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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

European Interoperability Framework – Implementation Strategy

{SWD(2017) 112 final}

{SWD(2017) 113 final}

1 INTRODUCTION

One of the Commission's ten priorities put forward by President Juncker¹ is to remove barriers to a digital single market in Europe. The public sector, which accounts for over a quarter of total employment and contributes to approximately a fifth of the EU's GDP through public procurement, plays a key role in the digital single market as a regulator, services provider and employer.

Member States are digitising their public administrations to save time, reduce costs, increase transparency, and improve both data quality and the delivery of public services. However, digital public services are not yet a reality in the European Union, as shown by the 2016 Digital Economy and Society Index for eGovernment.² When it comes to cross-border services in the Union, the situation is even more challenging as there are still barriers to access cross-border services.³

There is still great potential to further improve public services through end-to-end integration and automation, making better use of reliable sources of information, and openly publishing public data while ensuring that citizens' and businesses' records are treated in accordance with data protection rules to increase trust and confidence. National public services should be linked and reach beyond national borders to interconnect with similar services at EU level, thus contributing to the digital single market. For this to happen, there should be a coordinated approach, at all levels, when legislation is prepared, when public administrations organise their business processes, when information is managed and when IT systems are developed to implement public services. Otherwise the existing digital fragmentation will be intensified, which would endanger the offering of connected public services across the EU.

Interoperability is a key factor in making a digital transformation possible. It allows administrative entities to electronically exchange, amongst themselves and with citizens and businesses, meaningful information in ways that are understood by all parties. It addresses all layers that impact the delivery of digital public services in the EU, including:

- legal issues, e.g. by ensuring that legislation does not impose unjustified barriers to the reuse of data in different policy areas;
- organisational aspects, e.g. by requesting formal agreements on the conditions applicable to cross-organisational interactions;
- data/semantic concerns, e.g. by ensuring the use of common descriptions of exchanged data;

¹ A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change, Political Guidelines for the next European Commission, Opening Statement during the European Parliament Plenary Session, Strasbourg, 15 July 2014.

² eGovernment score stands at 55.4 % and exposes a significant gap between the highest and lowest scoring Member State.

³ As stated in the Single Market Scoreboard report for 2014 with regard to the Points of Single Contact.

- technical challenges, e.g. by setting up the necessary information systems environment to allow an uninterrupted flow of bits and bytes.

The Commission identified the need for interoperability between public administrations back in 1999⁴ and since then has supported programmes to develop, promote and use interoperability solutions in the EU. In 2010 it adopted a Communication⁵ entitled ‘Towards interoperability for European public services’ containing in annex the European interoperability strategy⁶ (EIS) and the European interoperability framework⁷ (EIF). Since then, the European interoperability framework has served as a reference throughout the Union and beyond, and was the basis of most national interoperability frameworks (NIFs) and strategies. Building on this success, it is now time to update and extend the current European interoperability framework to take on board new or revised interoperability requirements that arise from Union policies and programmes as well as from public administrations, while taking into account technological developments and trends.

In this context, it is recalled that the Communication on a Digital Single Market Strategy for Europe,⁸ of 6 May 2015, recognises interoperability as a prerequisite for “*efficient connections across borders, between communities and between public services and authorities*” and calls for the revision and extension of the existing European interoperability framework.

2 INTEROPERABILITY STATE-OF-PLAY AND WAY FORWARD

The Interoperability Solutions for European Public Administrations (ISA) programme (2010-2015),⁹ and its successor the ISA² programme (2016-2020),¹⁰ are the main instruments through which the current European interoperability strategy and European interoperability framework have been implemented. This has involved a variety of actions that aimed to improve digital collaboration between public administrations in Europe.

The national interoperability framework observatory (NIFO) established by the Commission in the context of the implementation of the ISA programme to measure progress and monitor

⁴ In 1999, the Commission launched an initiative dedicated to interoperability: 1719/1999/EC - Decision of the European Parliament and of the Council of 12 July 1999 on a series of guidelines, including the identification of projects of common interest, for trans-European networks for the electronic interchange of data between administrations (IDA).

⁵ COM(2010) 744 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions Towards interoperability for European public services, Brussels, 16.12.2010.

⁶ COM(2010) 744 final, Annex 1.

⁷ COM(2010) 744 final, Annex 2.

⁸ COM(2015) 192 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A Digital Single Market Strategy for Europe, Brussels, 06.05.2015.

⁹ Decision No 922/2009/EC of the European Parliament and of the Council of September 2009 on interoperability solutions for European public administrations (ISA).

¹⁰ Decision (EU) 2015/2240 of the European Parliament and of the Council, of 25 November 2015, establishing a programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (ISA² programme) as a means of modernising the public sector.

the state-of-play of interoperability in the Union has shown that in 2014, the alignment of national interoperability frameworks to the European interoperability framework had reached an average rate of 72 %.¹¹ However, the level of national interoperability framework implementation in specific national projects was 45 % in 2015, which shows that there are still difficulties with the practical implementation of the current recommendations.

Public administrations need more specific guidance on how to improve governance of their interoperability activities, establish cross-organisational relationships, streamline processes supporting end-to-end digital services, and ensure that existing and new legislation do not compromise interoperability efforts. This guidance is put forward in an updated set of interoperability recommendations included in the European interoperability framework, as set in Annex 2 to this Communication.

These recommendations should help public administrations to:

- improve their national governance of interoperability activities,
- use common operational models to develop better digital public services and include the needs of citizens and businesses from other EU Member States,
- manage data they own in common semantic and syntactic formats to make it easier to publish it on portals, and to aggregate, share and reuse it.

The updated interoperability recommendations evolve to take into account EU policies such as the revised Directive on the reuse of Public Sector Information,¹² the INSPIRE directive¹³ and the eIDAS Regulation.¹⁴

New EU initiatives, such as the European Cloud initiative,¹⁵ the EU eGovernment Action Plan 2016-2020¹⁶ and envisaged ones such as the Single Digital Gateway,¹⁷ are also considered so that the updated interoperability recommendations contribute to their implementation.

¹¹ State of Play of Interoperability in Europe - Report 2014.

¹² 2003/98/EC, revised by Directive 2013/37/EU.

¹³ Directive 2007/2/EC of March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE).

¹⁴ Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.

¹⁵ COM/2016/0178 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - European Cloud Initiative - Building a competitive data and knowledge economy in Europe.

¹⁶ COM/2016/0179 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - EU eGovernment Action Plan 2016-2020 Accelerating the digital transformation of government.

¹⁷ A digital single market initiative under the eGovernment set of actions.

The need to revise the European interoperability framework was confirmed during consultation activities¹⁸ with all concerned stakeholders, namely Member States' public administrations, citizens, businesses, and other interested parties such as Union institutions and bodies.

3 THE NEED FOR A NEW EUROPEAN INTEROPERABILITY FRAMEWORK

To address the interoperability challenges identified, the Commission presents in this Communication the new European interoperability framework and the strategy to implement it.

The new European interoperability framework puts more emphasis on how interoperability principles and models should apply in practice and considers emerging policy-related and technological needs. The number of recommendations has increased from 25 to 47. Recommendations are made more specific to facilitate their implementation. There is a stronger focus on openness and information management, data portability, interoperability governance and integrated service delivery.¹⁹

Implementation of the European interoperability framework is guided by the following vision: 'Public administrations should provide key interoperable user-centric digital public services to businesses and citizens, at national and Union levels, supporting the free movement of goods, people, services and data throughout the Union'. This vision has been widely endorsed²⁰ by the consulted Member States' representatives in ISA and ISA² committees, public administrations, and other stakeholders.

The Communication is accompanied by an interoperability action plan (as set in Annex 1), split into five strategic focus areas. It is based on interoperability priorities that should support the implementation of the European interoperability framework over 2016-2020.

The interoperability action plan should guide the European interoperability framework's implementation. In addition, Member States are expected to complement EU-level actions (identified in the interoperability action plan) with national actions, thus ensuring coherence, essential for the successful application of interoperability in the public sector in the Union. The interoperability action plan addresses issues related to the identification of solid mechanisms to govern interoperability at national level and across borders, collaboration between organisations, engagement of stakeholders, and awareness raising on the benefits of

¹⁸ The SWD(2017)113 related to the synopsis report on the consultation activities shows that Member States and EU institutions mentioned the need for a new European interoperability framework to (i) take account of new technological trends (73 %); (ii) provide practical and more targeted guidance for the implementation of interoperability requirements (73 %); and (iii) align with the evolution of EU strategies, in particular the digital single market strategy (65 %).

¹⁹ The SWD(2017)112 on Revision of the European Interoperability Framework - Analysis, gives details about the increase of the number of recommendations and the added value of the updates.

²⁰ The SWD(2017)113 related to the synopsis report on the consultation activities shows that 87 % of respondents agreed with this vision.

interoperability. It also covers the development, improvement and promotion of key interoperability enablers and supporting instruments, while considering the needs and priorities of end users.

4 FOCUS AREAS

4.1 Ensure governance, coordination and sharing of interoperability initiatives

Realising interoperability of public administrations requires governance and coordination bodies, and processes for planning, implementing and using interoperability solutions, both nationally and across the Union.

In this context, the key role of the Commission and the Member States is twofold:

- i. to govern, coordinate and share all interoperability initiatives²¹ at national and Union levels in view of ensuring that public administrations follow the principles and recommendations of the European interoperability framework,²²
- ii. to foster better cooperation across all levels of public administrations in the Union and break down the remaining organisational and digital silos.

The Commission and the Member States should implement the European interoperability framework. The Commission will monitor the implementation of the European interoperability framework through the ISA² programme.²³

The ISA² programme will play a key role in developing, establishing, maturing, operating, reusing, improving and promoting interoperability solutions facilitating cooperation between public administrations. The Commission, supported by the ISA² Programme, will ensure the appropriate governance of interoperability, classify and promote interoperability solutions, and coordinate the various EU interoperability initiatives.²⁴

4.2 Develop organisational interoperability solutions

Businesses and citizens should be able to benefit from interoperable public services based on a better integration of business processes and exchange of information between public administrations in the Union.

In this context, organisational interoperability means integrating or aligning cross-organisational business processes and formalising relationships between service providers and consumers of European public services.

²¹ Interoperability initiatives should be understood as actions and solutions (i.e. frameworks, services and tools) that contribute to the improvement of interactions between European public administrations, at all levels, including the sharing of information and knowledge between organisations. These initiatives should cover all levels of interoperability: legal, organisational, semantic and technical.

²² The proportionality principle limits EU action to what is necessary to achieve agreed policy objectives. This means that the EU will opt for solutions that give Member States the most freedom possible.

²³ Decision (EU) 2015/2240 on ISA², Article 1 Paragraph 2.

²⁴ Decision (EU) 2015/2240 on ISA², Articles 1 and 3.

4.3 Engage stakeholders and raise awareness on interoperability

Each interoperability initiative should be driven by a specific business case showing that interoperability is a worthwhile investment and that user needs are better fulfilled when information systems can communicate with each other.

In this context, public administrations should:

- i. measure and communicate the main benefits that could be achieved by applying the European interoperability framework principles and recommendations,
- ii. foster the application of the European interoperability framework and the solutions it proposes.

As end users, businesses and citizens should also be involved in the design, analysis, assessment and evolution of European public services. For this reason, the interoperability action plan has a specific action on user engagement, to collect businesses' and citizens' (including those with disabilities) views and needs in a participative and collaborative way. The Commission and Member States should as much as possible guide the design and development of public services based on user needs.

4.4 Develop, maintain and promote key interoperability enablers

Today, public administrations manage large amounts of data in different formats, using different data management methods, hosting multiple copies in many different repositories and often publishing it on portals throughout Europe with no harmonisation in terms of content and presentation. This explains why they reuse existing information about citizens and businesses in only 48 % of cases.²⁵ This often makes the delivery of public services to citizens and businesses cumbersome and time-consuming. It may also raise questions of trust in relation to data protection.

To improve the quality of European public services digitally delivered to end users, the Commission and Member States should define, develop, improve, make operational, maintain and promote a set of key interoperability enablers,²⁶ while ensuring the security of exchanged data.

4.5 Develop, maintain and promote instruments that support interoperability

When designing, implementing and using interoperability solutions Member States need the support of practical instruments, i.e. tools, frameworks, guidelines and specifications, which are necessary for achieving interoperability at national level and across borders. The Commission and Member States should promote the reuse of existing instruments and further develop new ones, in particular:

²⁵ As mentioned in Section 4.3.2 E-Government of the Digital Single Market Strategy (COM(2015) 192 final).

²⁶ As stipulated in Article 2(14) of the ISA² legal decision, 'key interoperability enablers' means interoperability solutions (e.g. services and tools, standards and specifications) that are necessary for the efficient and effective delivery of public services across administrations.

- the European interoperability reference architecture and European interoperability cartography;²⁷
- ways of assessing the ICT implications of the Union law²⁸ and identifying gaps in legislation hampering interoperability;²⁹
- the ‘sharing and reuse framework for IT solutions’ developed in the context of the ISA² programme, to promote and improve the sharing, collaborative development and reuse of IT solutions (including open source) by public administrations.

5 FINANCIAL INSTRUMENTS

The Commission will support, promote and monitor the implementation of the interoperability action plan, and the European interoperability framework in general, primarily through the ISA² programme.

Planned actions may also in whole or in part be financed by other instruments, for example:

- Horizon 2020³⁰ can support actions related to innovation in the public sector;³¹
- the ‘Connecting Europe’ facility³² can support the deployment and use of key cross-border mature digital services such as electronic identification, procurement and interoperable health services;
- the European structural and investment funds³³ can support actions related to digital growth through the development of ICT products and services³⁴ and those related to strengthening the institutional capacity and efficiency of public administrations,³⁵
- the structural reform support programme³⁶ can support public administrations in the implementation of the national dimension of the European interoperability framework.

Other financial instruments may support the implementation of the interoperability action plan or the European interoperability framework through targeted actions in specific policy areas.

²⁷ Decision (EU) 2015/2240 on ISA², Article 3(f).

²⁸ Decision (EU) 2015/2240 on ISA², Article 3(c).

²⁹ Decision (EU) 2015/2240 on ISA², Article 3(d).

³⁰ Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC, [Official Journal of the European Union L 347/104], Brussels 20.12.2013.

³¹ Societal Challenge 6 ‘Europe in a changing world - Inclusive, innovative and reflective societies’ of Horizon 2020.

³² Regulation (EU) No 283/2014 of the European Parliament and of the Council of 11 March 2014 on guidelines for trans-European networks in the area of telecommunications infrastructure and repealing Decision No 1336/97/EC.

³³ http://ec.europa.eu/regional_policy/en/information/legislation/guidance/.

³⁴ Thematic Objective No 2 of the ESIF.

³⁵ Thematic Objective No 11 of the ESIF.

³⁶ http://ec.europa.eu/about/srss/index_en.htm.

6 MONITORING AND REPORTING

Implementation of the European interoperability framework, and in particular the interoperability action plan, is only possible through joint ownership by the Commission and the Member States. The Commission, supported by the ISA² programme, should govern and coordinate implementation and monitoring.

The Commission will create an integrated framework for monitoring, assessing and reporting on progress in implementing the European interoperability framework and the interoperability action plan. These activities will be carried out within the remit of the interoperability observatory work under the ISA² programme using key performance indicators and measurable targets.

By the end of 2019, the Commission will evaluate the implementation of the European interoperability framework. Based on the evaluation results and in accordance with the principles of better regulation, the Commission may assess whether the specific recommendations of the European interoperability framework should be part of a mandatory instrument.

7 CONCLUSION

There is wide consensus among stakeholders on the need to update the existing European interoperability framework. If no action is taken, Member States, in their efforts to meet current challenges quickly, may opt for individual and diverging approaches to interoperability. This would result in incompatible solutions that may increase digital fragmentation across the EU and hinder the realisation of the digital single market.

The new European interoperability framework has been shaped in close collaboration with the Member States and following a wide consultation process with all other relevant stakeholders. Its successful implementation will require the active involvement of all actors, especially public administrations. The planned actions will ensure that the new European interoperability framework can achieve its ultimate objective of interoperable user-centric public services in the EU.