

29 JUNE 2023

Hands-on Workshop on Interoperability Maturity Tools (IMTs)

Summer School 2023

EUROPEAN COMMISSION

Directorate General for Informatics (DIGIT)

DIGIT B2 Digital Europe programme

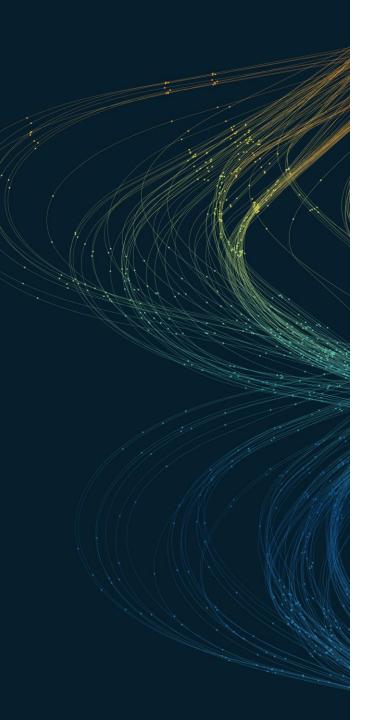
Project Officer: Dr. Raul Abril

intercoerable europe









Let's make an introduction

Where are you from?

What is your professional background?

Are you familiar with the Interoperability Maturity Tools? (e.g., IMAPS, SIQAT, GIQAT)

Take your phone and visit https://www.slido.com/

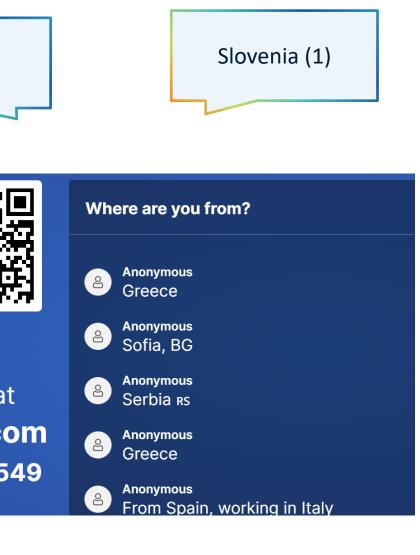
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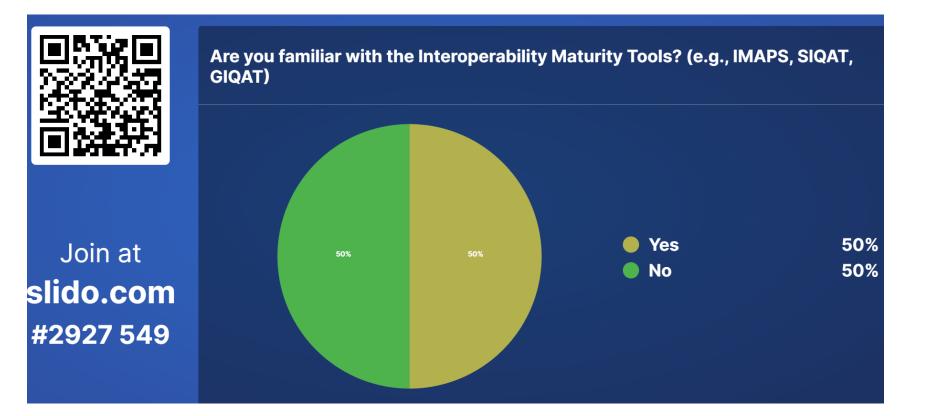


European Commission





Are you familiar with the Interoperability Maturity Tools? (e.g., IMAPS, SIQAT, GIQAT)





AGENDA

01 Introduction to IMTs: Interoperability aspects & Value propositions

02 IMAPS in practice workshop

03 Closing Remarks & Discussion

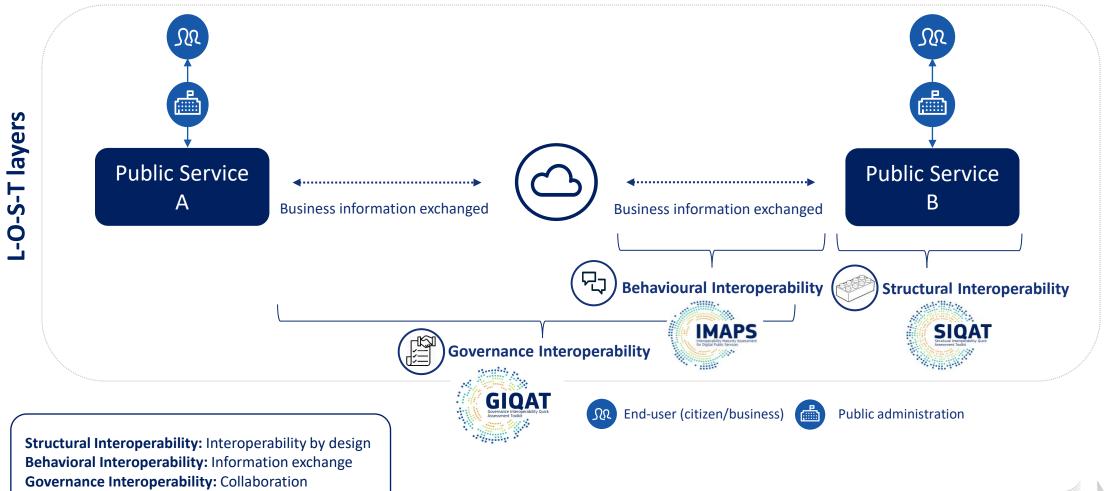


Introduction to IMTs

Interoperability aspects & Value propositions



Interoperability aspects



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Interoperability Maturity Tools (IMTs)







The **structural interoperability** is "the extent that a digital public service is interoperable on its **structure/design**". Assesses on how a digital public service owner can use or reuse the digital public service.



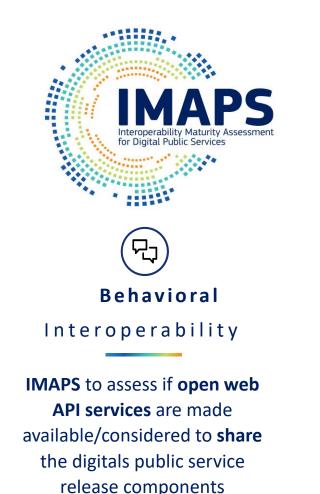
Governance Interoperability

The **governance interoperability** is "the extent its agreed choreography rules support a P2P collaboration". Focuses on collaboration and assesses the existence of **protocols and agreements** to allow the information exchange in agreed terms between digital public services.

Comparison among IMTs - Example

Let's suppose that a digital public service is using APIs for information exchange.

The digital public service owner may use one or all of the following tools to assess the interoperability maturity of the service:





Interoperability

SIQAT to assess if there is documentation and technical specifications in place to support the reuse of the API



GIQAT to assess the extend on which there are in place **technical agreements to define rules** for the exchange of the information

IMAPS VALUE PROPOSITION INTEROPERABILITY MATURITY ASSESSMENT OF A PUBLIC SERVICE

DESCRIPTION WHAT IS IMAPS?

IMAPS is an online questionnaire which allows public administrations to assess the interoperability maturity of their digital public services.

IMAPS is aligned with the principles and recommendations set out by the European Interoperability Framework (EIF).

Specialised versions of IMAPS can be used complementarily to assess the behavioural interoperability of a digital public service focusing on legal (LIMAPS), organisational (OIMAPS), semantic (SIMAPS) and technical aspects (TIMAPS).

AUDIENCE

FOR WHOM IS IMAPS RELEVANT?

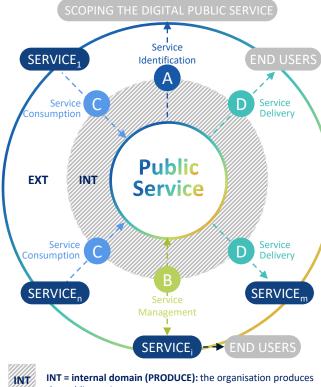
- **Public service owners** | to improve the overall behavioural interoperability and conformance of their digital public services.
- Policy-makers | to get insights on the interoperability maturity of digital public service.
- **Public Procurement Officers** | to identify standards and specifications for an interoperable digital public service.

BENEFITS WHY USE IMAPS?

- ✓ A free of charge assessment which can be completed in 30 minutes.
- An interoperability maturity score indicating where your service stands today considering key interoperability aspects.
- ✓ A set of recommendations for improving your digital public service, based on interoperability standards and good practices.
- A statement of conformance with the EIF principles. \checkmark
- ✓ A check of interoperability requirements for the design of new digital public services, which are interoperable by default.

IMAPS CONCEPTUAL MODEL

The IMAPS conceptual model describes all possible instances where interoperability with the outside world may occur from the digital public service viewpoint. It distinguishes between:



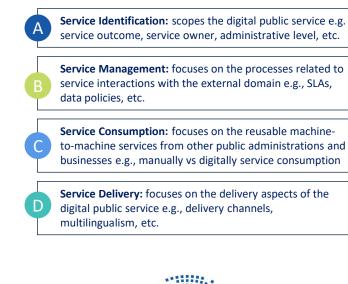
the public services

EXT = external domain (REUSE): the digital public service reuses EXT existing services from other administrations and/or businesses

END USERS: citizens, businesses and other III MM I public administrations or be consumed by another service

DIGITAL PUBLIC SERVICE COMPONENTS

The IMAPS assessment captures four different service areas:









Specialised IMAPS versions (Specialisations)

L-O-S-T

- Legal aspects <u>LIMAPS</u>
- Organisational aspects OIMAPS
- Semantic aspects <u>SIMAPS</u>
- Technical aspects <u>TIMAPS</u>

A dedicated video for an *Introduction to SIMAPS* is available in the Interoperable Europe YouTube channel and can be found <u>here</u>.



IMAPS specialisations

Complementary insights to IMAPS

LIMAPS

Measures and improves the legal behavioural interoperability maturity of digital public services. Legal interoperability focuses on the legal provisions that regulate the collaboration among different public administrations that operate under different legal mandates. <u>Start</u> your LIMAPS online self-assessment. <u>More info</u> on LIMAPS.

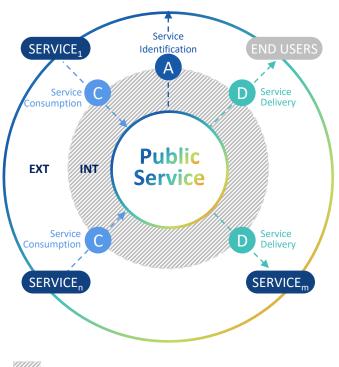
SIMAPS

Measures and improves the semantic behavioural interoperability maturity of digital public services. Semantic interoperability enables a meaningful manner of information exchange and ensures that their precise meaning is understood and preserved throughout exchanges between different organisations. Semantic interoperability provides also a common understanding of the data, by using common data formats.

<u>Start</u> your SIMAPS online self-assessment. <u>More info</u> on SIMAPS.

CONCEPTUAL MODEL

The LIMAPS conceptual model describes all possible instances where **interoperability with the outside world may occur from the digital public service viewpoint.** It distinguishes between:



INT = internal domain (PRODUCE): the organisation produces the public services

EXT = external domain (REUSE): the digital public service reuses existing services from other administrations and/or businesses

OIMAPS

Measures and improves the organisational behavioural interoperability maturity of digital public services. Organisational interoperability focuses on business processes and the collaboration among public administrations of different internal structures and user community requirements. <u>Start</u> your OIMAPS online self-assessment.

More info on OIMAPS.

TIMAPS

Measures and improves the technical behavioural interoperability maturity of digital public services. Technical interoperability focuses on the technical aspects of linking information systems and services (interface specifications, interconnection services between hardware and software, etc.). It is usually associated with hardware/software components, systems and platforms that enable machine-tomachine communication to take place. <u>Start</u> your TIMAPS online self-assessment. <u>More info</u> on TIMAPS.



SIQAT VALUE PROPOSITION STRUCTURAL INTEROPERABILITY QUICK ASSESSMENT TOOL



- SIQAT is an online questionnaire created in the EU Survey portal.
- SIQAT allows public administrations to assess the Structural interoperability of their digital public services.
- SIQAT is aligned with the principles and recommendations set out by the European Interoperability Framework (EIF).



- **Public service owners** | to improve the overall structural interoperability and conformance of their digital public services.
- **Policy-makers** | to get insights on the interoperability level of digital public service.
- **Public Procurement Officers** | to identify standards and specifications for an interoperable digital public service.



- A free of charge assessment which can be completed in 30 minutes
- An interoperability maturity score indicating where your service stands today considering key interoperability aspects.
- A set of recommendations for improving your digital public service, based on interoperability standards and good practices.
- ✓ A **statement of conformance** with the EIF principles.
- A check of interoperability requirements for the design of new digital public services, which are interoperable by default.

DIGITAL PUBLIC SERVICE COMPONENTS

The SIQAT assessment provides public administrations with insight into two key aspects of the structural interoperability of their digital public service:

Shareability: It is the extent that an open standard enables prospective coexistence of an off-the-shelf asset in a given domain set of digital public service value chains.

Reusability: It is the extent that an open standard enables the coexistence of an off-theshelf asset in a given value chain of a digital public service.







GIQAT VALUE PROPOSITION GOVERNANCE INTEROPERABILITY QUICK ASSESSMENT TOOL

DESCRIPTION WHAT IS GIQAT?

- GIQAT is an online questionnaire created in the EU Survey portal.
- GIQAT allows public administrations to assess the Governance interoperability of their digital public services.
- GIQAT is aligned with the principles and recommendations set out by the European Interoperability Framework (EIF).

AUDIENCE FOR WHOM IS GIQAT RELEVANT?

- **Public service owners** | to improve the overall governance interoperability and conformance of their digital public services.
- **Policy-makers** | to get insights on the interoperability level of digital public service.
- **Public Procurement Officers** | to identify standards and specifications for an interoperable digital public service.

BENEFITS WHY USE GIQAT?

- A free of charge assessment which can be completed in 30 minutes
- An interoperability maturity score indicating where your service stands today considering key interoperability aspects.
- A set of recommendations for improving your digital public service, based on interoperability standards and good practices.
- ✓ A statement of conformance with the EIF principles.
- A check of interoperability requirements for the design of new digital public services, which are interoperable by default.

DIGITAL PUBLIC SERVICE COMPONENTS

The GIQAT assessment provides public administrations with insight into two key aspects of the governance interoperability of their digital public service:

Collaboration Control: Is the extent that an open standard enables the collaboration control of a digital public service with another digital public service.

Collaboration Assurance: Is the extent that an open standard enables the collaboration assurance of a digital public service with another digital public service.









IMAPS workshop: Let's begin!



USER JOURNEY Interoperability Maturity Tools (IMTs)

An indicative illustration of how to build interoperable digital public services

Pablo is a Public Administration Officer responsible for a digital public service's portal. Pablo is puzzled over the digital public service's interoperability. The first challenge that Pablo needs to anticipate is the format of the data exchanged with other services (behavioural aspect). Pablo also wonders about any further documentation that could be produced for the best support software reuse (structural aspect), as well as the conditions required to regulate peer-to-peer interactions for information exchange (governance aspect). Pablo discovers through a Linkedin post the INTEROPERABILITY MATURITY TOOLS which are in line with the European Interoperability Framework (EIF). STEP 02: HOW TO START? THE INTEROPERABILITY MATURITY TOOLS



inter**o**perable

eurone

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STEP 01: THE BEGINNING OF THE JOURNEY FAMILIARISATION WITH THE CONCEPT

who

why

how

01

Pablo decides to assess the behavioural, structural and governance interoperability maturity of the digital public service across all interoperability levels (legal, organisational, semantic, technical) to:

- identify any *interoperability gaps* that are not yet considered; and
- receive useful *recommendations* for improvement.

STEP 03: THE IMTS TEAM HANDS-ON SUPPORT

he IMTs team provides Pablo with continuous upport of his choice, at all stages of the ssessments process through:

- Knowledge transfer sessions
- User guides;
- <u>E-learnings</u>.

02

03

STEP 04: REPORTS & RECOMMENDATIONS STRUCTURE & REPORT

05

04

Pablo receives a report that includes an interoperability maturity score and a set of recommendations, at the end of each survey, for all questions.

These recommendations propose good practices, guidelines and specific examples.

Some recommendations can trigger the need for further assessment in terms of the **legal, organisational, semantic and technical** behavioural interoperability.

STEP 06: HOW WAS THE JOURNEY? SHARE YOUR EXPERIENCE

06

Pablo shared with his network the news about the IMTs experience, and the earned value brought to the organisation! A success story was published with the IMTs team support via the channels of the Digital Europe Programme (DEP) community.



(i) Click on the <u>underlined</u> words in the text to learn more online



IMAPS in Practice





Divide into groups of three people





Select a digital public service from the list



Assess the selected digital public service with the **IMAPS survey**





Select a digital public service to assess

You may select one of the digital public services below. Each group will choose a **unique item** from the list.

- 1. Issuance of Fishing License for Third Countries and for Fishing Partnership Agreements
- 2. Issuance of Swordfish Fishing License (SWO)
- 3. Declaration of Tool Loss
- 4. First Buyers Registration
- 5. Declaration of First Sale for a Greek flag vessel
- 6. Declaration of First Sale for a Member State flag vessel
- 7. Aquaculture Census Report
- 8. Declaration of Unloading and Transshipment Ports
- 9. Declaration of Products with a Greek trade name
- 10. Registration of dead tuna handling statistics report from Fisherman





USER JOURNEY Interoperability Maturity Tools (IMTs)

An indicative illustration of how to build interoperable digital public services

Pablo is a Public Administration Officer responsible for a digital public service's portal. Behavioural interoperability with IMAPS Pablo is puzzled over the digital public service's Structural interoperability with SIQAT The first challenge that Pablo needs to anticipate is the Governance interoperability with GIQAT format of the data exchanged with other services (Governance Interoperability Quick Assessment Toolkit) Pablo also wonders about any further documentation that could be produced for the best **support software** reuse (structural aspect), as well as the conditions required to regulate peer-to-peer interactions for

02

03

Pablo discovers through a LinkedIn post the **INTEROPERABILITY MATURITY TOOLS** which are in line with the European Interoperability Framework (EIF).

information exchange (governance aspect).

The Interoperability Maturity Tools Start the assessment for the: (Interoperability Maturity Assessment of a Public Service) (Structural Interoperability Quick Assessment Toolkit)

Pablo realised that the Interoperability Maturity Tools are:

- applicable to any digital public services at all levels of government;
- user-friendly online questionnaires; ٠
- time saving and cost-efficient in interoperability tests;
- compatible with the EIF principles.

STEP 02: HOW TO START? THE INTEROPERABILITY MATURITY TOOLS

05

04

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STEP 01: THE BEGINNING OF THE JOURNEY FAMILIARISATION WITH THE CONCEPT

who

why

how

01

interoperability.

(behavioural aspect).

Pablo decides to assess the behavioural, structural and governance interoperability maturity of the digital public service across all interoperability levels (legal, organisational, semantic, technical) to:

- identify any interoperability gaps that are not yet considered; and
- receive useful recommendations for improvement.

06







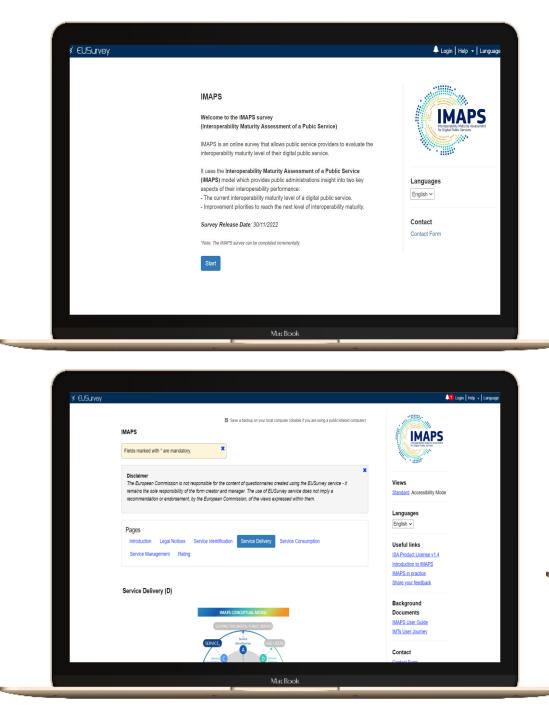
Welcome to the IMAPS Survey

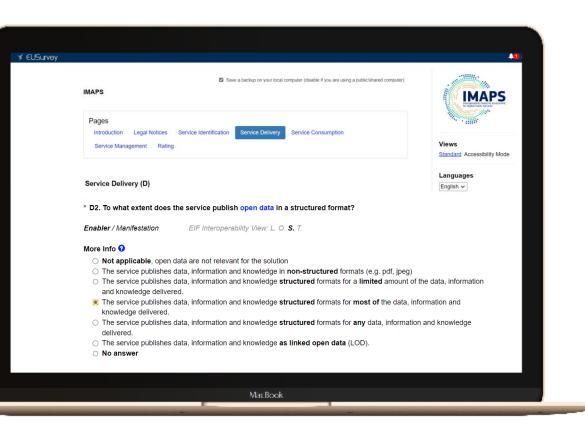
Interoperability Maturity Assessment of Digital Public Services

Visit the IMAPS survey through your laptop <u>https://ec.europa.eu/eusurvey/runner/IMAPS_v_2_2_0</u>











USER JOURNEY Interoperability Maturity Tools (IMTs)

An indicative illustration of how to build interoperable digital public services

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who

why

how

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The Interoperability Maturity Tools Start the assessment for the: Behavioural interoperability with IMAPS (Interoperability Maturity Assessment of a Public Service) Structural interoperability with SIQAT (Structural Interoperability Quick Assessment Toolkit) Governance interoperability with GIQAT (Governance Interoperability Quick Assessment Toolkit)

Pablo realised that the Interoperability Maturity Tools are:

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- user-friendly online questionnaires;
- time saving and cost-efficient in interoperability tests;

The IMTs team provides Pablo with continuous

support of his choice, at all stages of the

Knowledge transfer sessions;

compatible with the EIF principles.

02

03

STEP 02: HOW TO START? THE INTEROPERABILITY MATURITY TOOLS

STEP 03: THE IMTs TEAM

assessments process through:

HANDS-ON SUPPORT

User quides;

E-learninas.

05

04



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06

IMAPS survey: Start page

🗡 EUSurvey

🐥 Login | Help 👻 | Language 👻

IMAPS

Welcome to the IMAPS survey (Interoperability Maturity Assessment of a Pubic Service)

IMAPS is an online survey that allows public service providers to evaluate the interoperability maturity level of their digital public service.

It uses the **Interoperability Maturity Assessment of a Public Service** (IMAPS) model which provides public administrations insight into two key aspects of their interoperability performance:

- The current interoperability maturity level of a digital public service.

- Improvement priorities to reach the next level of interoperability maturity.

Survey Release Date: 30/11/2022

*Note: The IMAPS survey can be completed incrementally.



Languages

English ~

Contact

Contact Form





IMAPS survey: Introduction

HAPS Fields marked with * are mandatory.	Save a backup on your local computer (disable if you are using a publicithared computer	tor)
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Welcome to the IMAPS (Interoperability Maturity Assessment of a Public Service)



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Save as Draft

Report abuse

Introduction:

This online survey allows public service providers to evaluate the interoperability maturity level of their digital public service. It uses the Interoperability Maturity Assessment of a Public Service (IMAPS) model which provides public administrations insight into two key aspects of their interoperability performance:

The current interoperability maturity level of a digital public service

Improvement priorities to reach the next level of interoperability maturity

IMAPS measures how well a public administration interacts with external entities in order to organise the efficient provisioning of its public services to other public administrations, businesses and/or citizens.

The IMAPS survey helps public service providers to enhance the guality of the service delivery, reduce costs and overcome integration issues by reusing available services and orchestrate services in an effective manner in order to maximize the service outcome and benefits for citizens and public administrations.

Interoperability in a digital public service is an attribution defined as "the extent it enables peer-to-peer collaboration with public services towards mutually beneficial goals, involving the sharing of data, information and knowledge between them regardless their legal, organisational, semantic and technical environment".

The Interoperability Maturity Tools (IMTs) assess the interoperability maturity of a digital public service. Interoperability is of multidimensional nature involving structural interoperability, behavioural interoperability and governance interoperability;

- 1. The structural interoperability is "the extent its structure has been developed reusing and/or sharing components in support of a peer-to-peer collaboration" and can be assessed using the Structural Interoperability Quick Assessment tool (SIQAT).
- 2. The behavioural interoperability is "the extent its manifested behaviour exchanges data, information or knowledge with its environment in support of a peer-to-peer collaboration" and can be assessed using the Interoperability Maturity Assessment of a Public Service tool (IMAPS).
- 3. The governance interoperability is "the extent its agreed choreography rules support a peer-to-peer collaboration" and can be assessed using the Governance Interoperability Quick Assessment tool (GIQAT).





IMAPS survey: Legal notices

Save a backup on your local computer (disable if you are using a public/shared computer)

IMAPS

Fields marked with * are mandatory.

Disclaimer

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Pages Legal Notices

Service Identification Service Delivery Service Consumption

Service Management Rating

Legal Notices

Introduction



EUROPEAN COMMISSION IMAPS - INTEROPERABITIY MATURITY ASSESSMENT OF A PUBLIC SERVICE

Disclaimer:

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Views

*

Standard Accessibility Mode

Languages English 🗸

Useful links ISA Product License v1.4

Introduction to IMAPS IMAPS in practice Share your feedback

Background Documents IMAPS User Guide

IMTs User Journey

Contact Contact Form

Save as Draft

Report abuse



IMAPS survey: Service Identification

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Service Identification (A) n this section, please answer the following questions regarding the co A1A. Please provide your name: A1B. Please provide your email address:	Introduction to IMAPS IMAPS in practice Share your feedback Background Documents IMAPS User Guide IMTs User Journey, Contact Contact Form Save as Draft Report abuse	<u>s</u>



IMAPS survey: Service Delivery

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recommendation or endorsement, by the Euro	opean Commission, of the views expressed within them.

Service Delivery (D)





Views Standard Accessibility Mode

.anguages English ✔

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Background

Documents IMAPS User Guide

IMTs User Journey

Contact Form



Report abuse

* D1. To what extent does the service publish open data?

Enabler / Manifestation EIF Int

EIF Interoperability View: L. O. S. T.

More Info 😌

- O Not applicable, open data are not relevant for the solution
- The service does not publish open data
- The service publishes open data
- No answer

* D2. To what extent does the service publish open data in a structured format?

Enabler / Manifestation EIF Interoperability View: L. O. S. T.

More Info 😌

- O Not applicable, open data are not relevant for the solution
- O The service publishes data, information and knowledge in non-structured formats (e.g. pdf, jpeg)
- O The service publishes data, information and knowledge structured formats for a limited amount of the data, information and knowledge delivered.
- O The service publishes data, information and knowledge structured formats for most of the data, information and knowledge delivered.
- O The service publishes data, information and knowledge structured formats for any data, information and knowledge delivered.
- O The service publishes data, information and knowledge as linked open data (LOD).
- O No answer



Service Delivery Consumption Management Focuses focuses on the delivery aspects of the digital public service e.g., delivery channels, multilingualism, etc. Focuses on the processes Focuses on the reusable machine-to-machine related to service services from other public interactions with the administrations and external domain e.g., SLAs, businesses data policies, etc. D3 **D5 D8** D9 D10 D11 D12 D13 D14 D4 D6 **B13 B7 B3 B9 B12 B10 B4 B6 B8 B2 B11** Focuses on the reusable Focuses on the processes machine-to-machine related to service services from other public interactions with the external domain e.g., SLAs, administrations and data policies, etc. businesses Focuses focuses on the delivery aspects of the digital public service e.g., delivery channels, multilingualism, etc. Service Service Consumption Management Service Delivery

Service

Service

IMAPS outcome, service owner, administrative level, etc.

Scopes the digital public service e.g., service outcome, service owner, administrative level, etc.

Service

Identification

Scopes the digital public

service e.g., service

Service Identification

From the IMM to the online IMAPS survey

European Commission

IMM link to IMAPS survey - Example

IMAPS survey

* D3. To what extent does the service use semantic standards and specifications for the data deli

Enabler / Manifestation EIF Interoperability View: L. O. S. T.

More Info 😯

- Not applicable, there is no machine-to-machine interfacing
- The service **does not use** any standards or specifications for the data, information and knowledge
- The service is only using proprietary standards and is not leveraging existing (open) semantic information and knowledge delivery
- The service is using a mix of (open) semantic standards for data delivery, combined with propriet data, information and knowledge delivery
- The service is using mainly (open) semantic standards for data delivery, and only a few proprieta data, information and knowledge delivery
- \bigcirc The service is using **entirely** (open) semantic standards and specifications for the data, information
- \bigcirc No answer

IMM survey

B.7	Σε ποιο βαθμό τα σημασιολογικά πρότυπα (xml) και οι προδιαγραφές
	χρησιμοποιούνται για την ανταλλαγή δεδομένων;

Μη εφαρμόσιμο

Τα μοντέλα δεδομένων έχουν δημιουργηθεί για τη δημόσια υπηρεσία χωρίς να χρησιμοποιού

Ορισμένα ανοιχτά σημασιολογικά πρότυπα και προδιαγραφές χρησιμοποιούνται

Ολόκληρη η ανάπτυξη των μοντέλων δεδομένων στηρίζεται σε υπάρχοντα (ανοιχτά) σημασιο

Μη εφαρμόσιμο



IMAPS survey: Service Consumption

MAPS	Save a backup on your local computer (disable if you are using a public/shared computer)	
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Pages Introduction Legal Notices Service Identifical	tion Service Delivery Service Consumption	Useful links
Service Management Rating		ISA Product License v1.4
		Introduction to IMAPS IMAPS in practice

Service Consumption (C)





Share your feedback

Background

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Enabler / Manifestation EIF Interoperability View: L. O. S. T.

More Info 🕄

- O Not applicable, the service does not consume data, information and knowledge
- O The service consumes data, information and knowledge only via human interfaces.
- O The service consumes data, information and knowledge mainly via human interfaces and some machine to machine interfaces
- O The service consumes data, information and knowledge via a mix of human interfaces and machine to machine interfaces
- O The service consumes data, information and knowledge mainly via machine to machine interfaces and some human interfaces
- The service consumes data, information and knowledge fully via machine to machine interfaces

* C1. To what extent does the service consume data information and knowledge via digital channels?

O No answer

* C2. To what extent does the service reuse or self-produce the consumed services?

Enabler / Manifestation EIF Interoperability View: L. O. S. T.

More Info 🕤

- Not applicable, the service does not consume data, information and knowledge from other services
- O The service does not reuse any relevant services, although they are available for reuse
- O The service self-produces most of the consumed services, while relevant services are available for reuse by the service
- O The service reuses a selection of the consumed services
- O The service reuses most of the consumed services
- O The service reuses all of the consumed services
- O No answer

European Commission

From the IMM to the online IMAPS survey

Service Identification

Scopes the digital public service e.g., service outcome, service owner, administrative level, etc.

Service Delivery

Focuses focuses on the delivery aspects of the digital public service

MM

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Service Identification Focuses focuses on the delivery aspects of the digital public service

Service Delivery

Service Consumption

Focuses on the reusable machine-to-machine services from other public administrations and businesses

C1 C2 C5.1 C5.2 C7 C2 C3 C1 C1 C4

Focuses on the reusable machine-to-machine services from other public administrations and businesses

Service Consumption

Service Management

Focuses on the processes related to service interactions with the external domain e.g., SLAs, data policies, etc.

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Service Management



IMAPS survey: Service Management

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emains the sol	e responsibility of t		ager. The use of EU	Survey service does not imply a	

Service Management (B)





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Useful links

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* B1. To what extent does the service apply a data and metadata management process?

Enabler / Manifestation EIF Interoperability View: L. O. S. T.

More Info 😌

- O The service does not apply any data or metadata management processes
- O The service applies custom data or metadata management processes that are compliant to well known data management maturity models (e.g. DCAM, CMMI Data Management Maturity Model, IBM Data Governance Council Maturity model, Stanford Data Governance Maturity Model) without having full level model maturity
- O The digital public service applies custom data or metadata management processes that are compliant to well known data management maturity models (e.g. DCAM, CMMI Data Management Maturity Model, IBM Data Governance Council Maturity model, Stanford Data Governance Maturity Model) with full level model maturity
- No answer

* B2. To what extent does the service address the following cloud interoperability aspects for data processing in accordance with the Data Act Regulation?

More Info 🖯

- Transport interoperability
 Syntactic interoperability
 Semantic data interoperability
 Behavioural interoperability
 Policy interoperability
 Data syntactic portability
 Data semantic portability
 Data policy portability
 Application syntactic portability
 Application metadata portability
 Application behaviour portability
 Application policy portability
- No answer/Not applicable



From the IMM to the online IMAPS survey

Service Identification

Scopes the digital public service e.g., service outcome, service owner, administrative level, etc.

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outcome, service owner,

administrative level, etc.

Identification

service e.g., service

Service

Service Delivery

Focuses focuses on the delivery aspects of the digital public service

Service Consumption

Focuses on the reusable machine-tomachine services from other public administrations and businesses

Focuses focuses on the
delivery aspects of the
digital public serviceFocuses on the
machine service

Service Service Delivery Cor

Focuses on the reusable machine-tomachine services from other public administrations and businesses

Service Consumption

Service Management

Focuses on the processes related to service interactions with the external domain e.g., SLAs, data policies, etc.

B4	B6	B7	B8
D5	D1	D2	D8

Focuses on the processes related to service interactions with the external domain e.g., SLAs, data policies, etc.

Service Management



IMAPS survey: Rating page

APS	backup on your local computer (disable if you are using a public/shared c	IMAPS
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		Languages
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	Service Delivery Service Consumption	Useful links
Service Management Rating		ISA Product License v1.4 Introduction to IMAPS
		IMAPS in practice
Rating		Share your feedback
		Background
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ou can share your feedback here!		Contact

*Only if you are already involved in a knowledge transfer session, you can share your experience here!

Contact:

For any general or technical questions, please send an email to DIGIT-IMAPS@ec.europa.eu.

Thank you for taking the IMAPS questionnaire.



Contact Form



Report abuse



USER JOURNEY Interoperability Maturity Tools (IMTs)

An indicative illustration of how to build interoperable digital public services

Pablo is a **Public Administration Officer** responsible for a digital public service's portal. Pablo is puzzled over the digital public service's interoperability. The first challenge that Pablo needs to anticipate is the **format of the data exchanged** with other services (behavioural aspect). Pablo also wonders about any further **documentation** that could be produced for the best **support software reuse** (structural aspect), as well as the **conditions required to regulate peer-to-peer interactions** for information exchange (governance aspect). **The The Covernance Covernan**

how Pablo discovers through a LinkedIn post the INTEROPERABILITY MATURITY TOOLS which are in line with the European Interoperability Framework (EIF).



who

why

01

Pablo decides to assess the behavioural, structural and governance interoperability maturity of the digital public service across all interoperability levels (legal, organisational, semantic, technical) to:

- identify any *interoperability gaps* that are not yet considered; and
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Start the assessment for the: • Behavioural interoperability with IMAPS (Interoperability Maturity Assessment of a Public Service) • Structural interoperability with SIQAT (Structural Interoperability Quick Assessment Toolkit) • Governance interoperability With GIQAT (Governance Interoperability Quick Assessment Toolkit)

Pablo realised that the Interoperability Maturity Tools are:

- applicable to any digital public services at all levels of government;
- user-friendly online questionnaires;
- time saving and cost-efficient in interoperability tests;

The IMTs team provides Pablo with continuous

support of his choice, at all stages of the

Knowledge transfer sessions;

• compatible with the EIF principles.

02

03

STEP 02: HOW TO START? THE INTEROPERABILITY MATURITY TOOLS

STEP 03: THE IMTs TEAM

assessments process through:

HANDS-ON SUPPORT

User quides;

E-learninas.

Pablo implements the recommendations to the digital public service to *bring its interoperability maturity to the next level.*

He regularly checked with the IMTs team for advice during the implementation of updates.

STEP 05: RECOMMENDATIONS THE IMPLEMENTATION

05

04



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STEP 04: REPORTS & RECOMMENDATIONS STRUCTURE & REPORT

Pablo receives a report that includes an interoperability maturity score and a set of recommendations, at the end of each survey, for all questions.

These recommendations propose good practices, guidelines and specific examples.

Some recommendations can trigger the need for further assessment in terms of the **legal, organisational, semantic and technical** behavioural interoperability. STEP 06: HOW WAS THE JOURNEY? SHARE YOUR EXPERIENCE

06

Pablo shared with his network the news about the IMTs experience, and the earned value brought to the organisation! A success story was published with the IMTs team support via the channels of the Digital Europe Programme (DEP) community.



IMAPS Results report and interoperability score

IMAPS - Results

Thank you for completing the survey.

Your interoperability maturity levels of the Service Delivery, Service Consumption and Service Management of your Public Service, respectively, depend on the scores you achieved in each of these sections of the survey. Please see the survey score conversion table below for guidance.

The recommendations for your public service are displayed under each question and response provided.

Disclaimer

The information and views in this results report do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the information included in this document. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for any postprocessing of the results produced in the present report.

Survey Score Conversion Table

	Maturity Level				
	1	2	3	4	5
Service delivery (D)	0-1000	1001-2000	2001-3000	3001-4000	4001-5000
Service consumption (C)	0-400	401-800	801-1200	1201-1600	1601-2000
Service management (B)	0-600	601-1200	1201-1800	1801-2400	2401-3000

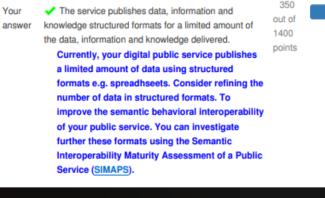
LEVEL 01	AD HOC	${\tt Poor Interoperability-the digital public service cannot be considered interoperable}$
LEVEL 02	OPPORTUNISTIC	Fair Interoperability – the digital public service implements some elements of interoperability best practices
LEVEL 03	ESSENTIAL	Essential Interoperability – the digital public service implements the essential best practices for interoperability
LEVEL 04	SUSTAINABLE	Good Interoperability – all relevant interoperability best practices are implemented by the digital public service
LEVEL 05	SEAMLESS	$\label{eq:linear} Interoperability \ \ Leading \ \ Practice - the \ \ digital \ public \ service \ is \ a \ leading \ interoperability \ practice \ \ example \ for \ others$



Service Delivery (D)

Score for this Section: 1298/5000

D2. To what extent does the service publish open data in a structured format? Enabler / Manifestation EIF Interoperability View: L. O. S. T. More Info



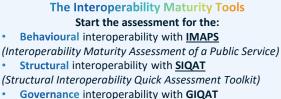
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(Governance Interoperability Quick Assessment Toolkit)

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STEP 01: THE BEGINNING OF THE JOURNEY FAMILIARISATION WITH THE CONCEPT

who

why

01

Pablo decides to assess the behavioural, structural and governance interoperability maturity of the digital public service across all interoperability levels (legal, organisational, semantic, technical) to:

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STEP 03: THE IMTs TEAM HANDS-ON SUPPORT

The IMTs team provides Pablo with **continuous support of his choice,** at all stages of the assessments process through:

- Knowledge transfer sessions;
- User guides;

02

03

• <u>E-learnings</u>.

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(i) Click on the <u>underlined</u> words in the text to learn more online

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Share your comments and feedback

What are your thoughts about the Interoperability Maturity Tools?

How do you think IMTs can promote the **digital transformation** within your organisation?

Would you **consider adopting the Interoperability Maturity Tools** in your organisation?

Take your phone and visit https://www.slido.com/

Use the code #3622382









What are your thoughts about the Interoperability Maturity Tools?

Super!!!	Well designed, easy to fill in the questionnaire	I liked the tool a lot, it is very complete.
		are your thoughts about the Interoperability Maturity Tools? honymous Yell designed, easy to fill in the questionnaire honymous iked the tool a lot, it is very complete.
administrators. Is not it?	Join at do.com	nonymous uper!!! nonymous would suggest that this tool is just for public administrators. Is ecause a layman user don't know the LOST properties well.

The survey is very well designed, user-centric and contains all information one needs to perform assessment.







How do you think IMTs can promote the digital transformation within your organisation?

Define the areas that



How do you think IMTs can promote the digital transformation within your organisation?

Anonymous

Define the areas that should be improved

Anonymous

Maybe it can determine the desired state of an organization, identify the goals it wants to achieve, and communicate this vision to all stakeholder

Anonymous

It can definitely give a response on status que, so that specific organizat know where to start, what is missing, what needs to be done differently

Anonymous

Highlighting the areas of improvement in regard with operability

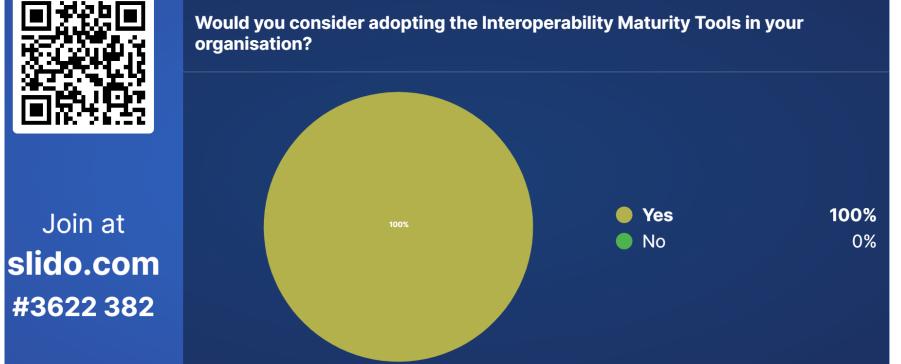
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Would you consider adopting the Interoperability Maturity Tools in your organisation?



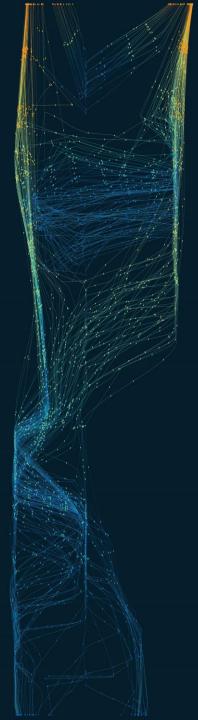




Closing Remarks

Reflections and next steps

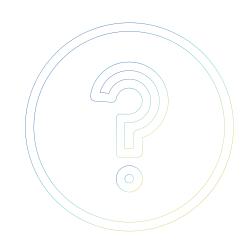
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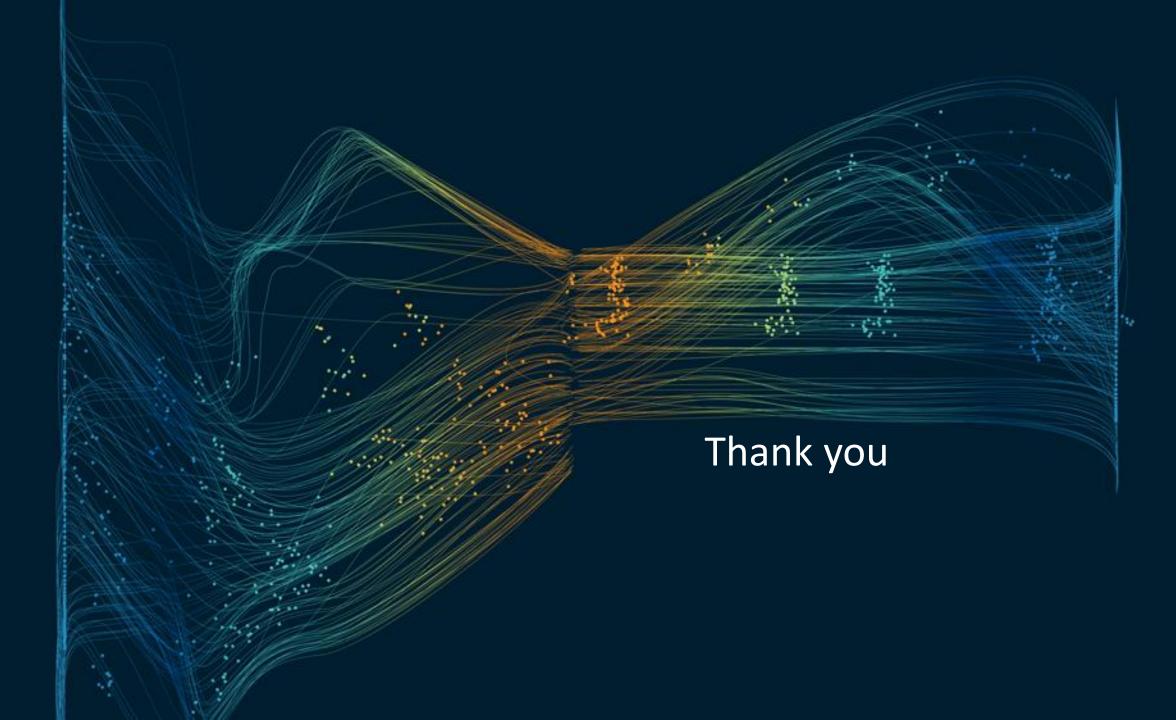
Next Steps

Do you have any questions?

Reach out to us: <u>Ine.VRANCKX@ext.ec.europa.eu</u> <u>DIGIT-IMAPS@ec.europa.eu</u>









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Stay in touch



<u>(@InteroperableEU) / Twitter</u>

Interoperable Europe - YouTube

Interoperable Europe | LinkedIn



DIGIT-INTEROPERABILITY@ec.europa.eu





How to get started?

- IMTs community on Joinup: <u>https://joinup.ec.europa.eu/collection/interoperability-maturity-tools-imts-digital-public-services/about</u>
- IMAPS online survey: <u>https://ec.europa.eu/eusurvey/runner/IMAPS_v_2_2_0</u>
- IMAPS action on Interoperable Europe page on Joinup website: <u>https://joinup.ec.europa.eu/collection/interoperable-europe/imaps</u>
- LIMAPS online survey: <u>https://ec.europa.eu/eusurvey/runner/LIMAPS_v_1_2_0</u>
- LIMAPS page on Joinup: <u>https://joinup.ec.europa.eu/collection/imaps-interoperability-maturity-assessment-public-service/solution/limaps/about</u>
- OIMAPS online survey: <u>https://ec.europa.eu/eusurvey/runner/OIMAPS_v_1_2_0</u>
- OIMAPS page on Joinup : <u>https://joinup.ec.europa.eu/collection/imaps-interoperability-maturity-assessment-public-service/solution/oimaps</u>
- SIMAPS online survey: <u>https://ec.europa.eu/eusurvey/runner/SIMAPS_v_1_3_0</u>
- SIMAPS page on Joinup : <u>https://joinup.ec.europa.eu/collection/imaps-interoperability-maturity-assessment-public-service/solution/simaps</u>





- TIMAPS online survey: <u>https://ec.europa.eu/eusurvey/runner/TIMAPS_v_1_2_0</u>
- TIMAPS page on Joinup : <u>https://joinup.ec.europa.eu/collection/imaps-interoperability-maturity-assessment-public-service/solution/timaps</u>
- GIQAT online survey: <u>https://ec.europa.eu/eusurvey/runner/GIQAT_v_2_1_0</u>
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