



Using data analytics to enhance audit impact

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#CultureShift 2030

In 2021-22, AGSA adopted a data-led strategy:

- Strengthening accountability and governance in the public sector
- Driving organisational cultures of performance, transparency, integrity, accountability

Role of data analytics

- ✓ Enables deeper audit insights
- ✓ Improves risk identification
- ✓ Supports actionable reporting
- ✓ Strengthens stakeholder engagement
- ✓ Advances AGSA's data-led audit strategy for 2030



Data analytics changes

- How we ask questions
- How risks are identified
- How evidence is gathered
- The skills auditors require

Key principle

Analytics enhances and informs auditor judgement – it does not replace it

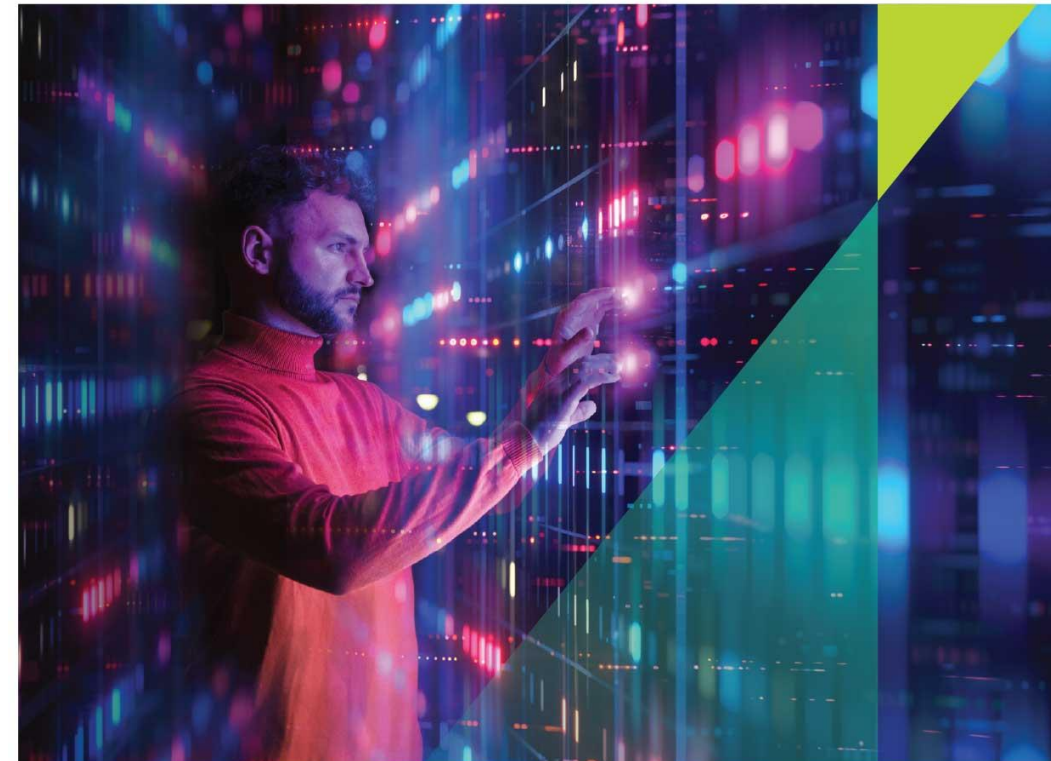
Strategic shift

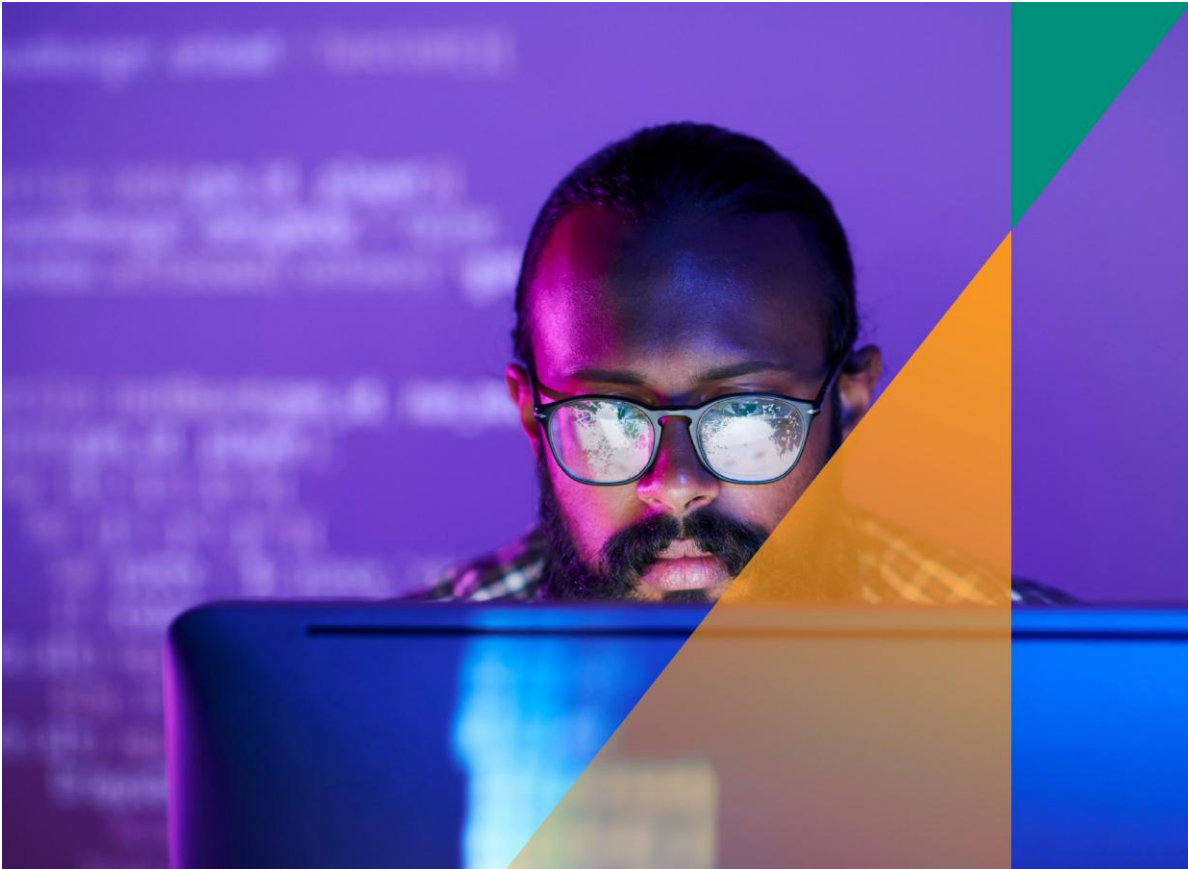
From:

- Retrospective, sample-based auditing

To:

- Risk-driven, data-led auditing





Analytics supports

- Audit planning and strategy
- Risk identification
- Substantive testing
- Evidence gathering
- Reporting and insight generation

Core approach

- Not a standalone technical function
- Embedded within audit methodology
- Continuously evolving and scalable

Future direction

- Predictive analytics
- Machine learning and AI-enabled risk anticipation

Key scalability initiatives

- Automation to improve audit coverage
- Analysis of transversal systems
- Themed analytics across sectors

Examples of themed analytics

- Conflict-of-interest detection
- Procurement risk analysis
- Contract management oversight
- Infrastructure and supply chain analytics

Result

- ✓ Broader public-sector insight
- ✓ Enhanced oversight capability
- ✓ Improved identification of systemic weaknesses





More effective audits

- ✓ Greater precision in identifying anomalies and risks
- ✓ Reduced reliance on sampling

More efficient audits

- ✓ Increased audit coverage
- ✓ Improved productivity and consistency
- ✓ Faster insight generation

Full population testing

- ✓ Stronger assurance through comprehensive analysis
- ✓ Better understanding of control environments

Foundational step

Established a centralised **data analytics enablement centre**

Focus areas

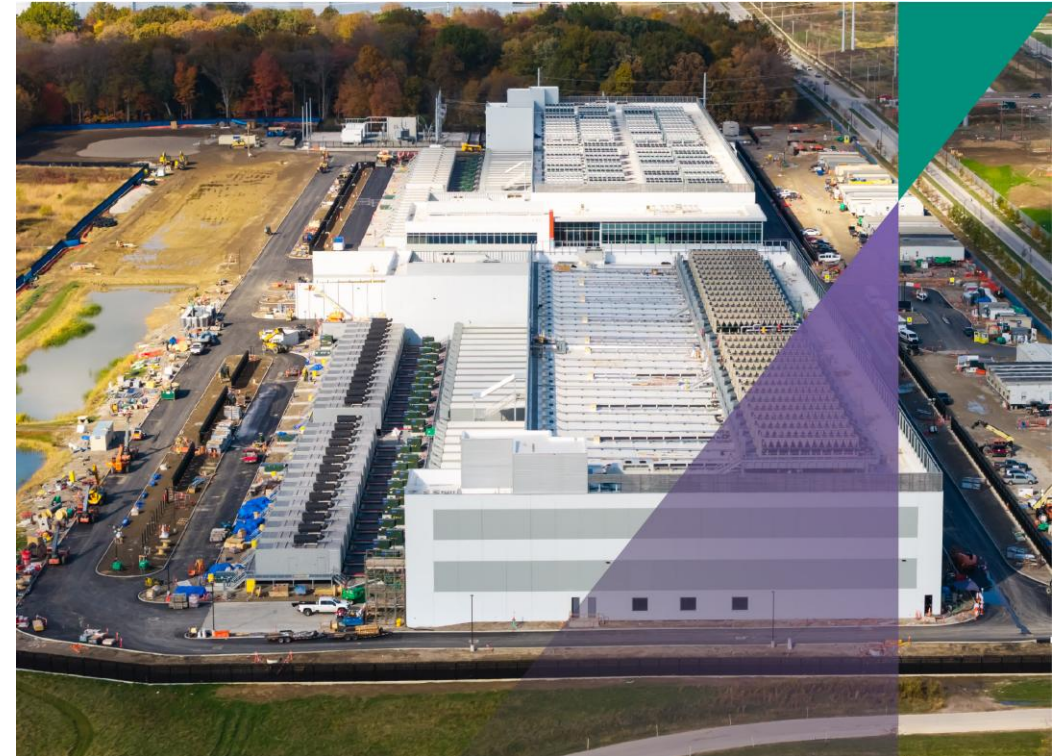
- Assurance analytics
- Fraud analytics
- Thematic analysis

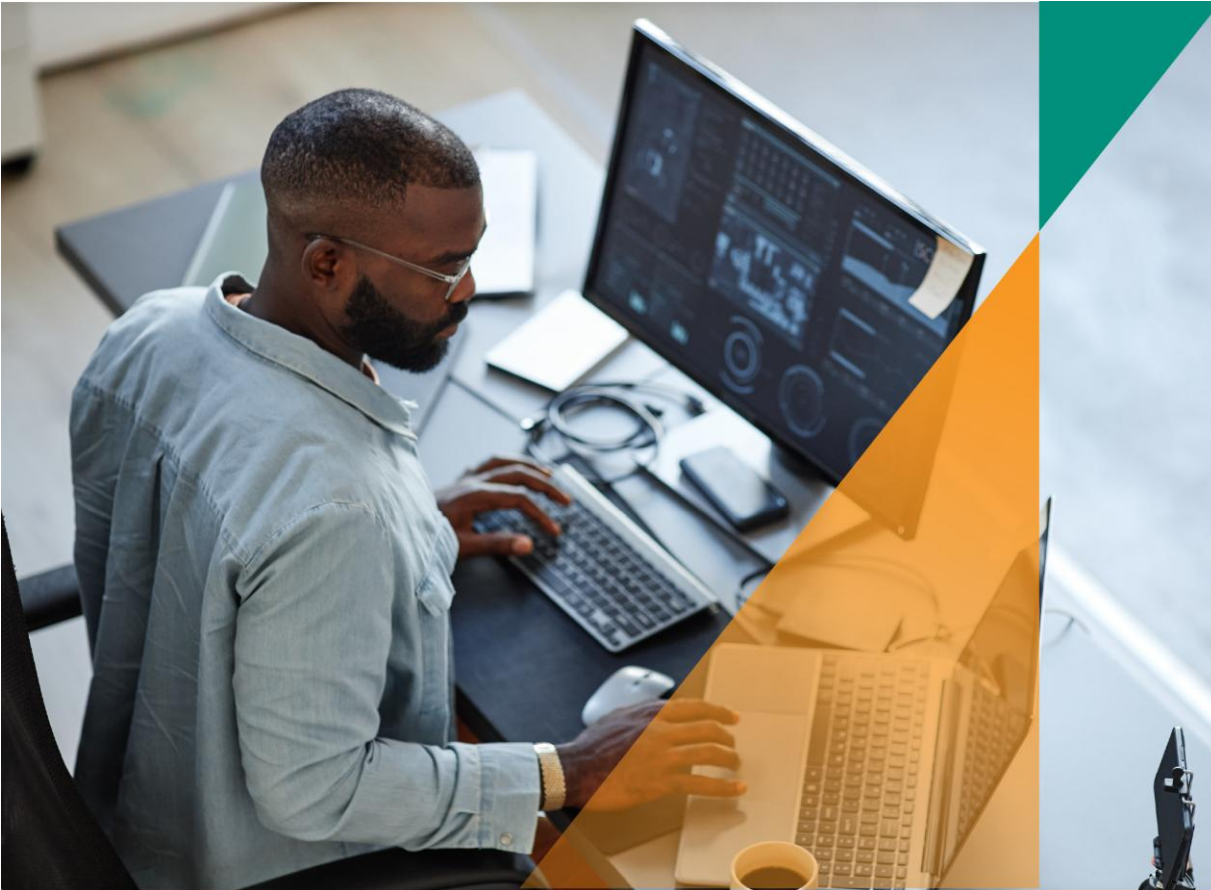
More efficient audits

- Revenue, assets, supply chain management, infrastructure

Supporting investments

- Data extraction and validation capability
- Dashboard reporting
- Analytical infrastructure





Sustainable capability requires:

- Audit and public-sector expertise
- Data management capability
- Analytical skills
- Fraud and risk analytics
- Insight communication skills
- Strong professional judgement

Sustainability approach

- Enablement and integration
- Not reliance on isolated specialists

Talent development

- Establishment of a Data Academy
- Internship programmes
- Defined skills pipeline
- Focus on talent retention

Traditional question

“Is this transaction correct?”

Modern data-led questions

“Where are the highest risks?”

“What patterns are emerging?”

“What systemic weaknesses exist across the full population?”

Impact on auditing

- Stronger focus on root causes
- More forward-looking audits
- More actionable findings
- Improved quantification of findings
- Better assessment of control environments



1. Start with audit needs

- Focus on audit questions and accountability outcomes
- Technology should serve audit objectives

2. Invest beyond technology

- Equal focus on people, process, and professional judgement

3. Embed analytics into methodology

- Integrate analytics across the full audit lifecycle

4. Prioritise scalability and sustainability

- Practical and repeatable solutions
- Adaptable across audits and environments

5. Build a data-driven culture

- Encourage curiosity, insight, and continuous learning
- Make evidence-driven thinking part of everyday auditing





Data analytics is increasingly:

- Part of the backbone of modern auditing
- Essential for effective public-sector oversight

Its real value lies in enabling audits that are:

- More effective, more efficient, more insightful

Ultimately, data analytics strengthens:

- Transparency, accountability, good governance, public trust

Closing Message

The greatest contribution of data analytics is not the technology itself – but its ability to strengthen audit impact.

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Auditor-General South Africa



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THANK YOU

