



17 JANUARY  
2022

10:00-12:00 CET

# Knowledge Sharing Session: SDG Search Service model

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The Catalogue of Services Action

interoperable  
europe

# Agenda

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**Introduction**

15'



**Member States status**

35'



**Lessons Learned**

25'



**Testing**

20'



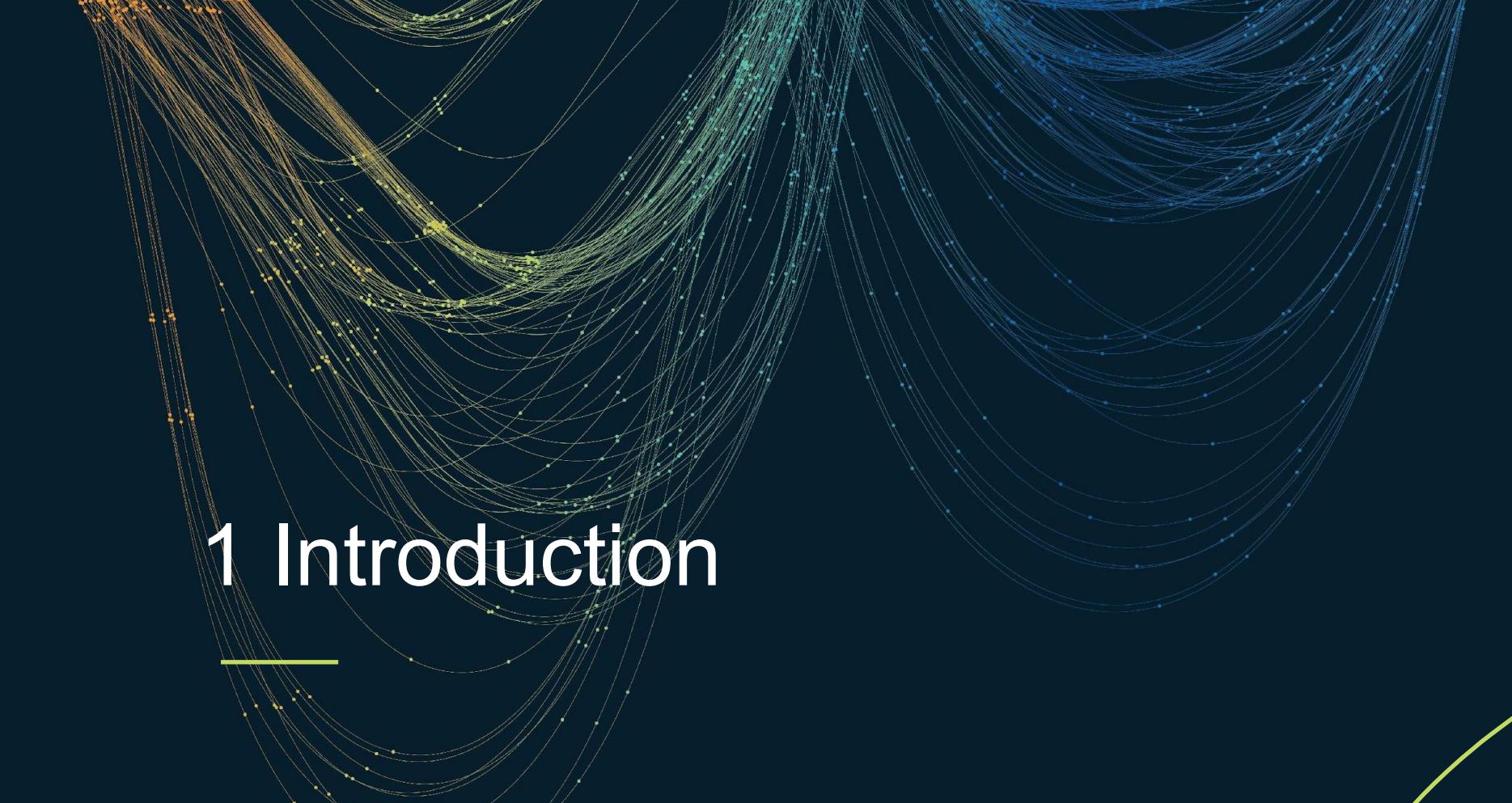
**NLP**

15'



**Conclusion**

10'



# 1 Introduction

# Background of the SDG Search Service model



## Foundation

The model is based on the [current metadata](#) available in the Repository of Links and reuses elements of CPSV-AP



## Information capture

The model captures core information from articles 9, 10 and 11 of the [SDGR](#)



## The need

The model was created to:

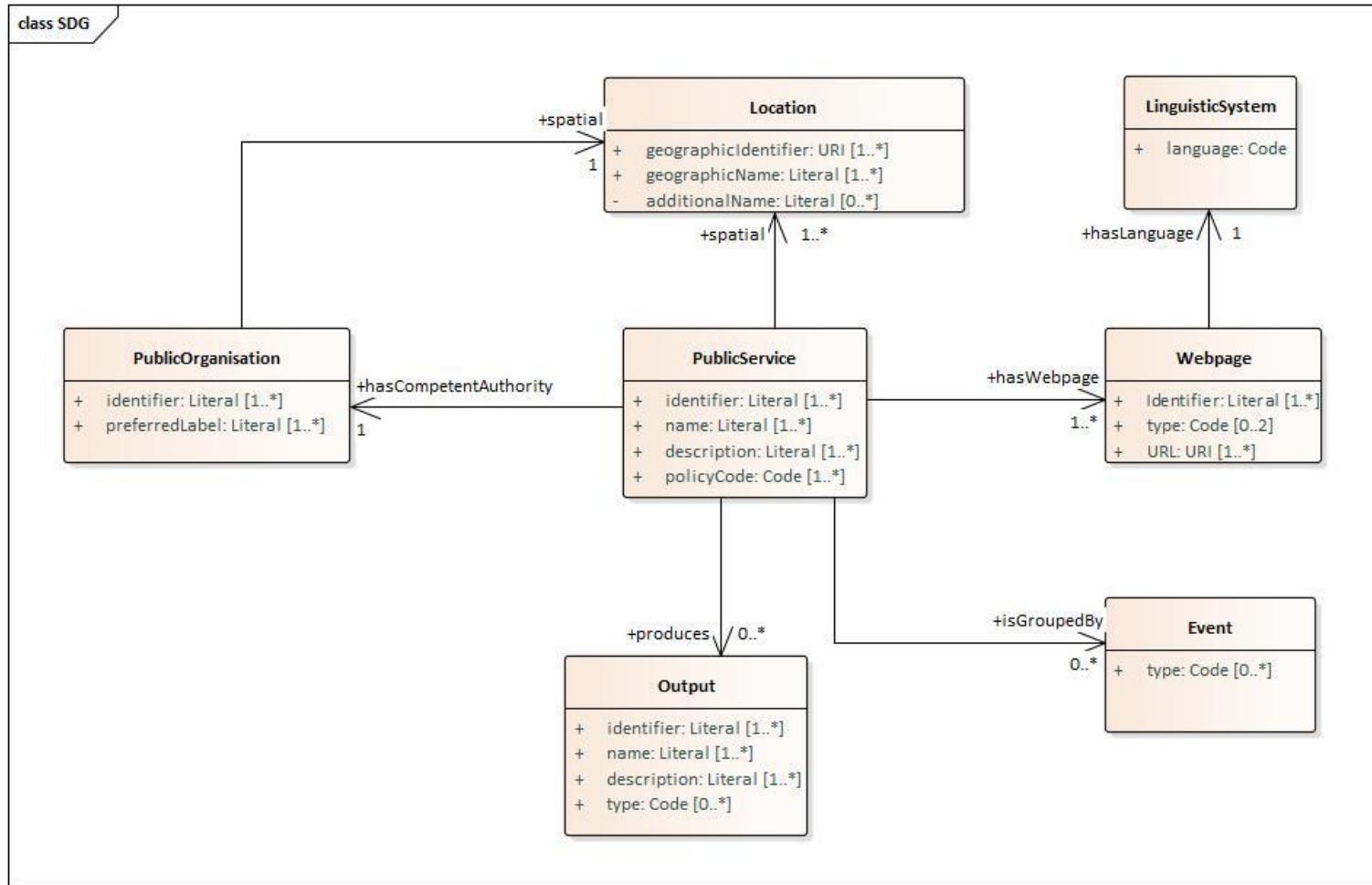
- improve the quality of search results on the YourEurope portal
- streamline the provision and maintenance of links



## Process

The model was created through the facilitation of [4 webinars](#) with 10+ Member States

# SDG Search Service model v1.00



<https://catalogue-of-services-isa.github.io/SDG-search-service-model/releases/v1.00/>

# Objectives of the model and the pilot

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## SDG Search Service model

- Facilitate information exchange according to the SDG
- Improve interoperability across the EU



## Pilot

- See how easily new metadata can be collected and added to the YourEurope portal
- Assess improved findability and searchability of public service information on the YourEurope portal by enriching information

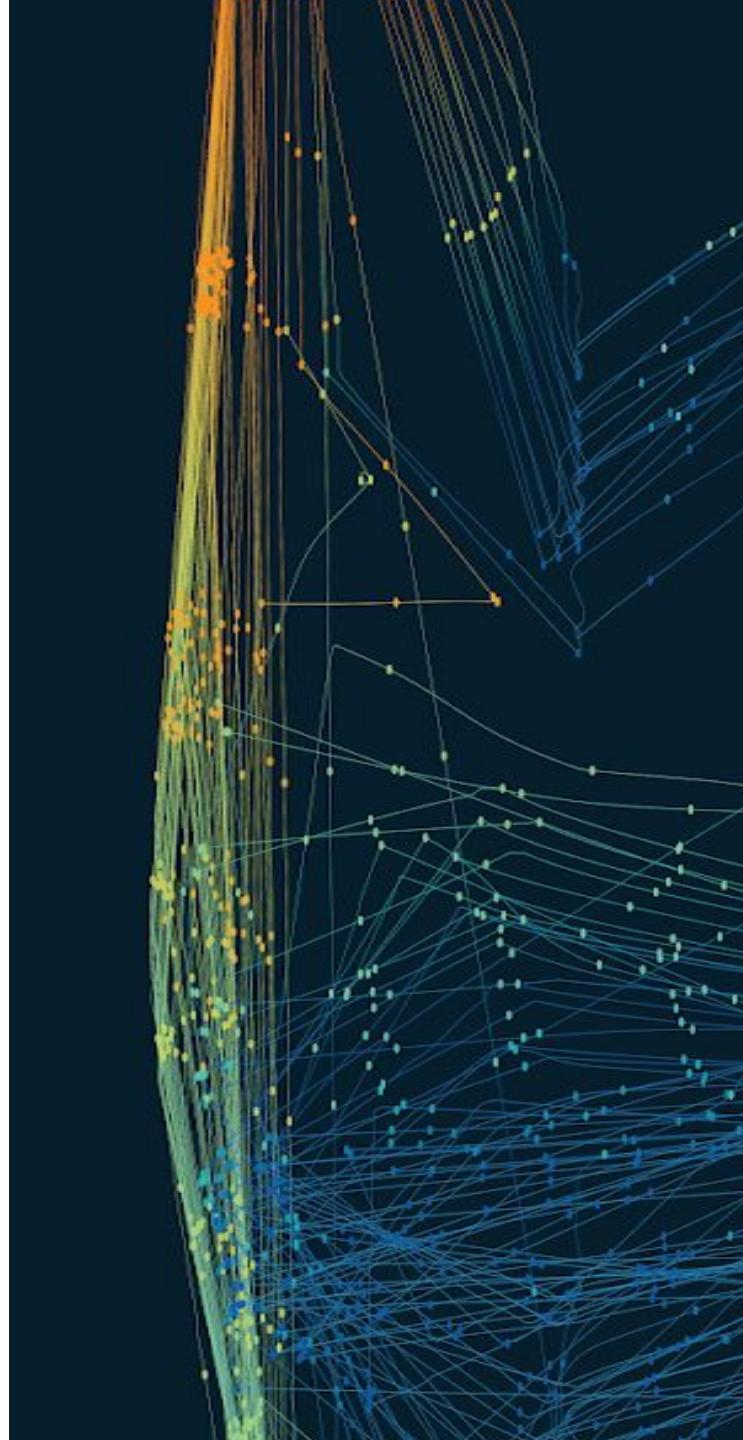
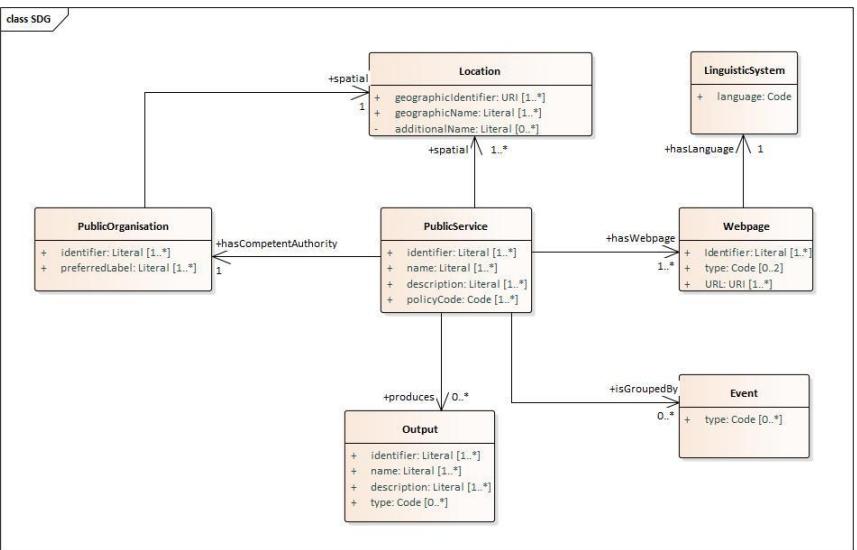


# Practical steps for the pilot

1

## Conceptual groundwork

Defining the SDG Search Service model on a conceptual level  
(completed in a previous phase)



## Creation of mapping sheets for model mapping

2

Mapping between the SDG model and your data model available.

|        | Usage  | Mandatory | Codelist  | Identifier  | Expected range/datatype | Mapping relation | Target Vocabulary                   | Data model         | Target Identifier | Description | Mapping comment   |
|--------|--|-----------|---|---|-------------------------|------------------|-------------------------------------|--------------------|-------------------|-------------|---|
| olic   | /  | no        | /   | <a href="http://data.europa.eu/m8g/isGroupedBy">http://data.europa.eu/m8g/isGroupedBy</a>                 | Event                   |                  |                                     |                    |                   |             | Can be derived from the category indicated  |
| public | The Public Organisation reuses Core Public Organisation Vocabulary ( <a href="https://semieu.github.io/CP OV/rs/releases/2.00/#Public%20">https://semieu.github.io/CP OV/rs/releases/2.00/#Public%20</a> ) | yes       | /   | <a href="http://data.europa.eu/m8g/PublicOrganisatio n">http://data.europa.eu/m8g/PublicOrganisatio n</a> | /                       | Near Match       | gov.gr.schemas.v1.sdg._organization | SDG - Organization |                   |             |   |
|        | /  |           | /   | <a href="http://purl.org/dc/terms/identifier">http://purl.org/dc/terms/identifier</a>                     | Literal                 | Near Match       |                                     |                    | id                |             |   |
|        | As defined in the ORG Ontology, a preferred label is used to provide the primary, legally recognised name of the organization. An organization may only have   | yes       | /   | <a href="http://www.w3.org/2004/02/skos/core#prefLabel">http://www.w3.org/2004/02/skos/core#prefLabel</a> | Literal                 | Exact Match      |                                     |                    | title             |             |   |
| sation | /  | yes       | /   | <a href="http://purl.org/dc/terms/spatial">http://purl.org/dc/terms/spatial</a>                           | Location                | No Match         |                                     |                    | -                 |             | not available - Currently all organisations included are have nationwide competency |
| on the | /  | yes       | /   | <a href="http://purl.org/dc/terms/LinguisticSystem">http://purl.org/dc/terms/LinguisticSystem</a>         | /                       |                  |                                     |                    |                   |             |   |
|        | The linguistic system will be defined by the ISO 639-1 code, e.g. 'en' for English. The Publications Office proposes a controlled vocabulary for languages fully compliant with ISA 639-1 (alpha 2):       | yes       | <a href="#">OP's controlled vocabulary (ISO639-1)</a> | <a href="http://purl.org/dc/terms/language">http://purl.org/dc/terms/language</a>                         | Code                    | No Match         |                                     |                    |                   |             | the gov.gr.schemas.v1.sdg.service-page supports bilingual fields                    |

3

## Translation to metadata tags for the Repository of Links

Translation to a structure which can be reused for tagging and within the Repository of Links.

- SDG.PublicService.URI
- SDG.PublicService.identifier
- SDG.PublicService.name
- SDG.PublicService.description
- SDG.PublicOrganisation.URI
- SDG.PublicOrganisation.identifier
- SDG.PublicOrganisation.preferredLabel
- SDG.PublicService.Location.additionalName
- SDG.PublicOrganisation.Location.administrativeLocation
- SDG.PublicOrganisation.Location.additionalName



European  
Commission



## 4

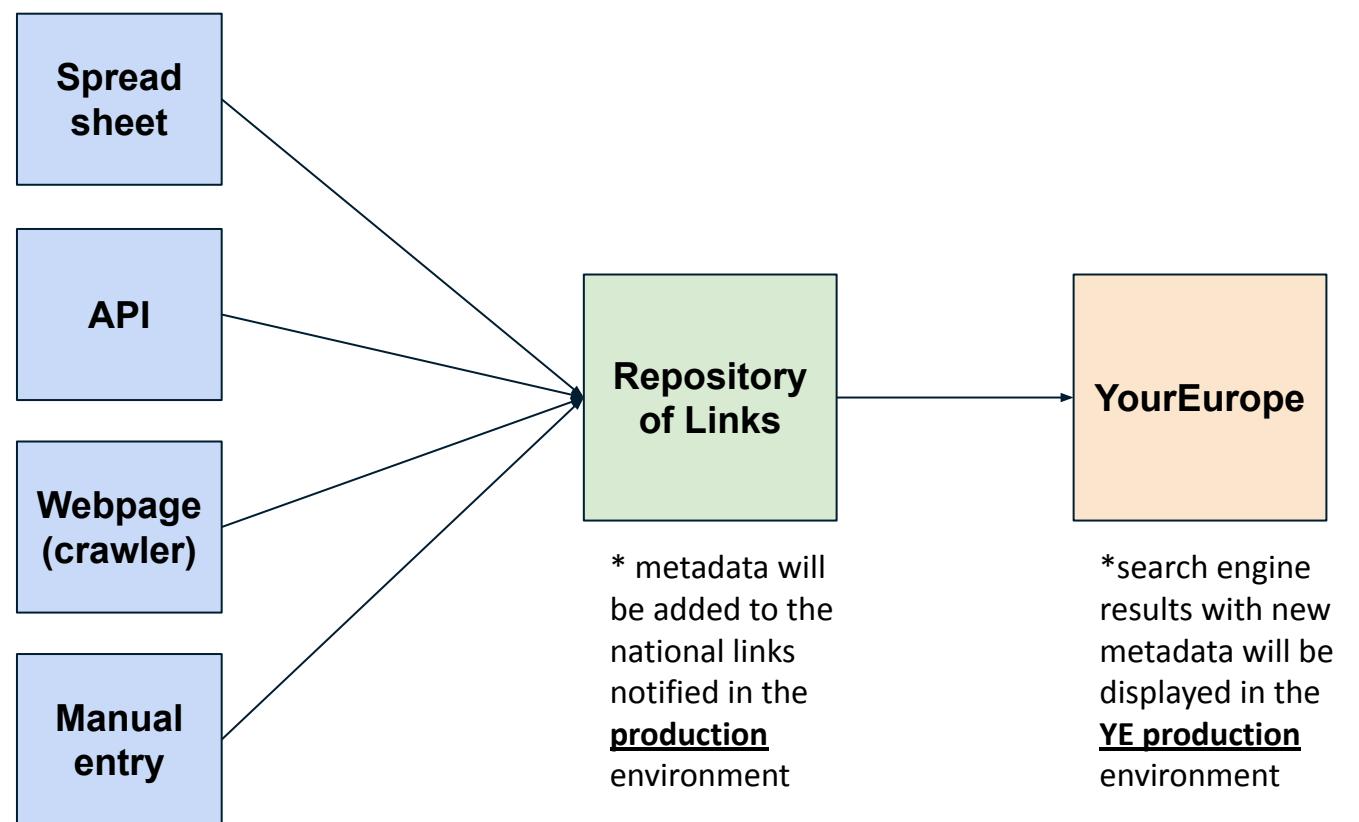
# Extension of uploading methods for the Repository of Links *(development in progress)*

Updating the currently available methods for providing information with the additional metadata tags:

- Excel sheet
- API to the repository
- Crawler through HTML tagging
- Manual entry into the repository UI



# Implementation flow



5

## Testing

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Proposed testing scenarios and Member State involvement:

→ **Has findability of public services on the YourEurope portal improved?**

Feedback and iteration of the SDG Search Service Model (back to step 1)



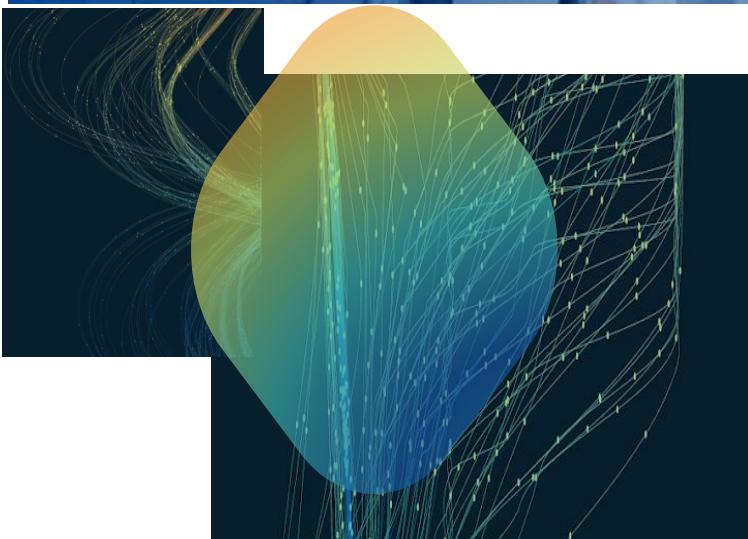
# 2 Member States Status



# Greece

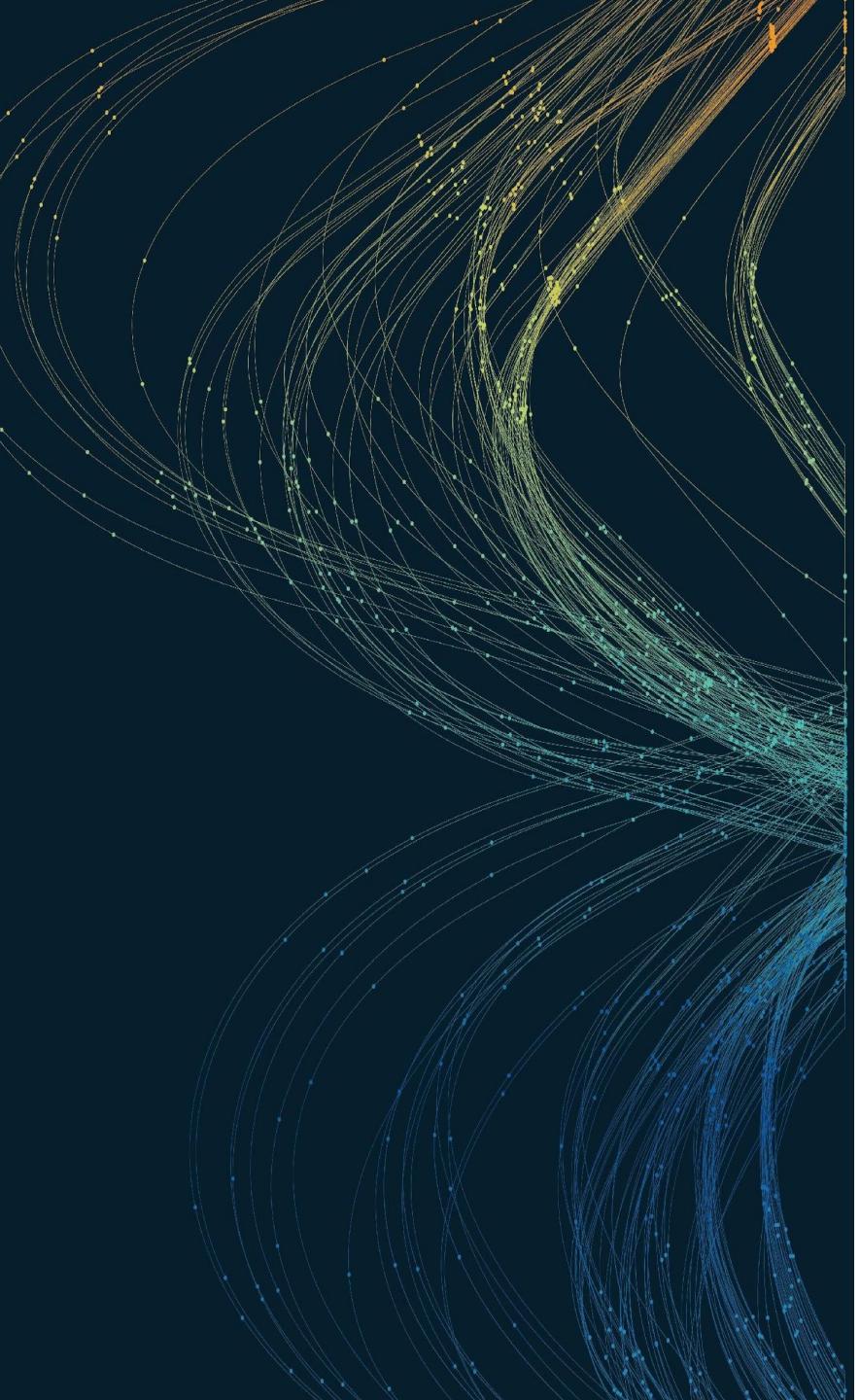
*Approach and lessons learned.*

The screenshot shows the header of a webpage titled "Your Guide to Greece". The header includes the European Union flag, the "Your Europe" logo, the "govgr" logo, language options for "EL" and "EN", and a navigation menu with items like "Home", "About", "SDG", "Contact", and "Logout". Below the header is a banner image showing two business people shaking hands in an office setting with a cityscape view. The text "Your Guide to Greece" is overlaid on the left side of the banner.



The Greek SDG Team

<mailto:govgr.development@mindigital.gr>



## Agenda

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- Introduce the Greek Registry of Procedures and the SDG Information portal.
- Showcase the approach for the Pilot step by step.
- Lay out the next steps.
- Brainstorming about leveraging this Pilot.

# Current national portals for public services information and procedures



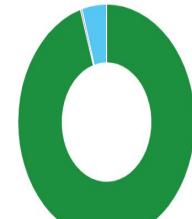
A central registry for Administrative procedures



Welcome to "National Registry of Public Services", the official register of procedures of the Greek Public Sector.

"National Registry of Public Services" is directed at individuals, professionals as well as public servants who need to find useful information, such as supporting documents, steps, time and cost of implementation, on any administrative procedure they wish.

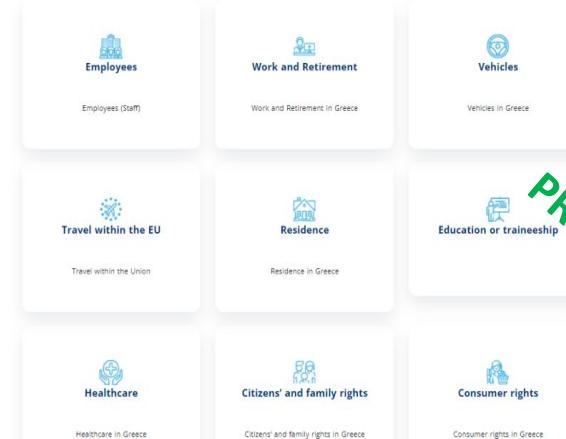
You can find procedures of your choice by simply using the **search bar** at the top-right corner of this page, or alternatively through navigating in the **register's categories** stated below.



**UNDER  
DEVELOPMENT**



A central portal for SDG information content



**PRODUCTION**

\* hosted in the national single digital gateway [gov.gr](http://gov.gr)

# National Registry of Administrative procedures



## National Registry of Administrative Procedures

Welcome to "National Registry of Public Services", the official register of procedures of the Greek Public Sector.

"National Registry of Public Services" is directed at individuals, professionals as well as public servants who need to find legal information, such as supporting documents, e.g. time and cost of implementation, on any administrative procedure they wish.

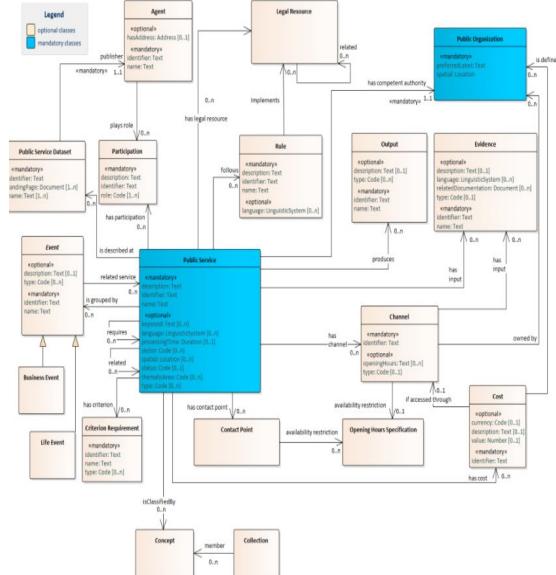
You can find procedures of your choice by simply using the **search bar** at the top-right corner of this page, or alternatively through navigating in the **register's categories** stated below.

**319 Published**  
Procedures that any interested person may seek in the Registry based on type or on life events.

**0 Under Publication**



## Custom extension of CPSV-AP to describe procedures



SDG procedures are tagged with SDG metadata



SDG procedures links are notified in the PROD *Repository of Links* using the crawler

# National SDG portal for information (1)



National portal for SDG Information



Your Guide to Greece > Residence > Temporary or permanent move

Temporary or permanent move

Last update: 17/02/2021

## Issuing a document of permanent residence

Competent department for issuing a document of permanent residence to the citizens of EU/EEA countries and Swiss Confederation and what documentation is needed

Competent Departments are the Departments of Aliens for the regions of Attica and Thessaloniki and Security Sub-directorates , Safety Departments and Police Stations handling issues of aliens for the rest of Greece.

Documentation:

- (a) Application, which is issued by the competent Department ;
- (b) Valid identity card or passport;
- (c) Previous Registration Certificate;
- (d) Document(s) certifying the 5-year continuous residence in Greece and
- (e) Three (3) color photos, 4x4 cm .

The document of permanent residence is free of charge and has no expiry date.

[Article 16 of Greek P residential Decree 106/2007 / 14.06.2007 (Government Gazette 135 A/ 21.06.2007), as it has been amended by Article 42 of Greek Law 4071/2012 (Government Gazette 85 A / 11.04.2012)]

Naturalisation of nationals from another Member State

Residence cards for Union citizens and their family members

Participating in municipal elections and elections to the European Parliament

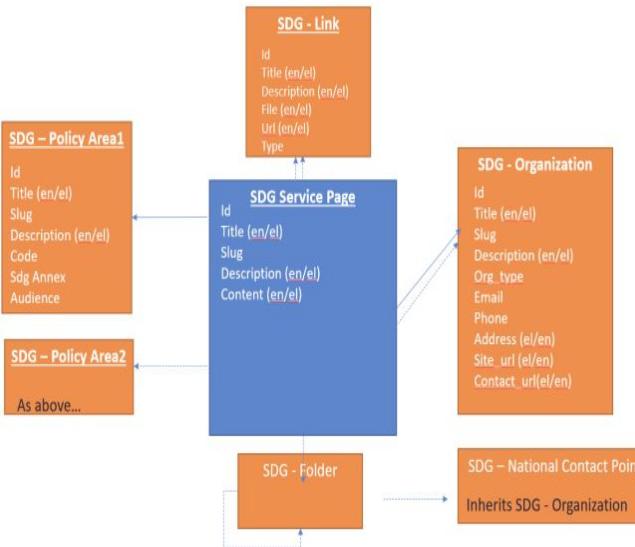
Purchasing and selling of immovable property

### Responsible authorities for content

HELENIC POLICE HEADQUARTERS



Custom data model describing Annex I information



Use of content management system (Django) to create /edit content. SDG metadata are automatically inserted in the html.

\*In the future the information will be retrieved from the Procedures Portal

SDG information links are notified in the YourEurope Repository of Links using the crawler

# National SDG portal for information (2)

## 1. Custom CMS tool

The screenshot shows a custom CMS tool interface with three main sections:

- Title:** Tίτλος: Issuing a document of permanent residence (highlighted by a red oval).
- Description:** Στιγμιότυπο: Competent department for issuing documents (highlighted by a blue oval).
- Content:** A rich text editor and a list of documentation requirements (highlighted by a green oval). The content area includes:
  - Competent Departments are the Departments of Aliens for the regions of Attica and Thessaloniki and Security Sub-directorates, Safety Departments and Police Stations handling issues of aliens for the rest of Greece.
  - Documentation:
    - (a) Application, which is issued by the competent Department;
    - (b) Valid identity card or passport;
    - (c) Previous Registration Certificate;
    - (d) Document(s) certifying the 5-year continuous residence in Greece and
    - (e) Three (3) color photos, 4x4 cm.
  - The document of permanent residence is free of charge and has no expiry date.

## 2. User Interface

The user interface for "Issuing a document of permanent residence" includes:

- A large image of the Acropolis.
- Text: Your Guide to Greece > Residence > Temporary or permanent move.
- Last update: 17/02/2021.
- Temporary or permanent move** (button highlighted by a red oval).
- Text: Rules in the case of death - repatriation of remains.
- Text: Naturalisation of nationals from another Member State.
- Text: Documentation:
  - (a) Application, which is issued by the competent Department;
  - (b) Valid identity card or passport;
  - (c) Previous Registration Certificate;
  - (d) Document(s) certifying the 5-year continuous residence in Greece and
  - (e) Three (3) color photos, 4x4 cm.
- Text: The document of permanent residence is free of charge and has no expiry date.
- Text: Article 16 of Greek P residential Decree 106/2007 / 14.06.2007 (Government Gazette 135 A / 21.06.2007), as it has been amended by Article 42 of Greek Law 4071/2012 (Government Gazette 85 A / 11.04.2012).
- Responsible authorities for content** (highlighted by a red oval): HELLENIC POLICE HEADQUARTERS.

## 3. SDG metadata tagged in html

The screenshot shows a snippet of HTML code with yellow highlights around specific tags, representing SDG metadata:

```
<neta data-n-head="ssn" data-hid="twitter:title" property="twitter:title" content="Your Guide to Greece - Gov.gr">
<neta data-n-head="ssn" data-hid="og:description" property="og:description" content="Find out more about the procedure for issuing a permanent residence document in Greece.">
<neta data-n-head="ssn" data-hid="twitter:description" property="twitter:description" content="Find out more about the procedure for issuing a permanent residence document in Greece.">
<neta data-n-head="ssn" data-hid="og:url" property="og:url" content="https://www.gov.gr/en/sdg/residence/temporary-permanent-move">
<neta data-n-head="ssn" data-hid="twitter:url" property="twitter:url" content="https://www.gov.gr/en/sdg/residence/temporary-permanent-move">

<neta data-n-head="ssn" data-hid="sdg-tag" name="sdg-tag" content="sdg">
<neta data-n-head="ssn" data-hid="DC_IS03166" name="DC.IS03166" content="GR">
<neta data-n-head="ssn" data-hid="DC.Location" name="DC.Location" content="EL">
<neta data-n-head="ssn" data-hid="DC.Service" name="DC.Service" content="Information">
<neta data-n-head="ssn" data-hid="policy-code" name="policy-code" content="D1,D4">
<neta data-n-head="ssn" data-hid="DC.Policy" name="DC.Policy" content="Temporary or permanent move;Residence cards">

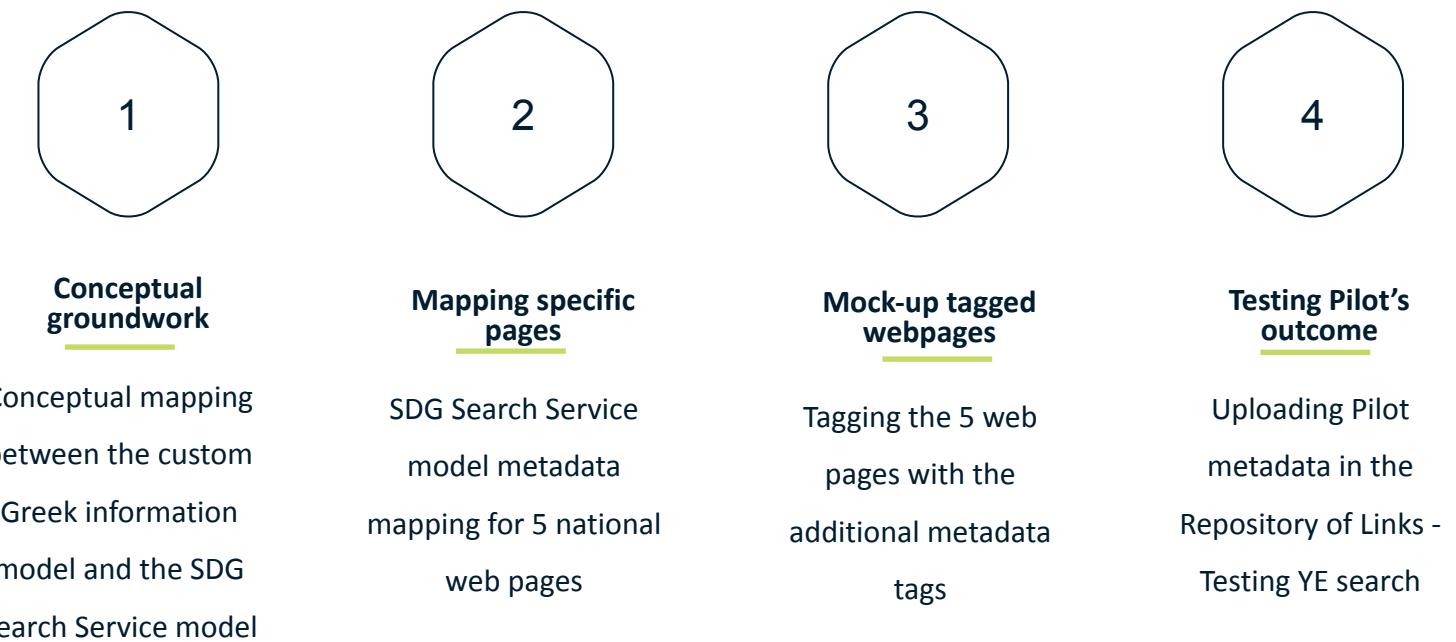
<neta data-n-head="ssn" data-hid="i18n-og" property="og:locale" content="en">
<neta data-n-head="ssn" data-hid="i18n-og-alternate" property="og:locale:alternate" content="el">
```

## 4. Crawler updates the repository of links

The crawler interface shows a list of links:

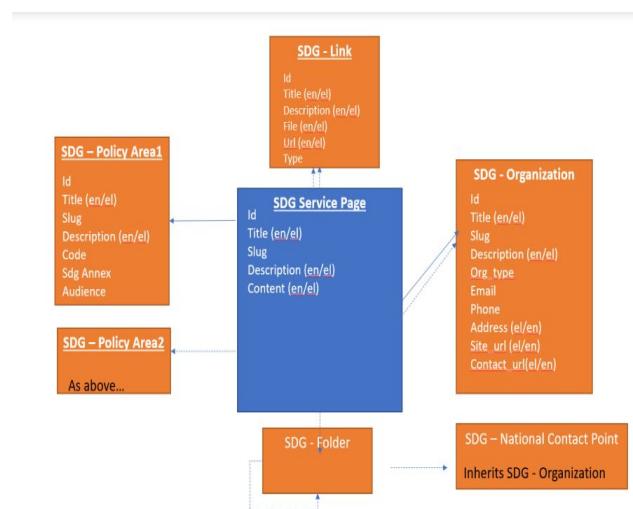
| URL   | Web Page Language | Categories | Type     | Notification Type | Actions |
|---|-------------------|------------|----------|-------------------|---------|
| https://www.gov.gr/en/sdg/residence/temporary-permanent-move#competent-department-for-issuing-document-of-permanent-residence | en                | D01        | internal | EMAIL             |         |

# Approach for the pilot



1

## Conceptual groundwork



# Output: Mapping our classes and attributes to the SDG Search Service model

| SDG Search Service model | Mapping relation | Target Vocabulary Internal identifier | Data model | Target Identifier | Description | Mapping comment   |
|--------------------------|------------------|---------------------------------------|------------|-------------------|-------------|---|
| policy Code              | Exact Match      |                                       |            | sdg_category      |             | "second_sdg_category" can also be used  |
| has competent authority  | Exact Match      |                                       |            | organisations     |             |   |
| spatial                  | No Match         |                                       |            |                   |             | not available - Currently, all Public Services included are available nationwide. |
| has webpage              | No Match         |                                       |            |                   |             | Each service-page is a webpage.   |

1

## Conceptual groundwork

Output: ... and then adding the concrete metadata and naming that will be used in the implementation.



| SDG Search Service model | Target Identifier | Description | Mapping comment                        | Metadata concepts (implementation) | Does the information need to be provided for the implementation? |
|--------------------------|-------------------|-------------|--|------------------------------------|--|
| Public service           |                   |             |  | SDG.PublicService.URL              | Yes  |
| identifier               | id                |             |  | SDG.PublicService.identifier       | Yes  |
| name                     | title             |             |  | SDG.PublicService.name             | Yes  |
| description              | description       |             |  | SDG.PublicService.description      | Yes  |
| policy Code              | sdg_category      |             | "second_sdg_category" can also be used | policy-code                        | already provided   |

# Output: Mapping the Pilot metadata tags for 5 national web pages

## Metadata for Public Service

### Mapping specific pages

| SDG.PublicService.URI   | SDG.PublicService.identifier | SDG.PublicService.name                      | SDG.PublicService.description   | policy-code    |            | /                | /           | /          |
|---|------------------------------|---|---|----------------|------------|------------------|-------------|------------|
|   |                              |   |   | Public Service | identifier | name             | description | policyCode |
| <a href="https://www.gov.gr/en/sdg/work-and-retirement/equal-treatment/general/regular-leave/">https://www.gov.gr/en/sdg/work-and-retirement/equal-treatment/general/regular-leave/</a>   | informationpage_416          | Regular leave                               | Each employed person with a fixed-term or indefinite-term employment relationship is entitled to paid annual leave from the start of employment in a specific company, without the need to complete basic working time (Article 2(1) of Emergency Law No 539/1945, as amended by Article 13(1) of Law 3227/2004 and replaced by Article 1 of Law 3302/2004).                            | B7             |            | organization_43  | EL          | 1;4        |
| <a href="https://www.gov.gr/en/sdg/vehicles/acquiring-and-renewing-driving-licence/driving-license-recognition-and-validity/driving-license-validity/">https://www.gov.gr/en/sdg/vehicles/acquiring-and-renewing-driving-licence/driving-license-recognition-and-validity/driving-license-validity/</a> | informationpage_164          | Driving license validity                    | If you hold a valid driving license issued by another EU country, it is still valid in Greek territory as it stands, as long as the conditions for granting the corresponding category of Greek driving license are met.  | C2             |            | organization_31  | EL          | 2;5        |
| <a href="https://www.gov.gr/en/sdg/healthcare/public-preventive-healthcare-measures/general/child-and-adult-immunisation">https://www.gov.gr/en/sdg/healthcare/public-preventive-healthcare-measures/general/child-and-adult-immunisation</a>   | informationpage_21           | Child and adult immunisation                | Child and adult immunisation takes place in accordance with the applicable National Immunisation Programme approved by the Ministry of Health. It should be pointed out that the National Immunisation Programme is recommended and not mandatory in its implementation by the public.  | F4             |            | organization_12  | EL          | 3;6        |
| <a href="https://www.gov.gr/en/sdg/work-and-retirement/taking-up-employment/pd-u1-portable-document-u1/supporting-documents-for-issue-of-pd-ui/">https://www.gov.gr/en/sdg/work-and-retirement/taking-up-employment/pd-u1-portable-document-u1/supporting-documents-for-issue-of-pd-ui/</a>             | informationpage_447          | Supporting documents for the issue of PD UI | The required documents for issuing the PD U1  | B2;K1          |            | organization_102 | EL          | 7;8        |
|   |                              |   | When the employment contract is drawn up or during its effect, the employer and the employee may agree with an individual contract in writing, on daily or weekly or fortnightly or monthly work, for a fixed or for an indefinite period, which will be shorter than normal (part-time working). If the agreement is not drawn up in writing or has not been notified within eight (8) |                |            |                  |             |            |

2

## Output: Mapping the Pilot metadata tags for 5 national web pages



Metadata for Public Organisation

# Mapping specific pages

| SDG Public Organisation.URI                                       | SDG Public Organisation.identifier | SDG Public Organisation.preferredLabel  | /       |
|---|------------------------------------|---|---------|
| Public Organisation   | identifier                         | preferredlabel  | spatial |
| <a href="https://ypergasias.gov.gr">https://ypergasias.gov.gr</a> | organization_43                    | MINISTRY OF LABOUR AND SOCIAL AFFAIRS - Directorate of Individual Arrangements  | EL      |
| <a href="http://www.yme.gov.gr">http://www.yme.gov.gr</a>         | organization_31                    | MINISTRY OF INFRASTRUCTURE AND TRANSPORT  | EL      |
| <a href="https://www.eopyy.gov.gr/">https://www.eopyy.gov.gr/</a> | organization_12                    | NATIONAL ORGANIZATION FOR HEALTH CARE SERVICES (EOPYY) - Directorate for HELLENIC MANPOWER EMPLOYMENT ORGANIZATION - Directorate of Insurance | EL      |
| <a href="https://www.oaed.gr/">https://www.oaed.gr/</a>           | organization_102                   |   |         |

## Output: Mock-up tagged web pages

### Setting up for implementation

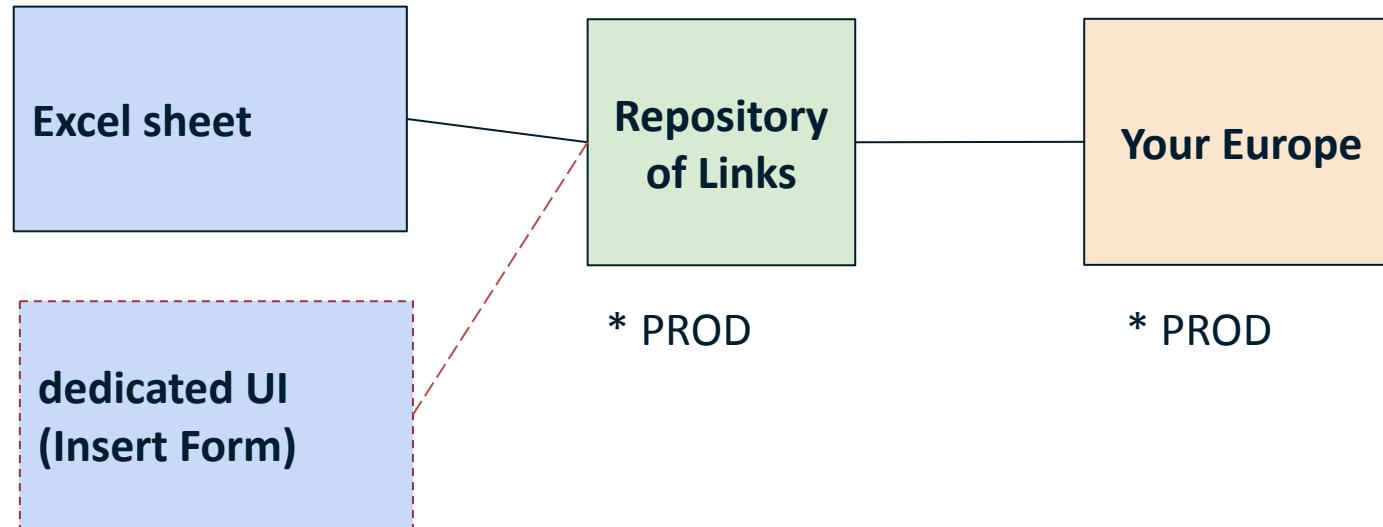
```
><meta data-n-head="ssr" data-hid="twitter:url" property="twitter:url"
content="https://www.gov.gr/en/sdg/work-and-retirement/equal-treatment/general/regular-leave/">
<meta data-n-head="ssr" data-hid="sdg-tag" name="sdg-tag" content="sdg"><meta
data-n-head="ssr" data-hid="DC.ISO3166" name="DC.ISO3166" content="enGR"><meta
data-n-head="ssr" data-hid="DC.Location" name="DC.Location" content="EL">

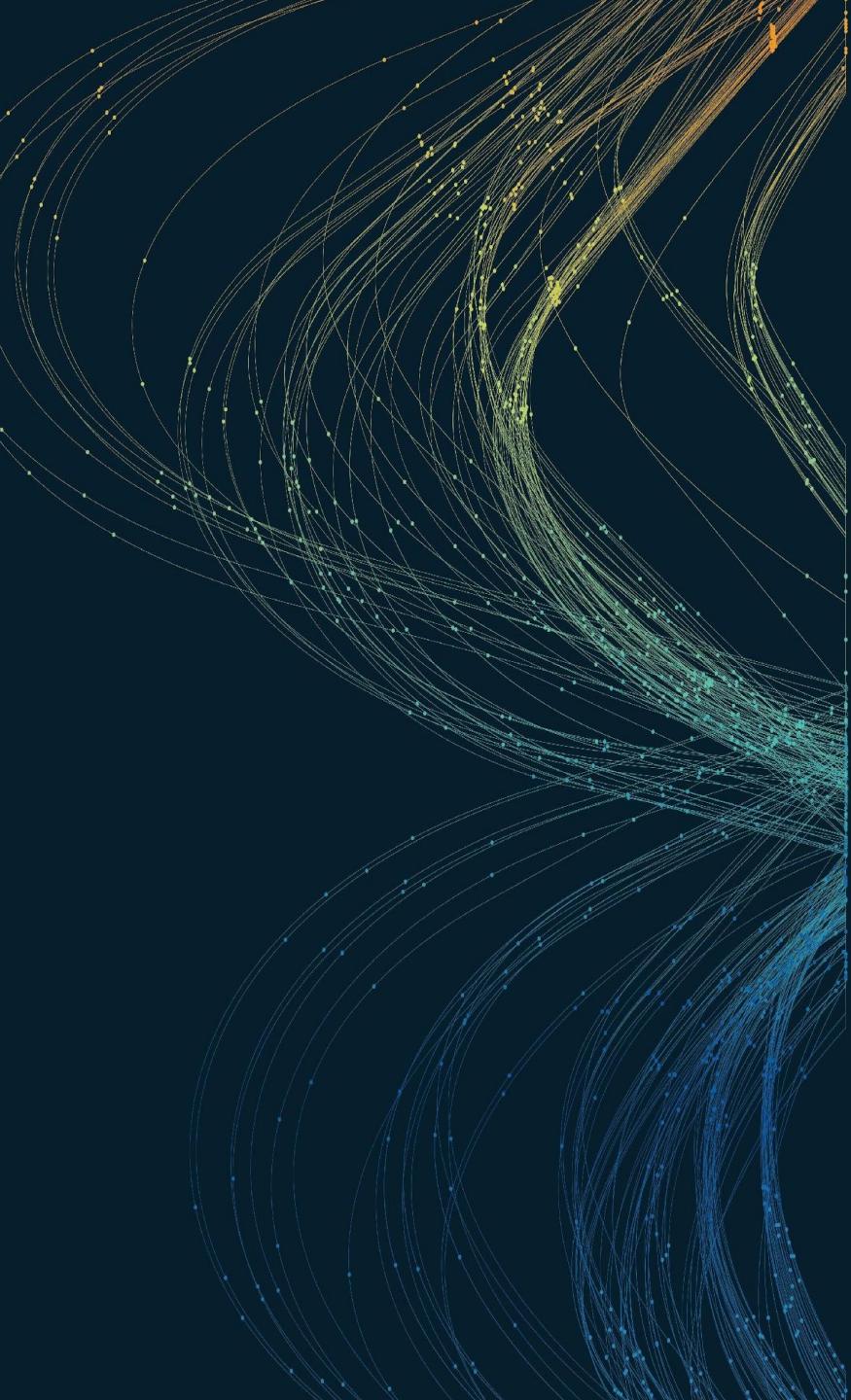
<meta name = "SDG.PublicServiceURI" content="">
<meta name = "SDG.PublicService.identifier" content ="1">
<meta name = "SDG.PublicService.name" content ="Regular Leave">
<meta name = "SDG.PublicService.description" content = "Each employed person with a
fixed-term or indefinite-term employment relationship is entitled to paid annual leave
from the start of employment in a specific company, without the need to complete basic
working time (Article&nbsp;2(1) of Emergency Law No&nbsp;539/1945, as amended by
Article&nbsp;13(1) of Law 3227/2004 and replaced by Article&nbsp;1 of Law")>
<meta name = "SDG.PublicOrganisation.URI" content ="">
<meta name = "SDG.PublicOrganisation.identifier" content ="1">
<meta name = "SDG.PublicOrganisation.preferredLabel" content = "Ministry of Labour
and Social Affairs - Directorate of Individual Arrangements">
```

4

## Output: Uploading Pilot metadata in the Repository of Links - Testing YE search

Testing Pilot's  
outcome





## Wrapping up: What did we need to provide?

- The current way (model) describing our SDG public services / pages.
- Efforts to perform the mapping, conceptual and metadata tags.
- 5-10 webpages tagged with the SDG Search Service model metadata
- Decide on the way of providing the Pilot metadata to the Repository of Links.

# Next steps

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**Testing**  
Evaluating the results of the pilot  
by performing tests in the  
YourEurope portal

**Extending the set of tagged pages**  
In the context of the NLP experiment,  
the set of tagged pages can be  
extended to facilitate training of the  
algorithm to automatically tag HTML  
pages

# Leveraging this Pilot

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**SDG Regulation deadline 12.2022 for Municipal authorities**  
provide information regarding the rules, procedures and assistance and problem-solving services within their responsibility.

*How can the Pilot serve as a tool to minimize the effort for tagging the web pages with SDG metadata?*



**Putting into practice a model which captures a single way of describing services across Europe according to the SDG**

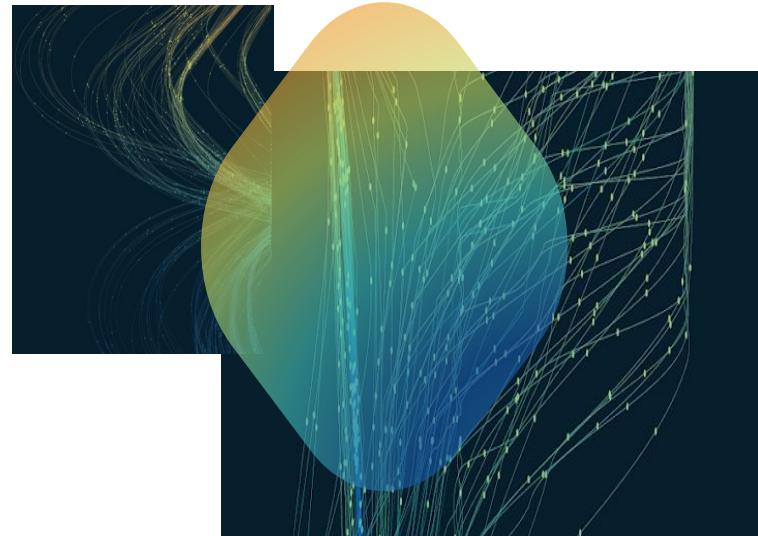


**Optimizing national search engines**  
increase findability of public services in national portals by implementing a common metadata tagging model.

*Could the Pilot be a ... best practice for the MS Public Service Providers ?*



Thank You!

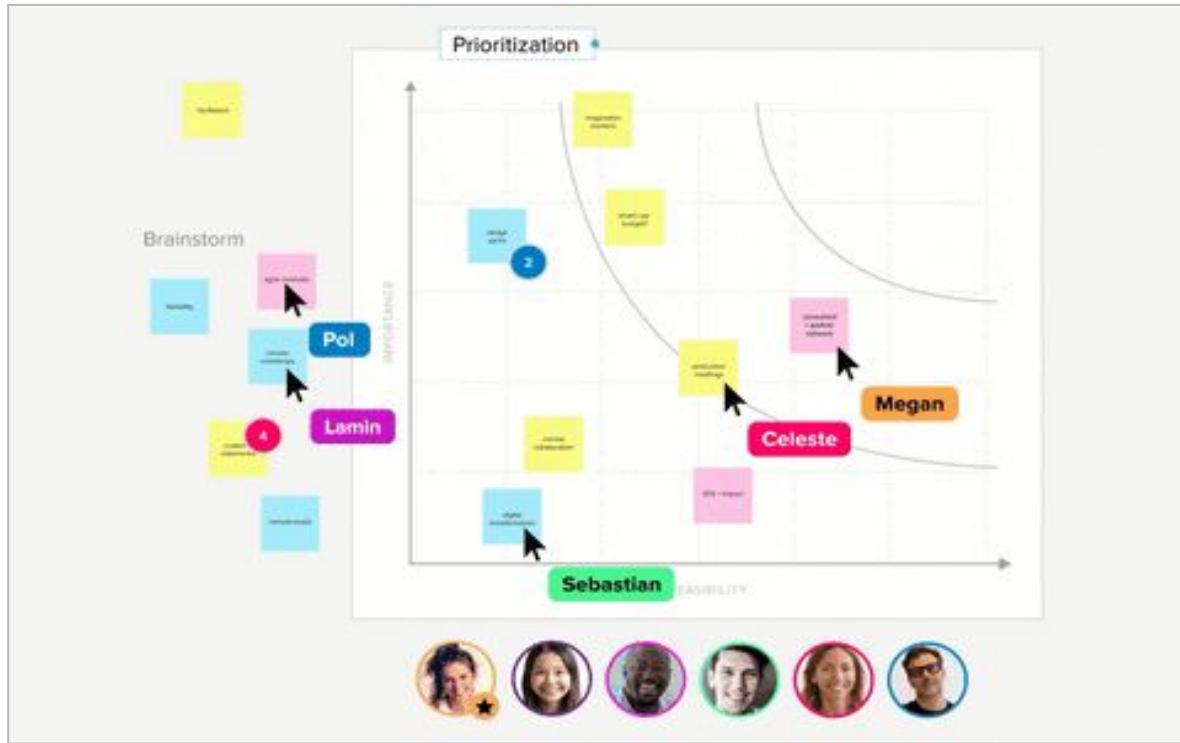


The Greek SDG Team

<mailto:govgr.development@mindigital.gr>



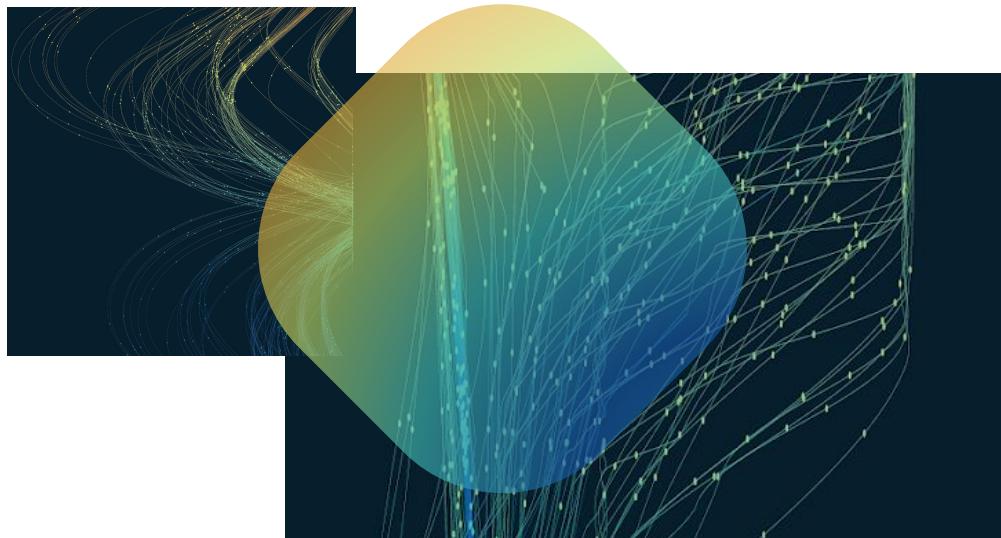
# Who is in the room?



<https://app.mural.co/invitation/mural/beadvtc7549/1641384331214?sender=uf3dcbf960c2047bf25c19141&key=ab67dc17-4822-4a2e-b227-ec104ad1202c>



# Round table and status



Some short questions per Member state about your current status in the pilot:

1. What is your current status regarding the pilot?
2. Have you been able to find commonalities between the SDG model and your structure for describing public services?
3. What are the next steps for you?



# 3 Lessons learned

# Best practices for providing information



## Existing model(s)

If there is a model available describing public services: map key concepts based on SDG.



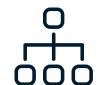
## Pragmatic and iterative approach

Start with the low hanging fruit; a mapping does not need to be perfect from the start. Iteration and open discussion enable usable results.



## No existing model(s)

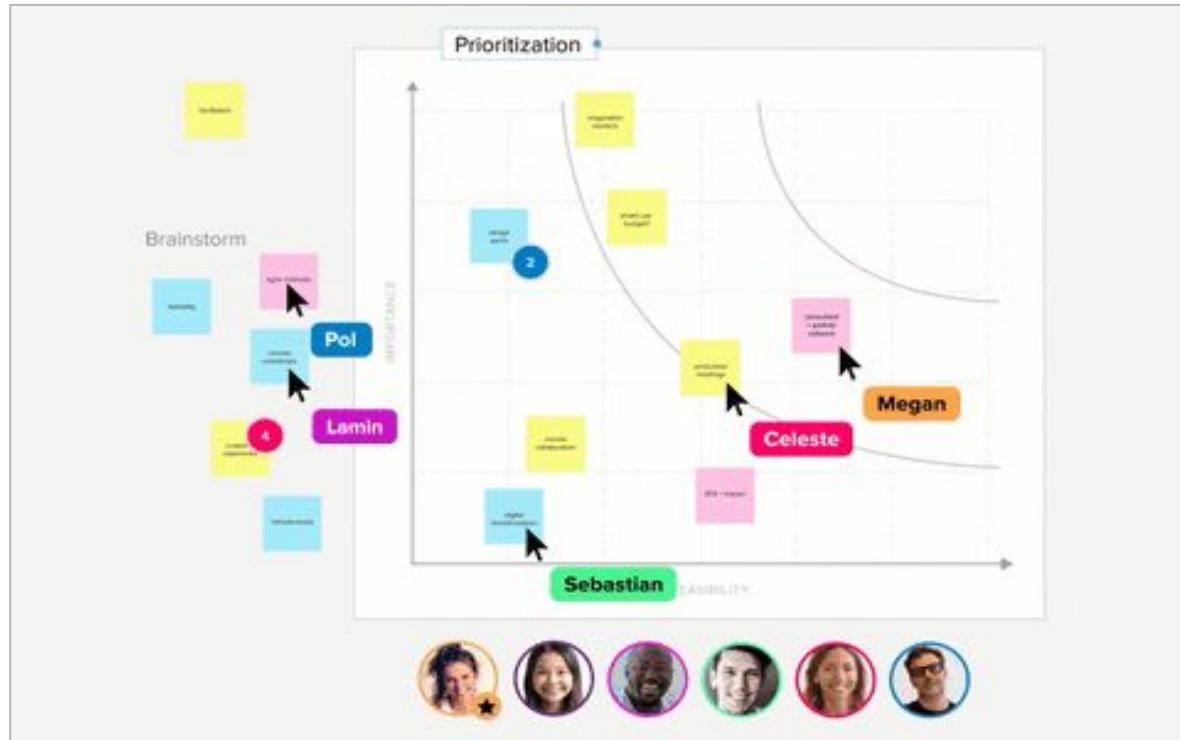
Familiarize yourself with the SDG model and find these concepts back in existing pages/systems.



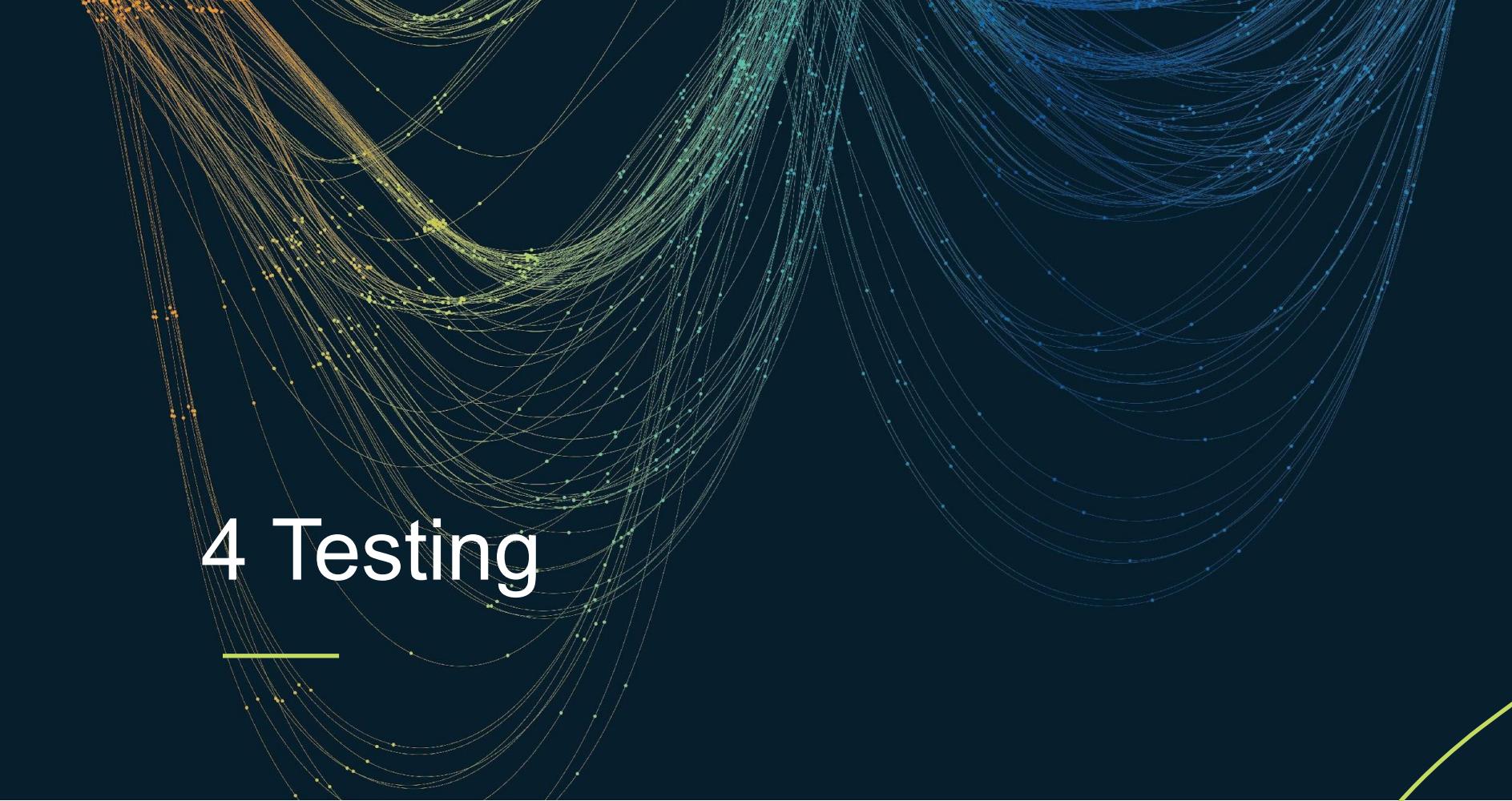
## Conceptual vs implementation

Focus on what is feasible for your administration. It is fine to skip a step if it is unrealisable at this moment.

# Feedback: barriers/difficulties



<https://app.mural.co/invitation/mural/beadvtc7549/1641384331214?sender=uf3dcbf960c2047bf25c19141&key=ab67dc17-4822-4a2e-b227-ec104ad1202c>



# 4 Testing

# How can findability of public services on the YourEurope portal be improved?

---

## **What is findability?**

What are the factors that play a role in findability? What do you consider as improved findability?

## **How can findability be improved?**

How can metadata be used to improve findability?

## **How can findability be tested?**

How and by who can tests be performed to assess findability?

# What is required to perform testing?

- **Use cases**

Does the findability increase by adding the additional metadata?



Additional  
metadata



Additional  
filters



More extensive  
description on the  
search page

- **Practical steps to perform the testing**

Perform tests before the additional metadata has been added, and similar tests afterwards and compare the results based on defined KPIs.

- **KPIs for measuring improvement**

The Key Performance Indicators (KPIs) that will be used as metrics to determine whether the findability of the public services has increased

- Page ranking in the search results
- Click-through rate of relevant links



# What are the types of testing?

- **Controlled testing**
  - The steps for testing are predetermined
  - One factor at a time can be tested through focused testing
  - A person performs a search query before and after scenarios are added
- **Uncontrolled testing**
  - Monitor the usual site traffic (users searching on the portal)
  - Document average KPIs before and after scenarios are added

## Examples of KPIs

- Ranking
- Findability
  - time before clicking
  - offline metrics such as relevant/non relevant, scoring



# Use case 1: additional metadata

Improved ranking

The screenshot shows a search interface with a magnifying glass icon and the query 'self-employment in portugal'. Below the search bar are two dropdown menus: 'Choose national / EU content' and 'Choose language'. The main content area displays four search results, each with a blue title, a link, a brief description, and a thumbs-up/thumbs-down rating icon. To the right of the results are two sidebar boxes: 'Working abroad' and 'Unemployment & benefits', each with a brief description. A large blue arrow on the left points upwards from the 'Improved ranking' text towards the search results.

self-employment in portugal

Choose national / EU content ▾ Choose language ▾

File the **self-employment** registration - ePortugal.gov.pt  

[eportugal.gov.pt/en/servicos/abrir-atividade-nas-financas](http://eportugal.gov.pt/en/servicos/abrir-atividade-nas-financas)

The **self-employed** workers must register themselves on the Tax Office. To do so, they must submit a **self-employment** registration certificate.

Value Added Tax (VAT) in Portugal - ePortugal.gov.pt  

[eportugal.gov.pt/en/cidadaos-europeus-viajar-viver-e-fazer-negocios-em-portugal/impostos-pa...](http://eportugal.gov.pt/en/cidadaos-europeus-viajar-viver-e-fazer-negocios-em-portugal/impostos-pa...)

Natural persons (**self-employed** persons) or legal entities (companies) that produce, market or provide services in Portugal have to pay taxes, ...

**Self-employment** - ePortugal.gov.pt  

[eportugal.gov.pt/en/cidadaos-europeus-viajar-viver-e-fazer-negocios-em-portugal/trabalho-e-r...](http://eportugal.gov.pt/en/cidadaos-europeus-viajar-viver-e-fazer-negocios-em-portugal/trabalho-e-r...)

**Self-employment** ... Coworking is becoming increasingly popular in Portugal amongst **self-employed** workers, entrepreneurs and start-ups, and there is already ...

Professional indemnity insurance in Portugal - ePortugal.gov.pt  

# Use case 2: filters based on additional metadata

The screenshot shows the 'Your Europe' website interface. At the top, there's a blue header bar with the 'Your Europe' logo and a search bar containing the text 'birth spain'. Below the header, a navigation menu includes links for 'Life and travel', 'Doing business', 'Contact assistance services', 'Report an obstacle', and 'Events'. Two dropdown menus are open: 'Choose national / EU content' (with options 'Spain' and 'EU') and 'Choose language' (with options 'English' and 'español'). A snippet of search results is visible, showing a link to 'administracion.gob.es/pag...'. A callout box at the bottom left encourages users to try other languages, with a 'español' option highlighted.

Your Europe > Search results

Life and travel Doing business Contact assistance services Report an obstacle Events

birth spain

Choose national / EU content ▾

Spain

EU

Choose language ▾

English

español

Minor children ...

[administracion.gob.es/pag...](http://administracion.gob.es/pag...)

Jun 18, 2021 ... What does registering a **birth** mean? **Births** are registered at the Civil Registry by the registrar to officially record that a baby has been ...

You can find more results for this search by choosing another language:

español

# Use case 3: More extensive description on the search page

The screenshot shows a search results page from the Your Europe website. The search query is "apply university helsinki". The results include:

- Alternative name:** Applying for Bachelor's and Master's level studies
- URL:** <https://studyinfo.fi/wp2/en/higher-education/how-to-apply-for-bachelors-and-masters/>
- Short description:** There are two ways to apply to a higher education degree programme in Finland: joint application or separate application. Make sure to check how and when you need to apply to your chosen study programme. There is no application fee, applying is always free.
- Related services' name and link:** Related information
  - [Bachelor's programmes offered in English in universities](#)
  - [Master's programmes offered in English in universities](#)
- Competent authority:** Finnish National Agency for Education
- Contact details:** contact@oph.fi

On the right side, there are two boxes:

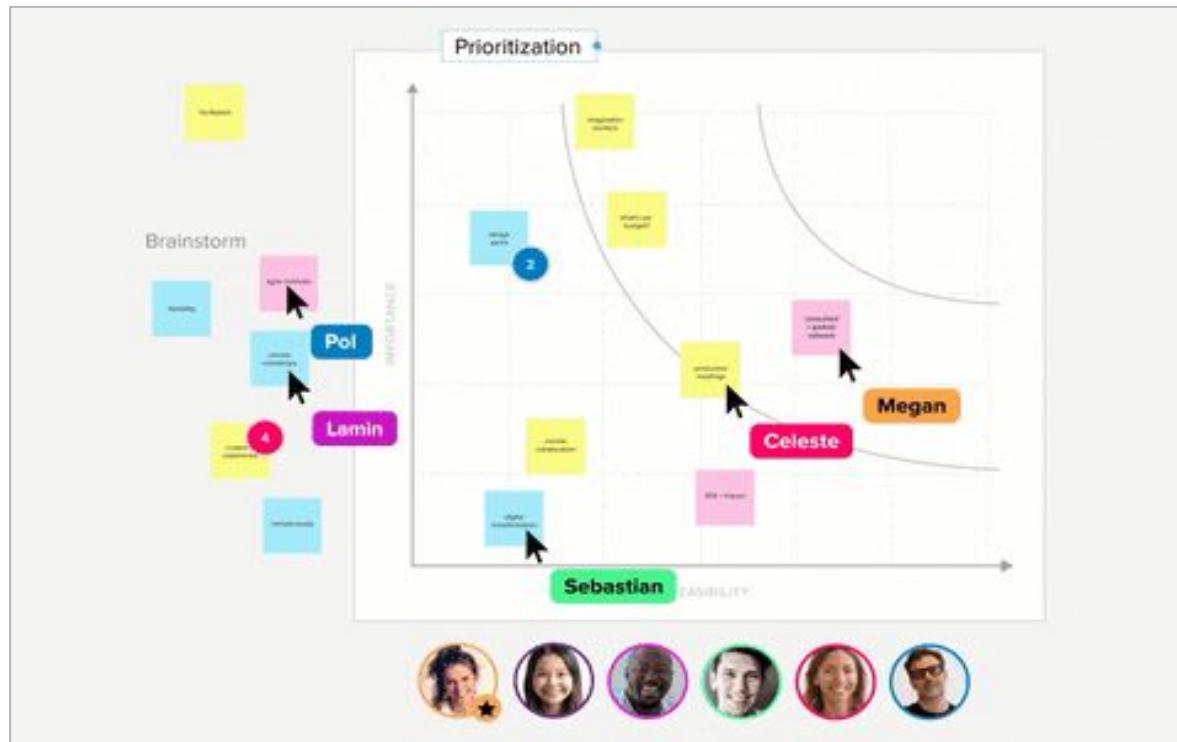
- Education & Youth:** Rights and requirements for EU nationals using the education system in another EU country: fees, language exams, recognition of qualifications, etc.
- Retiring abroad:** What happens with your pensions, healthcare and taxes if you go to live in another EU country

# What are the efforts required from the MS to perform the testing?

- **In controlled testing**
  - Defining use cases and test scenarios as a Member State
  - Performing ‘before’ and ‘after’ tests of the use cases
  - Documenting KPIs manually
- **In controlled and uncontrolled testing:**
  - the (subjective) judgement of page relevancy in relation to respective keywords



# Feedback: testing



<https://app.mural.co/invitation/mural/beadvtc7549/1641384331214?sender=uf3dcbf960c2047bf25c19141&key=ab67dc17-4822-4a2e-b227-ec104ad1202c>



# 5 NLP Proof-of-Concept

# The NLP prototype

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## Objective of the prototype

1. Automatise the tagging of HTML pages
2. Provide a concrete example of NLP in the Public Sector

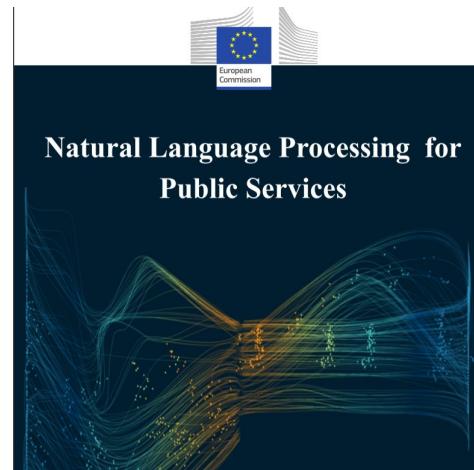
## Scope of the prototype

1. English webpages
2. Current data model

# Study on Natural Language Processing in a public context

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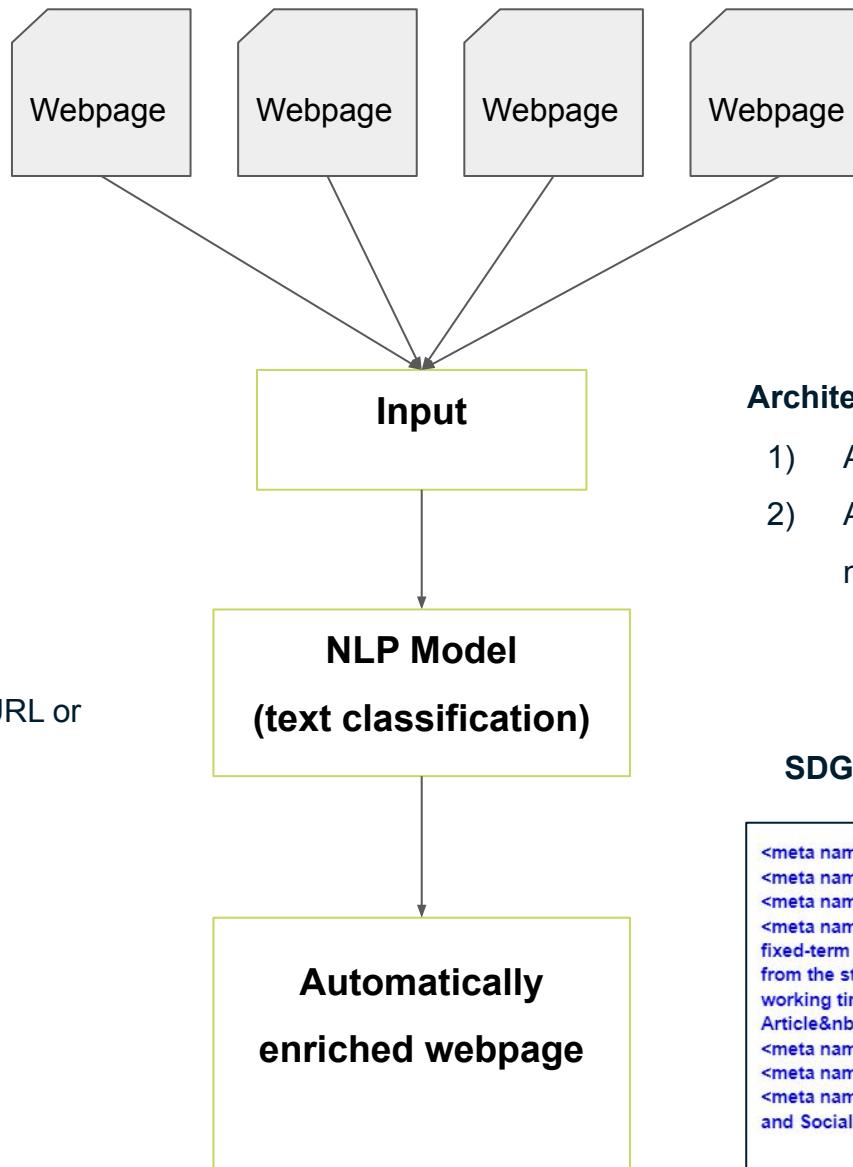
The newly developed NLP Proof-of-concept has the potential to relieve hours of manual labor in automatically tagging HTML pages.



# NLP Proof-of-Concept for the SDG

## Webpages relevant for the SDGR

Webpages that need to be tagged according to the SDG Search Service model.



## Architecture

- 1) An NLP client performs an API request
- 2) API contacts NLP engine which retrieves metatags from the webpage

## The algorithm

Multiple text classification techniques allow automatic retrieval of metatags based on the URL or the content of the page

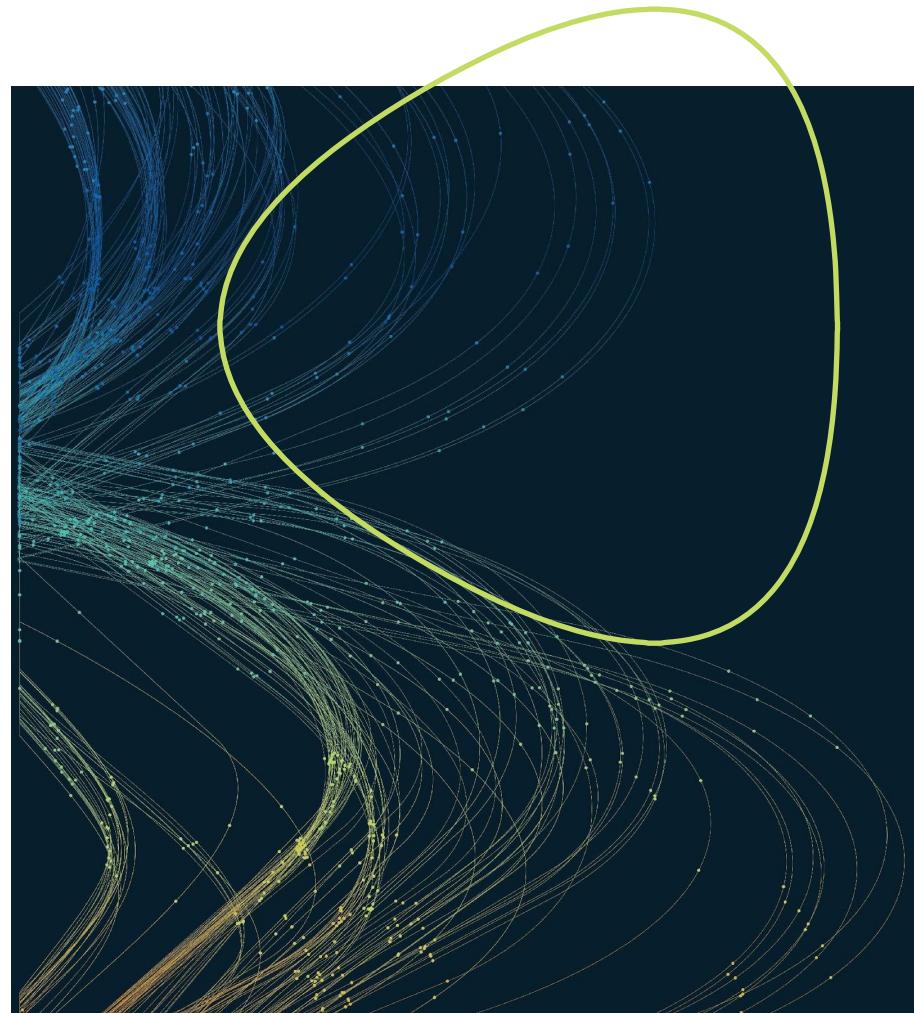
## SDG metadata tags

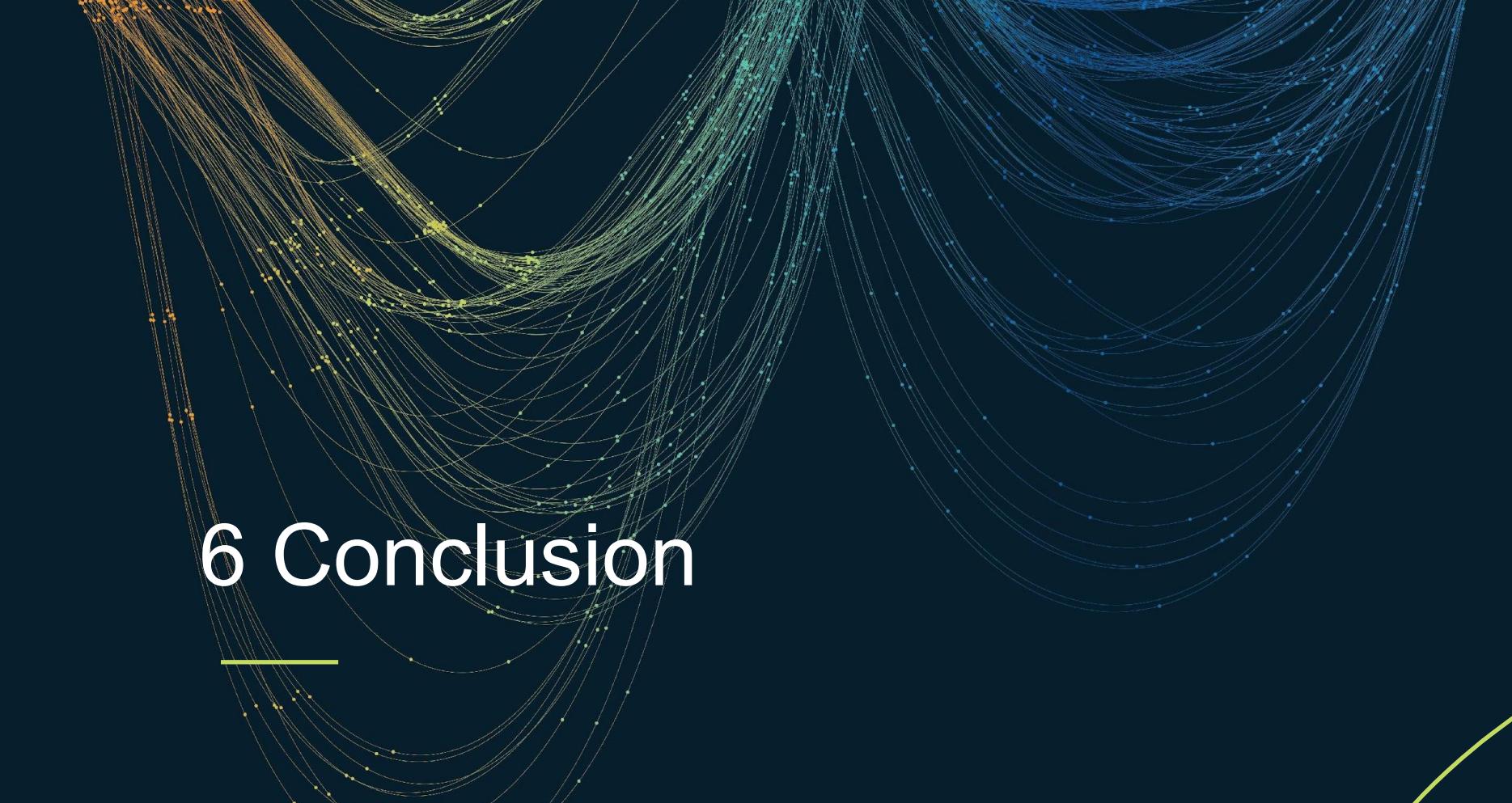
```
<meta name = "SDG.PublicServiceURI" content="">
<meta name = "SDG.PublicService.identifier" content ="1">
<meta name = "SDG.PublicService.name" content ="Regular Leave">
<meta name = "SDG.PublicService.description" content = "Each employed person with a fixed-term or indefinite-term employment relationship is entitled to paid annual leave from the start of employment in a specific company, without the need to complete basic working time (Article&nbsp;2(1) of Emergency Law No&nbsp;539/1945, as amended by Article&nbsp;13(1) of Law 3227/2004 and replaced by Article&nbsp;1 of Law">
<meta name = "SDG.PublicOrganisation.URI" content="">
<meta name = "SDG.PublicOrganisation.identifier" content ="1">
<meta name = "SDG.PublicOrganisation.preferredLabel" content = "Ministry of Labour and Social Affairs - Directorate of Individual Arrangements">
```

# Potential for the PoC

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- Proof-of-concept can be scaled up if results are positive
- Obligation for local administrations to provide SDG information by the end of 2022  
→ Relief of manual work for thousands of static webpages on regional level
- Interest from Member State side: to be determined





# 6 Conclusion

# Next steps: Pilot

The timings of the phases are subject to change.

| Month                                     | January   |    |    | February                  |            |            | March              |            |    | April |    |    |
|---|---|----|----|---------------------------|------------|------------|--------------------|------------|----|-------|----|----|
| Day                                       | 1   | 15 | 31 | 1                         | 15         | 31         | 1                  | 15         | 31 | 1     | 15 | 31 |
| <b>Outputs:</b>                           |   |    |    |                           |            |            |                    |            |    |       |    |    |
| Identification and mapping of information |   |    |    | Indicative                |            |            |                    |            |    |       |    |    |
| Implementation on the Repository of Links |   |    |    |                           | Indicative |            |                    |            |    |       |    |    |
| Testing the YourEurope portal             |   |    |    |                           |            | Indicative |                    |            |    |       |    |    |
| NLP Proof-of-Concept                      |   |    |    |                           |            |            | Indicative         |            |    |       |    |    |
| Conclusions and way forward               |   |    |    |                           |            |            |                    | Indicative |    |       |    |    |
| Meetings*                                 | *additional meetings can be arranged/ planned meetings can be removed when required |    |    |                           |            |            |                    |            |    |       |    |    |
|   |   |    |    | Knowledge sharing session |            |            | concluding webinar |            |    |       |    |    |



# Next steps: SDG Search Service model

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A new iteration of working on the conceptual model can be foreseen in 2022 after the pilot if there is interest from the Member States to further work on it.

## Process feedback & extension of the current model

Process the feedback captured during the pilot & extend the model with additional information relevant to the SDGR.



## Alignment with existing models & vision on the long term usage and role of the SDG model

We strive to be aligned with the CPSV-AP and standards as much as possible. We position the SDG model as an implementation model of the CPSV-AP.



## Translation to Repository of Links

When the model gets updated, the changes also need to be made in the Repository of Links to fetch the additional information.





# Thank you !



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## Stay in touch and visit:

### GitHub:

- [SDG Search Service model](#)
- [CPSV-AP](#)

Joinup: [Catalogue of Services Collection](#)

Interoperability academy: [training platform](#) for describing public services



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# How to stay in contact with the Catalogue of Services Action?

## Platforms



### GitHub:

- [SDG Search Service model](#)
- [CPSV-AP](#)



Joinup: [Catalogue of Services Collection](#)



Interoperability academy: training platform for describing public services

## Communication

- Regular follow up on the progression of the pilot in the next weeks
- Keeping the Member States up-to-date with the latest focus areas to get involved regarding the description of public services.

## **Catalogue of Services team**

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