



AI in the European public sector

Insights from JRC research

*European Commission
Joint Research Centre
Digital Economy Unit (T.1)*

Joint
Research
Centre

The views expressed are those of the author and may not in any circumstances be regarded as stating an official position of the European Commission.

Policy background

Coordinated plan

COORDINATED PLAN ON ARTIFICIAL INTELLIGENCE 2021

OUR KEY PROPOSALS TO BUILD STRATEGIC LEADERSHIP



Policy background

AI Act



Policy background

Data Governance Act



Entered into force
on 23 June 2022

- **Data Scope**
 - Data voluntarily made available by stakeholders
- **Main actors involved**
 - Public sector + Private sector (Business) + Individuals + Researchers
- **Policy intervention**
 - Make such data easy to share in a controlled manner (technical, legal and with organisational support), while ensuring data interoperability across sectors and Member States.
 - Build trust in data sharing.
- **Expected results**
 - Facilitate data sharing
 - Development of common European data spaces
 - Create wealth for society
 - Provide control to citizens and trust in companies

New policy context

Open Data Act



Open Data Directive entered into force on
16 July 2019

Implementing Act on High Value Datasets

https://eur-lex.europa.eu/eli/reg_impl/2023/138/oj

Adopted on 21 December 2022

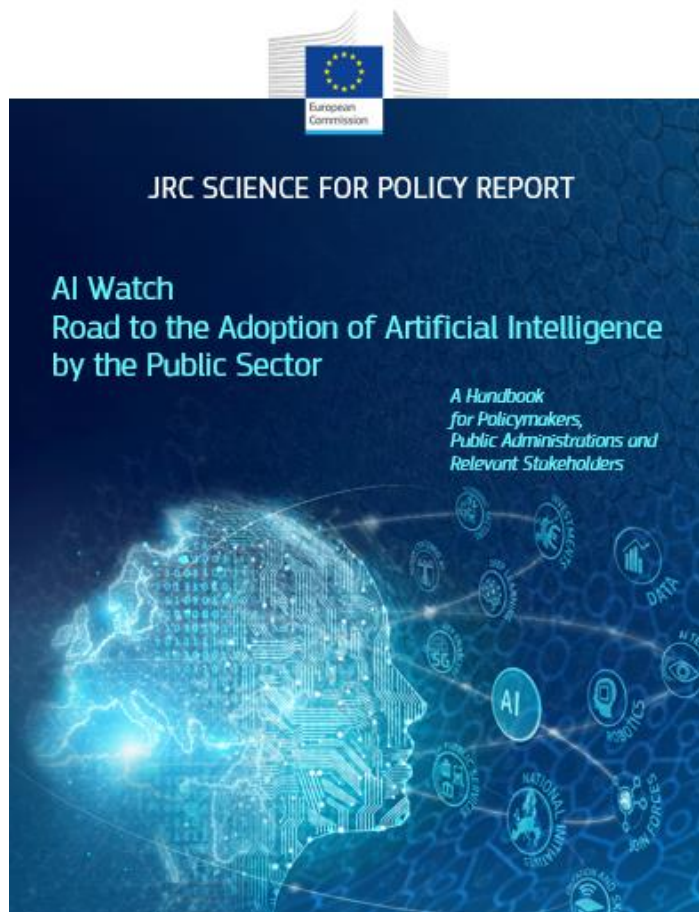
Published on 20 January 2023
(Official Journal of the EU)

- **Data Scope**
 - 'High Value' Open data from Government.
- **Main actors involved**
 - Public sector.
- **Policy intervention**
 - Make such data available for re-use free of charge.
- **Expected results**
 - Increased data availability and access
 - Reduce heterogeneity in licensing



AI in the Public Sector – JRC research

- Road to the adoption of AI by the Public Sector
- European landscape on the use of Artificial Intelligence by the Public Sector



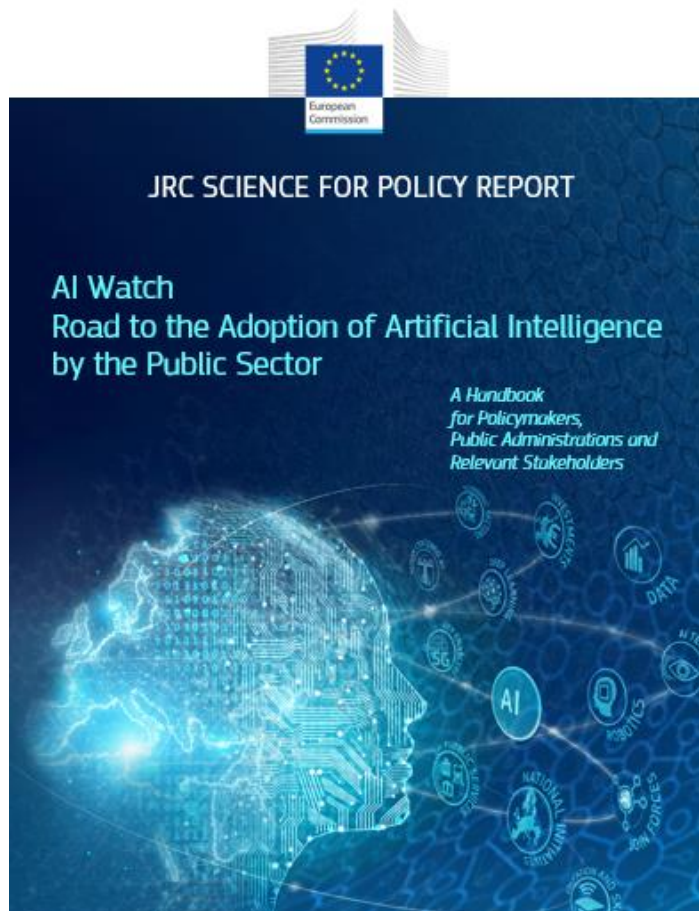


Road to the adoption of AI by the public sector

4 Areas of interventions

16 Recommendations

Over 50 Actions
at different levels of operational governance





Road to the adoption of AI by the public sector

1. Provide an **educated picture of the State of the Art of AI in Europe**
2. **Identify challenges and opportunities**, areas of intervention and potentials
3. **Outline Initiatives and activities** in support to progress of AI in the public sector
4. **Provide a dedicated framework** and possible actions for **key stakeholders at all levels**
5. Identify **policy options** and **research avenues** for the future



an ***actionable plan***
based on *concrete evidence* supported by *examples*, ruled by *common needs and opportunities*, supported by *initiatives and policies* at all levels



Road to the adoption of AI by the public sector

Area 1:
*Promote an EU value-oriented,
inclusive, human-centric
and trustworthy AI
in the public sector*

Area 2:
*Enhance coordinated governance,
convergence of regulations,
and capacity building*

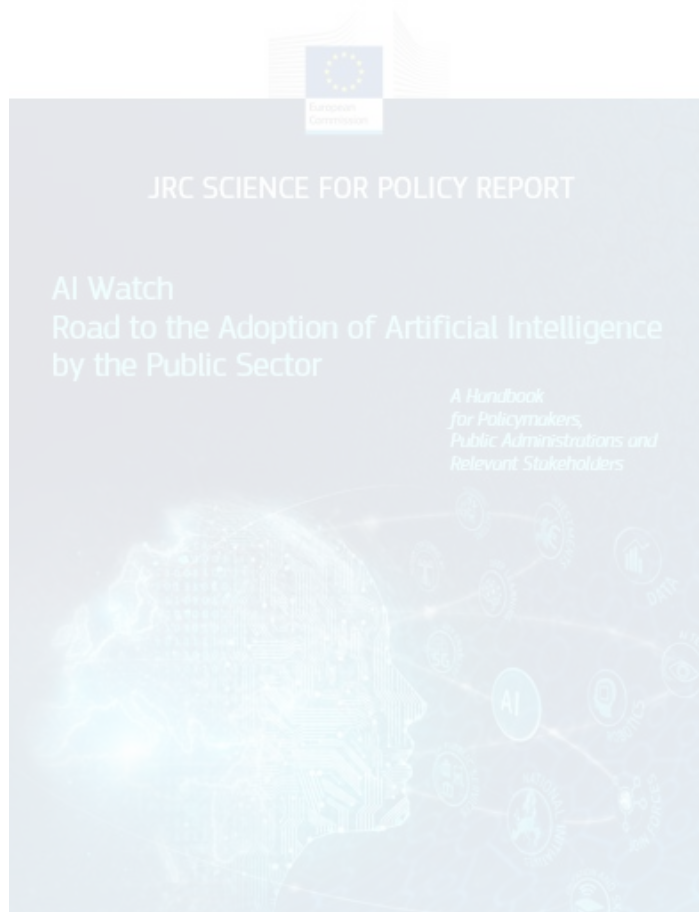
Area 3:
*Build a shared and interactive AI digital
ecosystem*

Area 4:
*Apply and monitor sustainability through
value-oriented AI impact assessment co-
created frameworks*



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European landscape on the use of Artificial Intelligence by the Public Sector

1. Analysis of the AI national strategies with a focus on the public sector
2. Inventory of use cases of AI in the public sector
3. In-depth case studies

link: <https://europa.eu/dK7jk6>





AI Case Inventory

686 AI cases collected and validated

How we collect cases?

- Country repositories or research studies
- News articles
- Responses to our AI Survey

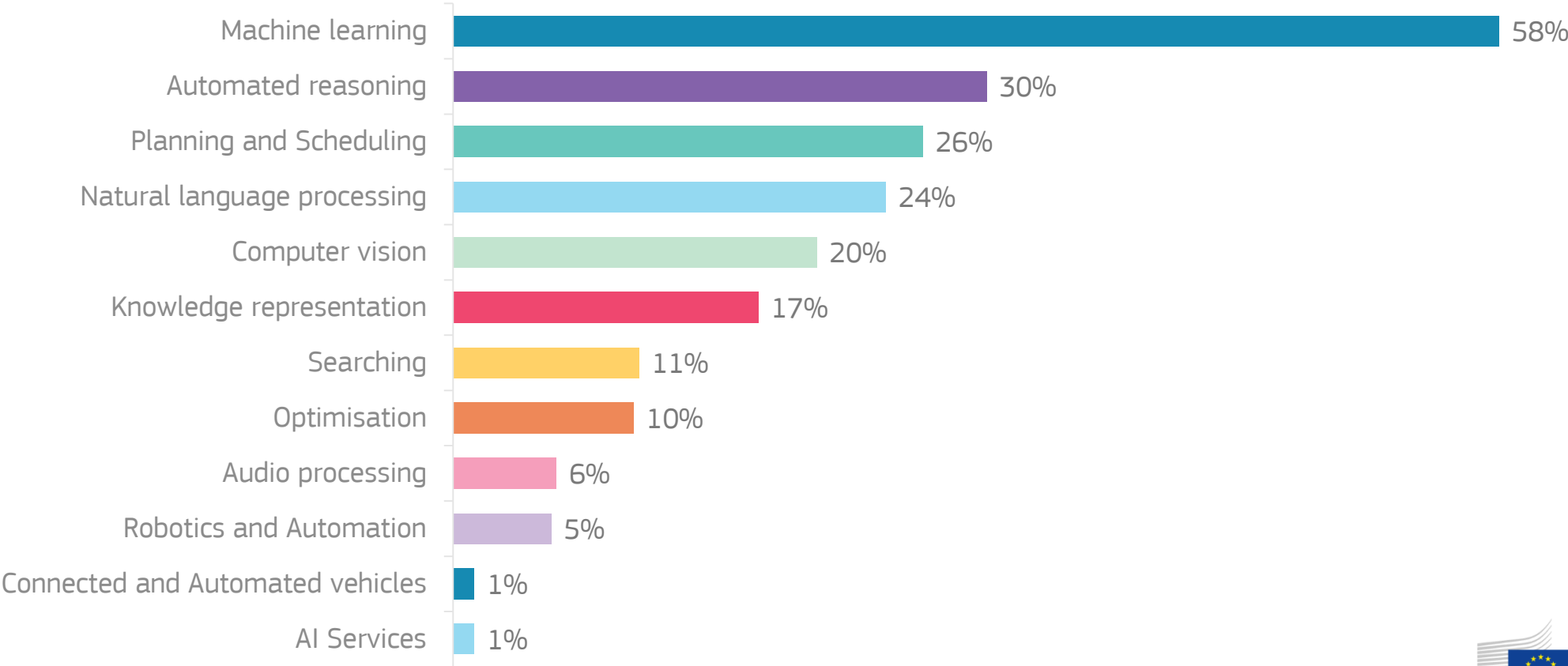
n.b. the cases are not statistically representative. No comparison can be done among the different countries

Published cases: [Joint Research Centre Data Catalogue - Selected AI cases in the public sector - European Commission \(europa.eu\)](#)



AI Cases by Technology

ML is the main AI technology, even though the spectrum of opportunities is variegate





AI Cases by Status

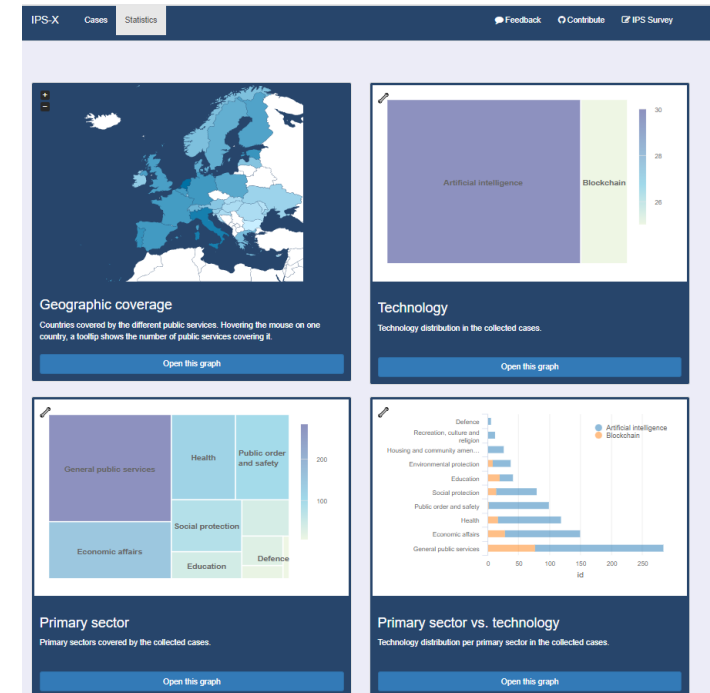
Several cases are already in use in daily operations





AI Cases - Open Data & Explorer

ID	Name	Website
1	AMS - public employment service	https://www.fronti
2	Mona - Public chatbot for companies	https://www.usp.gv.a
3	CitizenLab - Youth for Climate	https://youth4climat
4	Walloon - Agricultural subsidy	https://inspire.ec.eur
5	AcPaas - Technical procurement	https://acpaas.digip
6	Flemish Infoline - Automatic	https://www.innov
7	ILVO - List of multiple AI projects in	https://ilvo.vlaandere
8	Belgium - Detection batch numbers	https://www.kindeng
9	Verontrustingten - Enabling accurate	
10	Camera System - Mobile phone	https://baseline.vias
11	PaveAI 2.0 - Interprets the figures in	https://flemishmaste



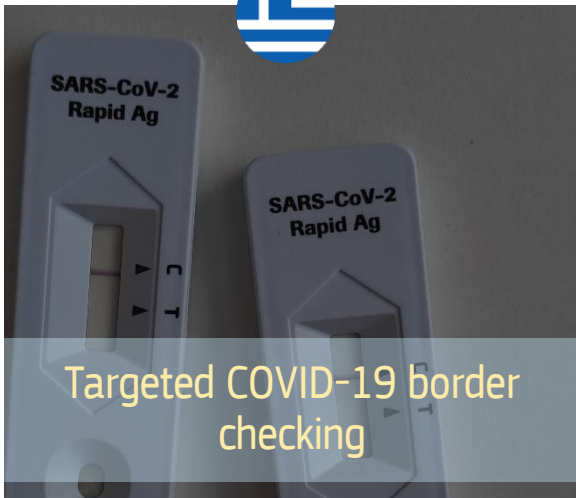
<https://data.jrc.ec.europa.eu/dataset/7342ea15-fd4f-4184-9603-98bd87d8239a>



<https://ipsoeu.github.io/ips-explorer/case/>



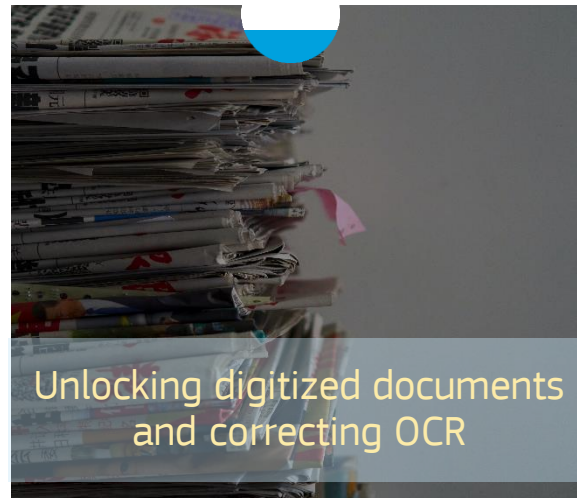
Intelligent Control Platform



Targeted COVID-19 border checking



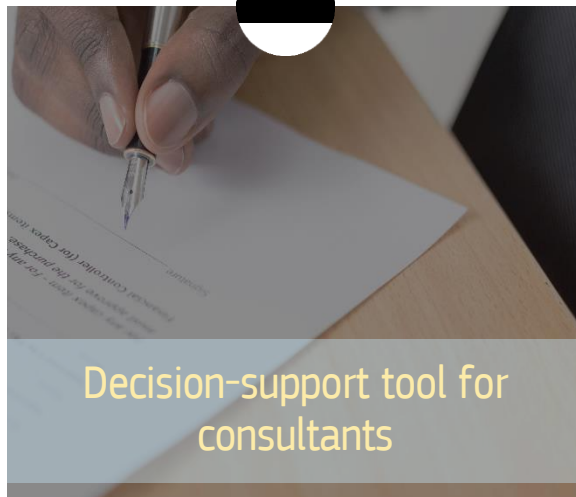
Reducing night noise through nudging



Unlocking digitized documents and correcting OCR



Object Detection Kit



Decision-support tool for consultants



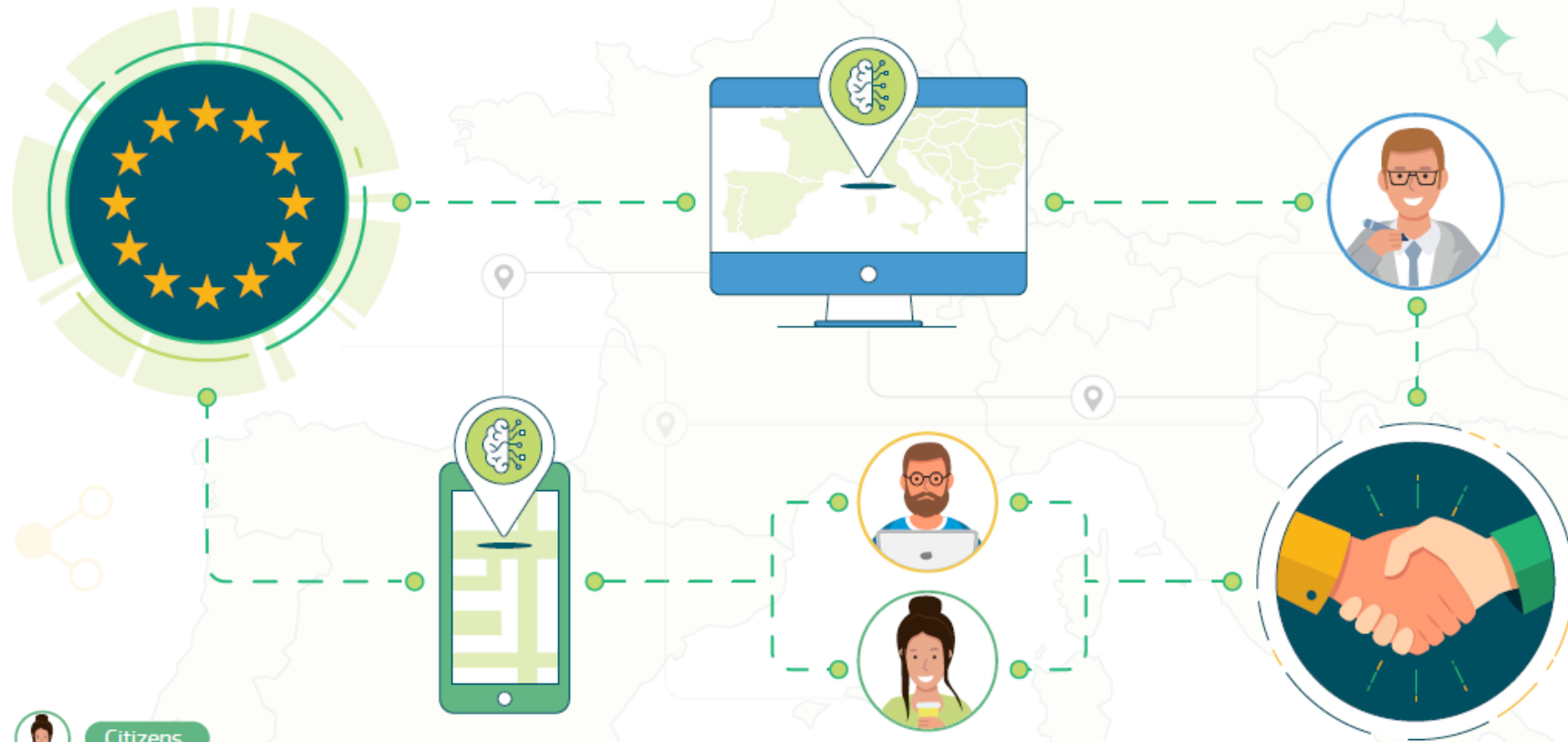
Automation of subtitling videos and audios



Detect false police reports

LOCATION INTELLIGENCE

Public administrations in Europe increasingly rely on **location data** and **technologies** to deliver better and more tailored public services. That allows them to make better decisions and thus better policymaking, while making life easier for businesses and citizens.

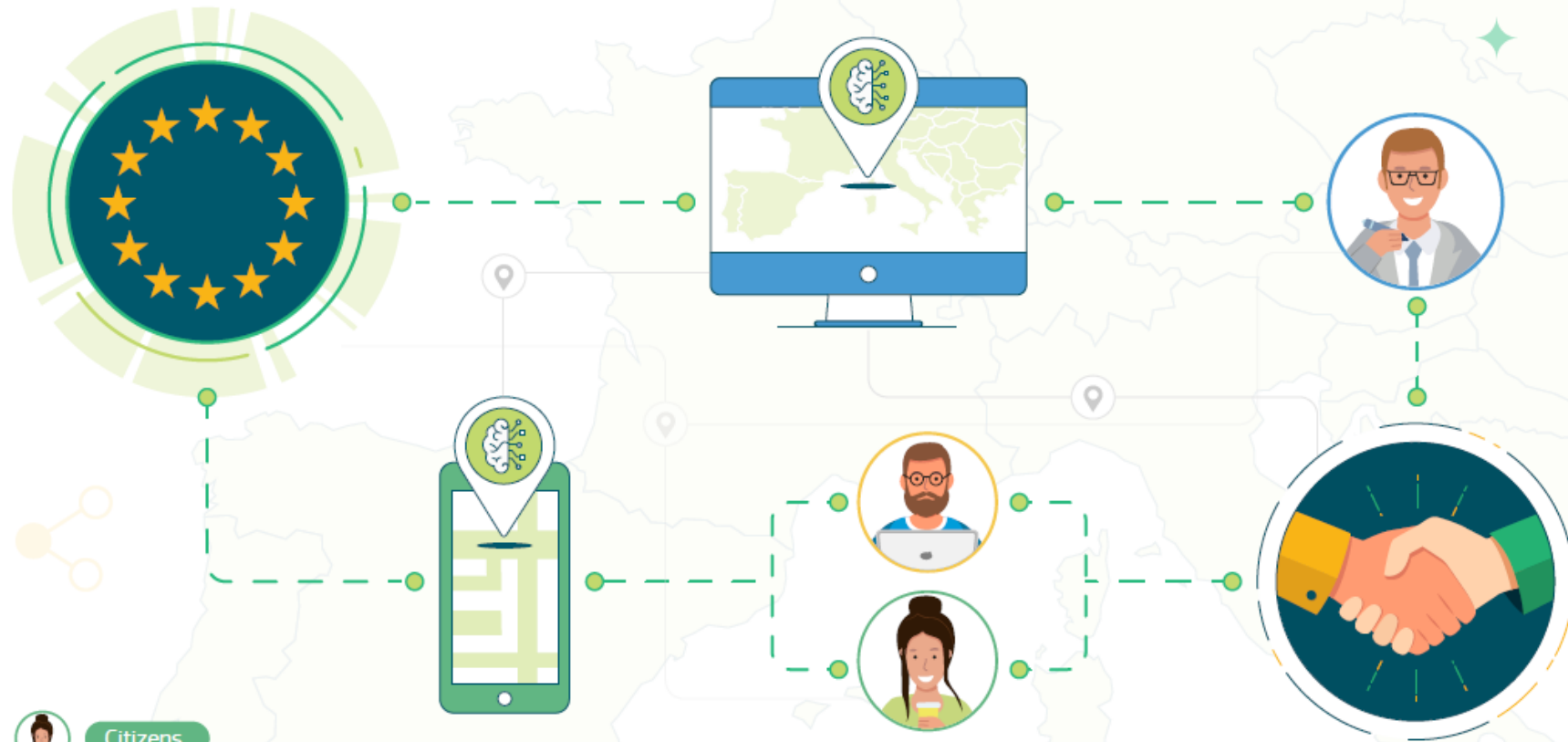


-  Citizens
-  Businesses
-  Public Administrations

With **Location Intelligence**, modernised public administrations can solve "Where?" questions and derive meaningful insights on important socioeconomic and environmental challenges.

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Lesson learned

_ AI is widespread

Public organisations should start considering AI not only as a research and innovation area but also as a set of solid and available technologies for improving the administrative machine. Moreover, they should start preparing themselves for a diffuse and common usage of AI in all public sector areas

_ Need of in-house expertise

Public administrations should consider in-house knowledge on AI for the – partial or complete - internal development of AI, for the direction and adjustment of the system developed by external suppliers and/or for ensuring proper management of procurement activities.

_ General awareness

Public administrations should start considering AI as a technology that will affect the daily routines of most employees, hence start thinking about the wide diffusion of basic knowledge on how the algorithm works and how to deal with systems that use AI techniques.

Lesson learned

_ Balance of in-house vs external development

Given that most likely a public organisations would need support for developing an AI system, they should carefully select the proper partner(s) and/or suppliers and balance internal and external development.

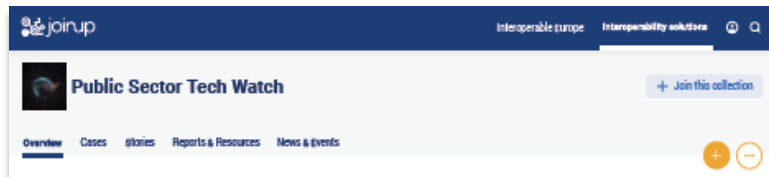
_ Need of trustworthy AI

Risks should be systematically assessed with a structured and well-defined procedure, avoiding any form of discriminatory and unfair use of the AI system. Proper mitigation measures should be identified for ensuring a human-centric use of AI. This needs to become a routine for public organisations.

_ Technology is only half of the story

Public administrations should be aware that the technical effort for coding an AI system is only a small portion of the effort needed for the implementation thereof. Introducing an AI solution requires a general awareness of AI but also new task allocation and, when needed, new roles and positions within the organisation.

Upcoming...



interoperable
europe

- Public Sector Tech Watch
- Report on AI and interoperability in the public sector
- ... and much more