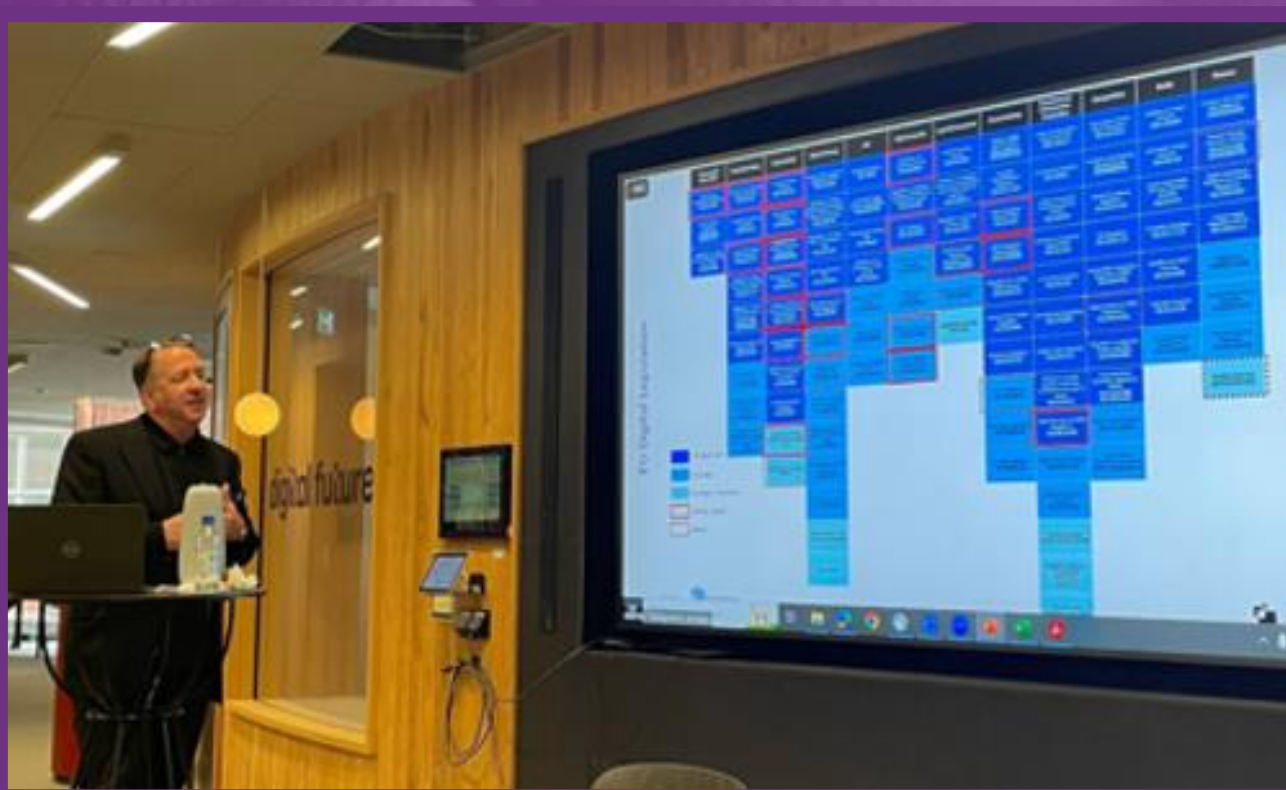


# Regulatory AI Supervision by Competent Authorities

KTH Workshop - April 4, 2024



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# Agenda

- 1. New Perspectives for Electronic Communication Regulators**
- 2. Regulatory AI Sandboxes: A Tool for AI Innovation**
- 3. Scenarios for Organisation of National AI Supervision**
- 4.Q&A**

# Personal AI Audit Experience 2019-2023

**Drones for Good: Using AI-Assisted UAS to Find Missing Persons in Challenging Areas**

**Trials: Swedish Terrain Types**

The resilience of the AI is increased by including new Swedish scenarios and new weather conditions.

Locations	Weather Conditions	Human Posture and Clothing
<ul style="list-style-type: none"><li>* Forest, maritime, open field, mountains, snow</li><li>* Including level of terrain difficulty (Easy/Medium/High)</li></ul>	<ul style="list-style-type: none"><li>* Rainy, windy, snowy, Cloudy</li><li>* Low temperatures</li><li>* Different times of the day, 12am with sunlight</li></ul>	<ul style="list-style-type: none"><li>* Standing, sitting down, horizontal position, walking</li><li>* Colour, texture, coverage</li><li>* Isolated or close to artefacts such as boats, houses or cliffs</li></ul>

**Authors**  
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1. Participation in AI assisted UAS/drone based search & rescue platform development with the University of the West of Scotland.

2. Activities:

- AI training data input
- system test & feedback log
- search strategy development & test
- training data bias management
- human in the loop
- edge computing vs central system benchmarking
- testing in real world conditions.

Här visar Hans Hedin, insatsledare på Svenska räddningsdrönare, hur ny teknik används i sökandet efter försvunne Deniz Arda. Therese Haugen, insatsledare på Missing People Stockholm, berättar också om hur sökandet organiseras. Foto: Sandra Kjellström/SVT

## 300 personer söker efter försvunne Deniz i Tyresta nationalpark

UPPDATERAD 29 JANUARI 2021 PUBLICERAD 28 NOVEMBER 2020





## Member of European Working Group of Competent Authorities on AI

- 18+ member states representatives that conduct analysis of and discuss the practical aspects of future AI supervision.
- Headed by the Dutch Authority for Digital Infrastructure, in collaboration with ENISA and UNESCO and funded by DG Reform.

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# From Electronic Communication to Digital Services

## - Expanded Focus for the Swedish Post & Telecom Authority

### Traditional Focus

1. Spectrum Management
2. Competition Supervision
3. Broadband Development
4. Radio Equipment Market Control
5. Satellite & Satellite Earth Station Management
6. Robust & Resilient Networks



# The New Reality: EU Digital Legislation Landscape

Research & Innovation	Industrial Policy	Connectivity	Data & Privacy	IPR	Cybersecurity	Law Enforcement	Trust & Safety	E-commerce & Consumer Protection	Competition	Media	Finance
Digital Europe Programme Regulation, (EU) 2021/694	Recovery and Resilience Facility Regulation, (EU) 2021/241	Frequency Bands Directive, (EEC) 1987/372	General Data Protection Regulation (GDPR), (EU) 2016/679	Database Directive, (EC) 1996/9	Regulation for a Cybersecurity Act, (EU) 2019/881	Law Enforcement Directive, (EU) 2016/680	Product Liability Directive (PLD), (EEC) 1985/374, 2022/0302(COD)	Unfair Contract Terms Directive (UCTD), (EEC) 1993/13	Technology Transfer Block Exemption, (EC) 2014/316	Satellite and Cable I Directive, (EEC) 1993/63	Common VAT system, (EC) 2006/112, 2022/0407(CNS)
Horizon Europe Regulation, (EU) 2021/695, (EU) 2021/764	InvestEU Programme Regulation, (EU) 2021/523	Radio Spectrum Decision, (EC) 2002/676	Regulation to protect personal data processed by EU institutions, bodies, offices and agencies, (EU) 2018/1725	Community Design Directive, (EC) 2002/6, 2022/0391(COD)	Regulation to establish a European Cybersecurity Competence Centre, (EU) 2021/887	Directive on combating fraud and counterfeiting of non-cash means of payment, (EU) 2019/713	European Standardization Regulation, (EU) 2012/1025	E-commerce Directive, (EC) 2000/31	Company Law Directive, (EU) 2017/1132, 2023/0088(COD)	Information Society Directive, (EC) 2001/29	Payment Service Directive 2 (PSD2), (EU) 2015/2366, 2023/0209(COD)
Regulation on a pilot regime distributed ledger tech. market, (EU) 2022/868	Connecting Europe Facility Regulation, (EU) 2021/1153	Broadband Cost Reduction Directive, (EU) 2014/61, 2023/0046(COD)	Regulation on the free flow of non-personal data, (EU) 2018/1807	Enforcement Directive (IPR), (EC) 2004/48	NIS 2 Directive, (EU) 2022/2555	Regulation on terrorist content online, (EU) 2021/784	Radio Equipment Directive (RED), (EU) 2014/53	Unfair Commercial Practices Directive (UCPD), (EC) 2005/29	Market Surveillance Regulation, (EU) 2019/1020	Audio-visual Media Services Directive (AVMSD), (EU) 2010/13	Digital Operational Resilience Act (DORA Regulation), (EU) 2022/2554
Regulation on High Performance Computing Joint Undertaking, (EU) 2021/1173	Open Internet Access Regulation, (EU) 2015/2120	Open Internet Access Regulation, (EU) 2015/2120	Open Data Directive (PSD), (EU) 2019/1024	Directive on the protection of trade secrets, (EU) 2016/943	Information Security Regulation, 2022/0084(COD)	Temporary CSAM Regulation, (EU) 2021/1232, 2022/0155(COD)	eIDAS Regulation, (EU) 2014/910, 2021/0138(COD)	Directive on Consumer Rights (CRD), (EU) 2011/83	P2B Regulation, (EU) 2019/1150	Portability Regulation, (EU) 2017/1128	Crypto-assets Regulation (MICA), (EU) 2023/1114
Regulation on Joint Undertakings under Horizon Europe, (EU) 2021/2085, 2022/0033(INL)	European Electronic Communications Code Directive (EECC), (EU) 2018/1972	Data Governance Act (DGA Regulation), (EU) 2022/868	Standard essential patents, 2023/0133(COD)	Cybersecurity Regulation, 2022/0085(COD)	E-evidence Regulation, 2018/0108(COD)	Regulation for a Single Digital Gateway, (EU) 2018/1724	e-Invoicing Directive, (EU) 2014/55	Vertical Block Exemption Regulation (VBER), (EU) 2022/720	Satellite and Cable II Directive, (EU) 2019/788	Digital euro, 2023/0212 (COD)	
Decision on a path to the Digital Decade, (EU) 2022/2481	Roaming Regulation, (EU) 2022/612	ePrivacy Regulation, 2017/0003(COD)	Design Directive, 2022/0392(COD)	Cyber Resilience Act, 2022/0272(COD)	Digitalization of travel documents	General Product Safety Regulation, (EU) 2023/688	Geo-Blocking Regulation, (EU) 2018/302	Digital Market Act (DMA Regulation), (EU) 2022/1925	Copyright Directive, (EU) 2019/790	Financial Data Access Regulation, 2023/0206 (COD)	
European Chips Act (Regulation), 2022/0652(COD)	Regulation on the Union Secure Connectivity Programme, (EU) 2023/588	European Data Act (Regulation), 2022/0047(COD)	Compulsory licensing of patents, 2023/0129(COD)	Cyber Solidarity Act (Regulation), 2023/0109(COD)		Machinery Regulation, (EU) 2023/1230	Digital content Directive, (EU) 2019/770	Regulation on distortive foreign subsidies, (EU) 2022/2550	European Media Freedom Act, 2022/0277(COD)	Payment Services Regulation, 2023/0210(COD)	
European critical raw materials act (Regulation), 2023/0079(COD)	.eu top-level domain Regulation, (EU) 2019/517	European Health Data Space (Regulation), 2022/0140(COD)				AI Act (Regulation), 2021/0106(COD)	Directive on certain aspects concerning contracts for the sale of goods, (EU) 2019/771	Horizontal Block Exemption Regulations (HBER), (EU) 2023/1066, (EU) 2023/1087		Revision of the late payments Directive	
Establishing the Strategic Technologies for Europe Platform (STEP), 2023/0199(COD)	New radio spectrum policy programme (RSPP-2.0)	Regulation on data collection for short-term rental, 2022/0358(COD)				Eco-design Regulation, 2022/0095(COD)	Digital Services Act (DSA Regulation), (EU) 2022/2065	Platform Work Directive, 2021/0414(COD)			
	Telecoms Act / Fair Share initiative	Harmonization of GDPR enforcement, 2023/0202(COD)				AI Liability Directive, 2022/0303(COD)	Right to repair Directive, 2023/0083(COD)	Single Market Emergency Instrument (SMEI), 2022/0278(COD)			
		Interoperable Europe Act, 2022/0378(COD)					Political Advertising Regulation, 2021/0381(COD)				
		Access to vehicle data, functions and resources					Multimodal digital mobility services (MDMS)				
		GreenData4all					Consumer protection: strengthened enforcement cooperation				
							Consumer rights: adapting ADR to digital markets				

- In force
- Negotiations
- Suggested/announced
- PTS involvement
- PTS relevant



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# Regulatory Sandboxes: A Tool for AI innovation (article 57)

## Sandbox purpose

AI regulatory sandboxes shall provide for a controlled environment that fosters innovation and facilitates the development, training, testing and validation of innovative AI systems for a limited time before their being placed on the market or put into service pursuant to a specific sandbox plan agreed between the prospective providers and the competent authority.

Set-up by a national competent authority.

## Sandbox responsibilities and options

- Member States shall ensure that their competent authorities establish **at least one AI regulatory sandbox at national level**, which shall be operational by 24 months from the date of entry into force of this Regulation.
- That sandbox may also be **established jointly** with the competent authorities of one or more other Member States.
- **The Commission may provide technical support, advice and tools** for the establishment and operation of AI regulatory sandboxes.
- Additional AI regulatory sandboxes at **regional or local level**, or established jointly with the competent authorities of other Member States may also be established.
- **The European Data Protection Supervisor** may also establish an AI regulatory sandbox for **Union institutions, bodies, offices and agencies**, and may exercise the roles and the tasks of national competent authorities in accordance with this Chapter.

# AI Regulatory Sandbox Cases



Spain



the Netherlands



Sweden

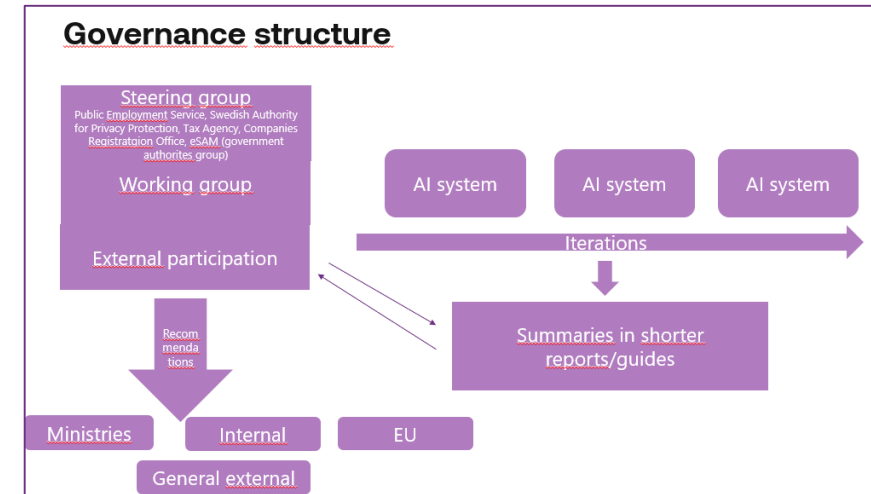
Agencia Española de Supervisión de la Inteligencia Artificial

Logotipo del Ministerio

La Terraza, sede de la AESIA en La Coruña.

Pilot Phase Regulatory Sandboxes

Dutch sandbox:  
Images not shared at  
this point in time



# Spanish AI-sandbox

- Planned for presentation/launch in 2023
- Present status: "re-definition" due to new political situation as of 2023



The Regulatory Sandbox provides solutions to the complex obligations of the EU AI Act by offering this practical "general rehearsal". Specifically these are the key points of the Spanish regulation governing this controlled testing environment (Real Decreto 817/2023):

- It wants to study the "operationalization" of the obligations that the EU AI Act establishes on the development and uses of (i) high-risk artificial intelligence systems; (ii) general purpose artificial intelligence systems; and (iii) foundational artificial intelligence models.
- It focuses on both "provider" and "user" entities of these three types of AI.
- It establishes how the entities that want to join the Regulatory Sandbox will be chosen and what requirements they must have (e.g. at the level of current privacy compliance).
- It stipulates a set of documentation and IT requirements/obligations (identical to some of those of the EU AI Act) for the use or development of these three types of AI that will be applied and analyzed in the framework of the Regulatory Sandbox at a practical level.

## Sources:

AI Alliance Assembly, Spain 2023

Discussion at European Working Group of Competent Authorities on AI 2024

[First European regulatory sandbox on Artificial Intelligence - Connect On Tech](#)

**Agencia Española de  
Supervisión de la Inteligencia  
Artificial**



La Terraza, sede de la AESIA en [La Coruña](#).





# Main idea

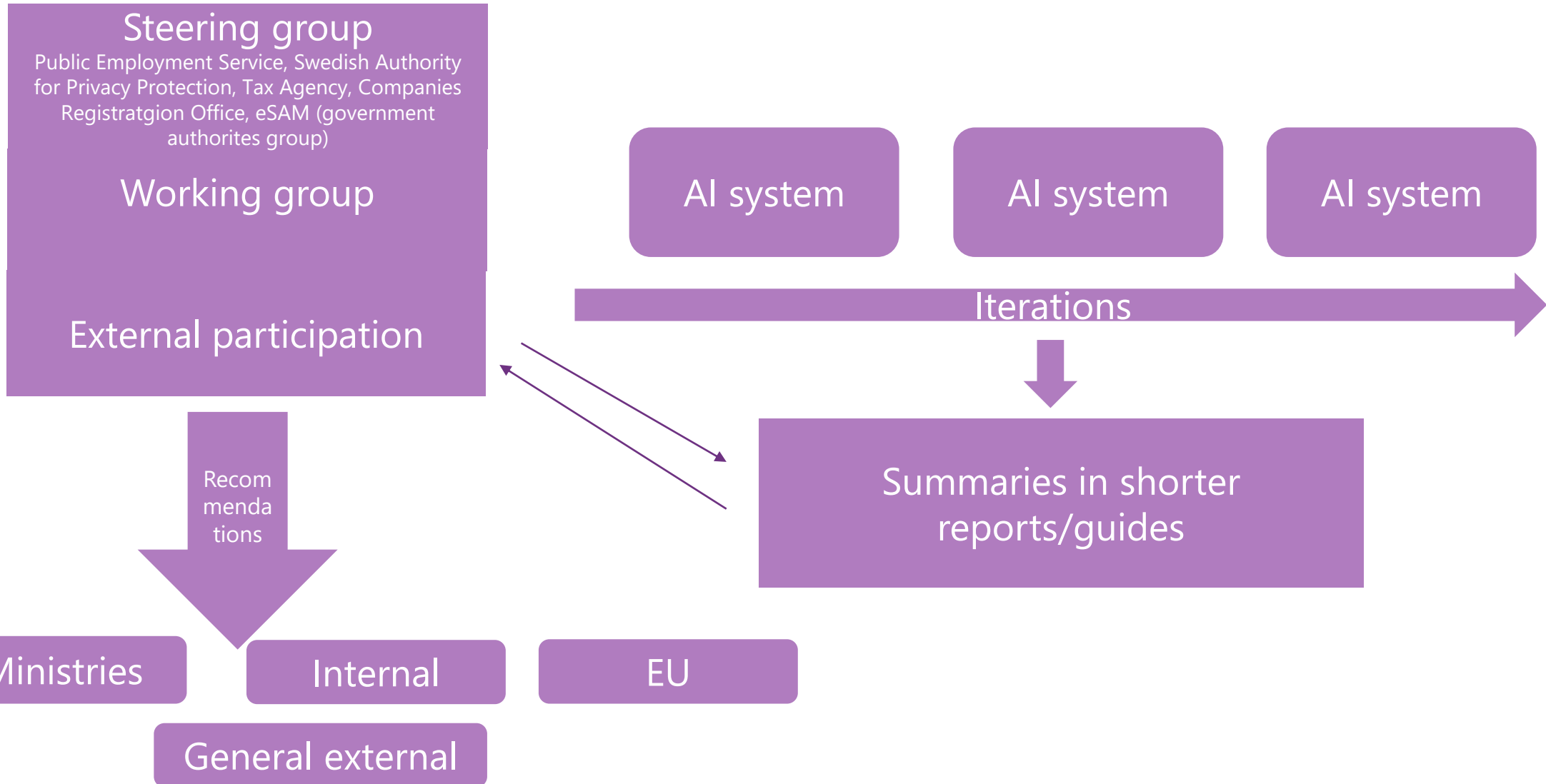
In partnership we conduct a pilot of a regulatory sandbox as defined by the AI Act. We shall iterate different AI-systems within the sandbox

Starting in a smaller group with only government agencies to learn and set a structure, then open up more and more.

## Knowledge building on three levels

- To understand the AI Act
- To understand AI regulatory sandboxes, methodology, requirements, needs etc.
- To understand what competences we need, costs, infrastructures etc.

# Governance structure



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# Scenario Analysis for National AI Supervision

## Scenario 1

Set-up of new AI agency

## Scenario 2

Existing agency gets "AI control" with minimum collaboration

## Scenario 3

Multiple agencies collaborate

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La Terraza, sede de la AESIA en La Coruña.



Scenario Outcome			
	Scenario 1	Scenario 2	Scenario 3
<b>Pros</b>	<ul style="list-style-type: none"> <li>Easier competence attraction.</li> <li>Single point of contact for all AI supervision.</li> <li>Less complex inter-agency collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>Easier competence attraction.</li> <li>Single point of contact for most AI supervision.</li> <li>Less complex inter-agency collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>Good knowledge of sector specific AI.</li> <li>Agency expert areas (cybersecurity, GDPR, digital inclusion, etc) better utilized.</li> </ul>
<b>Cons</b>	<ul style="list-style-type: none"> <li>Limited knowledge of sector specific AI.</li> <li>Limited access to agency expert areas.</li> <li>Takes time to set up a new agency.</li> </ul>	<ul style="list-style-type: none"> <li>Limited knowledge of sector specific AI.</li> <li>Limited access to agency expert areas.</li> </ul>	<ul style="list-style-type: none"> <li>Several supervision points of contact.</li> <li>Complex inter-agency collaboration.</li> <li>Competence attraction more difficult since many agencies compete for the same personal resources.</li> </ul>



# Scenario Analysis for National AI Supervision

## Scenario 3: Multiple agencies collaborate



- **Scenario development:** within the European Group of Competent Authorities on AI.
- **AI Act annexes and articles defining responsibilities** (overview on next slide):
  - AI Act Annex I (existing product safety legislating where appointed competent authorities already exists)
  - AI Act Annex III (8 high-risk areas relating to sector specific competence)
  - Additional AI Act articles identifying potential competent authorities in various sectors or areas such as data protection, digital infrastructure and financial markets.
- **Scenario result:**
  - *Structure:* Several authorities are defined as competent authorities due to the complexity of sector specific AI systems.
  - *Co-ordination of annex I competent authorities:* National authority responsible for electronic communication/digital infrastructure.
  - *Coordination of annex III competent authorities:* National authority responsible for data privacy / data protection.
  - *National co-ordinating authority:* Depends on member country specific situation
    - Based on supervisory capabilities, responsibility of related digital acts, experience from supervising technical systems and AI competence.

# Potential Competent Authorities for AI Act

## AI Act Annex I Authorities

Product safety legislation

- Consumer agencies
- Medical products agencies
- Transport agencies
- Radio/electronic communication equipment authorities
- + x others
- **Co-ordinated by: National electronic communication / digital infrastructure agencies.**

## AI Act Annex III Authorities

High risk areas

- Biometrics
- Critical infrastructure authorities
- Education & labour authorities
- Employment authorities
- Essential private & public services agencies
- Law enforcement agencies
- Migration & border control authorities
- Justice & democratic processes agencies
- **Co-ordinated by: National data protection agencies.**

## Authorities from other articles

- Financial supervision authorities
- Human rights authorities
- Cybersecurity agencies
- Data protection agencies
- Media regulating authorities
- **Co-ordinated by:** Any of the two agencies coordinating according to annex I or annex III based on additional capabilities.

# Thank you!

For further dialogue and collaboration related to AI act supervision, AI-sandboxes, etc., please contact me at [hans.hedin@pts.se](mailto:hans.hedin@pts.se).

