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Implementation of AI in European National Mapping and Cadastral Agencies

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Sharing experiences and best practice

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Trusted daily everywhere for secure ownership transactions, diligent policy elaboration and monitoring

Relied on by European institutions and UN, governments, businesses and citizens

Registered on the EU Transparency Register and bound by its code of conduct

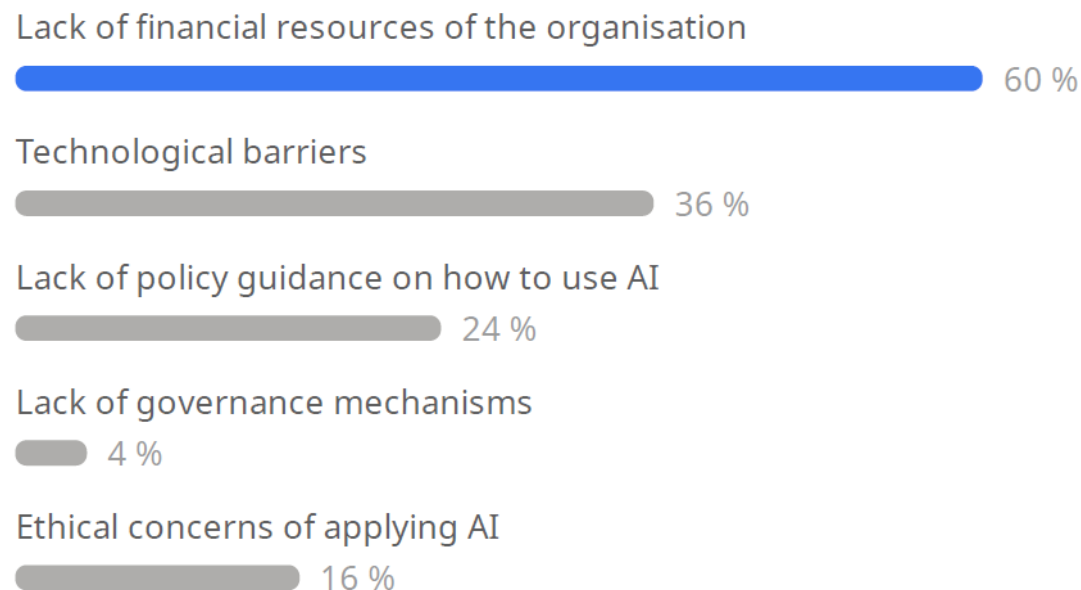# AI in National Mapping, Cadastral and Land Registration Authorities

- EuroGeographics worked in collaboration with EuroSDR
- Organised three online workshops in three years: 2021, 2022, 2023
- The workshops took a holistic view of the implementation of AI: policy frameworks, research trends and experiences of implementing AI
- Brought together staff members of NMCAs, researchers at NMCAs and academic institutions, policy people and software developers
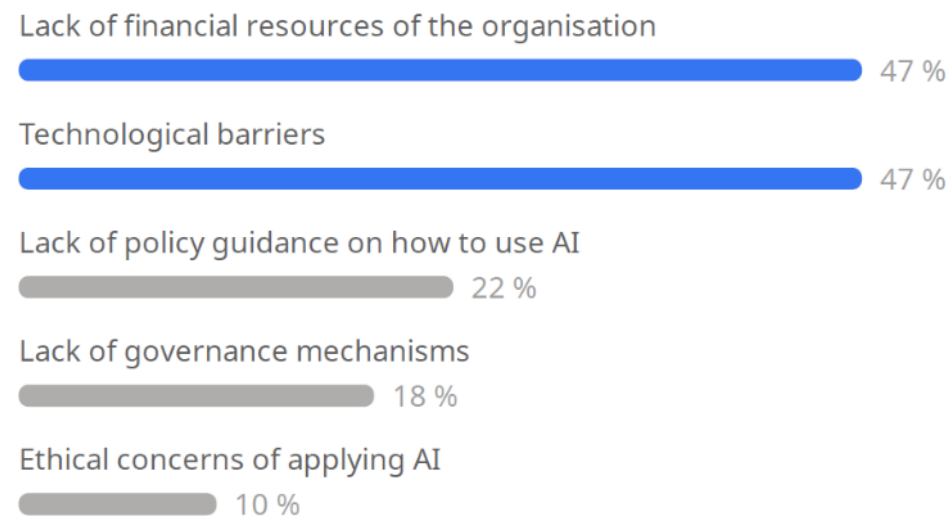- A total audience of about 500 across the three workshops

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Highlights of some trends from the workshop

- NMCAs view AI as an opportunity rather than a threat, but have become more weary of the hype with time - going from 99% in 2021 to 86% in 2023

- NMCAs still consider the maturity of AI in their organisations as low: 63% in 2021 to 57% in 2023

- The drivers for implementing AI in NMCAs are mainly Cost/Time savings and More efficient business processes, quality is not a prime driver and has not changed in three years – decreasing from 36% to 31% from 2021 to 2023. AI was seen as an innovation in 2021 (62%) and less so by 2023 (22%)

- Machine learning and Computer vision are the top two AI technology most relevant for NMCAs

- NMCAs see themselves as both users and suppliers in the AI cycle

In your view which will be the main barriers that NMCAS are facing when implementing AI solutions in the near future?
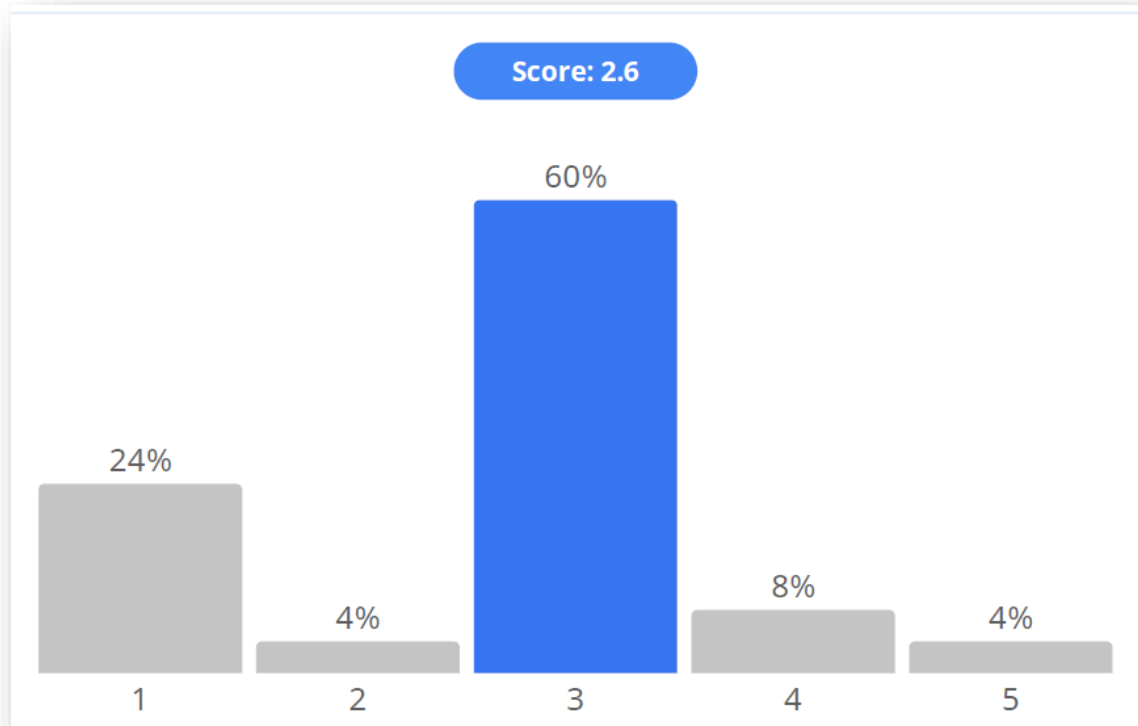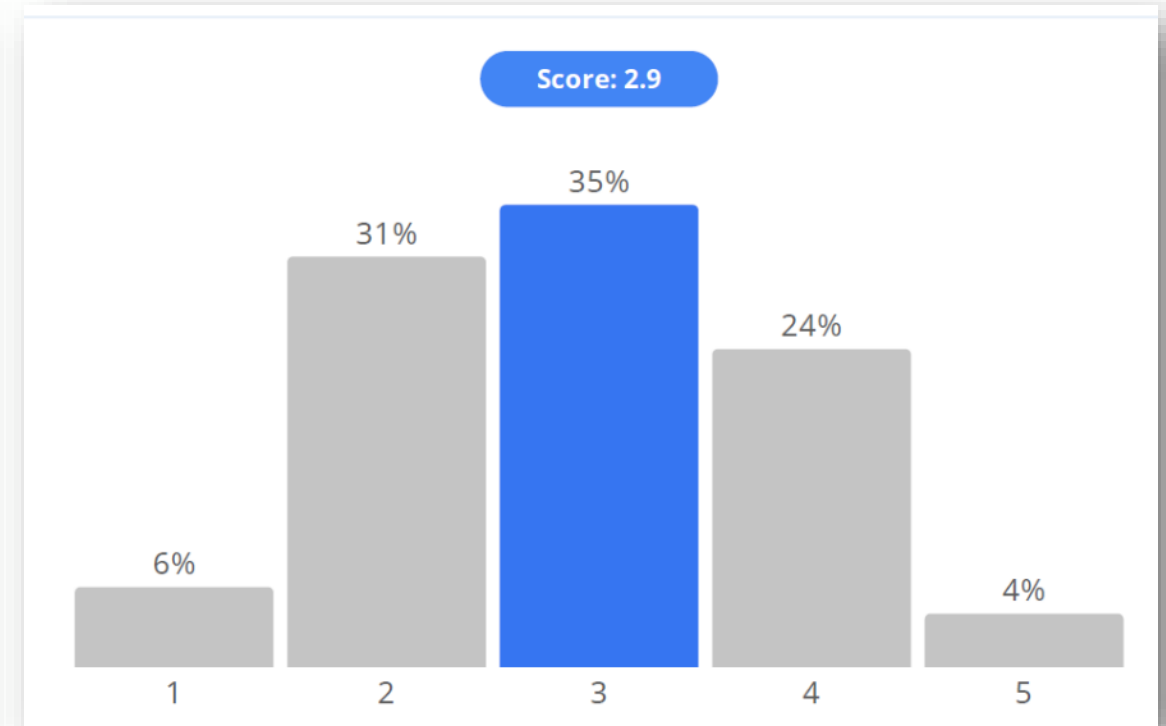

Lack of financial resources of the organisation
60 %

Technological barriers
36 %

Lack of policy guidance on how to use AI
24 %

Lack of governance mechanisms
4 %

Ethical concerns of applying AI
16 %

October 2022

Lack of financial resources of the organisation
47 %

Technological barriers
47 %

Lack of policy guidance on how to use AI
22 %

Lack of governance mechanisms
18 %

Ethical concerns of applying AI
10 %

September 2023

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AI will totally disrupt the working processes at NMCAs

Score: 2.6

60%

24%

4%

8%

4%

1 2 3 4 5

October 2022

Score: 2.9

35%

31%

24%

6%

4%

1 2 3 4 5

September 2023

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AI will have a significant impact NMCA business models
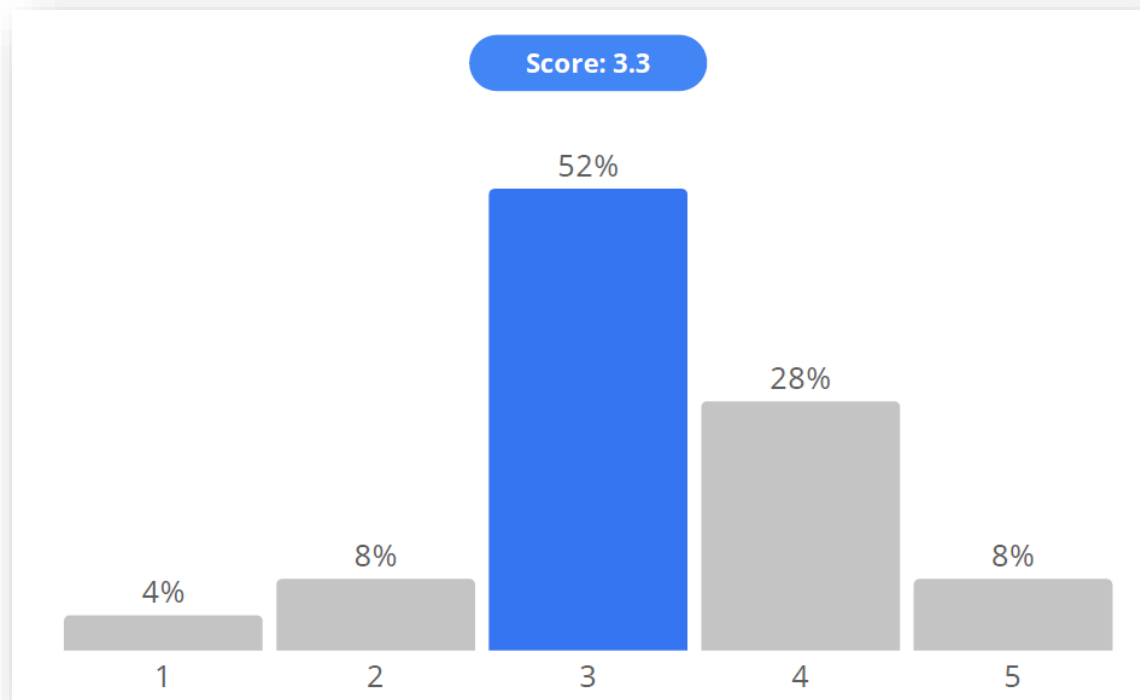
October 2022

September 2023

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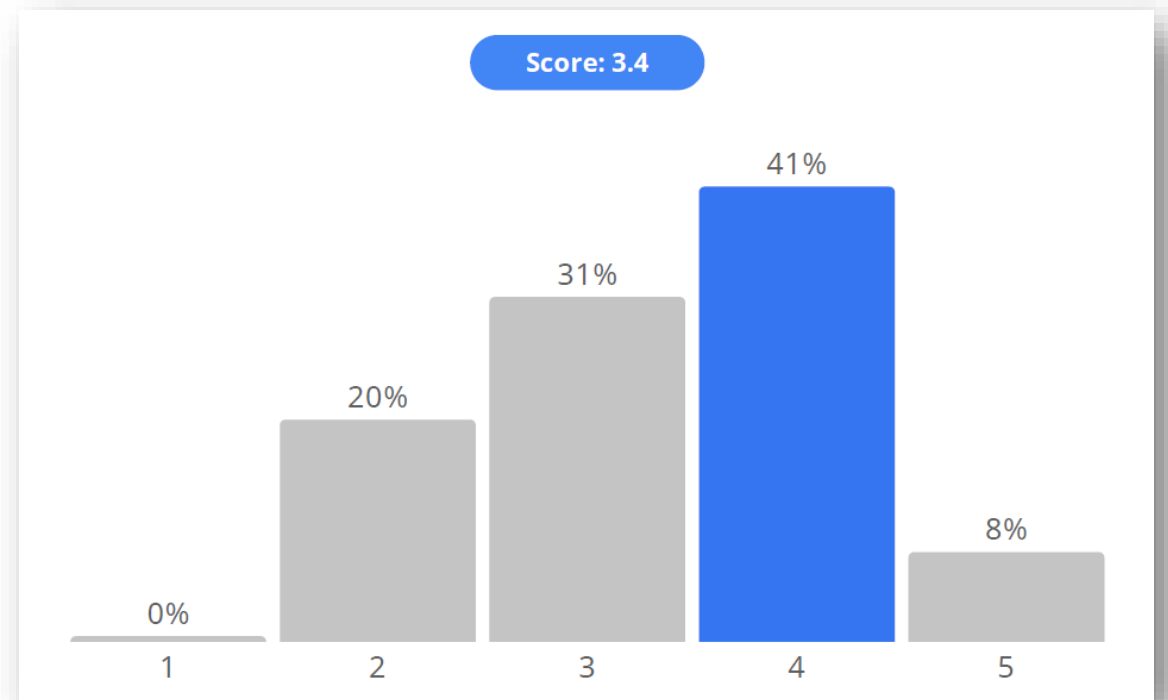
Trust and governance are important

Thinking about the (future) use of AI by NMCAs, which risk levels do you envisage?

Unacceptable risk

0 %

High risk

0 %

AI with specific transparency obligations

89 %

Minimal or no risks

11 %

What do you think about the main risks of using AI at NMCAs?

Which geospatial issues should AI policy take into account?

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NMCA's outlook of AI

- Routine
- In the future 🙂 There is no future without AI
- Easier data collection.
- NMCAs can play a key role in providing high-quality, reliable reference data to support AI/ML training and validation of results.

- Automatic process of creating printable pdf/paper maps in different scales.
- to be a better service deliverer
- Different staff skill set and new data being collected from different sources

- NMCAs already apply AI/ML, but ar still before the tipping point. Some already have excellent results and expertise - but overall, we will have to put more resources to catch up with this field.

- NMAs - pursue it!
- AI Can be a very usefull tool in our production processes !
- AI is a tool

- AI is a tool that need to be used intelligently 😉

- hopefully it will be able to manage many of the 'low hanging fruit' jobs in object detection, almost autonomously.
- Less manual work, just checking

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Thank you!