



What Have We Learned 50 Years After Seveso?

**How digitalization
can actually work**

About the Speaker



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1 Nearly Three Decades of Experience

Deep roots in process industry
— from plant floor to boardroom
strategy.

2 Operational Safety & Digitalisation

Specialised in translating digital tools
into real safety outcomes for complex
industrial environments.

3 Insights Shaped at Octave

Working with process industry clients to embed discipline-driven digital
workflows that protect people and assets.

Seveso, 10 July 1976

Seveso is often remembered as a technical incident — a loss of containment, a reaction gone wrong. But if you look closer, it was something else entirely.

Delayed Recognition

The risk was not identified early enough to prevent harm.

Missing Shared Understanding

No consistent picture of what was happening across teams.

Weak Communication

Critical information failed to reach the right people in time.



Today's Plants: More Data Than Ever

What We Have Today

- More sensors across every process unit
- More automation and control systems
- More data streams than ever before

Technically, we are safer than ever.

And Yet...

If you analyze incidents today, many follow very similar patterns to those seen 50 years ago. The technology changed. The underlying vulnerabilities did not.

 Similar patterns still remain on the plant floor.

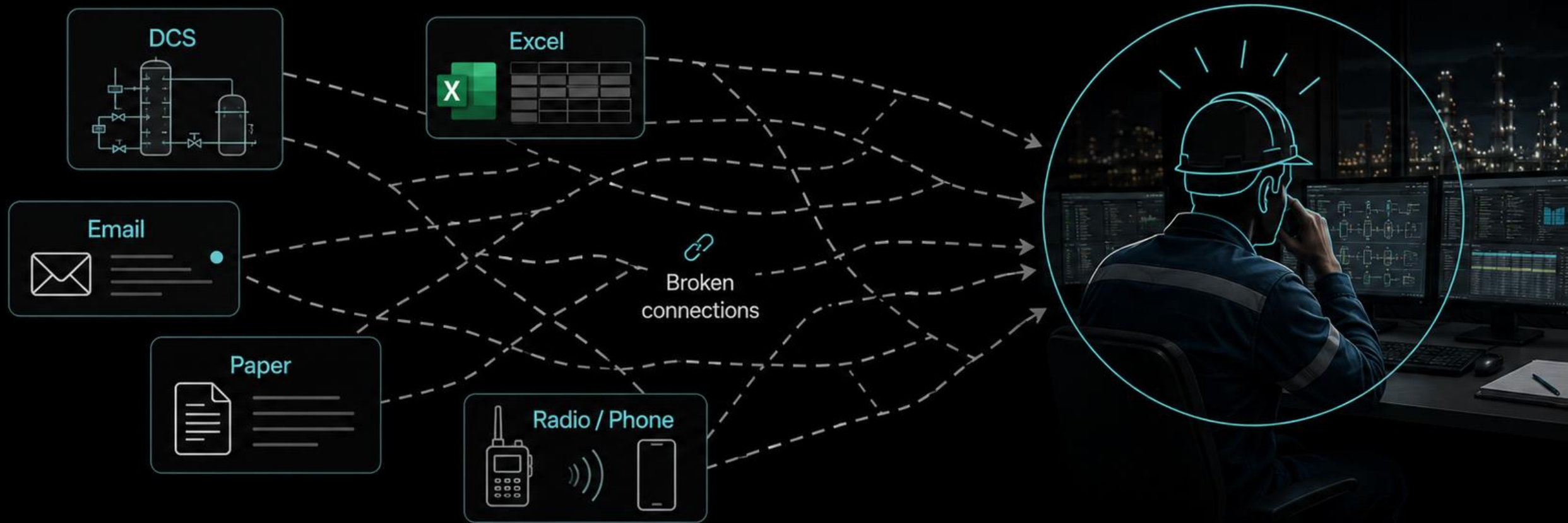
We improved systems. We did not improve decisions.

Over the last decades, the process industry invested heavily in technology, infrastructure, and compliance.

But the fundamental question of **how decisions are made on the plant floor** was largely left unanswered.



This is what digitalization often looks like.



| The operator becomes the **system integrator**.

A Critical Example: Shift Handover

Shift handover is one of the most safety-critical moments in daily plant operations. It is where knowledge of the current state must transfer reliably between people.

And yet, in most facilities today:

- Critical information is shared verbally
- Notes are scattered across multiple systems
- There is no consistent, structured understanding of the situation



This is exactly where risk starts to build up — quietly, before any alarm sounds.



The Myth: More Data = Better Decisions

✘ The Assumption

Collecting more data will automatically lead to better decisions and safer operations.

✓ The Reality

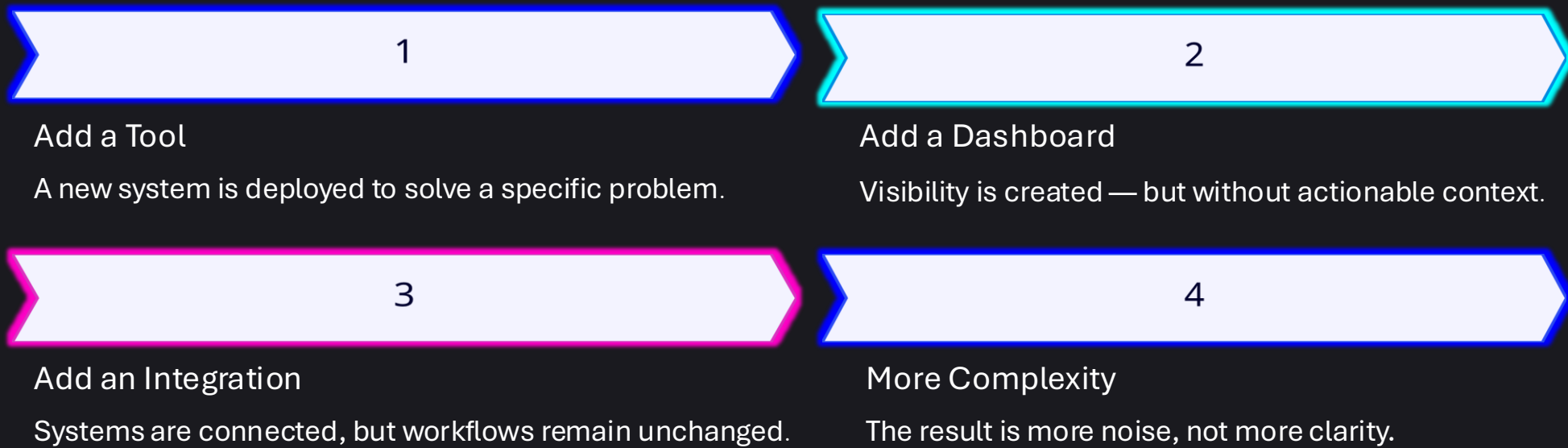
More data often leads to more noise, more uncertainty, and more cognitive overload for operators.



The belief that data volume equals decision quality is one of the most persistent myths in industrial digitalization.

Why Digital Initiatives Fail

Most digital transformation programs in the process industry follow a recognizable and ultimately self-defeating pattern:



 **Complexity is not clarity. Adding layers does not solve the underlying problem.**

Process Safety Fails in the Last Mile

Process safety rarely fails in design. It rarely fails in engineering. It fails in **execution** — in the last mile, where people actually operate the plant.

- Not in Design
Engineering standards and safety systems are generally well-defined.
- Not in Engineering
Technical barriers are in place and largely effective.
- In Execution
The gap between what systems know and what operators do is where incidents occur.



The Core Insight: Connect Data, Context, and Action

Data Without Context

= Noise. Numbers without meaning cannot drive safe decisions.

Context Without Action

= Useless. Understanding a risk without a guided response changes nothing.

Data + Context + Action

= Safety. Only when all three are connected does digitalization actually reduce risk.

Safety only improves when these three elements are structurally linked within the workflow — not left to individual interpretation.

What Actually Works: Embedded, Discipline-Driven Workflows

Digitalization only works when it becomes part of **how people work** — not as an additional system to check, but as a workflow that guides decisions in the moment they are needed.



Structured Communication

Consistent, role-specific information flow at every handover and critical moment.



Contextualized Data

Operational data enriched with process knowledge and situational awareness.



Guided Actions

Clear, discipline-driven next steps embedded directly in the workflow.



The context-aware intelligence platform for the physical world.

Design

Where intelligence is modelled

Schematics & 3D Modelling
Engineering Analysis
Engineering Information Management
Geospatial Intelligence

Operate

Where intelligence compounds

Operations Optimization
Asset Performance & Quality Assurance

Build

Where intelligence materializes

Construction & Supply Chain Management
Project Performance

Protect

Where intelligence becomes durable

Public Safety
Physical Security
Industrial Cybersecurity



Before vs. After: The Real Transformation

The key difference is not the technology deployed — it is how work is structured around it.

Before

- Reactive — responding after problems emerge
- Fragmented — information scattered across systems
- Experience-driven — relying on individual memory

After

- Proactive — identifying deviations before they escalate
- Structured — consistent, shared operational picture
- Insight-driven — guided by contextualized data

From Alarm Reaction to Early Pattern Recognition



The goal is not to react faster to alarms. The goal is to **recognize patterns earlier** — to see the signal before it becomes an incident. Turning operational data into meaningful insights enables teams to act before risk escalates.

The difference is not technology. It's **structure**.



When data, context, and action are connected, decisions become easier.

50 Years After Seveso

We did not fail to collect data. We failed to act on it.

We don't have a data problem. We have a **decision problem**. The path forward is not more dashboards — it is embedded, discipline-driven workflows that connect data, context, and action where it matters most: on the plant floor.

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Thank you

