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The New Rules of Operational Software

Why industrial + asset-rich organisations are moving beyond legacy platforms to build faster, smarter operational systems.

Technology Briefing (Overview).

The Problem:
Operational Software Is Now A Constraint.

Operational technology is meant to improve performance, but for many businesses, it's slowing it down.

Across operations, teams are working inside a patchwork of:

- Legacy OT systems (CMMS, SCADA, fleet, etc.)
- IT platforms (ERP, finance, CRM)
- IoT devices + sensors
- Databases
- Spreadsheets, paper + workarounds

These systems don't work together, so people fill the gaps.

The Result.
Software creates work, rather than remove it. This is the 'Operational Ceiling', technology stops accelerating ops and starts slowing them.

Common Warning Signs.
- Manual data entry between systems
- Delayed or unreliable reporting
- Shadow tools (spreadsheets, paper, etc.)
- Long timelines for simple changes
- Integration projects for basic use cases

At this point, adding more software doesn't fix the problem: it compounds it.

The Legacy Approaches:
Why They Don't Work Anymore.

Most organisations cycle between three competing options:

1. Off-the-Shelf Software.
- Forces you to adapt to the system
- Expensive, slow to implement
- Still doesn't reflect real operations + patchwork of tools
- Average cost: ~$80k+ per project (including configuration + integration)
- Typical timeline: 2-6+ months

2. External Custom Development.
- Highly tailored, but slow and costly
- Long-term dependency on developers
- Innovation bottleneck
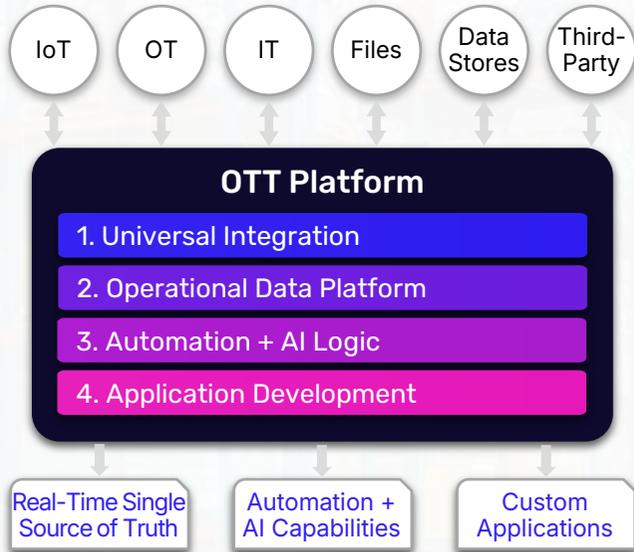- Average cost: $200k+ per project
- Typical timeline: 12-24 months

3. Internal DIY Development.
- New no-/low-code platforms appear to make development faster
- Breaks down in real-world environments
- Requires maintenance + base platform capability augmentation, e.g. add integration platform, workflow tool, etc.
- Average cost: $60k–$150k internal effort
- Typical timeline: 6-12+ months

All three approaches share the same flaw: they treat software as a project with an end-state - not an evolving capability.

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The Shift:
From 'Rip-and-Replace' to 'Wrap and Extend'.

Instead of replacing systems, build on top:
Over-the-Top (OTT) Operational Layer.

These gives you 2 new options:

4. OTT Augment.
- Keeps your existing systems in place
- Adds real-time, automation + AI to them
- Improves operational fit of legacy tech
- Average cost: ~$22k per project
- Typical timeline: 3-6 weeks to 3 months

5. OTT Replace.
- Replace rigid/bad system with perfect fit
- Use OTT base for wider integration + data
- Focus on operational functionality
- Average cost: ~$25k per project
- Typical timeline: 4-8 weeks to 1–3 months

The New OTT Approach:
What an OTT Layer Enables.

The difference is not just cost, it's how quickly you can deploy and get value from the systems. This minimises risk and enables a staggered approach, improving adoption.

What This Layer Actually Enables.
There are added benefits to adopting an OTT approach beyond operational benefits:

1. Universal Integration:
   Acts as a universal integration platform, capable of connecting all your technologies and data stores together; handling protocols, latency + formats.
2. Operational Data Platform:
   Ingest and normalise your data in real-time, creating a single source of truth and making it available in dashboards + to existing tools.
3. Automation + AI Logic:
   Workflow automation capabilities sits on top of all your systems, adding automation and AI to all your existing assets and systems.
4. Application Development:
   Build custom operational applications directly on top of your systems, making it possible to build + deploy in weeks.

Unlike the first 3 options, these approaches don't require you to replace existing systems, won't lock you into vendor roadmaps, or risk ROI with untested long deployments that fail to deliver the returns promised.

The Real Business Case:
What Most Businesses Miss.

Most organisations evaluate software based on licensing, but it's not accurate.

The biggest drivers are:

- Integration with current systems
- Implementation timelines/consultants
- Operational disruption + training
- Vendor dependency
- Ongoing change/development

Factored in, the economics change and traditional approaches take months-to-years. Modern OTT approaches deliver value in weeks, whilst giving you the ability to keep improving without starting again.

Get the Full View:
Download the eBook.

Explore all five operational software approaches, with real cost comparisons, timelines + where each works best.

Get practical frameworks + a step-by-step path on how you can utilise it.

Download Now

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