

# WEBINAR – 3

## SUSTAINABLE OPERATIONAL EXCELLENCE

WORKFORCE PERFORMANCE IN A DATA DRIVEN ERA

Presented by:



# SPEAKERS



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# Recap Webinar 2

## Designing Resilient Sustainable Operations in the Industrial and Energy Sector



**Energy incentives + Tax credits:** How U.S. and Canada clean-energy credits can materially improve project economics.

**Operational Cost Reduction:** “Last-mile” levers that actually move the needle, load shaping/peak management, yield discipline (less scrap/rework), standardization, and early maintenance triggers.

**Performance & resilience:** Reliability + Safety discipline backed by a digital backbone (integrated plant/maintenance/ESG data, monitoring, analytics) to enable predictive operations and faster decisions.

# Hidden Losses in Energy & Industrial Operations



- Heat rate degradation
- High auxiliary power consumption
- High specific water consumption
- Start/stop & part-load inefficiencies
- Financial leakages, environmental penalties, competitiveness risks

# Heat Rate Loss

## Impact (500 MW Plant)

- **Baseline: 2,200 kcal/kWh | Degradation: +5%**
- **Extra coal: ~150,000–180,000 tons/year**
- **Cost impact: \$9M–\$12M USD/year**
- **CO<sub>2</sub> increase: ~300,000–350,000 tons/year**



# Auxiliary Power

## Consumption Loss

- Design: 6–7% | Actual: 9–10%
- Excess APC ~3%
- Lost generation: ~130–150 million units/year (500 MW)
- Revenue loss: \$6.5M–\$9M USD/year
- Drivers: inefficient equipment, poor load management



# Water Consumption

## Water Stress Impact

- Design:  $\sim 2.5 \text{ m}^3/\text{MWh}$  | Actual:  $3.5\text{--}4.0 \text{ m}^3/\text{MWh}$
- Excess water:  $\sim 1.5\text{--}2$  million  $\text{m}^3/\text{year}$  (500 MW)
- Cost + compliance + ESG risk
- Operational risk in water-stressed regions
- License-to-operate implication



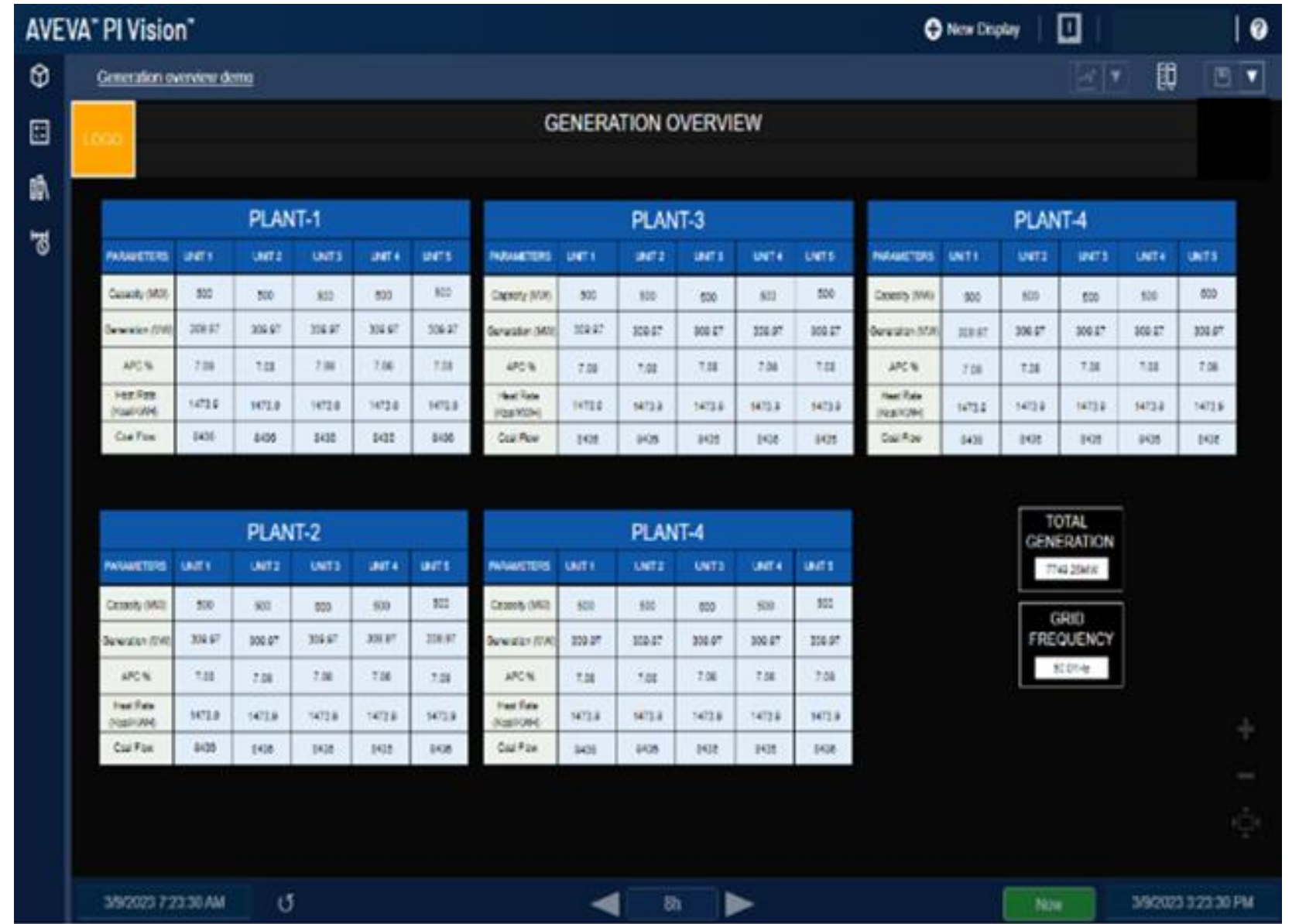
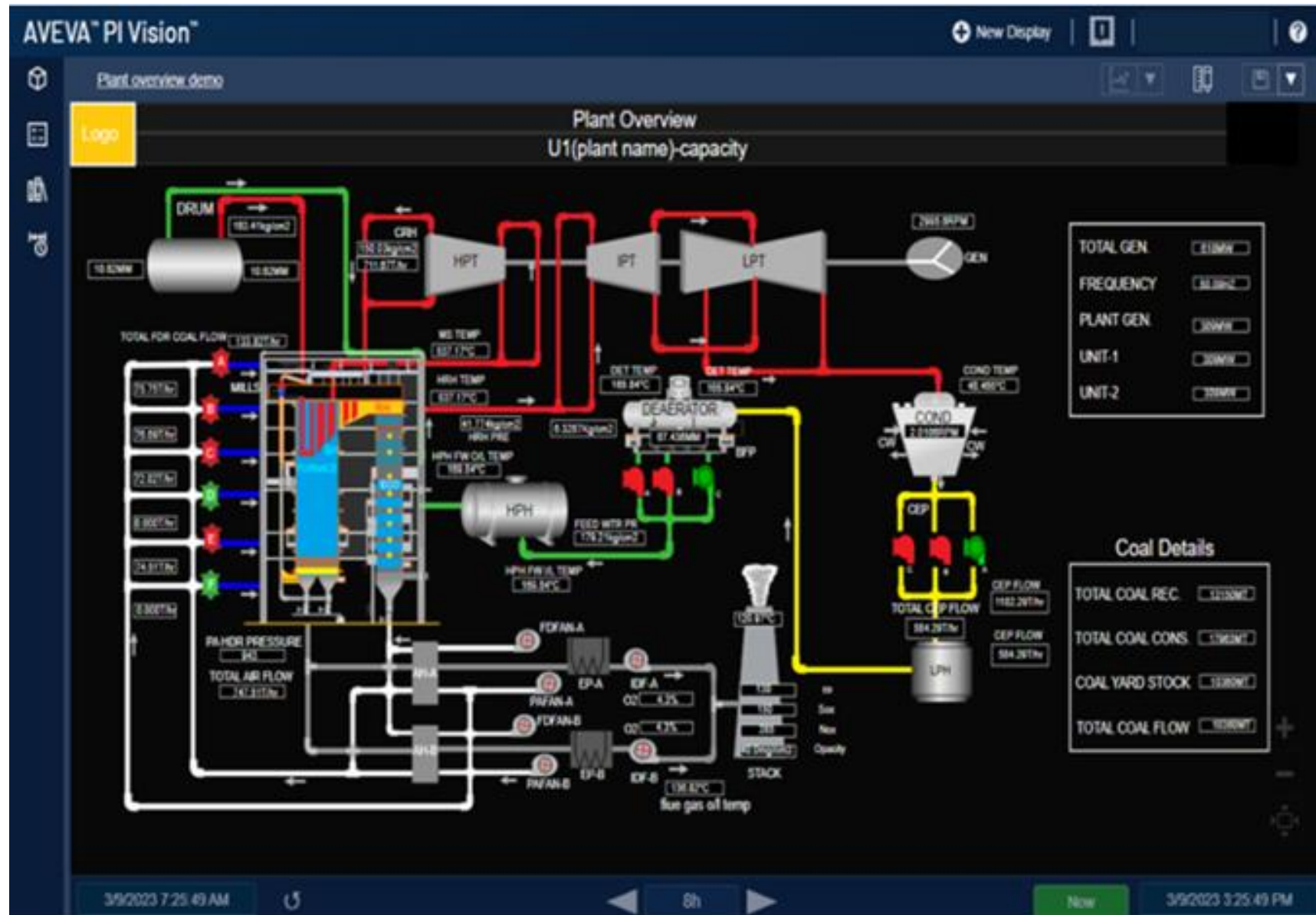
# Total Impact

## Broad Overview (500 MW)

- Heat rate loss: >\$9M-\$12M USD
- APC loss: ~\$6M - \$9M USD
- Water & others: \$200-\$300K USD
- Total: ~\$18M - \$20M USD/year
- Recurring, often invisible losses



# Centralized Monitoring Dashboard



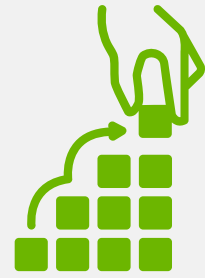


# Why this Matters **Across Industries**

- Applicable across cement, steel, chemicals, refineries
- Energy inefficiency = higher cost of production
- Weak ESG performance and competitiveness
- Operational excellence = elimination of systemic losses



# Operational Excellence



## Foundation

VSM, OEE, Visual Management



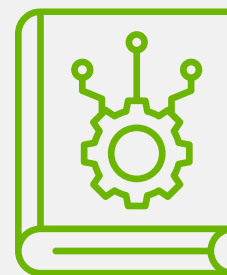
## Diagnostics → Implementation

2 Cases + Quick examples



## Sustaining Gains

Governance, Routines, Accountability



## 90 Day Playbook

Polls, Q&A and next steps



# The Promise

What gets measured **gets improved**

## See the Work

If you can't see the work, you can't manage it

## Measure Losses

Make time, quality, cost, safety, and energy visible

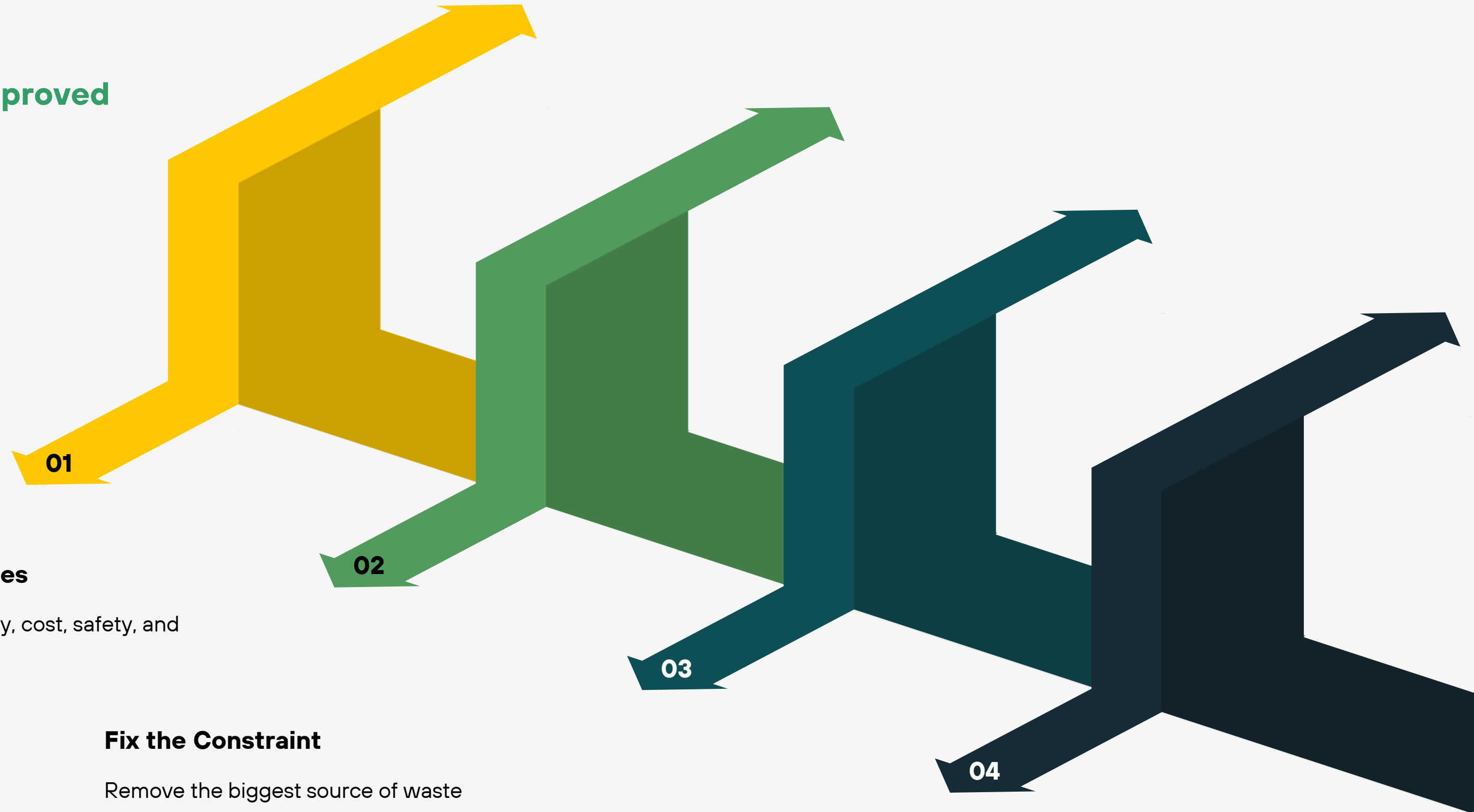
## Fix the Constraint

Remove the biggest source of waste before chasing everything

## Hold the Gain

Standardize, review, and sustain through routines

Process improvement is not a side activity;  
it is how strategy becomes measurable  
performance



# Three Anchors for Improvement

Simple tools that help leaders focus



## 01 Value Stream Mapping (VSM)

End-to-end flow, handoffs, waiting, rework  
Best for services, approvals, offices, and production flows

## 02 OEE

Availability × Performance × Quality  
Best for asset-intensive lines and production equipment

## 03 Visual Management

KPIs translated into daily action  
Best for sustaining focus and accountability

# Barriers to kicking off

## Process Improvement Initiatives

In your org: What do you think is the biggest barrier to initiating process improvement

**A:** Data visibility / measurement

**B:** Leadership attention / priorities

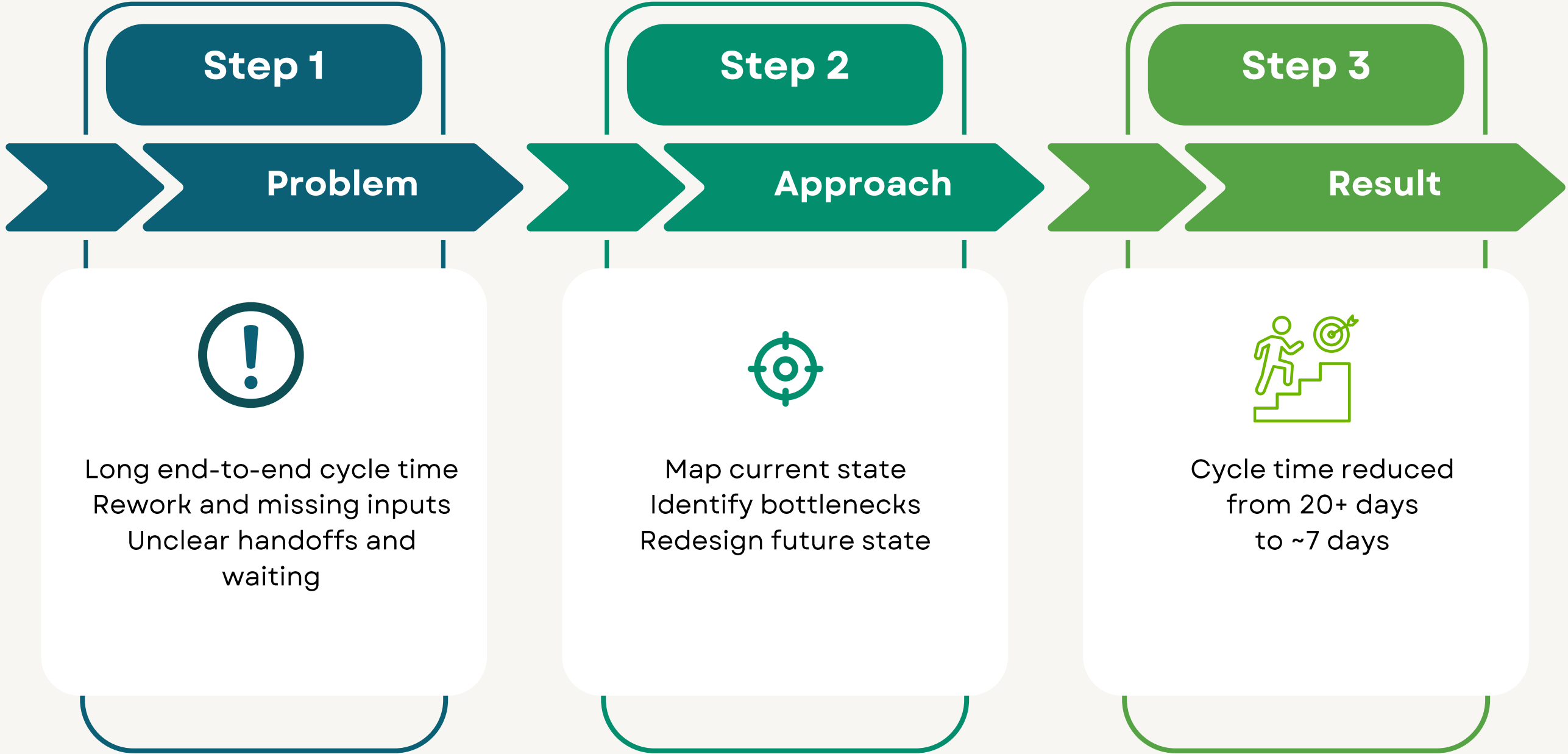
**C:** Silos / handoffs

**D:** Skills / capability

**E:** Time / firefighting culture

# Hero Case 1: VSM in Government Services

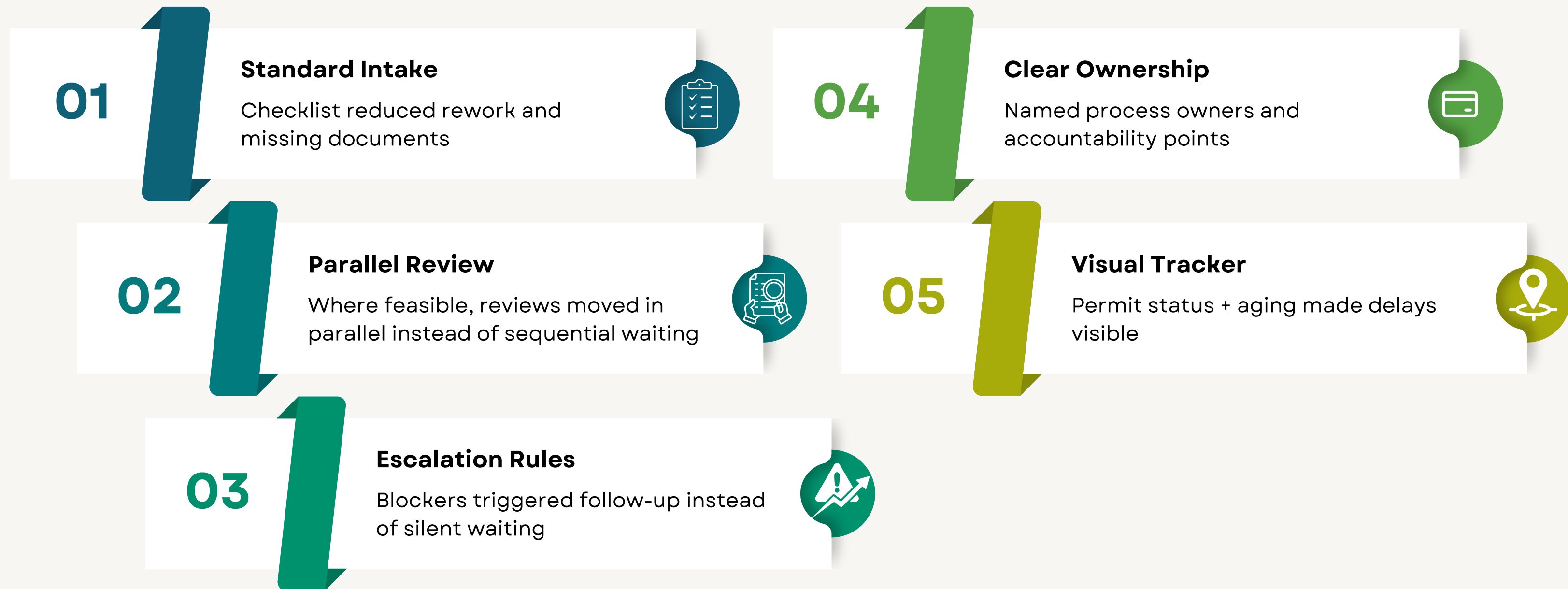
Municipality | Construction permit review and approval



**VSM turns invisible service delays into visible improvement opportunities**

# Hero Case 1: What Changed

## Construction Permits



# OEE Explained

How OEE is actually measured

$$\text{OEE} = \text{Availability} \times \text{Performance} \times \text{Quality}$$



## 01 Availability

Run Time ÷ Planned Production Time

Losses: breakdowns, changeovers, waiting

## 02 Performance

(Ideal Cycle Time × Total Count) ÷ Run Time

Losses: minor stops, slow cycles, idling

## 03 Quality

Good Count ÷ Total Count

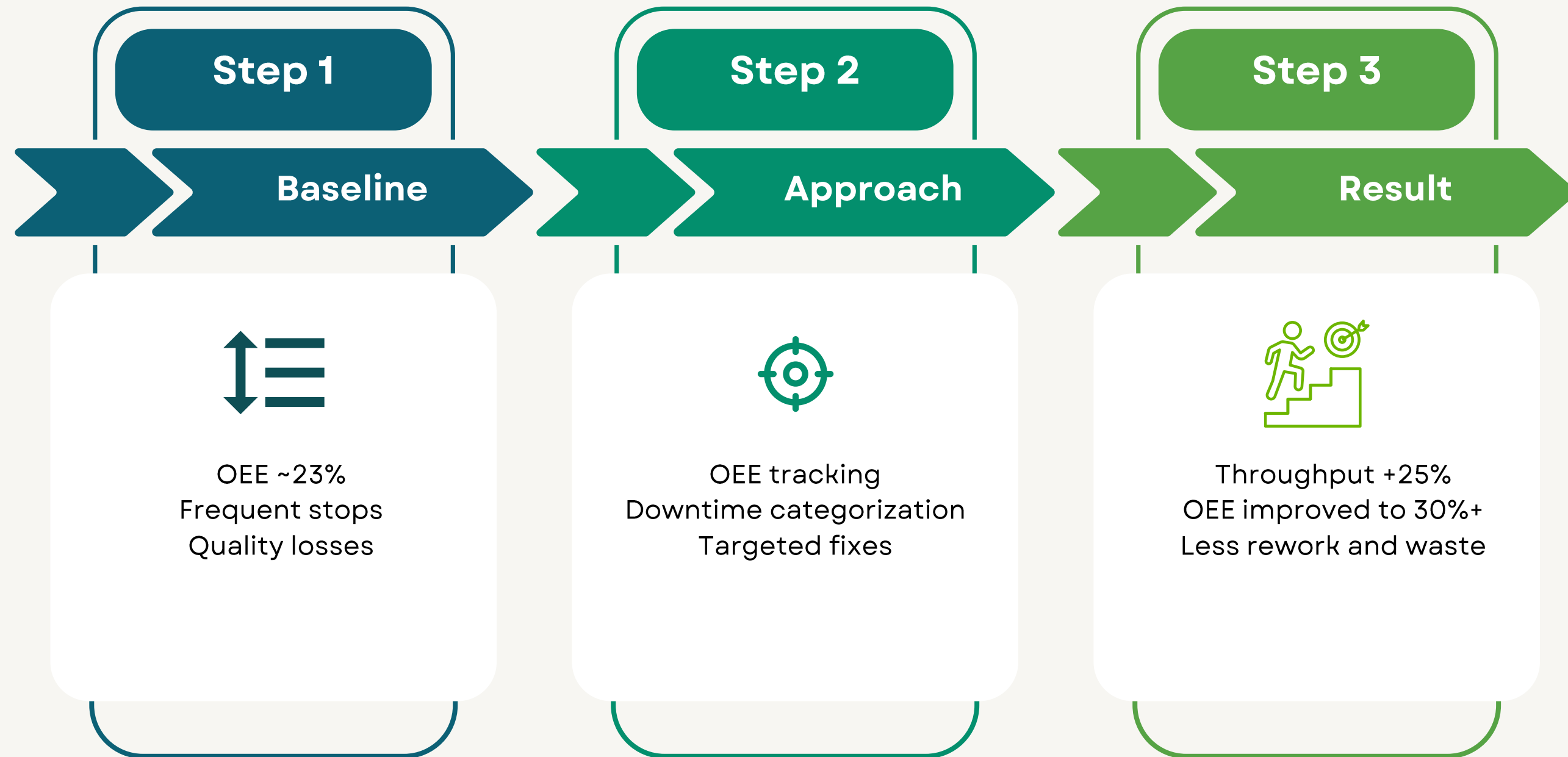
Losses: rejects, rework, startup scrap

**Example: 80% × 85% × 95% = 64.6%**

**OEE**

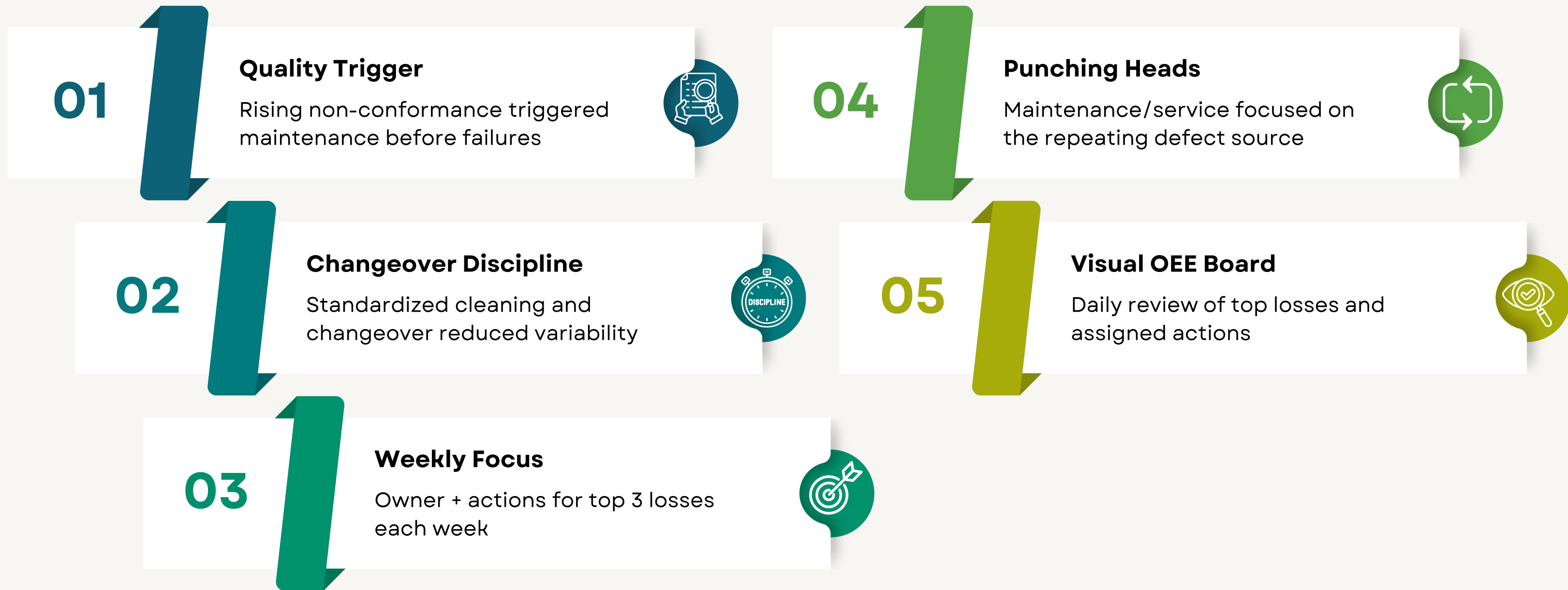
# Hero Case 2: OEE in Manufacturing

Pharma| Tableting process



# Hero Case 2: What Changed

Pharma| Tableting process



# Quick Examples **Across Sectors**



## **Banking**

Loan processing VSM  
reduced waiting and rework  
in qualification



## **Plastics**

OEE in automated bag  
manufacturing stabilized  
flow and downtime



## **Heat Exchangers**

Drafting flow + tube-end  
welding stability  
improvements

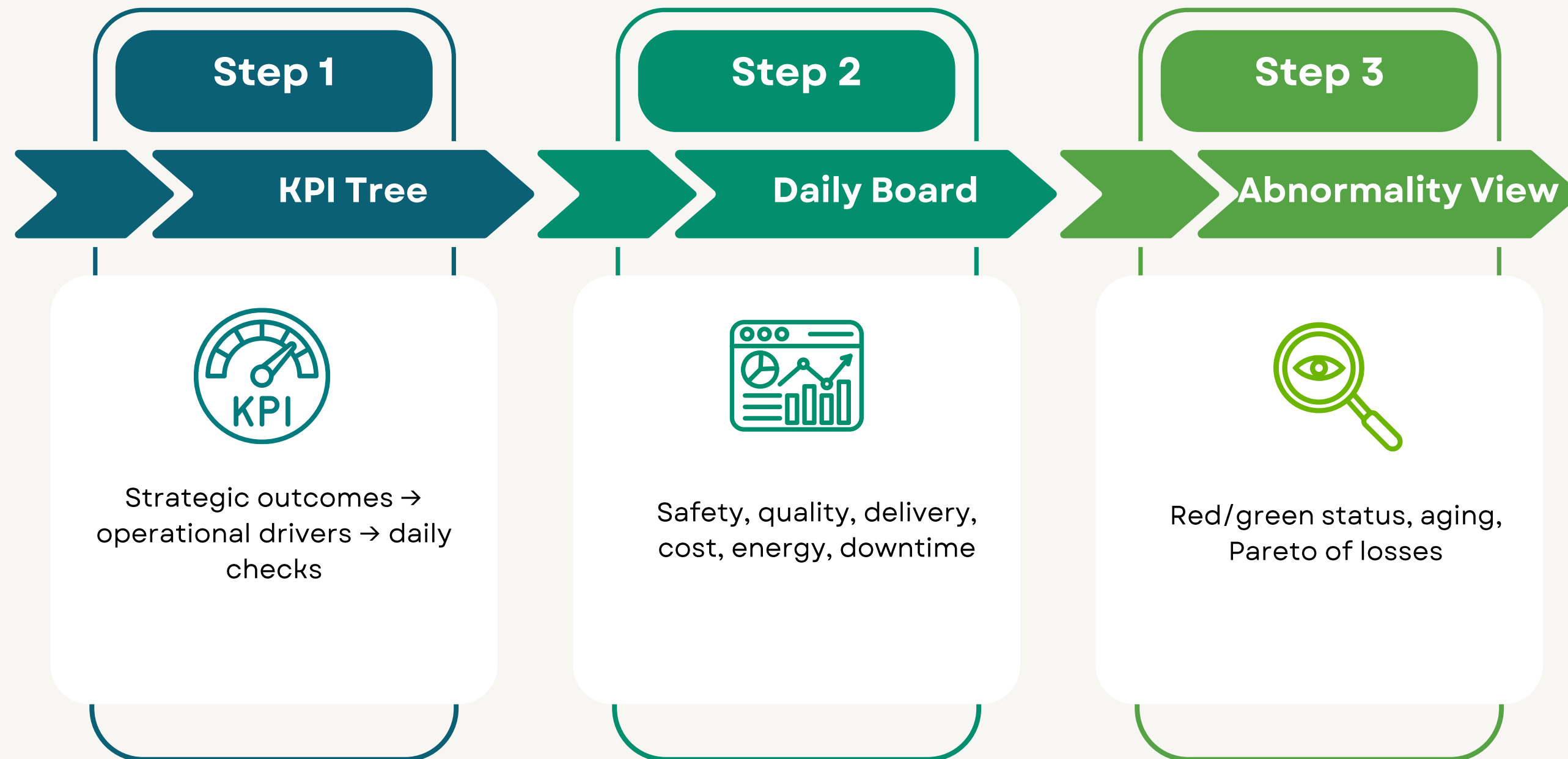


## **Municipalities**

Approval processes improved  
through handoff reduction  
and first-time-right controls

# Visual Management

Turning metrics into daily decisions



**Daily cadence: Review → Assign → Follow up**

# Process Improvement → ESG Outcomes

Why Lean and optimization strengthen sustainability performance

01

## Waste

Less scrap and rework reduces material waste and embedded emissions



03

## Energy

Fewer trips and downtime improve energy intensity and reliability



02

## Safety

Better standard work reduces incident risk and strengthens compliance



04

## Assurance

Traceable metrics support credible ESG reporting and audit readiness



# Sustaining Gains

Governance to hold the improvement

## Why Gains Fail

Too many KPIs

Gains drift back

No owner or routine

No control plan or escalation

## How to Hold Gains

Few meaningful metrics

Escalation when off-target

Owner and review cadence

Standard work and training

**Improvement sticks when measurement becomes part of the management rhythm.**

# Which metric

## Matters the most

Which metric matters most to your organization right now?

**A:** Cycle time / lead time

**B:** Cost

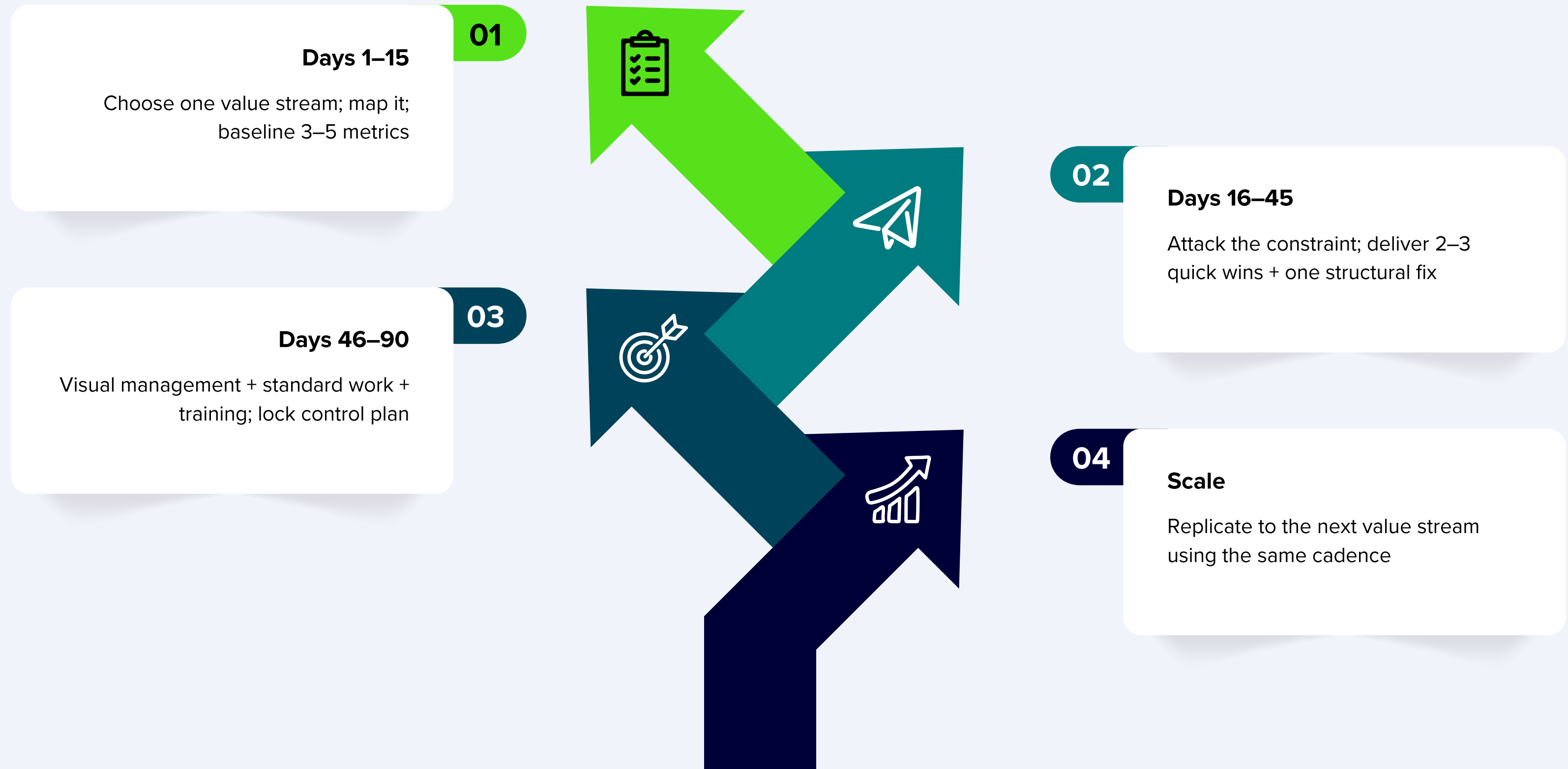
**C:** Quality / first-time-right

**D:** Safety

**E:** OEE / uptime / reliability

# 90-Day Playbook

A no-regret plan leaders can start tomorrow



# Leveraging the AA1000SES for Your Organisation's Energy Transition

## Stakeholder Engagement as a Value Driver

6<sup>th</sup> May 2026

DUBAI

LONDON

NEW YORK

RIYADH

# Why Stakeholder Engagement Matters

Stakeholder engagement isn't a box-ticking exercise, when done right, it can mitigate risks, identify opportunities, and ensure buy-in



- **Materiality is stakeholder-dependent:** What is "material" shifts by group; workers prioritize safety and job security, communities focus on local impacts, investors on climate and governance risk. *e.g., a refinery's top issue for regulators may be air quality, while for investors it's stranded-asset risk.*



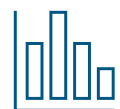
- **Risk detection early:** Engagement surfaces emerging issues *before* they become incidents (safety near-misses, labour grievances, supplier disruptions). *e.g., contractor feedback flagging fatigue patterns weeks before an HSE event.*



- **Data credibility & auditability:** Stakeholder inputs validate assumptions, boundaries, and KPIs, strengthening evidence quality for disclosures and assurance. *e.g., community input refining Scope 3 boundaries for CSRD assurance.*



- **License to operate:** Builds legitimacy and reduces friction with communities, workforce, and customers, accelerating permitting and project timelines. *e.g., wind-farm developers shortening consent cycles via early Indigenous engagement.*



- **Better decisions & performance:** When engagement informs priorities, capital flows to the highest-value interventions and outcomes improve. *e.g., reallocating training budget toward grid-modernisation roles flagged by workforce surveys.*

# The AA1000 Principles and Standards are adopted and used globally

## The AA1000 AccountAbility Principles and Standards

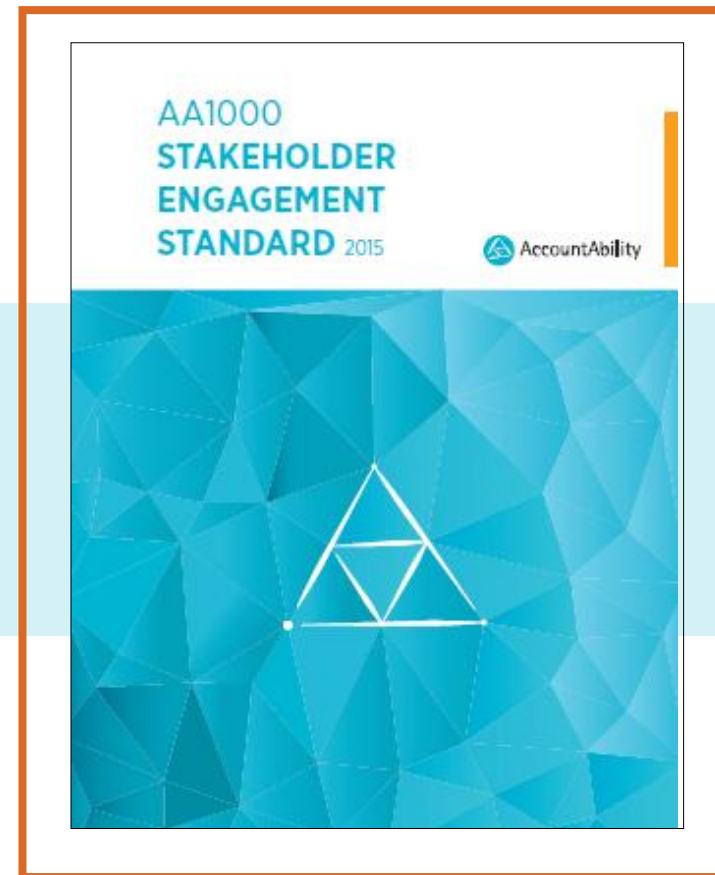
At the core of AccountAbility's work is the *AA1000 Series of Standards*. These are principles-based Standards and Frameworks used by a broad spectrum of organizations globally to demonstrate leadership and performance in accountability, responsibility and sustainability.

The AA1000 Standards are based on the principles of *Inclusivity, Materiality, Responsiveness* and *Impact*.

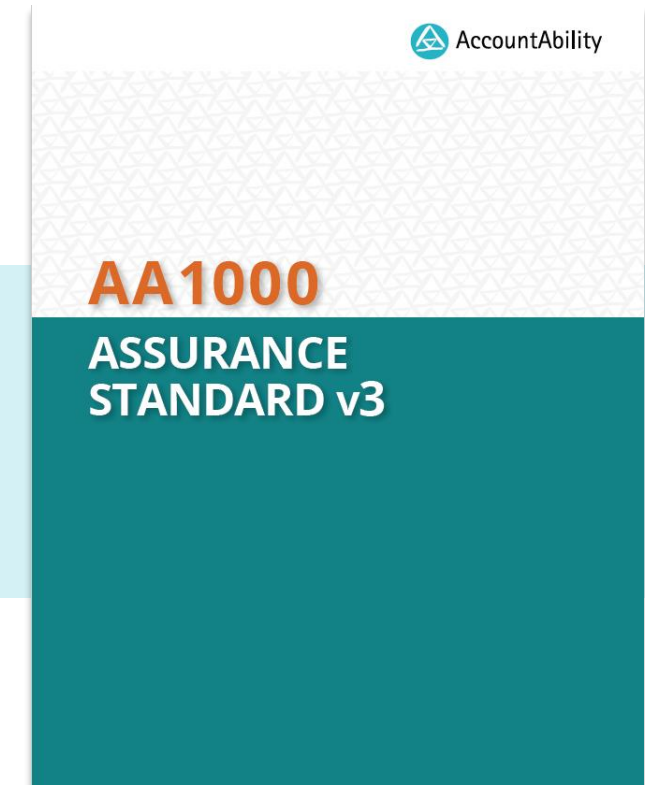
Currently being updated...



The **AA1000 AccountAbility Principles Standard (2018)** outlines the foundational AccountAbility Principles.



The **AA1000 Stakeholder Engagement Standard (2015)** is designed to enable organizations to respond to stakeholders in a comprehensive and balanced way to material issues, impacts, and opportunities.

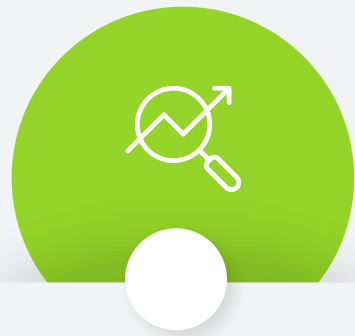


The **AA1000 Assurance Standard v3** is the leading methodology used for sustainability-related assurance engagements, to evaluate the nature and extent to which an organization adheres to the AA1000AP.

# What the AA1000 stakeholder engagement process is:

A structured cycle: Plan → Engage → Analyze → Respond → Embed → Re-engage

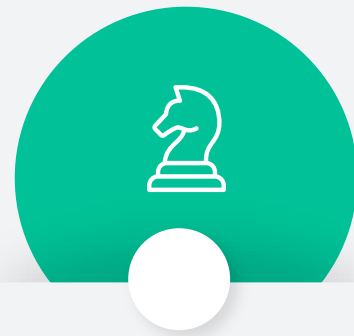
01



## Research & Analysis Define purpose + scope (Plan)

- Clarify the engagement objective
- Define scope and boundaries: sites, value chain areas, time horizon
- Map decision points: what decisions will engagement influence?

02



## Stakeholder mapping + prioritization

- Identify stakeholder groups across: internal & external
- Prioritize using criteria like: influence, dependency, impact severity, proximity, vulnerability, and expertise

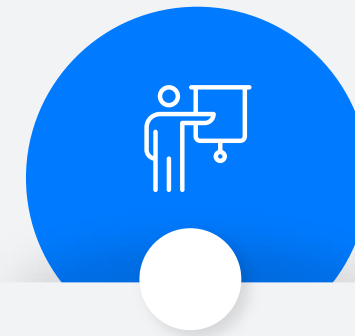
03



## Design engagement methods

- Choose methods that fit stakeholder type and risk interviews, focus groups
- Ensure accessibility and psychological safety (especially workforce inputs)

04



## Execute engagement + capture evidence

- Document: participant profile, dates, topics, key concerns
- Maintain an audit trail: agendas, survey instruments, notes, coded themes

05



## Analyze + determine material topics

- Convert inputs into: themes, risks/opportunities, and material topics
- Link to metrics: which KPIs and controls prove performance on each material topic?

06



## Respond + integrate into reporting and management systems

- Publish what you heard and what you'll do: commitments, action plans, owners, timelines
- Embed into governance: committee oversight, management KPIs, internal controls, data owners

# Leveraging AA1000SES to Power the Energy Transition

## How energy organisations operationalise stakeholder engagement to accelerate decarbonisation and a just transition

*Utilities, oil & gas majors, and renewables developers have engaged AccountAbility and the AA1000SES to activate their stakeholder engagement strategies: embedding host communities, workers, regulators, and investors into the design and delivery of their energy transition strategies, from phase-out to build-out and grid modernisation.*



### Key Opportunities

- Map transition stakeholders, such as host communities, workers, regulators, ESG investors, and Indigenous groups, into prioritisation and influence matrices
- Right-size engagement cadence across the project life cycle, mitigating for risks and opportunities
- Strengthen governance around engagement, adapting to issue escalation, just transition KPIs, disclosure-ready evidence

### Outputs & Results

- ✓ Stakeholder-aligned transition activities
- ✓ Just transition stakeholder engagement activities aligned with AA1000SES, which has interoperability across CSRD, GRI, and more

# Case Study: UK Utility

## How embedding AA1000SES earned the utility license to operate, regulator confidence, and assurance-ready disclosures

Since 2017, **this UK Utility** has engaged AccountAbility every year to assess their stakeholder engagement practices and performance against the AA1000 Stakeholder Engagement Standard (AA1000 SES) and leading practice examples, to determine their Stakeholder Engagement Maturity Score and prepare a forward-looking performance improvement implementation plan.

### How They Integrated AA1000SES

- Mapped stakeholders across host communities, workforce, regulators, and investors with prioritization and influence matrices
- Operationalized the AA1000SES cycle (Plan → Prepare → Implement → Review) with clear KPIs and feedback loops
- Annual independent assessment against AA1000SES, generating a maturity score and improvement roadmap

### Business Outcomes

- ✓ **License to operate:** smoother permitting and reduced community opposition on transition projects
- ✓ **Regulator confidence:** Ofgem-secured approvals
- ✓ **Earlier risk detection:** workforce and community signals surfaced before becoming incidents
- ✓ **AA1000SES Performance Badge:** third-party recognition of engagement maturity, used in reporting

#### Impact & Effectiveness Rating

Separate from the Stakeholder Engagement Healthcheck score, the Impact & Effectiveness rating aims to provide [Company] with greater insight into the operationalising of engagement practices.

Key Criteria	Assessment	Rating
The AA1000 Pillar that the assessment will be based on.	AccountAbility's assessment of an identified practice within the pillar that is operational and implementation focus.	Traffic light rating identifying whether the client meets the criteria, somewhat meets the criteria, or does not meet the criteria.

**The Impact & Effectiveness rating:**

- Identifies areas of the standard which focus on implementation, aligned with the AA1000 best practices for stakeholder engagement
- Provides succinct overview that reflects the past year's efforts in addressing gaps for implementation

**[Company] Ratings 2025**

- Meets criteria: 11
- Somewhat meets criteria: 5
- Does not meet criteria: 0

Key Aspects	Questions	Interviewee Perceptions/ Scores							Average 2021
		1	2	3	4	5	6	7	
Commitment & Integration	Commitment to the AA1000 Principles	5.00	5.00	4.50	4.50	4.00	4.00	5.00	4.57
	Integrating SE into the organisation's governance	5.00	5.00	5.00	4.50	5.00	3.50	5.00	4.71
	Integrating SE into the organisation's processes and policies (strategic)	4.00	5.00	4.00	5.00	4.00	5.00	5.00	4.57
Purpose, Scope & Stakeholders	Integrating SE into the organisation's operational management	4.00	4.00	4.00	4.50	3.50	4.00	4.50	4.07
	Having a clear purpose for SE	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
	Establishing a clear scope for SE	5.00	5.00	4.50	5.00	4.00	5.00	5.00	4.71
	Determining the mandate, ownership and stakeholders of the engagement	5.00	5.00	4.50	4.50	4.00	5.00	4.50	4.64
	Profiling and mapping stakeholders	4.00	5.00	4.00	5.00	4.00	3.00	5.00	4.29
	Determine engagement levels and methods	4.00	5.00	4.00	5.00	4.00	4.00	4.00	4.29
	Establishing boundaries of disclosure	4.00	4.00	4.00	5.00	4.00	3.00	4.50	4.07
	Building a comprehensive engagement plan	4.00	5.00	4.00	5.00	4.00	4.00	4.50	4.36
	Establishing indicators to track the progress of the engagement	3.50	4.00	4.00	5.00	3.50	3.50	4.50	4.00
	Capturing stakeholder input to the engagement plan	5.00	4.50	4.50	5.00	4.00	4.00	5.00	4.57

#### Performance Summary

**PILLAR A: COMMITMENT & INTEGRATION**  
Company X shows a strong continued commitment to the AA1000 Stakeholder Engagement Standard and demonstrates a consistent effort to improve engagement practices with internal and external stakeholders. It is recommended that the organisation seeks to maximise opportunities for knowledge sharing within the SSE Group to further integrate stakeholder engagement into operational management and strategy.

**PILLAR B: PURPOSE, SCOPE, AND STAKEHOLDERS**  
Company X clearly communicates the organisation's wider purpose and strategy internally. The organisation can focus on further honing the scope of key messages to external stakeholders to ensure employees feel more confident and equipped to represent Transmission's purpose accurately and effectively.

**PILLAR C: PLANNING THE ENGAGEMENT**  
Company X demonstrates a strong commitment to increasing early engagement with stakeholders. As the organisation experiences rapid growth, it should focus on continuing to expand the application of customised tools to meet different stakeholder needs.

**PILLAR D: PREPARING THE ENGAGEMENT**  
Company X has built on and identified further resources that support and enhance its commitments. As these are rolled out throughout the organisation, Company X should continue to identify engagement risks that may arise and assess appropriate means to alter the engagement method where needed.

**PILLAR E: IMPLEMENTING THE ENGAGEMENT PLAN**  
Company X continues to strengthen its approach to devising briefing materials that are made available to participating stakeholders in a timely manner, with stakeholder input increasingly informing this. It is advised that the organisation considers both short- and long-term impacts on the targeted stakeholders after engagements.

**PILLAR F: REVIEW & IMPROVE**  
Company X has demonstrated a good awareness of implementing an action plan that reflects its learning and consequently improves processes in the organisation. As the organisation continues to grow, it should continue to adopt a consistent approach to feedback collection across departments and formal and informal engagement methods.

#### ACCOUNTABILITY'S STAKEHOLDER ENGAGEMENT MATURITY LADDER

81% in 2024  
85% in 2023  
82% in 2022

78% in 2021  
62% in 2020

**Thank you!**

