas that could benefit from further improvement. The continuation of manual processes, data collection and financial irregularities is also prone to errors. According to MA representatives, these issues are mainly due to budget constraints and are not currently prioritised according to the development qualification criteria. These processes and functionalities certainly add administrative burden for the responsible authorities. Yet, the administrative procedures set up to consolidate these issues function adequately and do not decrease the information's quality, per se. This sentiment was reverberated by interviewed institutional users too.

4.3. User-friendliness and user satisfaction

Despite some drawbacks, the system has ways to consolidate them. For example, all beneficiaries agreed, or strongly agreed, that “With time and more experience using the system, it helps me carry out tasks more efficiently”. Also, whilst help-functionalities were found lacking, beneficiaries from our sample gave overwhelmingly positive feedback on help-desk services provided by authorities, both in Figure 11 and in open-ended questions on good practices (see Box 3). Indeed, the overarching consensus is that e-Toetus is relatively easy to use once, increases efficiency, and saves the beneficiary time and resources; each of these **positive statements is agreed upon by at least 75% of all beneficiary respondents.**

Figure 11. e-Toetus user-friendliness



Source: PPMI Consortium – Beneficiary survey - Question 18: “Do you agree or disagree with the following statements describing the user-friendliness and effectiveness of the indicated electronic data exchange system you used:”

User-friendliness and user satisfaction for institutional users also remain high; most authority representatives interviewed have worked with the system for a long time and consider it easy to use. During the interviews, they referenced the degree of ease to which new colleagues were able to learn how to use the system. Most contended that the system is simple and requires little training. However, as seen from the results of a user survey administered by the MA in the latter period of 2020¹⁸, there are some caveats to the user-friendliness of SFMIS.

Table 4. Institutional User Survey Results (SFOS)

Survey question	Mean	Median
Q1. To what extent does SFOS currently meet your expectations?	6.8	8
Q.2 Please rate your satisfaction with SFOS Support	8.1	10

Source: PPMI consortium, based on beneficiary user surveys administrated by the State Shared Service Centre

In these surveys, users assigned scores (0-10) on certain aspects of the respective systems. The institutional user survey on SFOS (83 participants in total) shows that several institutional users reported that the system is not quite as user-friendly as they would like. Lower ratings to Q.1 were assigned due to various factors, most commonly, the mailbox function, through which the users communicate with beneficiaries and/or other institutional

¹⁸ User surveys administered by the State Shared Service Centre (MA)

users. It is in a chat format and reportedly lacks adequate search and retrieval functions. However, MA representatives are currently developing the chat function to make it user-friendly with better search and retrieval functions. Indeed, despite various difficulties within the system, we can see from the median score that most scores remain high.

4.4. Help-desk organisation and functionality

Authority representatives and beneficiaries agree that the helpdesk services are highly useful. During interviews, **beneficiaries reported immense satisfaction with the help received from administrative staff**, i.e., the 2nd level intermediary bodies, who constitute the first level of contact for the beneficiaries for help and assistance with system use, project reports, and the like. In turn, institutional users, for which the MA constitutes the point of contact when technical, structural issues arise (or to relay feedback given by beneficiaries), also give high ratings for helpdesk services (see Q.2 Table 4). The average is pulled down somewhat by respondents who have not used the helpdesk services and therefore assigned an arbitrary score of 5. Thus, the helpdesk is organised on two levels. Their users describe it as highly useful and claim that issues brought forth to the respective helpdesks were resolved quickly and efficiently (see Figure 11).

5. Good practices, challenges and lessons learnt

This section presents a synthesis of the good practices and lessons learnt of the Estonian e-Cohesion system that have been uncovered through this case study. The aim is to provide effective solutions for the other Member States, as well as identify the pitfalls and mistakes that may occur when implementing e-Cohesion systems; in this way, we facilitate policy learning and knowledge sharing, which can inform and underpin efforts to set up and/or improve e-Cohesion systems in the 2021-2027 programming period.

5.1. Good practices

The feature of e-Toetus that makes it stand out from the over 100 systems that we have identified throughout this evaluation study is its **high level of internal interoperability**. This good practice is beneficial to both beneficiaries and institutional users. For the former, the **pre-fill of information from interconnected computerised systems saves the beneficiary time and resources and reduce the overall administrative burden**. Indeed, the pre-fill of information from other sources adheres to the **once-encoding principle**. Still, it goes one step further, as it goes beyond providing the data only once in the system but only once among the multiple interconnected registers/databases in Estonia. Beneficiaries can retrieve data and information from interconnected registers/databases within e-Toetus. It also allows implementing bodies to easily verify data submitted to the system and request data for compliance checks, which reduce the risk of fraud. In addition, the interconnection of multiple computerised systems means that a wealth of data is easily available, which was re-occurring praise of the Estonian SFMIS from authority representatives.

The interoperability of the Estonian e-Cohesion system is a good practice example for other MS. However, we must note that such a practice is not easily transferable or reproducible. In many ways, this **high level of interoperability is made possible by the encompassing digitalisation agenda in the Estonian public policy sphere and the digital infrastructure that it has produced**. According to MA representatives, because Estonia is a small country, close cooperation between departments and institutions in building these interconnections is enhanced. Regardless, the investment into digitalisation has paid off, not only in terms of e-Cohesion but to the improved accuracy of the information infrastructure in Estonia overall (through adherence to the logic of the 'single source of truth') and reduced administrative efforts where only one register/database collects and store a certain type of data. Thus, the interoperability of e-Toetus remains an example from which other member states can aspire and learn.

The second good practice example highlighted from the Estonian experience with e-Cohesion is its client-focus, i.e., the focus on user experience and feedback. User feedback is consistently collected for new applicants/beneficiaries, generating weekly reports for the MA. A more extensive survey is administered twice a year for beneficiary users and once a year for institutional users. Institutional users and beneficiaries also took part in the development and implementation process of e-Toetus, helped define business requirements, and participated in training sessions organised by the MA. Indeed, user involvement and test trials in initial system development have double benefits; it helps developers understand user priorities. Users learn how to navigate and use the system before it officially launches. Similarly, beneficiaries were able to test beta versions of e-Toetus to apply for funds and report back to the MA, which greatly informed the development of e-Toetus.

Another good practice of e-Toetus is its slow and evolutionary approach to system development. This approach ensured time to test all functions, make necessary alterations, and present the users with a fully functional system in 2015. It is also cost-effective to ensure that all user groups are involved with the system before its launch. It is much cheaper to

develop prototypes for testing and make alterations based on these rather than alter the existing system after its launch. Still, today, whenever a new, large development is to be implemented to e-Toetus, the MA allow the relevant user group to test a prototype before introducing it and wait for feedback on how to improve it before adding it permanently to the system. However, whilst retaining this focus, it is impossible to implement all changes/developments requested by users, and the MA must manage user expectations. Therefore, a good practice example brought forth by the MA representatives is to develop a methodology for assessing criteria of importance (see Figure 3) to prioritise development tasks. This development methodology enables a structured and transparent development process, which reduce biased decision-making.

Another good practice is for the MA to remain client-focused. This good practice example is highly transferrable to the context of other member states. Effective communication is maintained through various channels, such as chat functionalities, online message boards, emails, and automatic feedback collection (continually and at set dates), ensuring that client focus is upheld. As we can see from the beneficiary survey results on feedback collection (Figure 4) and user-friendliness (Figure 11), this focus on user experience, facilitated through effective communication, has satisfied beneficiaries. The Estonian MA's commitment to this is showcased through their recent outsourcing of a communication company to maintain and further build on their communication strategy.

5.2. Barriers, challenges, and lessons learnt

Given the critique levelled by beneficiaries regarding the complexity of requirements, a major challenge for the improvement for Estonia in the 2021-2027 programming period is to simplify and streamline the open call procedures and eligibility rules. Whilst this is not related to the system *per se*, it is a relevant aspect of e-Cohesion, as MA representatives conceded that the adaption of European regulations to national regulations was overzealous and imposed unnecessary requirements and administrative burdens on beneficiaries and institutional users alike. **The lesson learnt from this by the MA is to avoid such gold-plating practices and not ask beneficiaries for any more information than what is strictly required.** The MAs and IBs are currently collaborating on new guidelines for the relevant ministries. These will ensure that the complexity of eligibility rules is reduced, does not differ too widely between different open calls, and does not exceed the ESIF regulations provided by the EU.

Another challenge faced by the authorities in the next programming period is consolidating requirements on information with GDPR. Many institutional users and MA representatives argued that a substantial challenge to overcome to meet the novel requirements put forward by the 2021-2027 CPR, in which the function to “**record and store electronically** the data on each operation necessary for monitoring, evaluation, financial management, verifications and audits, and shall ensure the security, integrity and confidentiality of data and the authentication of the users”¹⁹ is required. This means that detailed, personal data on project participants collected manually from various governmental registers and collated in Excel spreadsheets by the national statistics board (as explained in section 4.2) must now be obtained through SFOS.

The MA is currently developing an additional module into SFOS and e-Toetus that will enable the collection of the required ESF data, which has great **simplification potential** due to its elimination of parallel Excel use. However, this challenge points to a more encompassing difficulty; **the tension between collecting and storing a wealth of information in e-Cohesion systems whilst adhering to GDPR.** For now, the difficulty

¹⁹ European Union (2021). Regulation (EU) 2021/1060 of the European Parliament and of the Council of 24 June 2021 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy

related to (Article 72(1)(e) has been resolved by only allowing a small group of users with the correct privileges to see this personal data, with strict terms and conditions attached to how to treat and use the data.

Due to the due to the purpose limitation principle Article 5(1)(b)²⁰ and because personal data can only be stored during a limited time, the bi-directional flow of information within the Estonian information infrastructure is restricted as this data cannot be used for auxiliary yet vital purposes, such as the collection of long-term data for statistics or evaluations. In short, implementing this requirement requires substantial effort but generates limited benefits from the perspective of the MS. According to MA representatives, **the primary focus for the upcoming period is to adjust the legal framework concerning personal data in SFOS to satisfy EU regulations, GDPR, and MS needs.**

5.3. Summary

This case study has demonstrated that the Estonian e-Cohesion system fulfils all key requirements as laid out by the 2014-2020 Common Provisions Regulation²¹ and relevant Implementing Regulation.²² It also shows a high level of preparedness for the 2021-2027 programming period, for which developments to comply with the novel regulations outlined in the 2021-2027 CPR are well underway. Estonia is also an example where the e-Cohesion initiative has had **positive ‘spill-over’ effects; the e-Cohesion system functions so well that funding sources outside ESIF are actively sought after and incorporated into it.**

Most importantly, this report details the good practices that resulted in an e-Cohesion system that is, according to our findings, useful and user-friendly, has resulted in significant efficiency gains, and have high beneficiary satisfaction rates, overall. Indeed, the good practice examples and lessons learned here provide ample space for policy learning for other member states to be inspired by and learn.

Box 6. Summary of good practices

Good practice examples showcased by e-Toetus

- **Interoperability and its facilitation of the ‘only-once’ encoding principle** – the high level of interoperability of e-Toetus, i.e., its extensive interconnection with other computerised systems simplify the key process and reduce administrative burdens for beneficiaries by pre-filling information from several of these systems (e.g., population register, business register) and allowing beneficiaries to retrieve information from others (e.g., unified accounting system, e-Procurement system). This also serves to verify inserted information before submission. This simplifies the cross-checking of data for institutional users to reduce double-funding and fraud and detect uneligible fund recipients.
- **Client-oriented system development with user needs in focus** – the initial and continuous development of e-Toetus is heavily influenced by user feedback collected at regular intervals for both beneficiaries and institutional users. The development methodology also enables a structured approach to system development, for which user needs are among the most heavily weighing categories.
- **Evolutionary system development approach** – the slow and steady approach to system development is not only cost-effective. Still, it gives the MA the time to involve all users in the

²⁰ <https://gdpr-info.eu/art-5-gdpr/>

²¹ European Union (2013). Regulation (EU) No 1303/2013 Of the European Parliament and of the Council of 17 December 2013

²² European Commission (2014). Commission Implementing Regulation (EU) No 1011/2014 of 22 September 2014 laying down detailed rules for implementing Regulation (EU) No 1303/2013 of the European Parliament and of the Council as regards the models for submission of certain information to the Commission and the detailed rules concerning the exchanges of information between beneficiaries and managing authorities, certifying authorities, audit authorities and intermediate bodies. OJ L 286, 30.9.2014

development process and ensure that the system is well-structured and fully equipped. The development methodology is another good practice related to system development and enables a structured and transparent development process.

- **Effective communication** – the emphasis put on effective communication between the MA, institutional users and beneficiaries serves to maintain the satisfaction of the system. There are various channels for programme stakeholders at all levels to communicate, such as chat functionalities, online message boards, emails, and automatic collection of feedback (continually and at set dates), which ensures that effective communication is maintained, which ensures that client-focus is upheld.

Source: PPMI consortium

Annex

List of interviewees

No.	Institution	Type of interview	Date of the interview
1	State Shared Service Center	Technical perspective	25 February 2021
2	State Shared Service Center	Technical perspective	25 February 2021 and 16 December 2021
3	State Shared Service Center	Technical perspective	25 February 2021
4	State Shared Service Center	Technical perspective	25 February 2021
5	State Shared Service Center	Policy Perspective	1 March 2021
6	State Shared Service Center	Policy Perspective	1 March 2021
7	Ministry of Finance	Policy Perspective	2 March 2021
8	State Shared Service Center	Institutional user perspective	2 March 2021 and 16 December 2021
9	Ministry of Finance	Institutional user perspective	4 March 2021
10	Ministry of Finance	Institutional user perspective	4 March 2021
11	Ministry of Social Affairs	Institutional user perspective	5 March 2021
12	-	Beneficiary perspective	Interview in writing
13	State Shared Service Center	Beneficiary perspective	Interview in writing
14.	Estonian Unemployment Insurance Fund	Beneficiary Perspective	Interview in writing

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