

# AI as Boundary Infrastructure in Environmental Assessment

*From boundary objects to boundary infrastructure*



**Lone Kørnøv and Ivar Lyhne**

*The Danish Center for Environmental Assessment, Aalborg University  
Denmark*

[lonek@plan.aau.dk](mailto:lonek@plan.aau.dk) & [Linked-In](#)

[www.dcea.dk](http://www.dcea.dk)



# Why this matters now

- ✓ Accelerating green transition
- ✓ Pressure for faster permitting
- ✓ Increasing data complexity
- ✓ Digitalisation and AI
- ✓ Growing expectations for transparency and trust

*How do we simplify without oversimplifying?*



PRESS RELEASE | Dec 10, 2025 | Brussels | 5 min read

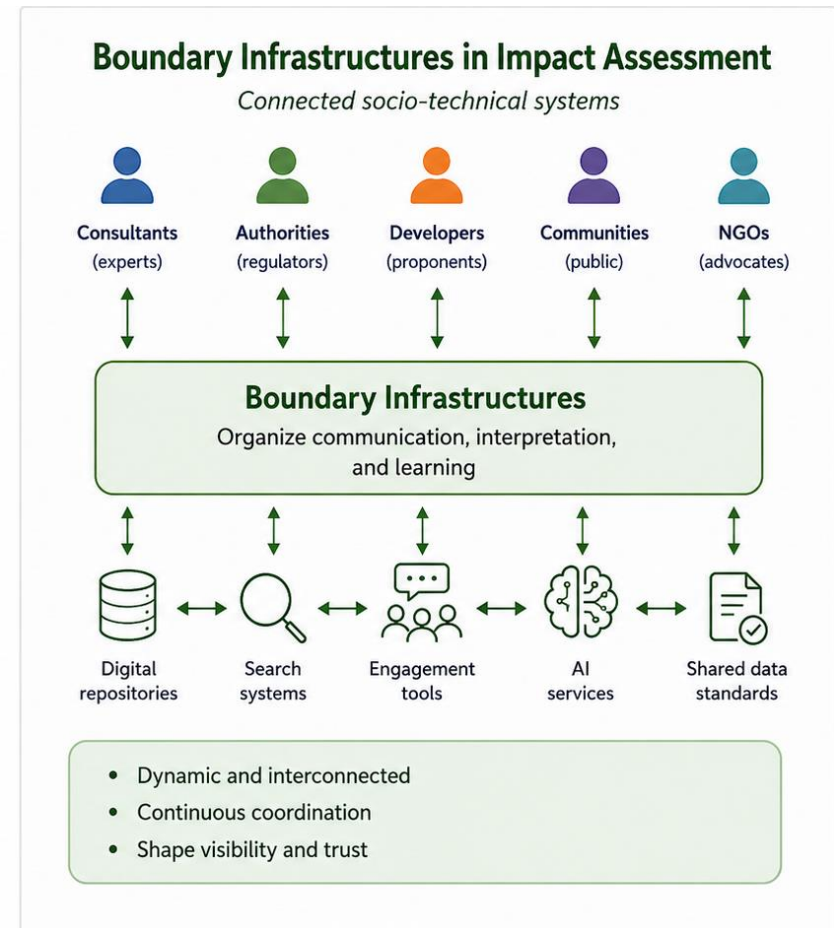
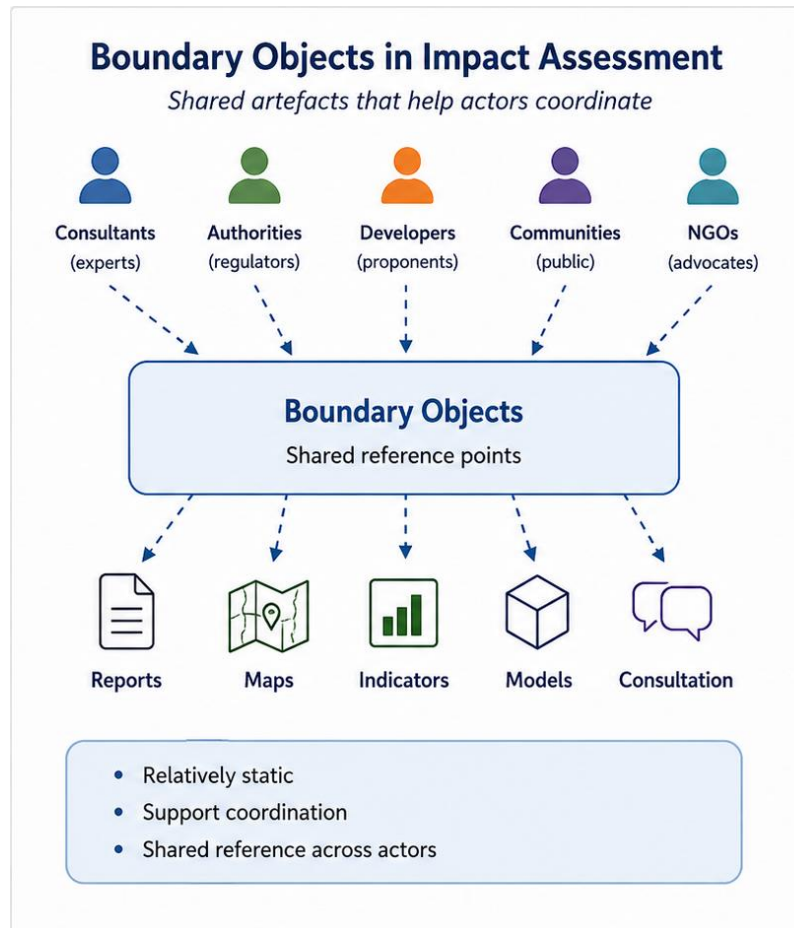
## Promoting sustainable growth with simpler, smarter environmental legislation

### PAGE CONTENTS

- Top
- Quote(s)
- Related media
- Related topics
- Print friendly pdf
- Contacts for media

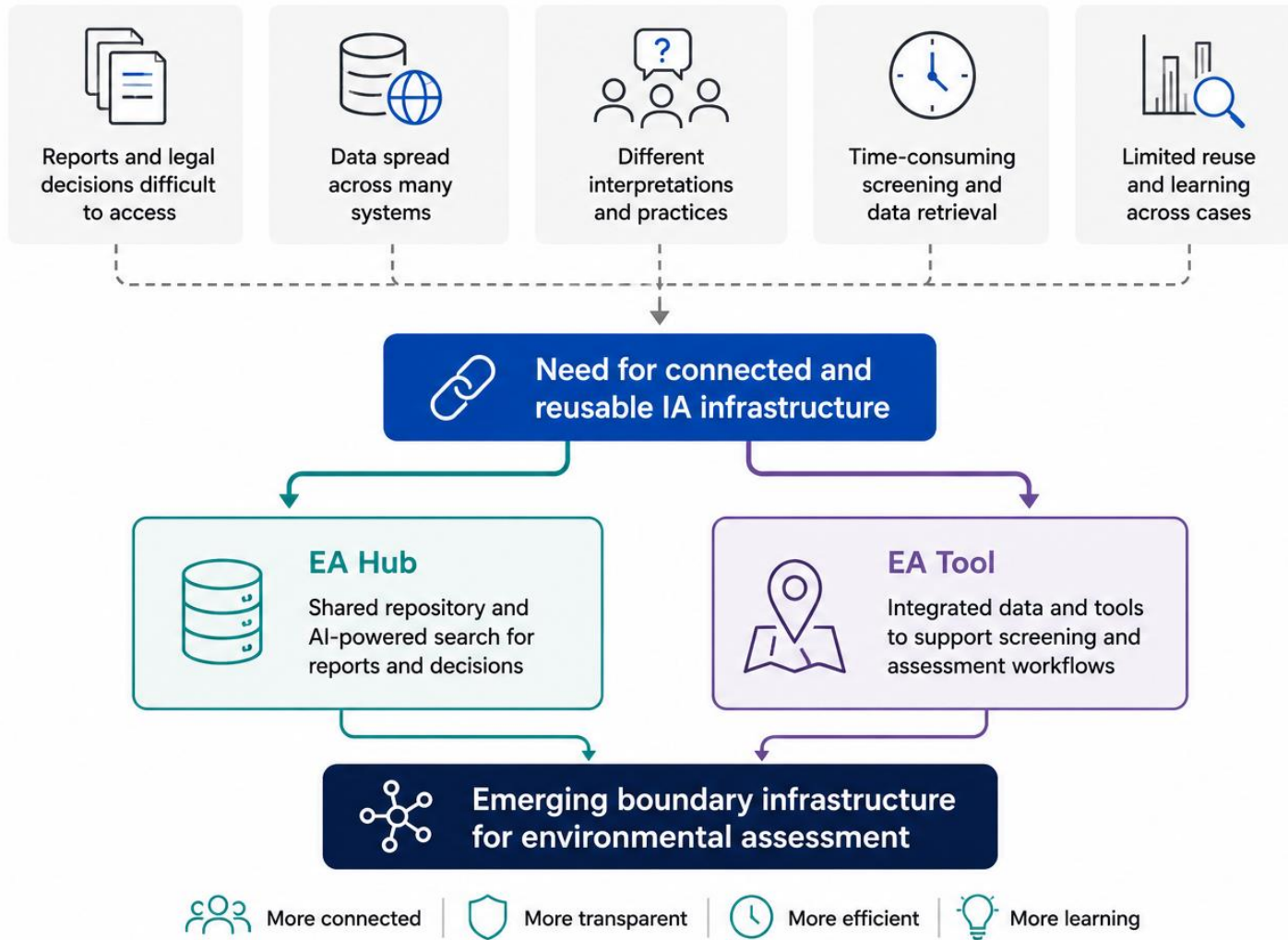
Today, the European Commission presented a [package of measures](#) to simplify environmental legislation in the areas of industrial emissions, circular economy, environmental assessments and geospatial data. The changes will contribute to reducing the administrative burden for businesses, while keeping the EU's ambitious objectives to protect the environment and human health. It will accelerate and streamline permitting processes for all projects, in particular in strategic sectors, such as strategic digital projects, critical raw materials projects and affordable housing, facilitating the transition to a clean and digital economy in the EU. Simplifying regulations and reducing administrative burdens is indeed essential to meet these environmental objectives and strengthen the EU's competitiveness.

# From boundary objects to boundary infrastructure



# Outset and the Danish journey

From fragmentation to infrastructure



# EA Hub

**EA-Hub**  
The Danish Environmental Portal

Search within environmental assessments and board of appeal decisions from all of Denmark.

**2.700+ EIA and SEA reports**  
(georeferenced and with metadata)

**+1.500 legal cases**

**AI search built on language model –**  
exclusively on Hub documents  
(results shown as text snippet from the documents)

**Words/phrases search**  
(results shown as text snippet from the documents)

Environmental Assessments | Board of Appeal Decisions

Search in titles and PDF documents

Classic | **AI search** | Guide

Press enter to search

[View Environmental Assessments in map →](#)

**Newest Assessments**  
Showing 30 of 2581 assessments

- 2021 · In public hearing  
**Miljøvurdering af forslag til kommuneplan 2022**  
Rødovre Kommune  
[Plan](#)
- 2023-2024 · Final approval given  
**Miljøvurdering - Forslag til Kommuneplantillæg nr. 20 og forslag til Lokalplan nr. 152...**  
Bornholms Regionskommune  
[Plan](#)
- Miljørapport - Miljøvurdering af Forslag til Lokalplan nr. 207.1  
Ballerup Kommune  
[Plan](#)

2021 - EIA report in hearing | 2020 - In public hearing | 2020 - In public hearing

**Map View:** Search Assessments, About, Help, EN, Layer control, 909.89 km², Drawn geometry, Distance from geometry, Type Distance, m, Assessments on the map, selections.

# EA tool

- Over 700 curated GIS datasets-covering both onshore and offshore, purpose-built for environmental assessment and permitting
- Structured according to the environmental factors in the European and Danish regulation
- Autogenerate screening reports for a chosen geography
  - Land-based screening
  - Marine screening

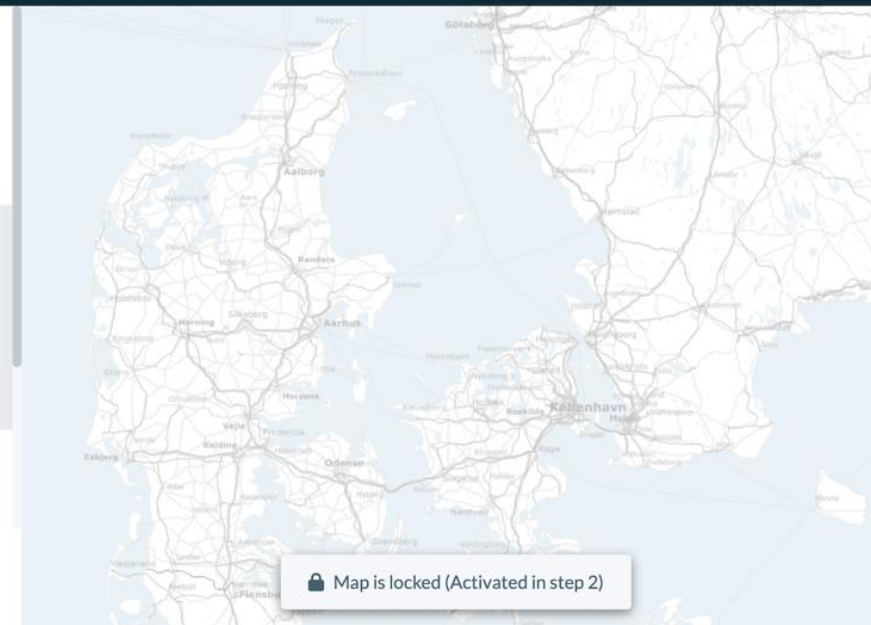
## Environmental assessment tool

The purpose of this tool is to create an overlay analysis of defined geographical areas.

Select screening method

- Land Screening >
- Marine Screening >

The investigation uses publicly available, nationwide, and relevant data, systematized according to environmental factors and other conditions. The result of the investigation can be saved (with login), downloaded as



Survey Title:

### Which area do you want to investigate?

You can choose between drawing an area yourself, drawing a line or uploading your own geometry.

- Draw area
- Draw line
- Upload geometry  
Select a zip file containing shape files - Max. 15MB

### Survey of the area

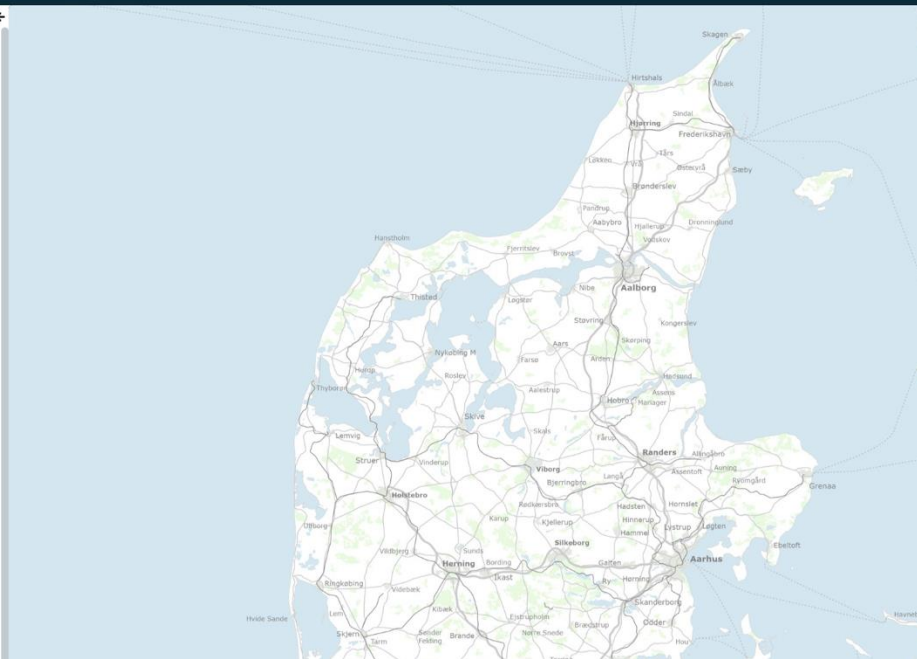
The following is the result over the overlap analysis, distributed on many datasets

[Execute analysis](#)

### Ready for analysis

- Flora, fauna og biodiversitet - terrestrisk (29)

14



# Observed infrastructural and governance effects

---

**The curated, trustworthy data has led to:**

- ❖ Improved accessibility and communication
- ❖ Shared learning across projects and institutions
- ❖ Law proposal to secure the tools/infrastructure become sustainable
- ❖ Expansion and innovation
  - ❖ Toward AI agents supporting screening, legal compliance and reporting
  - ❖ Cross-boundary data space (offshore)
- ❖ Increased standardisation and consistency
  - ❖ Scoping template
  - ❖ Digital templates for EIA screening (infrastructure and extraction)
  - ❖ Cross-ministry initiative to standardise and digitalise EA

# Conclusion

---

## **Main argument**

AI in Impact Assessment should not only be understood as a technical tool

It increasingly functions as:

- ❖ A communicative infrastructure
- ❖ A mediator of interpretation
- ❖ A coordinator across professional boundaries
- ❖ A shaper of visibility, comparison, and trust

## **Final reflection**

The key question is therefore not whether AI enters IA – but what kind of infrastructure we are building around it – and for it.



**IAIA26**  
QUÉBEC CITY, CANADA

# Let's continue the conversation!

Message me your questions or comments in the IAIA26 app.

**Lone Kørnøv**

*The Danish Center for Environmental Assessment, Aalborg University*

*Denmark*

**#iaia26**