Don’t bury the data

AGS, data science, and who reads your monitoring data in 2050

Paul Burton | Geotechnics/Cirro

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FROM DATA FORMAT TO TEAM SHAPE

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12 Reading. Or 35,000.

One piezometer. One year.

Judgement does not scale by three orders of magnitude.

Monitoring is the evidence base

Slopes. Tailings. Groundwater. Environment.

Continuously instrumented.

Decisions now rest on data trails, not judgement alone.

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The bottleneck is not the sensor

We solved collection.

We did not solve custody.

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A number without context is not data. It is liability with a decimal point

AGS already solves this

Mature

Decades as the transfer standard

Self-describing

Context travels inside the file

Portable

Operator to consultant to regulator

Underused

We file it under site investigation

Then it stopped being ours alone.

Structured data can be read by people

who are not geotechnical engineers.

Who is in the room now

TEN YEARS AGO

- Geotechnical engineer
- Engineering geologist
- Field technician
- CAD drafter

TODAY, SAME PROGRAMME

- Data engineer
- Data scientist
- Geospatial / GIS specialist
- Telemetry and automation
- Asset information manager

Why the market moved

Volume

A reporting task became a data-processing task

Scrutiny

An auditable chain from sensor to statement

Integration

Twins and live models need structured inputs

Automation

Appetite running ahead of data hygiene









The uncomfortable Part

Data without domain: a confident model of a sensor swap.

Domain without data: a 40-tab spreadsheet with a resignation option.

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The talent question is the wrong one

Don’t just hire data scientists.

Staff the interface between the two.

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AGS is the handshake between the engineer who installed the instrument and the data scientist who will never meet them.

What Can I do?

- Apply AGS (or similar protocol) to monitoring, not just site investigation
- Specify structure and handover in every scope
- Give one named person the schema
- Make data custody an engineering deliverable

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The sensor tells you what happened.

The standard is what lets everyone else understand it.

Including the people we haven't hired yet.



REAL TIME MONITORING & VISUALISATION

A GEOTECHNICS SOLUTION