Regulatory AI Supervision by Competent Authorities
KTH Workshop - April 4, 2024

Hans Hedin
Strategic Foresight & Intelligence
Swedish Post & Telecom Authority
Hans.hedin@pts.se
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
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
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.

Source: Supervising AI by Competent Authorities - European Commission (europa.eu)
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
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

Source: kaizenner.eu
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
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.
Al Regulatory Sandbox Cases

Spain  the Netherlands  Sweden

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
Swedish pilot of AI-regulatory sandbox
EC expert group on regulatory sandboxes
2024-03-06

David Magård

Bolagsverket
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.

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.

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

Steering group
Public Employment Service, Swedish Authority for Privacy Protection, Tax Agency, Companies Registration Office, eSAM (government authorities group)

Working group

External participation

AI system

Iterations

Summaries in shorter reports/guides

Recommenda tions

Ministries

Internal

General external

EU

AI system

AI system

AI system
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
## Scenario Analysis for National AI Supervision

### Scenario 1
Set-up of new AI agency

**Pros**
- Easier competence attraction.
- Single point of contact for all AI supervision.
- Less complex inter-agency collaboration.

**Cons**
- Limited knowledge of sector specific AI.
- Limited access to agency expert areas.
- Takes time to set up a new agency.

### Scenario 2
Existing agency gets ”AI control” with minimum collaboration

**Pros**
- Easier competence attraction.
- Single point of contact for most AI supervision.
- Less complex inter-agency collaboration.

**Cons**
- Limited knowledge of sector specific AI.
- Limited access to agency expert areas.

### Scenario 3
Multiple agencies collaborate

**Pros**
- Good knowledge of sector specific AI.
- Agency expert areas (cybersecurity, GDPR, digital inclusion, etc) better utilized.

**Cons**
- Several supervision points of contact.
- Complex inter-agency collaboration.
- Competence attraction more difficult since many agencies compete for the same personal resources.
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 exist)
  - 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.