FROM PROCESS TO PERFORMANCE

How to Eliminate Downtime Through Connected Manufacturing Processes

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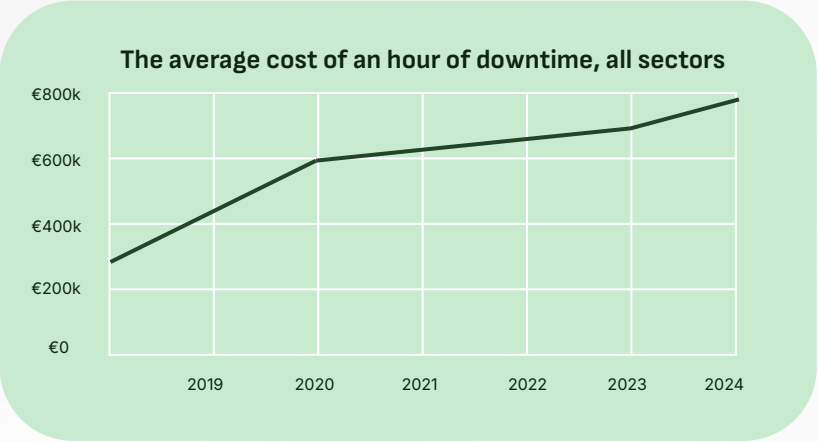
Tom Williams - Head of Design and Process Engineering at Pandrol

Downtime = a €1.2 trillion problem.

An average large plant sees 30 hours of downtime (17 hours unplanned!) per month - and it's rising!



... directly impacting your ability to profitability meet demand

Top contributors to downtime and escalating costs.

Equipment failures

Failures resulting from machinery and equipment issues can cause severe disruptions

Component Wear & Tear
Electrical Failures
Improper Maintenance
Calibration Errors

Human errors

Mistakes made by operators, technicians, or maintenance personnel can lead to inefficiencies and downtime

Improper Operation
Maintenance Mistakes
Insufficient Training
Safety Risks

Production issues

Inefficiencies within production processes can severely disrupt operations

Bottlenecks
Lack Standard Work
Process Control Failures
Improper Scheduling

Quality problems

Issues stemming from poor quality inputs, processes, or standards disrupt production

Defective Materials
Inadequate Quality Control
Rework & Scrap
Insufficient Root Cause Analysis

L2L research on downtime.

Statement	Agree
Delays in reporting cause a chain reaction that slows everything down	74%
Reactive approach to maintenance	67%
No consistent system in place for tracking the causes of downtime	40%

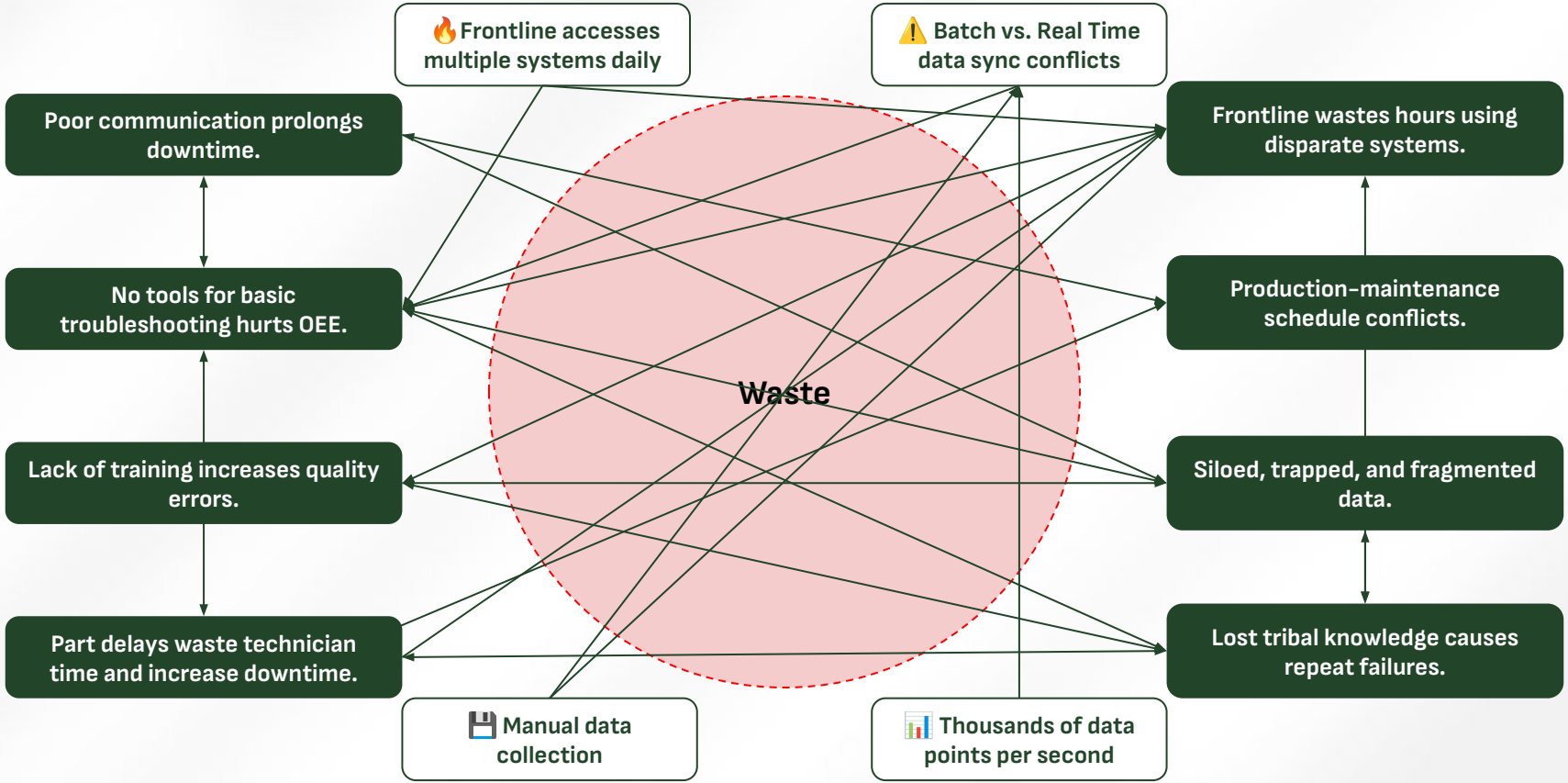
72%

of manufacturing leaders say they still need to personally check in on every downtime event.

Source: Beyond Breakdowns - The Real Impact of Downtime, Research by L2L 2025

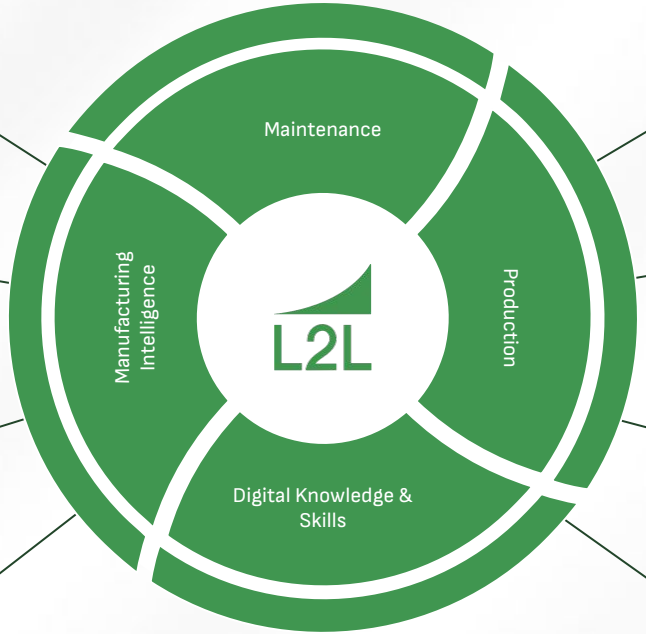

MOTOROLA

The Reality of Disconnected Manufacturing Operations.



Connected Manufacturing Operations

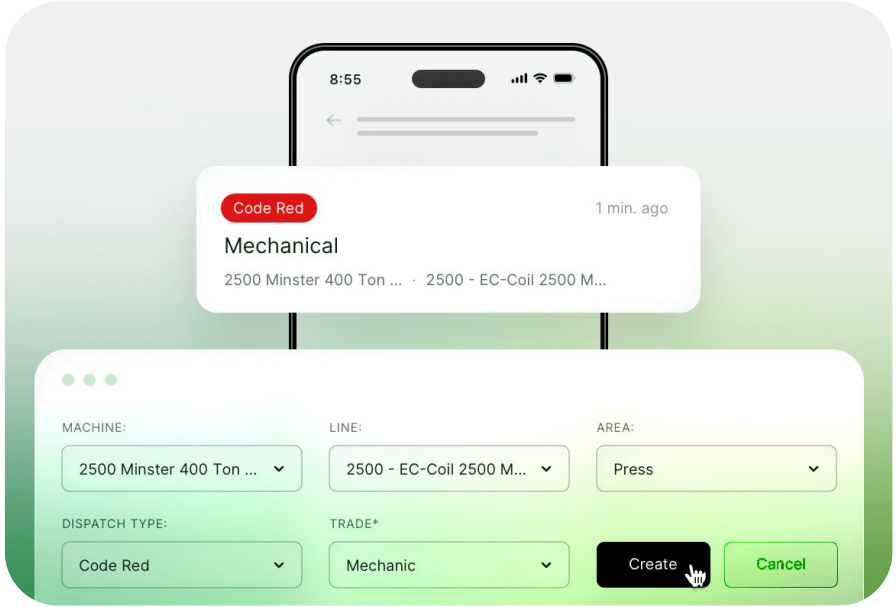
- Eliminate manual handoffs.
- Capture data at the source.
- Skills, training, and guidance.
- Point system unification for enhanced productivity.



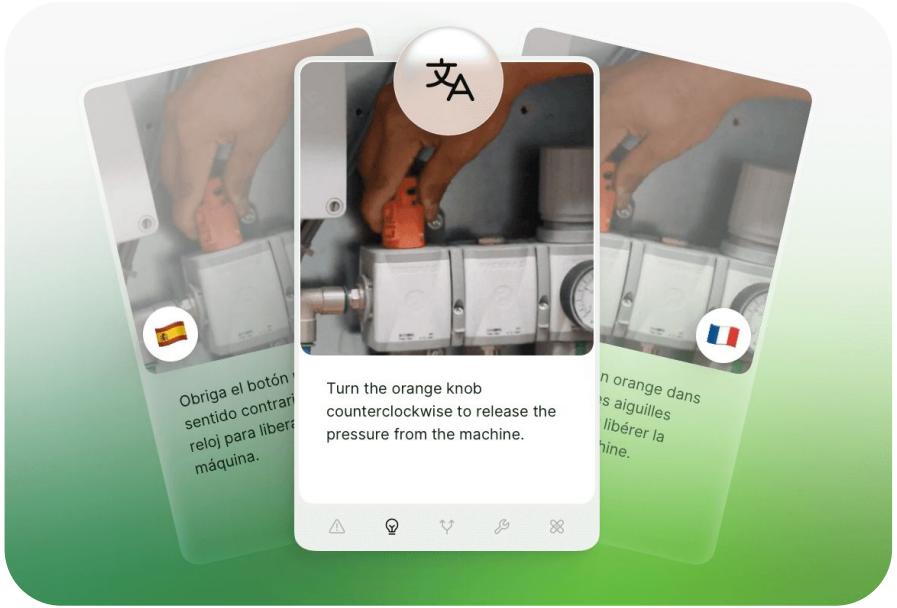
- Easy to use for the frontline.
- Proactive schedule coordination across operations.
- Equip frontline to resolve issues quickly.
- Standardize and scale best practices instantly.

Replace outdated legacy technology. Connect existing systems.

From problem...



... to solution ✅



Introducing: Tom Williams

PANDROL

Head, Design and Process Engineering

→ Fastening systems across global rail operations

→ Manufacturing engineering at Rolls-Royce nuclear reactor operations + structures and transmission

→ Knows what it takes to get production systems right because he's built them, fixed them, and scaled them

Experience at Rolls-Royce.

- Global network of testbeds
- Development testing – cyclic, fan-blade off, bird strike
- Production engine pass-off ~£30M of product per day
- Maintaining up-time

PANDROL

We lead the rail infrastructure sector

To **maximise** the availability of track, **safety** of people and assets, and deliver **sustainable lifetime value** for networks around the world.

World Speed Record

for conventional trains
574.8km/h

Longest Heavy Haul

track in the world
2000km

World's Highest Track

Tibet Line, China,
5200m

PANDROL The driving force in rail

Aluminothermic Welding

Electrification

Fastening Installation Equipment

Rail and Sleeper Handling

Rail Fastenings Systems

Rail Welding Equipment

Signalling Equipment

Sustainable Resilient Systems

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Track Safety Equipment

Track Transpor-tation Equipment

1700 employees globally at the heart of more than **400** railways in over **100** countries, with a 2023 global sales revenue of **€519 million.**

Close to our Customers

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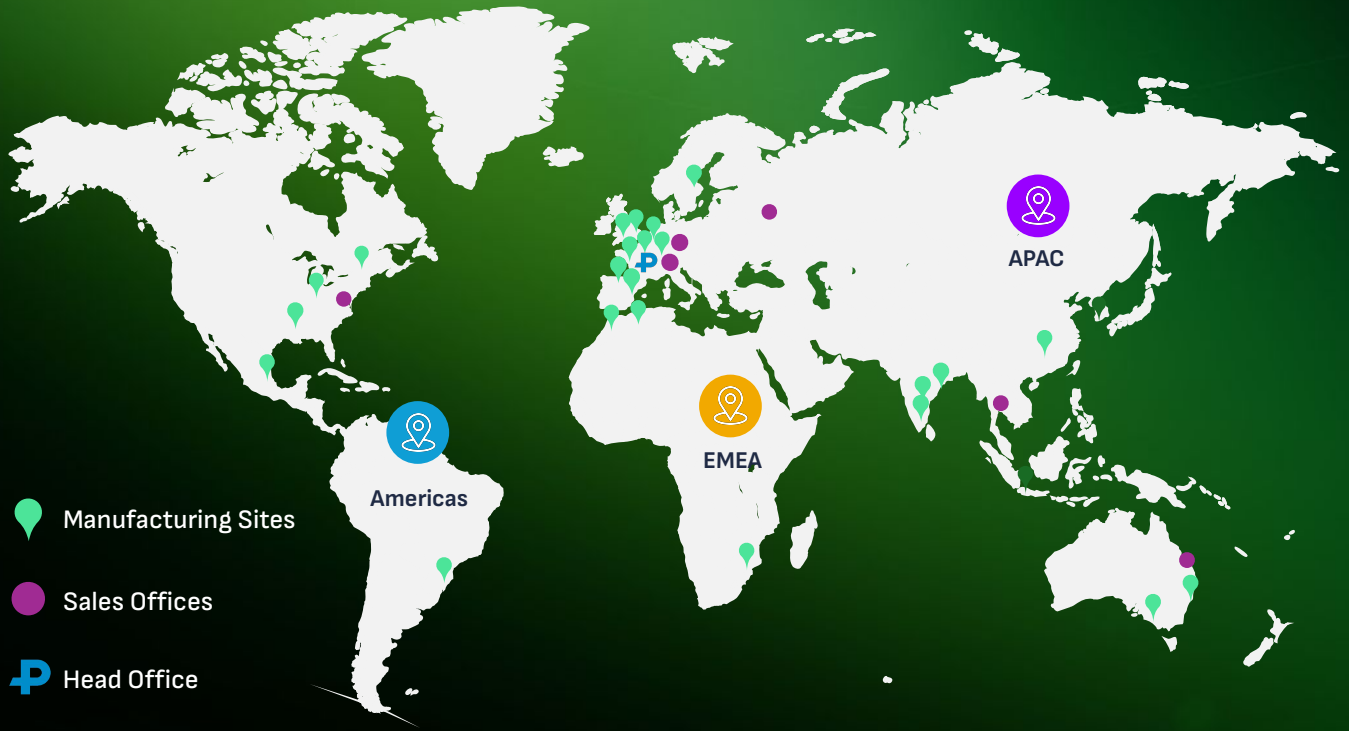

Key locations:

Worksop

Douai

Memphis

Blacktown

Hyderabad
Raipur

Raismes

PANDROL

Connecting all of our facilities

- Improve OEE by 3% in 2026, 2% in 2027 and 1% in 2028.
- Operational Availability
- Standardisation (maintenance, production, quality, training, SOPs, OEE)
- Starting Pandrol on the Industry 4.0 journey
- Visibility and transparency of manufacturing data

Engineering critical items – standardising production data, quality standards, drawings, work instructions

Digital strategy roadmap to combat downtime.

Understand current downtime drivers

Use the input of the entire shop floor to identify downtime disruption.

Integrate “where” needed

Integrate in small steps. Blanket integration is wasteful and cumbersome

Take action on downtime

Concentrate on those issue that extend downtime incidents, then apply to all maintenance functions.

Digitize workflows

Put repeatable, simple digital workflows in place that guide the worker to the correct and most efficient outcome.

GET THE RESEARCH REPORT

Beyond Breakdowns: The Real Impact of Downtime

→ Responses from 607 manufacturing leaders

- Average 30 hours of downtime/month
  (17 of those are unplanned!)
- 60% lose $250K+ annually
- 93% are taking action, but only 46% see results

... how do you compare?

Your Free Copy

Thank you!
Don’t forget to visit our booth.

Book a demo of L2L

Questions? My email: daan.assen@l2l.com