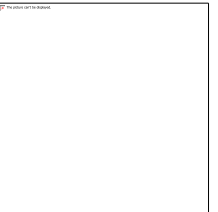




Presented by Mikela Camilleri and Alexia Farrugia

Young EUROSAI Conference
9-10 June 2026

Digital Transformation in Auditing: Enhancing NAO Effectiveness through Emerging Technologies and Methodologies



Welcome

On behalf of the **Malta National Audit Office (NAO)** we are:

- Mikela Camilleri working within the Financial and Compliance Section
- Alexia Farrugia working within the Special Audits and Investigations Section



Modernising Public Sector Auditing Through Digital Innovation

Supreme Audit Institutions operate in an increasingly **complex, data-rich environment**, challenging traditional audit approaches.

Agenda:

Explore how the **NAO** can leverage:

- **Data Analytics**
- **Geographic Information Systems (GIS)**
- **Web Scraping and Desk-Based Research**
- **Artificial Intelligence (AI)**
- **Cloud-Based Technologies**

Examine how emerging technologies can improve **audit effectiveness, efficiency and risk identification**.

Assess the **transferability of private-sector audit innovations** to the public sector context.

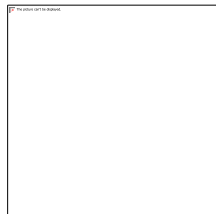
Highlight opportunities for **modernisation**, while addressing:

- Data quality and accessibility challenges
- Information security and privacy concerns
- Ethical and institutional considerations





Impact of AI and Cloud Technologies and Associated Risks



AI is enhancing audit processes **across planning, risk assessment, testing and reporting phases.**

Microsoft 365 Copilot has been introduced at the NAO to **improve productivity and efficiency.**

Enhanced extraction, processing, and analysis of auditee information improves risk identification and audit effectiveness.

AI and cloud-based platforms:

- Streamline documentation review, analysis, collaboration and workflow standardisation
- Provide remote and real-time access data

Benefits include improved efficiency, scalability, risk detection, and reduced manual effort and human error.

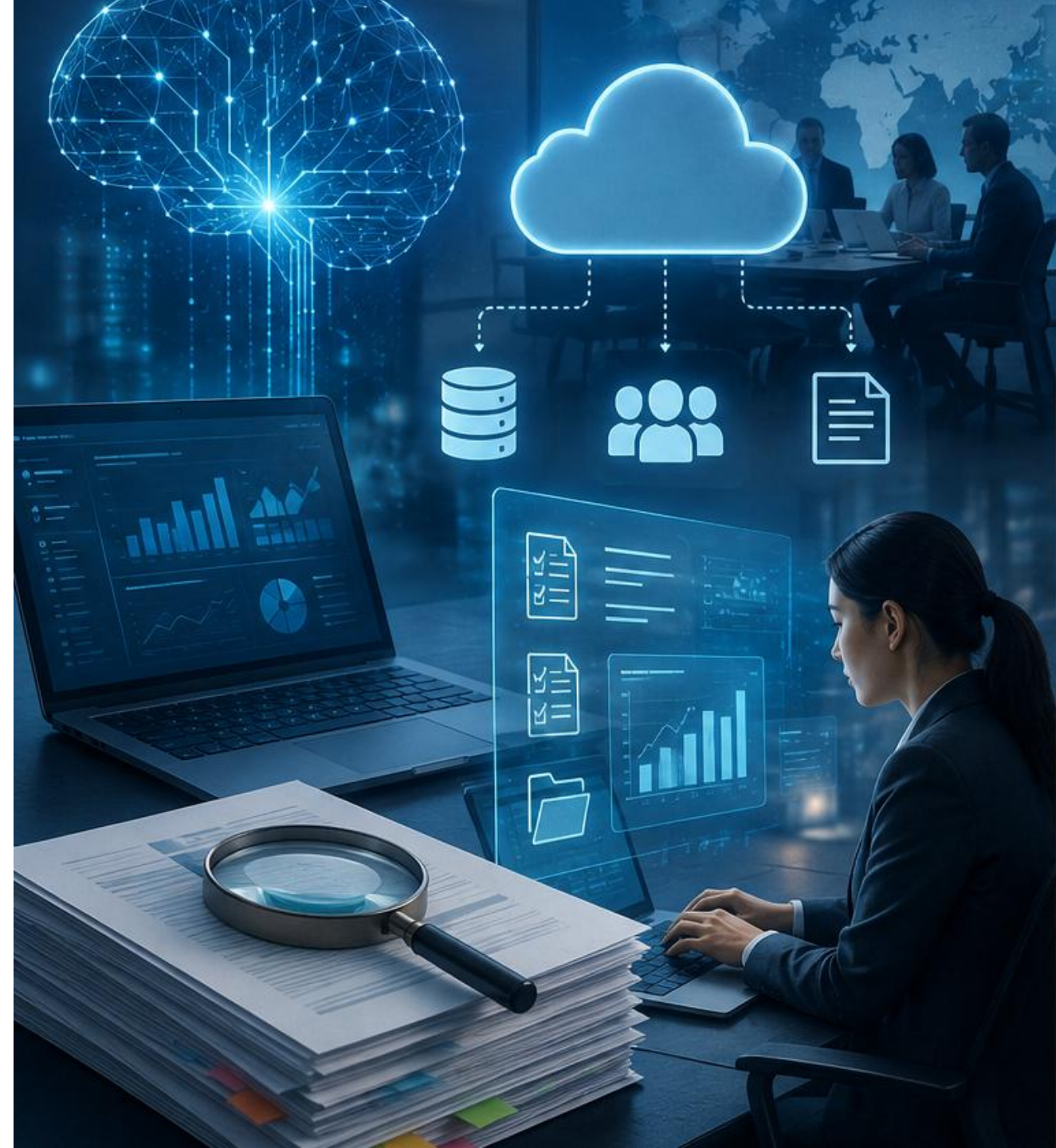
AI adoption raises **concerns** regarding transparency, bias, explainability, and cybersecurity.

Cloud solutions introduce risks relating to regulatory compliance, data ownership, and dependence on third-party providers.

Robust due diligence is essential to safeguard data integrity, privacy, and audit reliability.

Auditors increasingly require a combination of audit, financial, technological, and data analytics skills.

Technology investments should support public sector accountability requirements while strengthening audit quality and internal controls.



Public Sector Constraints on Digital Innovation

Public sector audits operate within strict **legal and regulatory frameworks**, which may limit or delay technology adoption.

Public sector **audit objectives differ** from the private sector, focusing on accountability, value-for-money, and policy outcomes.

Privacy, confidentiality, and data protection requirements necessitate strong **security controls** and careful oversight of cloud providers.

Fragmented or restricted government data can reduce accessibility and limit the effectiveness of digital tools.

AI adoption requires explainability, transparency, and robust governance to **maintain public trust** and accountability.

Budget limitations and **skills gaps** in data analytics and technology remain significant barriers to digital transformation.

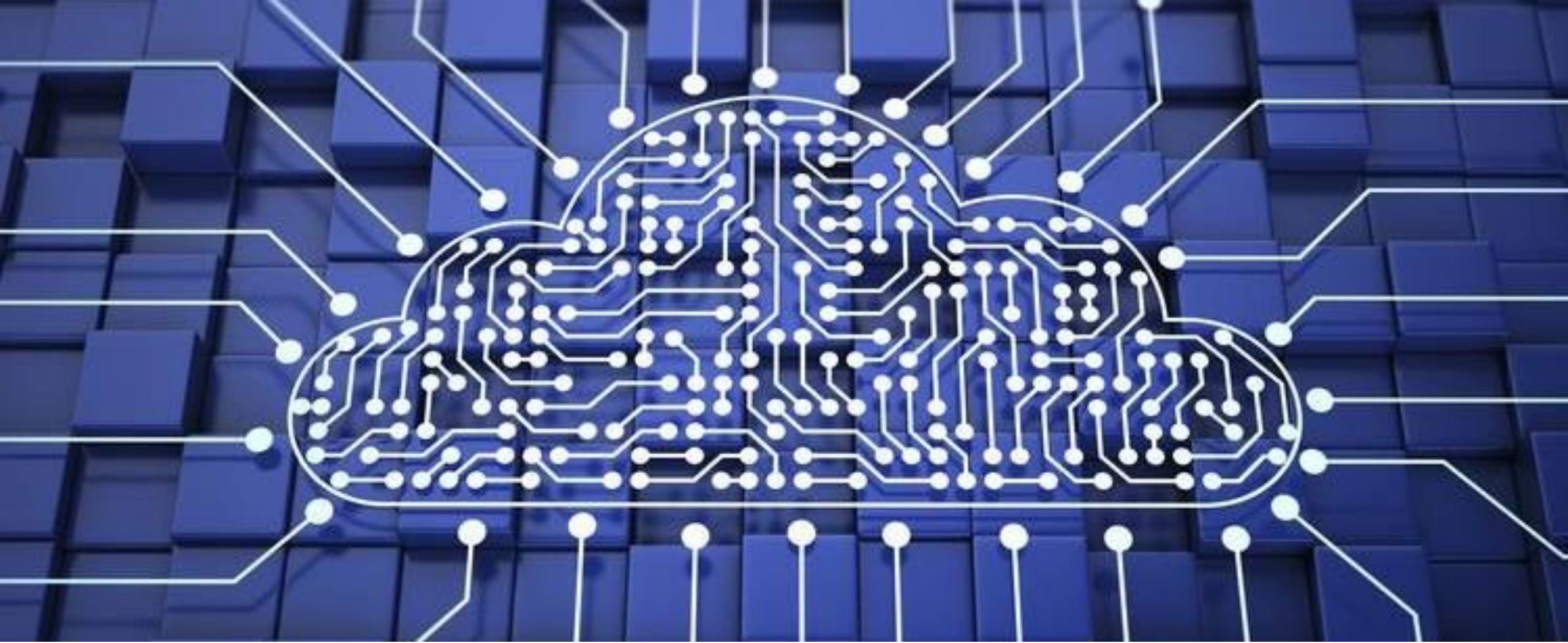


Building Digital Capability and Managing Change



Effective adoption of digital innovation requires the NAO to:

- **Invest** in data infrastructure, data management, analytics capabilities, and data governance.
- Develop **workforce skills** through continuous training and by combining audit expertise with data science capabilities.
- Use **analytics** to support and enhance professional judgement, not replace it.
- Address **key challenges** including resistance to change, cybersecurity risks, system integration, and auditor independence.
- Strengthen understanding of **security and regulatory requirements** through ongoing professional development.
- Promote sharing of knowledge and best practices through **international collaboration** (e.g. EU Contact Committee, EUROSAT, and INTOSAI).



Integrating modern solutions: The
NAO's approach

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Seeking digital innovation

The NAO has formed an action team focusing on the integration of AI, data analytics and other technologies in audit work. This action team aims to:

- Identify relevant **technologies** and methodologies to improve audit quality
- Identify **training** opportunities to increase employees' skills and knowledge on such approved technologies and methodologies
- Establish **contacts** with SAls, educational institutions and other organisations
- Facilitate **knowledge sharing** through exchanges

The action team has been working on two fronts:

Short-term

- On the short-term end, the action team seeks to identify **potential topics for training** to ameliorate the skills of staff
- **In-house surveys** are to be circulated to gather feedback from all skill levels to identify what tools different sections use in their work
- **Short videos** are also issued monthly to familiarise the staff with advanced functionalities of readily available tools, such as Microsoft excel.



The action team has been working on two fronts:

Long-term

- On the long-term front, the Office has **collaborated with external bodies** to identify potential solutions
- One example is **web scraping**, an automated function to extract large chunks of data from websites whilst converting it into more manageable formats such as spreadsheets
- The NAO has also collaborated with the National Statistics Office to identify the **feasibility** of writing a web-scraping code for the Office's needs
- The aim of automating this research is to assist the audit team in identifying potentially crucial information in a more efficient manner.



The action team has been working on two fronts:

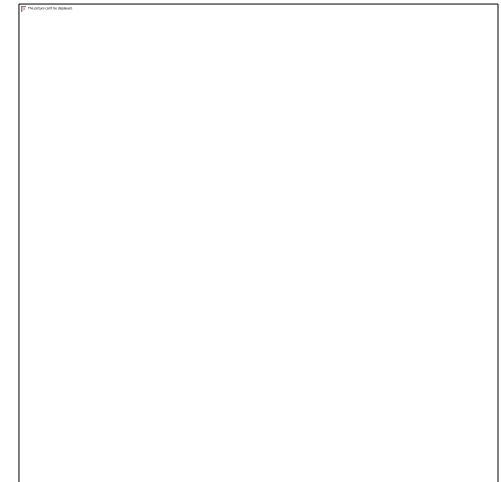
Long-term

- Another potential project is the integration of a **Geographic Information System (GIS)** into the audit team's workflows.
- This would turn audit evidence into **spatial intelligence** by mapping and analysing where services, outcomes, risks and resources are located, revealing patterns one might miss if presenting data in a tabular format.
- The action team highlighted the potential use of spatial analysis of **socio-economic indicators** for example health, education, environment and land use
- The main benefits would not only be greater clarity and precision of findings, but also **enhanced transparency, communicability** of the audit and **improved reader interaction**



Seeking external support for audit modernisation

- The NAO is currently working with the Organisation for Economic Co-operation and Development (OECD) to implement a **Technical Support Instrument (TSI) project** funded by the European Commission.
- The project, entitled 'Improving External Audit Quality in Malta' aims to **strengthen the quality, consistency and impact of external audit** in Malta
- The project also sets out to provide a **comprehensive framework** to strengthen audit quality
- A key component of the project focuses on the digitalisation of the NAO's corporate and audit processes
- These efforts are intended to support the transition towards more data-driven, efficient and consistent audit practices in line with international standards and good practice.



Future projects financed by Erasmus+

- The NAO has sought financial backing through submitting an application under the Erasmus+ project to **support staff mobility and capacity building**. The project was selected for funding in May 2026.
- This project will consist of **4 job-shadowing mobility activities** hosted by SAI Denmark and SAI Estonia to 8 NAO staff
- The experience will focus on strengthening organisational capacity in the areas of **data analytics, the responsible use of AI in audit work, and stakeholder communication and engagement**.
- Such exchanges also **promote knowledge sharing** and foster **strong cooperation within the SAI community**, while encouraging broader uptake of EU funding instruments for institutional development





Closing Remarks

Adopting the above solutions enables auditors to work more efficiently by automatic routine procedures, strengthening documentation and enabling deeper analysis.

Ultimately, continual investment in current technologies will enable the NAO to enhance audit quality, remain relevant as auditees modernise, and deliver timely insights that better support accountability and good governance