Evaluation of e-Cohesion 2014-2020

In-depth case study – SFINGE2020 e-Cohesion system of Emilia-Romagna

Contents

List of figures, tables, and boxes

List of figures

List of tables

List of boxes

Glossary of terms

MonitWeb	National monitoring system
AppIO	The application through which beneficiaries register to SFINGE2020
Infocamere	National register of enterprises
DOC-ER	Regional document management system

List of abbreviations

AA	Audit Authority
CA	Certifying Authority
CAD	Codice dell'Amministrazione Digitale (English transl. Digital Administration Code)
CPR	Common Provisions Regulation
GDPR	General Data Protection Regulations
IB	Intermediate Body
HTTPS	Hypertext Transfer Protocol Secure
MA	Managing Authority
MB	Megabyte
OP	Operational programme
SAP	Regional Accounting System
SFC	Structural Funds Management system

1.   Introduction

SFINGE2020 is the e-Cohesion system used to exchange information between ESI Funds authorities and beneficiaries of the Regional Operational Programme co-financed by ERDF in Emilia-Romagna, Italy. **SFINGE2020 was selected as a case study mainly due to its potential of providing good practices that, possibly, can be transferred to other Member States (MS): completeness of the system, a good degree of automation, high user-friendliness, and flexibility**. **The results from our large-scale EU survey** of programme authorities and beneficiaries involved in interventions financed by the ERDF and the Cohesion Fund (CF) during the programming period 2014-2020, **highlighted that this system is characterised by** all the most important features that allow a **smooth and efficient exchange of information** and is **highly appreciated by users**. Apart from the survey, this report is based on findings from desk research and in-depth interviews with institutional users and representatives of the Managing Authority (MA), Certifying Authority (CA), as well as beneficiaries (a complete list of interviewees is provided in Annex). The report is structured to: present the key characteristics of the e-Cohesion system; discuss its development process; assess how it meets key requirements and contain key functionalities; examine the results that the use of electronic data exchange system brings; and provide good practise examples, as well as challenges and lessons learnt from the launch of the e-Cohesion system.

Table 1. Introduction to SFINGE2020

e-Cohesion system title	SFINGE2020
Years of operation	First version launched during programming period 2007-2013; current version launched in 2016.
ESI funds	ERDF
Operational Programmes	ROP Emilia-Romagna - ERDF (CCI: 2014IT16RFOP008)

Source: PPMI consortium

SFINGE2020 is one of the several e-Cohesion systems currently used in Italy, which has a **highly decentralised approach to the electronic exchange of information**. Indeed, in this Member State, each Operational Programme (OP) has its own e-Cohesion system, with some OPs even using two e-Cohesion systems. We identified 32 e-Cohesion systems for the 29 Italian OPs analysed during our mapping. This partly reflects that Italy is a highly regionalised country where regional administrations have a high degree of autonomy and power in all the policy areas relevant to EU Cohesion Policy. At the same time, the high number of e-Cohesion systems may also reflect the lack of strong coordination mechanisms, among regions, between regions and national authorities, as well as amongst national authorities (e.g., MAs of national OP's also use different systems and, in some cases, more than one system simultaneously).

Figure 1. Structure of SFINGE2020
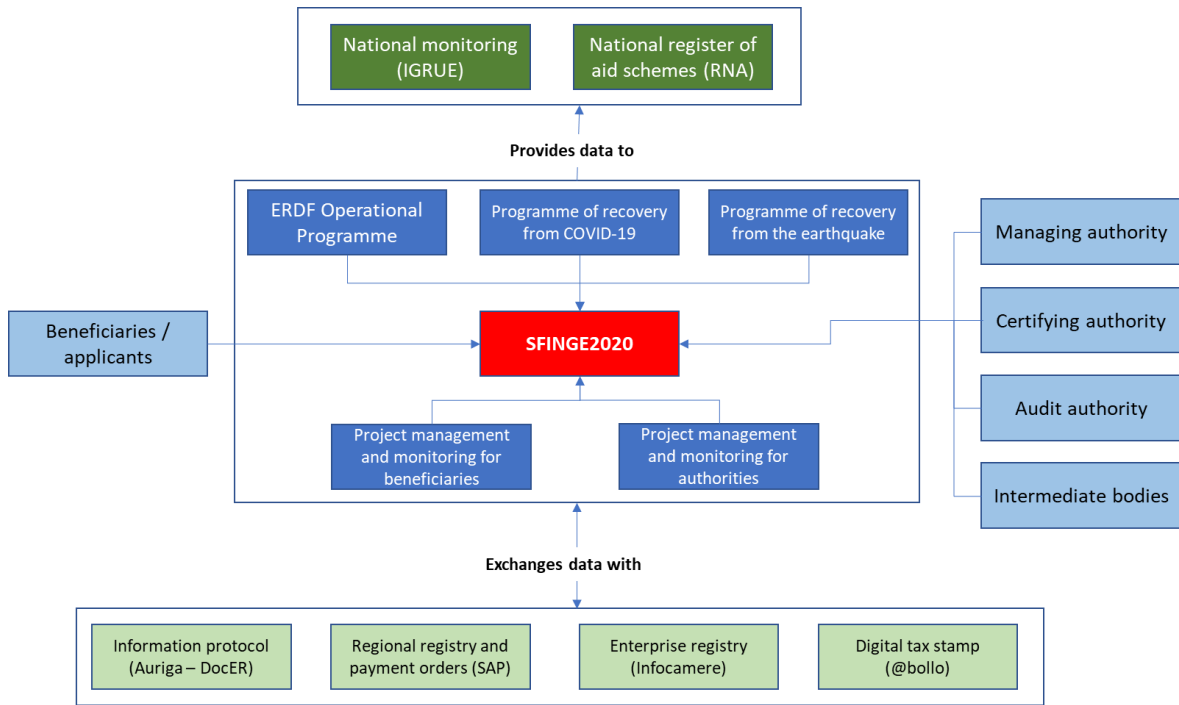
Source: Authors' representation based on information received from the MA of Emilia-Romagna

The use of the system is **mandatory** for ERDF applicants and beneficiaries, and all the authorities (MA, AA, CA and IBs) have access to it. The system is currently used to manage 16,500 projects and counts 28,000 users and 21,800 registered entities. SFINGE2020 is interoperable with the national ESI Funds monitoring system and other national/regional systems and registers.

2. Development and operation of SFINGE2020

SFINGE2020 was initially launched during the 2007-2013 programming period as part of a wider national and regional digitalisation agenda. Over the years, it has been further developed to enhance user-friendliness and integrate the requirement of the EU Regulation no. 1303/2013. This chapter describes the role of regional, national and EU regulation for the set-up of SFINGE2020 and provides an overview of the system's development throughout the years.

2.1. European and national legal framework

The system responds to the requirements of the mentioned EU Regulation no. 1303/2013 (CPR), the Italian regulation concerning digitalisation of public administration (CAD)[1], and it complies with the security standards adopted by the Emilia-Romagna Region for its information systems. SFINGE2020 was not developed in isolation but as part of a wider national and regional digitalisation agenda dating back to 2003[2]. **The digitalisation strategy of the Emilia-Romagna region was aimed at setting up a unified information access point that could simplify administrative procedures and communication with other regional and local administrations and provide simple tools for citizens and enterprises to access various regional and local public services.** Starting from this background and coming from the experience of the 2000-2006 programming period, the Managing Authority decided to build its own system for the management of the projects financed by the ERDF to have an instrument that would make it possible to keep track of the progress of a project at every step of its lifecycle, and that would allow transmitting data automatically to the national monitoring system, saving time and preventing errors for the benefit of all programme authorities.

2.2. Operational aspects in introducing and developing the system

At the beginning of the 2007-2013 programming period, a data repository system was used in the context of the Emilia-Romagna OP. This stored all the information needed to feed the integrated control system used for financial reporting by the authorities to perform verification and controls. just after the experience of the 2000-2006 programming period, the MA highlighted the need for developing a tool that could support the administration and speed up procedures related to the management of EU Funds. Therefore, the first version of SFINGE was launched in 2008. This initial version only allowed to manage the application phase and hence was sufficient to reduce the MA's burden related to the evaluation of proposals/applications. Then, during the 2007-2013 programming period, the system was further developed, and, in 2010, a new version was released, also integrating management, monitoring and controls of ERDF projects.

Furthermore, interoperability with the national monitoring system was established. In this last version, all the authorities and the beneficiaries have access to the system[3]. **With the 2014-2020 programming period and the requirements of the CPR, the e-Cohesion system was further updated to better fulfil the principles of interoperability and only once-encoding. In this context, the new system called SFINGE2020 was released. Currently, all the exchange of information between beneficiaries and authorities takes place via the system**. Moreover**, the interoperability with other regional registers and systems**, such as SAP (the regional accounting system) **has been enhanced**. This

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[1] Codice dell'Amministrazione Digitale DLGS. n. 82 del 7 marzo 2005.

[2] Codice dell'Amministrazione Digitale DLGS. n. 82 del 7 marzo 2005.

[3] Rapporto di Esecuzione Finale approved by the Monitoring Committee the 17/03/2017.

further simplifies the authorities' work saves beneficiaries' time for filling information and the time for verification.

SFINGE2020 has been developed by an external service provider who is also in charge of maintaining and developing the e-Cohesion system. Interviewed representatives of the MA highlighted that one of the key elements that allowed to develop of a well-functioning system, highly appreciated by the users, was indeed the decision to select an external provider with the required IT skills and who, at the same time, knew the functioning of the ERDF and was familiar with its requirements.

Over the years, **the e-Cohesion system has been constantly updated to respond to the needs and feedbacks of the different users**, both beneficiaries and public authorities, collected through the specific section of the system that allows signalling malfunctioning/requests and through consultations. For example, to simplify the burdensome process that the beneficiary had to undergo to request a change in a project compared to the original contract, the MA introduced a specific section in the system allowing for submitting change requests. Due to the pandemic, the approach to on-the-spot checks was modified to overcome the restrictions imposed because of COVID-19. The controls were performed by collecting and exchanging the specific documents needed for on-the-spot checks. In light of the highly positive experience in using the system, the Emilia-Romagna region decided to use SFINGE2020 to manage other European, regional, and national funds (see details in Box 1). Furthermore, given the system's update for the next programming period, the MA has organised a consultation with Intermediate Bodies and users to collect their feedback and views on what can be done to enhance the system's user-friendliness further.

Box 1. EU-added value of the system

> Based on the positive experience of both the beneficiaries of regional support and of the MA, the Emilia-Romagna Region decided to use SFINGE2020 also to manage other European, regional and national funds such as, for example, the following:
>
> - National Development and Cohesion Fund (FSC).
>
> - Fund for the reconstructions of the sites damaged by the earthquake (since 2019).
>
> - National funds for mitigating the adverse effects of the COVID-19 pandemic.
>
> - In the near future, the e-Cohesion system will also be extended to other regional initiatives and used by other regional departments.
>
> The use of the same system across different departments and funds is considered beneficial since it allows to:
>
> - Provide a single point of access for several funding opportunities. This ensures learning economies in using the e-Cohesion system and reduces the administrative burden for both the Public Administration's personnel and beneficiaries.
>
> - Increase transparency and efficiency in using other funds managed by the Region.

Source: PPMI Consortium

The existence of a regional digitalisation strategy has facilitated the development of SFINGE2020, encouraging the digitalisation of several bodies in the Public Administration and creating a central technological structure in the region that ensures the system's stability and responsiveness. Nonetheless, the development of SFINGE2020 has been resource-intensive and required a significant effort, especially in terms of IT procurement and tendering processes, administrative costs, and internal human resources needed to set up the system and adapt organisational structures and processes enable the electronic exchange of information.

3.　　　Key features of SFINGE2020

In the following sections, we will evaluate SFINGE2020 according to the key requirements of e-Cohesion, derived from the mapping framework, which was developed based on the standards and requirements set out in **Article 122(3) of the 2014 - 2020 Common Provisions Regulation,[4] Implementing Regulation[5], and then further elaborated in various guidance documents**.[6] 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.

All programme authorities and beneficiaries have access to the system, and the table below summarises the main activities that each type of user carries out in the system.

Table 2. Main activity in SFINGE2000 for each major user group

Type of user	Main activity in the system
Applicants / Beneficiaries	Applicants use SFINGE2020 to see which call for proposal is open and submit applications. Beneficiaries use SFINGE2020 to create, submit, modify, and check project modification requests, payment claims, and progress reports. At any time, a beneficiary can retrieve information uploaded at earlier stages of the process or in previous projects.
Intermediate Body (IB)	IB's use SFINGE2020 directly to carry out their tasks as administrative users. They constitute beneficiaries' first point of contact and have similar access rights. Also, use the system to interact with the MA. e.g., to upload evidence of expenditure, etc.
Managing Authority (MA)	The MA use SFINGE2020 for all aspects related to the management of ESI Funds' financed projects. They use the system for launching calls and assessing the application received. The MA can access and monitor the applications while the system automatically calculates the total score of each application. Moreover, the MA can monitor the activity progress, modification requests, and payment claims. The MA can monitor all the actions taken and their status, and all the communications through a dashboard. The system automatically enters the expenses to be certified in a standard template, while the request for certification is sent to the CA.
Certifying Authority (CA)	SFINGE2020 has a specific section dedicated to the CA. The CA can access all information uploaded in the system and uses the system to perform all its activities. There is also a specific section in the system where the CA stores all the expenses that cannot be certified. The system is not interoperable with SFC2014; therefore, the CA transmits the data to SFC2014.
Audit Authority (AA)	The AA access the system to consult the various sections most relevant to the AA's work: programming, planning, implementation, Annual Control Report, monitoring.

Source: PPMI Consortium

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

[5] 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.

[6] 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.

3.1.   Key principles

Interoperability and **only once encoding** are the two key principles of e-Cohesion systems. The former refers to the notion that all programme authorities should have access rights to the system and share data among themselves. As shown in Table 2, this minimum requirement is fulfilled by SFINGE2020. By extending the concept of interoperability further, the e-Cohesion system may be linked to monitoring systems of different programmes (e.g., in one country or region) and external databases. **SFINGE2020 fulfils this criterion since it is interoperable with the national monitoring system MonitWeb and some national/regional systems and registers**, as highlighted in Table 3. These include, for example, the regional document management systems DOC-ER, which is the register of enterprises, from which the system prefills some information on the enterprises. Such an integrated model of electronic information exchange reduces processing times, significantly lowers the administrative burdens for both beneficiaries and authorities and reduces error rates and risk of fraud. However, SFINGE2020 is not integrated with SFC2014, and this implies that the CA/MA (depending on the data) must transmit data manually to the SFC2014. According to the information available, the MA plans to implement the integration with the SFC2014 "as soon as possible".[7]

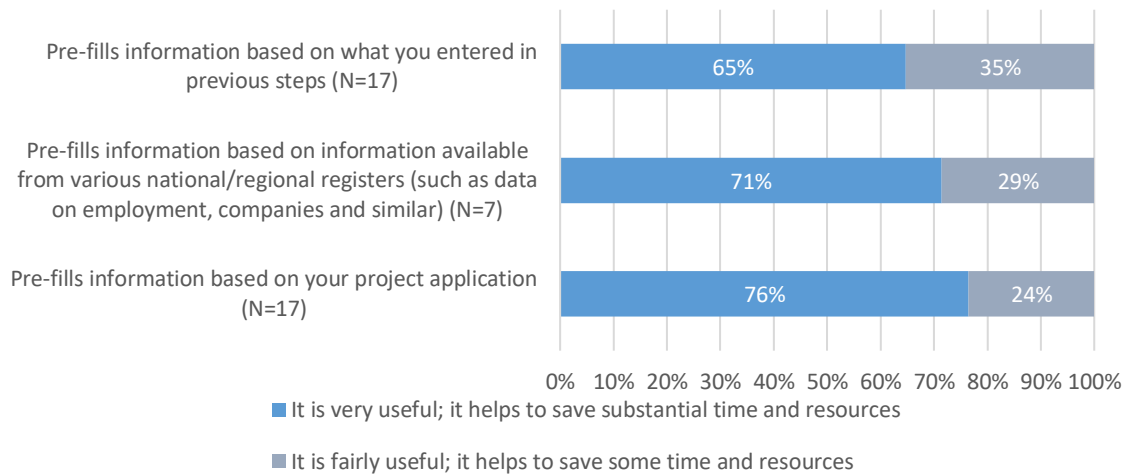**Table 3. SFINGE2020 integration with other computerised systems**

NATIONAL MONITORING SYSTEM	NATIONAL/GOVERNMENTAL REGISTERS	OTHER SYSTEMS
- MonitWeb	- Infocamere (Register of enterprises) - BDAP (Database on local public entities balance sheet)	- DOC_ER (Regional document repository system) - AURIGA (Regional protocol system) - Open Coesione (Public database of national monitoring data) - PagoPA (national platform for paying taxes and fees to the public administration) - SAP (Regional accounting system)

Source: PPMI Consortium

The high level of interoperability on the national level further enables the fulfilment of the principle of **only once encoding**, which means that beneficiaries need not submit the same information twice. The data entered in SFINGE2020 is shared with all relevant authorities, and because of its integration with government registers, information regarding each beneficiary is, in some cases, prefilled. As shown in Figure 2, the re-use and prefilling of information have been judged as very useful by most users, as it allows them to save substantial time and resources. **Information is pre-filled** based on data stored in other external databases/registers, information entered during previous steps, and during the application process. Therefore, the only once encoding principle is fulfilled by the Emilia-Romagna e-Cohesion system at the programme level, significantly simplifying the workflow of both beneficiaries and authorities whilst reducing the risk of errors.

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[7] SI.GE.CO. Emilia-Romagna – ERDF.

Figure 2. Re-use and pre-filled information in SFINGE2020

Pre-fills information based on what you entered in previous steps (N=17)	65% / 35%
Pre-fills information based on information available from various national/regional registers (such as data on employment, companies and similar) (N=7)	71% / 29%
Pre-fills information based on your project application (N=17)	76% / 24%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ It is very useful; it helps to save substantial time and resources

■ It is fairly useful; it helps to save some time and resources

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?"

3.2.   Key processes

The minimum requirement for e-Cohesion systems in terms of key processes include the ability to create, complete, submit, check, and certify applications, progress reports, modification requests, payment claims and whether the system is used to exchange information related to audits and management verifications. SFINGE2020 provides all these functions. **SFINGE2020 is the official solution for managing each step of the ERDF projects** lifecycle except for some measures to fight the COVID-19 pandemic, for which the applications were received by certified emails. Authorities use the e-Cohesion system extensively for all the processes, as well as for communicating with beneficiaries. According to the survey findings, the respondent authorities indicated that between 75% and 100% of the data exchanges with beneficiaries occur through the system.

In terms of modification requests, the system includes a specific section created for the beneficiaries for responding to the requests of additional information/documents (Box 2) coming from authorities. In this way, both the beneficiaries and the institutional users can easily keep track of the documents provided at different stages of the process, ensuring that no documents/data get lost.

Box 2. Request for the integration of additional or missing data/documents

> The system includes a specific section dedicated to submitting additional or missing information requested by the MA. This section contains a summary of all the requests sent by the MA, and, by clicking on each request, it is possible to consult the already entered information or upload new documents.
>
> When opening a request for integrating the data provided in previous stages (Figure 3), the beneficiary is guided towards completing the request step by step, starting from the visualisation of the request to submitting the required additional documents etc. Tooltips and document checklists are used to make the process more user-friendly.

Source: Manuale Operativo Beneficiario richiesta integrazione domanda Sfinge2020

3.3. Key functionalities

The third key requirement category relates to **functionalities that enable user-friendliness, usability, and accuracy**. SFINGE2020 fulfils all these requirements as it is easy to use (despite its technological complexity). Its various functionalities allow users, especially beneficiaries, to enter data and visualise all the needed information in a structured environment. This serves to reduce errors and time spent managing the projects.

SFINGE2020 includes various interactive forms that guide the beneficiaries within the system, which further saves a substantial amount of time and avoid errors. For example, SFINGE2020 makes it possible to: prefill information; consult detailed **user manuals** online, organised by process; benefit from a **helpdesk service**, **tooltips,** and a **wizard** (stepwise user-guide). SFINGE2020 also includes a section dedicated to the communication between the authorities and the beneficiaries, which made the communication among the involved actors more agile. This is not a live chat but more like a user log. Exchanges are stored directly in this specific section of the system, which keeps track of all the communications in the system. This is used for the communication between authority and beneficiaries concerning the projects, while communication with the MA concerning malfunctioning and requests related to the system itself take place through the helpdesk section of the system.

The system also offers several functionalities such as **automatic calculation** of reported amounts; **automatic embedded controls** of missing data/empty fields; **system generated alerts** to notify the users that certain actions can be performed; **online status tracking** that

allows the user to monitor the progress of the projects; the possibility to **retrieve data and documents uploaded**, even several years after the upload. According to the beneficiary user survey, the **functionalities considered most useful by beneficiaries are the automatic embedded controls**, which significantly reduce error rates **and system-generated alerts**, allowing beneficiaries to keep abreast of project management.

In addition, the system homepage is clear and intuitive and **provides a comprehensive project overview**; it includes three main sections: a horizontal menu from where the user can retrieve different user manuals, consult the FAQs, signal malfunctioning of the system or ask for help, view personal data etc.; a vertical navigation panel from which the user can access all the different processes supported by the system (application, different stages of project implementation and verification, as well as a specific section dedicated to the communication with the authorities); a central notification area, where the users can visualise news concerning open calls, reminders etc.

3.4.   Key data security requirements

Within SFINGE2020, the minimum data security requirements (**data availability, integrity, confidentiality)** are all adequately fulfilled. SFINGE2020 guarantees the protection of privacy of personal data and commercial confidentiality for legal entities through Hypertext Transfer Protocol Secure (HTTPS) and password encryption. As shown in Figure 4, SFINGE2020 employs role model privileges after the authentication, which is granted exclusively through certified digital identity (both for the FrontEnd and the BackOffice components). Users are authorised to take actions only in their fields of competence.

Figure 3. Structure of SFINGE2020 security system
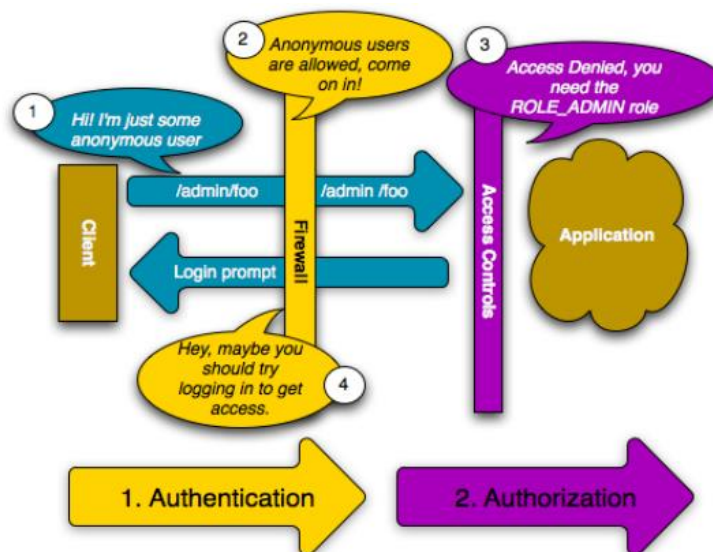
Source: SI.GE.CO. Emilia-Romagna – ERDF

The system is part of a centralised regional technological structure that ensures quality and continuity of the service; a centralised control system for data and applications security (firewall, load balancer, connectivity etc.); centralised backup and disaster recovery system; quick resolution time of accidents/issues. Before its release, SFINGE2020 successfully passed several tests on security (cross-site scripting, SQL injection etc.) and accessibility.

Data have been stored in the systems for several years, making information on all the projects' lifecycle easily and readily accessible. The system operates 24 hours a day, seven days a week. The users have the possibility to signal malfunctions, which speeds up the resolution times of outstanding issues. The use of e-signature ensures authenticity and integrity of the documents, has increased security and, at the same time, has helped beneficiaries to save substantial resources.

4. Usefulness and performance of SFINGE2020

4.1. Overall usefulness and performance

The system has been positively assessed by the vast majority of the respondents in our surveys and from all the participants to the interviews conducted for producing the present report. The set-up of the e-Cohesion system has simplified and sped up the authorities' daily work and the management and implementation of the project lifecycle for the beneficiaries. The system reduced the repeated transmission of the same information; facilitated communication between beneficiaries and authorities; sped up the exchange of information between stakeholders; increased the transparency and accessibility of relevant information; reduced costs relating to the management of projects; improved data quality and integrity; improved data security and privacy; increased legal compliance; enabled the standardisation of management processes.

The system has been constantly improved since its initial launch. The beneficiaries who have used SFINGE2020 over a long period note that it improved considerably, now an intuitive and complete tool. Furthermore, the e-Cohesion system ensures adequate response time, even during high traffic. Both beneficiary and authority interviewees highlighted that they did not experience particular or critical malfunctioning.

Box 3. Completeness and standardisation

> Beneficiaries particularly appreciate the completeness of SFINGE2020. **Indeed, the system provides streamlined and standardised procedures for all the processes related to the entire project lifecycle.** This significantly simplifies the work of the authorities and beneficiaries, especially for the beneficiaries that carry out more than one project co-financed by ERDF, ensuring important economies of scale in using the e-Cohesion system. Furthermore, all documents and information concerning the projects are orderly stored within the system, allowing all users to keep track and retrieve data easily and securely.

Source: PPMI Consortium

Authority representatives also highly appreciate the interoperability with other systems, which reduces the time spent on verification. They also expressed satisfaction that SFINGE2020 is the unique access point for beneficiaries and authorities involved at all stages of a project's lifecycle. This simplified the authorities' work and communication with the beneficiaries. Indeed, the experience with SFINGE2020 has been assessed so positively by the regional administration that the system is now being used for other regional and national funds (see Box 1).

4.2. Drawbacks to usefulness and performance

The analysis for this case study, based on a triangulation of methods (desk research, survey, and interviews), highlights that SFINGE2020 did not have any significant drawbacks. A minor detail is that the MA cannot use SFINGE2020 to produce aggregated indicators on the progress of the entire OP. However, the MA can easily download information from SFINGE2020 in Excel format and then analyse such data for monitoring purposes.

Even though no major drawbacks were identified, the users made some suggestions on minor improvements that could further advance the simplification potential of e-Cohesion. One beneficiary suggested that SFINGE2020 could send out email alerts in addition to alerts in the system when communications and requests from the authorities are uploaded to avoid missing important communications. During one interview, a MA representative

stated that they are already working on implementing this feature by sending notifications through the 'AppIO', which is the app used by beneficiaries to register in the system. In addition, one IB representative suggested increasing the maximum size of the documents which can be uploaded, as the current maximum file size of approximately 4 MB is considered too small and prevents the storage of all documents related to complex projects. Another beneficiary suggested adding a section dedicated to complaints in which the beneficiaries could directly raise issues concerning application, implementation, and verification procedures.

4.3. User-friendliness and user satisfaction

The overall satisfaction concerning the user-friendliness of the e-Cohesion system is very high among authorities and beneficiaries. Most survey respondents believe that SFINGE2020 is self-explanatory and intuitive, despite its complexity, and highlight that the user interface is easy to operate (Figure 4). Most beneficiaries and authorities agree that using the system does not require extensive training. In contrast, accumulated experience/learning by doing allows them to carry out the tasks more efficiently. This explains why, on the contrary, some users, especially those that use the system less frequently, find the system more time consuming at first. This was argued by several interviewees, who cited the benefit of 'learning by doing' and that initial difficulties tend to disappear with more practical experience using the system.

Figure 4. User-friendliness of SFINGE2020
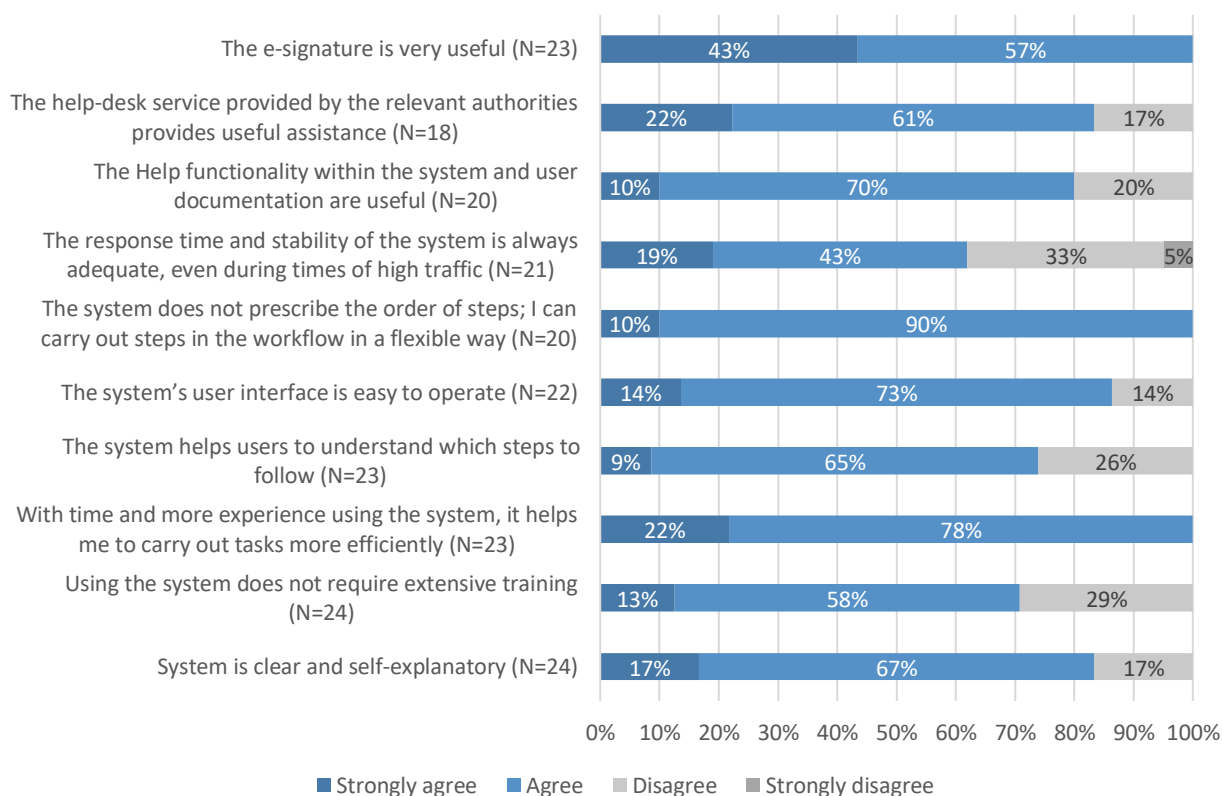
Source: PPMI Consortium – Beneficiary survey - Question 18: "Do you agree or disagree with the following statements describing the user-friendliness and effectiveness of the indicated electronic data exchange system you used:"

To overcome the initial difficulties in using SFINGE2020, the MA provides the users with a set of tools, which beneficiaries have judged as very useful. These include the help functionality, several manuals, and assistance from the helpdesk service. The users also appreciate the flexibility of the system that does not prescribe a precise order according to which the beneficiary has to complete the various steps of the workflow. This is a very

appreciated advantage of SFINGE2020 (especially compared to other systems), considering that all survey respondents agree that being able to carry out steps in the workflow in a flexible way enhances user-friendliness.

4.4. Help-desk organisation and functionality

Regarding the helpdesk service, beneficiaries can send a request for support through a dedicated section of the system. The users reported that it was easy to report whenever issues or doubts arose, and these were resolved quickly. Once the beneficiary has forwarded their request through the system, they can also receive further support and guidance by phone. Overall, the users are highly satisfied with the time efficiency and support quality. However, one beneficiary suggests that the authorities add a live chat function where beneficiaries can directly contact both authorities and technicians to speed up and further increase the effectiveness of the support/communications.

5. Good practices, challenges and lessons learnt

This section presents a synthesis of the good practices and lessons learnt of SFINGE2020 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

SFINGE2020 is a mature, complex e-Cohesion system, which is considered intuitive, flexible, and easy to use by most of the key stakeholders who participated in the EU survey and/or were interviewed as part of this case study. Indeed, the majority of users consulted have expressed high levels of satisfaction. The mentioned features are some of the most important qualities of the system, which was primarily designed to simplify the tasks of authorities and beneficiaries, diminishing the administrative burden related to the management of ERDF projects. The fact that **the system is developed and maintained by an external service provider, which combines IT expertise with knowledge of the functioning of ESI Funds, facilitated SFINGE2020's ability to integrate the specific and complex needs for managing ESI Funds in a flexible and user-friendly environment.** This is something the authority representatives argued is an especially good practice.

Another good practice of SFINGE2020 is its completeness: all activities related to the project lifecycle phases, including modification and integration requests, can be performed within the system. This allows users to track progress, avoid losing information, and reduce efforts of transmitting or communicating the same data. This quality makes it possible to save time and resources to the advantage of both authorities and beneficiaries. A key lesson from SFINGE2020 is that a well-functioning and the efficient e-Cohesion system should provide all key processes mandated by the minimum requirements and thus ensure that all the actions and communications related to the projects can be performed in the system. Including all these features in a single system require a complex IT structure and adequate skills, but at the same time, it may allow the setup of an intuitive, agile, and user-friendly e-Cohesion system. When developing the e-Cohesion system, **it is of primary importance to consider the users' points of view and needs** and systematically collect their feedback through consultations or surveys.

The possibility to automate to a significant extent the work of authorities and beneficiaries is another good practice example demonstrated by SFINGE2020. This comes with standardising procedures, speeding up information processing, evaluating projects, and data entry. The system automatically calculates the total score of each application, the amounts to certify and enters the necessary information in requests for certification addressed to the CA. There are several advantages to procedural automation; these features save the MA time and resources and, at the same time, reduce potential errors. The prefilling of beneficiary information, based on data available in other registers or based on information already entered in SFINGE2020 at a previous stage and the automatic calculation of costs and embedded controls, also considerably reduce possible mistakes. The **key factor that makes automation possible is the standardisation of procedures and processes.**

Interoperability with other systems/registers is quite well developed in the case of SFINGE2020, and some of the features in this system interoperability can be considered a good practice. They could be successfully transferred to other contexts. For example, interoperability with the regional accounting system and the register of enterprises (Infocamere) avoids the need to re-submit the same information on financial flows and company registry data, preventing mistakes and reducing the risk of double funding well

easing the verification procedures. Interoperability may require modifying technical features and the relevant systems that need to exchange information and adjusting the legal framework to allow a free flow of sensitive information from one system to another.

5.2. Barriers, challenges, and lessons learnt

SFINGE2020 will be used during the 2021-2027 programming period. The system will be updated to meet the requirements of the new CPR and to be coherent with the new national and regional regulatory framework concerning the use of information systems in the Public Administrations (e.g. CAD, "Piano Triennale per l'informatica", "Indicazioni AGID").

Apart from the changes prompted by the regulatory context, the MA plans to introduce some additional novelties in the system, further simplifying its use and speeding up the completion of the different procedures at the different stages of a project's lifecycle. This will also require strengthening interoperability with other systems/registers. For example, to simplify and automate the rather burdensome verification procedures related to "anti-mafia" checks,[8] the MA plans to enhance SFINGE2020's interoperability with relevant external systems that provide such information (e.g., DURC online[9]). Furthermore, the MA is working on a more capillary and effective notification system to inform users on project progress and actions that should be taken, without the need to frequently enter SFINGE2020 and look for notifications.

To ensure that the new version of SFINGE2020 accounts for the users' needs, the MA has conducted consultations with the beneficiaries to collect views on what can be done to make the system even more user-friendly. In the next years, thanks to the positive experience with this e-Cohesion system, the information system used by the region Emilia-Romagna for managing funds related to sport and culture (SIBAC) will be integrated into SFINGE2020.

5.3. Summary

As highlighted in this report, SFINGE2020 stands out as a complete, agile and flexible e-Cohesion system, highly appreciated by institutional users and beneficiaries. The experience of SFINGE2020 was successful to the extent where, in recent years, its use was extended to cover several other regional and national funds (e.g., FSC) and this trend which will continue, according to the stakeholder. Thus, it is fair to conclude that experience with e-Cohesion in Emilia-Romagna had important spill-over effects, contributing, among other things, to boost the digitalisation and simplification of the management of other EU and non-EU funds in the region. The analysis of SFINGE2020 presented in this report has highlighted several key elements that can be considered good practices in developing an e-Cohesion system (see details in the box below).

Box 4. Summary of good practices

> **Good practice examples showcased by SFINGE2020**
>
> - **The standardisation of procedures, the automated calculation of data, and the preparation of documents considerably reduce the MA's workload and potential mistakes while speeding up the decision-making processes,** especially in the evaluation phase of applications. The function of automatic calculation has been very useful also for beneficiaries;

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[8] These are obligatory checks that must be carried out prior to the signature of the contracts in order to make sure that the criminal record is clean, and the entity has no linkages with organized crime.

[9] DURC is a certification of labour compliance which contains information on the regularity of payments, social security, welfare, and insurance mandatory contributions.

- **Interoperability with other national/regional systems and registers** is essential. It makes it possible to pre-fill information based on the data contained in other documents/repositories. It facilitates the work of the authorities and beneficiaries, e.g. in the verification of the information provided. All this reduces the amount of time spent on the management of the projects and also reduces the risk of fraud;

- **Another distinctive element of the system is completeness. All the information, official communication, documentation, and actions are directly integrated into the system**. The possibility that each user has to easily consult the information uploaded in the system and keep track of the projects' progress is one of the most appreciated features of SFINGE2020. This can be considered a good practice which could be transferred to other e-Cohesion systems;

- **The system is developed and maintained by an external service provider, which combines IT expertise with knowledge of the functioning of ESI Funds**. This facilitated the release of an e-Cohesion system that integrates the specific and complex needs for managing ESI Funds in a flexible and user-friendly environment.

Source: PPMI Consortium

Annex

List of interviewees

No.	Institution	Type of interview	Date of the interview
1	Managing Authority - Emilia-Romagna ERDF	Policy Perspective	14 December 2021
2	Managing Authority - Emilia-Romagna ERDF	Technical Perspective	14 December 2021
3	Certifying Authority - Emilia-Romagna ERDF	Institutional user perspective	23 December 2021
4	Intermediate Body – Municipality of Modena	Institutional user perspective	7 December 2021
5	Intermediate Body – Municipality of Cesena	Institutional user perspective	9 December 2021
6	University of Parma	Beneficiary perspective	6 December 2021
7	Finimpresa	Beneficiary perspective	7 December 2021
8	Rete PMI Romagna	Beneficiary perspective	2 December 2021
9	AS Mechanical Technology s.r.l.	Beneficiary perspective	6 December 2021

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