

For executives leading asset-intensive organisations

You approved the digital investment.

Who owns the business result?

Connect technology spending to business priorities. Fund the changes needed to deliver the benefit. Make accountability clear before the next approval.

A practical guide to digital transformation strategy
for the executive investment conversation.

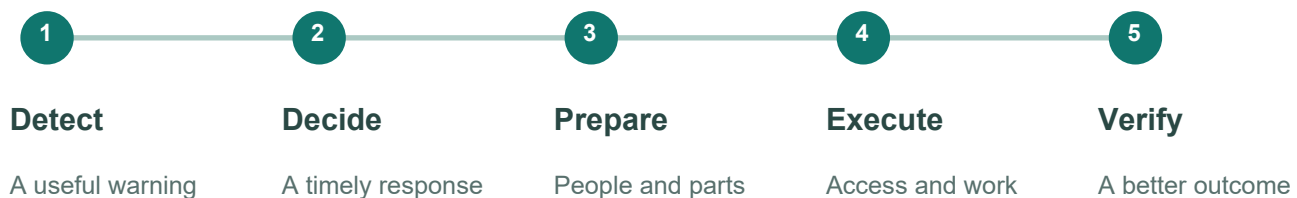
The system is live. Production is still losing hours.

The executive team approves predictive maintenance to reduce unplanned stoppages. Sensors are installed, the dashboard works and engineers receive earlier warnings. The programme reports a successful launch.

But a warning still waits for someone to assess it. A planner cannot secure the part. Operations cannot release the equipment. The fault progresses, and the line stops.

At the next review, the technology team can show that the system worked. The COO still has the production loss. The CFO asks where the promised benefit went.

WHERE THE RESULT HAS TO TRAVEL



The investment case must cover the whole job

In this illustrative example, earlier detection creates an opportunity. The business captures it only when the response changes. The approval therefore needs to cover the workflow, resources and decisions between the warning and the completed work.

The question for leadership is whether the programme has an owner with the authority to make those changes, and whether the benefit is being measured after they happen.

This paper sets out the choices behind a credible digital strategy: the outcome, the constraint, the investment sequence, the accountable owner and the evidence for the next commitment.

What are we paying to improve?

“Digitise maintenance” gives a programme room to spend without making its purpose clear. “Reduce lost production from avoidable failures on this process line” gives the business a result to investigate and measure.

Start with the loss or opportunity

Establish where performance falls short, how often it happens and why it matters. Separate equipment downtime from production lost: buffers, standby equipment and other constraints can change the commercial effect.

A growth strategy may call for more reliable capacity. A cost programme may need less rework or lower contractor expenditure. An ageing asset base may require better recovery capability. These priorities can justify different investments.

Test what is stopping improvement

In the opening example, better fault detection helps only if detection is a material constraint. Review recent incidents. Did the team lack warning, misunderstand the condition, wait for parts or defer the work? The evidence should influence what receives funding.

Define the result before selecting the platform

Agree a baseline, target, timeframe and business owner. Explain which assumptions connect the technology to the result. Compare a process change, better use of existing systems and a new purchase before selecting an approach.

The World Economic Forum’s Lighthouse Operating System connects digital transformation with operational excellence and sustainability. It provides a useful broader frame: develop the capabilities the operation needs to perform. [1]

At the investment table

CEO

Which business priority does this serve, and what are we choosing to defer?

COO

Which operating constraint must change?

CFO

What benefit can be evidenced, at what total cost?

CIO or digital leader

What technology, data and support will make the change dependable?

What needs to work before the next project pays off?

A portfolio can contain several attractive business cases that depend on the same unfinished work. A planning assistant, a spares review and a condition-monitoring system may all need reliable equipment records and the attention of the same engineers.

ILLUSTRATIVE SEQUENCE FOR THE MAINTENANCE EXAMPLE

01 Establish the gap

Review failures and response delays.

Choose the constraint worth addressing.

02 Build a complete response

Connect the warning to decisions, parts and work.

Test the result on a defined operation.

03 Expand what is repeatable

Reuse proven connections and practices.

Adapt for local equipment and capacity.

Fund shared work against named uses

Connect each foundation investment to the initiatives it enables, with a delivery owner and a usable milestone. Avoid an open-ended data programme with no operating customer. Equally, do not expect every local project to rebuild its own connections and definitions.

An industrial example: EGA

In May 2024, Emirates Global Aluminium described two parallel parts of its strategy: delivering near-term business improvements and building foundations for company-wide change. Its manufacturing platform formed part of that shared foundation. [2]

By January 2025, EGA reported more than 80 use cases, over 3,000 employees upskilled and around US\$100 million in financial impact across its programme. These are company-reported aggregate results, not a return attributable to the platform alone. [3]

Who can change the way the work gets done?

The project manager can deliver the system. The business owner must make the operating changes that allow the benefit to follow. Both roles need clear commitments and a way to escalate decisions they cannot resolve.

Give the owner authority across the process

For predictive maintenance, the owner may need to change alert review, planning priorities, spare availability and production access. If no one can resolve a conflict between maintenance and operations, a named sponsor alone will not close the gap.

Make each function's contribution explicit. Technology owns agreed system performance and support. Engineering defines how warnings are assessed. Operations and maintenance agree how justified work reaches execution. Finance verifies the benefit calculation.

Budget for normal use

Include time for people to practise the new workflow, resolve errors and maintain the information it depends on. A planner needs the recommendation in the planning process. A technician needs correct equipment context at the job. The same training session will not address both needs.

Keep the owner after the project team leaves

Agree who funds licences, connections, data upkeep and support. Review whether people use the system in actual work and whether that use improves the intended outcome. Login counts alone will not answer either question.

Deloitte's survey of 600 manufacturing executives identifies adoption, resource constraints and value tracking among implementation challenges. The survey supports treating these as investment requirements; it does not establish a causal formula for success. [4]

Resolve before approval

Business owner

A named leader accountable for the result.

Decision rights

Authority to resolve conflicts across functions.

Capacity

People and time to redesign, adopt and support the work.

After go-live

A review schedule, measures and ongoing funding.

What will change in the business, and when?

Ask finance and the operating owner to agree how each benefit reaches a business measure. Keep the assumptions visible. An estimate becomes more useful when the review can show which parts have been demonstrated.

THE CLAIM	WHAT IT FIRST MEANS	WHAT THE EXECUTIVE SHOULD ASK
Time saved	People have more capacity.	How will that capacity be used? Does it avoid overtime, contractors or additional hiring?
Downtime reduced	Equipment is available for longer.	Does this increase saleable output, improve service or reduce another cost?
Inventory reduced	Less value is held in stock.	Is cash recovered, future buying avoided, or stock written off?
Risk reduced	Exposure or recovery time improves.	Which failure scenario changes, and how strong is the supporting evidence?

Compare the full cost of delivering the change

Include integration, data preparation, workflow redesign, training, assurance and recurring support. Show the effect of slower adoption, lower use or higher review effort. Give shared costs a visible home in the portfolio.

Count the benefit once

If monitoring, planning and parts availability together avoid a stoppage, do not let all three projects claim its full value. Track the combined result and explain each contribution. Compare periods carefully for changes in production volume, asset condition and other improvement work.

What should be common, and where do sites need freedom?

Local teams need enough freedom to solve real problems. The enterprise needs enough consistency to support what they build. Decide the boundary before separate projects create incompatible records, repeated integration work and permanent support obligations.

Standardise what must connect

Agree common equipment identifiers, definitions for business measures, access controls and ownership of shared information. Establish how systems exchange records and how changes are approved. These decisions make cross-site comparisons and reuse more credible.

Allow for the work at each site

A mine, processing plant and port may share a business priority while operating under different conditions. Equipment, connectivity, workforce arrangements and maintenance access can change what works. Require a local operating case before replicating a solution.

Buy an arrangement you can sustain

Review support, service continuity, security responsibilities, pricing exposure and the effort required to move to another supplier. Confirm what data can be exported and whether the business can make practical use of it. Keep recovery arrangements proportionate to the consequence of disruption.

Decide what can be retired

Include the cost and conditions for replacing old reports, connections and systems. Some parallel operation may be needed during transition. Give it an owner and an end condition so the new investment does not simply add another permanent layer.

In the maintenance example, success means an alert enters a supported operating process with clear responsibility. Another dashboard that requires manual copying may increase the workload instead.

Challenge the proposal

Existing capability

Could a current system meet the need?

Business continuity

What happens when the service or connection fails?

Supplier dependence

Can data and records be recovered and used elsewhere?

Retirement

Which old system or manual step can actually end?

What deserves the next funding commitment?

A review needs to show more than spend, milestones and deployment counts. Ask what changed in the operation, what remains unproven and which decision the next funding commitment will enable.

Look for competition between good projects

Several initiatives may rely on the same planners, engineers, data owners or shutdown windows. Assess delivery capacity across the portfolio. A sequence the business can absorb may deliver more than simultaneous launches that overload the people needed for adoption.

Revisit the assumptions behind the approval

For the maintenance programme, compare warning quality, time to assess, work prepared and action completed within the useful warning period. Then examine the intended production or cost outcome. These measures help locate a gap without treating every failure as a software problem.

Use the agreed baseline and recognise other changes in the operation. A good result during a quiet production period needs interpretation. A trial too short to observe rare failures may support a workflow finding without proving avoided downtime.

Make the next decision explicit

Continue

Evidence supports the operating change and the next defined use.

Redirect

A different constraint now limits the benefit. Move effort to it.

Consolidate

Several projects duplicate capability or need a shared solution.

Stop or defer

The remaining benefit does not justify the next cost, or dependencies are not ready.

Past expenditure explains how you arrived here. The next decision should turn on the value and cost still ahead.

Put the strategy on one page.

Use these fields for each material investment, then review them together across the portfolio. A blank answer is an unresolved decision, not a reason to fill the space with an ambition statement.

Business result

The measurable outcome, baseline, target and timeframe.

Example: reduce avoidable production loss on a defined process line.

Operating constraint

The evidence showing what prevents that result today.

Late warning, delayed decisions, unavailable parts or lack of access?

Required changes

The technology, workflow, people and information needed.

Specify how a useful warning reaches completed maintenance.

Sequence and cost

Dependencies, full costs and the next usable milestone.

Fund response capability alongside detection; identify shared work.

Accountable owner

The leader who owns the outcome and can resolve conflicts.

Name the supporting obligations of operations, engineering, finance and IT.

Evidence and review

The measures, review date and conditions for further funding.

Separate technical performance, operational use and business impact.

Continuity and exit

How the business sustains, changes or retires the solution.

Identify support, recovery, data access and transition responsibilities.

Before the next approval, ask the business owner to explain how the investment changes performance, who must act and what evidence will justify continuing.

Evidence behind the paper.

[1] World Economic Forum, in collaboration with NEOM

The Lighthouse Operating System: Driving Responsible Transformation. 7 April 2025. [Read source](#)

An industrial capability framework informed by the Global Lighthouse Network. It provides guidance, rather than a controlled evaluation of investment returns.

[2] Emirates Global Aluminium

EGA launches one of the region's first digital manufacturing platforms to advance Industry 4.0 strategy. 15 May 2024.

[Read source](#)

Primary company account of its parallel focus on business improvements and shared digital foundations.

[3] Emirates Global Aluminium

EGA designated Industry 4.0 global lighthouse by World Economic Forum, in UAE and world aluminium industry first. 15 January 2025. [Read source](#)

Programme-level financial impact and workforce figures are company-reported. They are not an independently verified platform ROI or a forecast for other organisations.

[4] Deloitte / Tim Gaus and Michael Schlotterbeck

2025 Smart Manufacturing and Operations Survey: Navigating challenges to implementation. 1 May 2025. [Read source](#)

Survey of 600 executives from large manufacturers with US headquarters or operations, conducted August to September 2024. Findings reflect reported experience.

How to use this guide

The maintenance programme is an illustrative scenario, not a reported deployment. The investment questions and review template are NextGenMaint's practical synthesis. They should be applied to the organisation's own operating evidence, investment criteria and responsibilities.

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