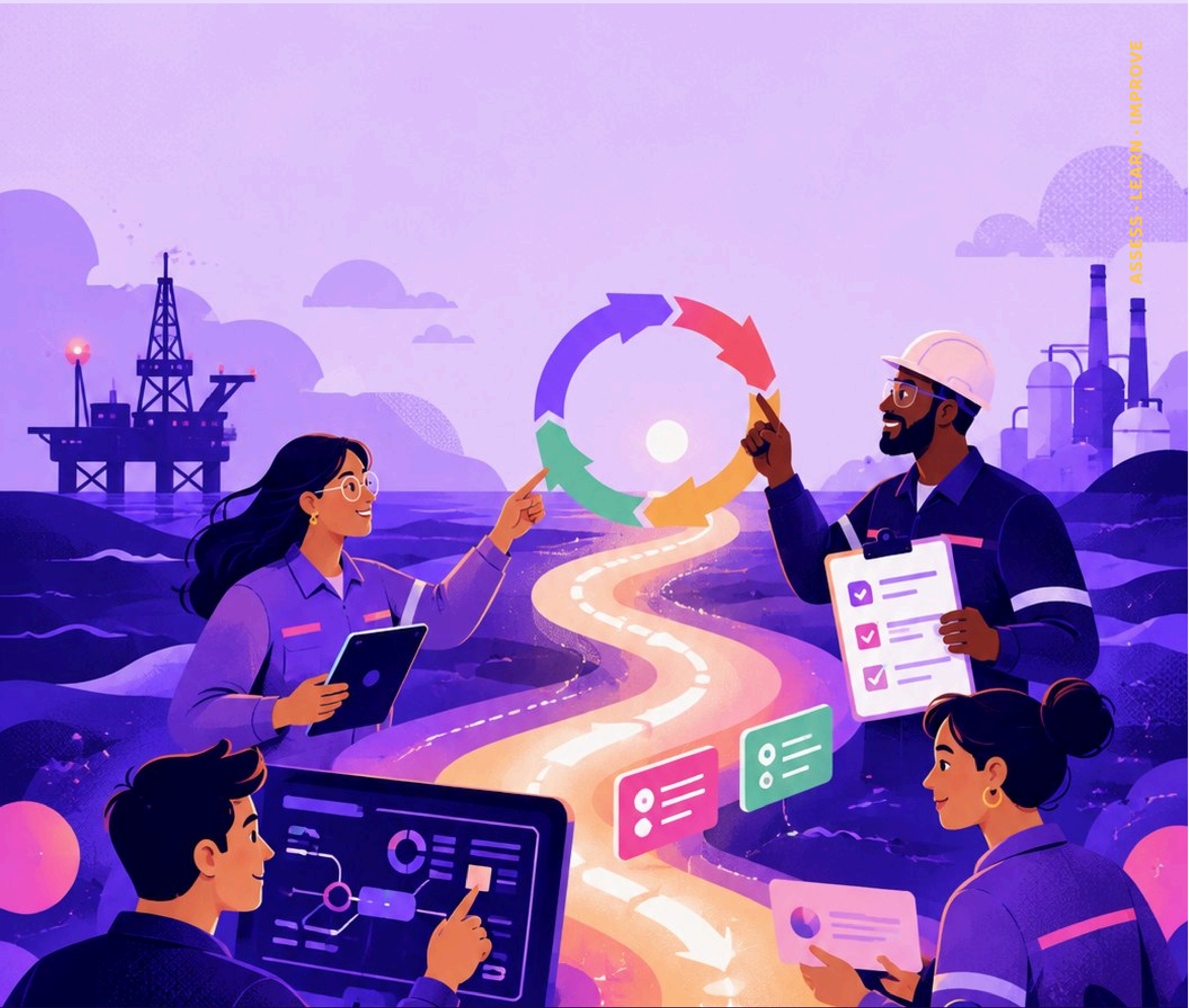
LEAN SIX SIGMA · ASSESSMENT REPORT

≋ FLOW

Procurement & Supply Chain department review.

MIXED DEPARTMENT · PORTFOLIO RANK #2



ASSESS · LEARN · IMPROVE

SCORECARD

Procurement: what the evidence says.

Strongest pillar: P3 Workplace & System Organisation (5S) (3.80). Weakest: P7 Continuous Improvement Culture (2.17). 7 red and 19 amber criteria form the improvement backlog — the next page lists the lowest-scoring ones with the evidence behind each.

Procurement & Supply Chain

DEPARTMENT TYPE

Mixed · Portfolio rank #2

ASSESSMENT STATUS

Solid Foundation

PILLARS SCORED

7 / 7

OVERALL WEIGHTED SCORE

3.23 / 5.00

Solid Foundation

±5pp weight sensitivity: 3.17–3.29
Waste severity 19/24 · Weighted 5S 3.00

Evidence, not vibes

Red findings	7
Amber findings	19
Green findings	15
Governance gates open	1

Pillar evidence state

BARS score appears only once every criterion is scored

PILLAR	WEIGHT	RAW	WEIGHTED	RAG
P1 Process Clarity & Documentation	15%	**3.60**	10.80	A
P2 Waste & Non-Value-Added Activity	15%	**3.00**	9.00	A
P3 Workplace & System Organisation (5S)	10%	**3.80**	7.60	A
P4 Performance Measurement	20%	**2.71**	10.84	R
P5 Quality & Error Management	15%	**3.75**	11.25	A
P6 People, Skills & Engagement	15%	**3.60**	10.80	A
P7 Continuous Improvement Culture	10%	**2.17**	4.34	R

SHINGO LENS Principles **3.03** Systems **3.29** Tools **3.32**

RBPS READINESS **1/20** elements implemented

PROCUREMENT · SIPOC

The process this assessment is scoring.

Supplier–Input–Process–Output–Customer boundary for Procurement & Supply Chain, set before any pillar was scored.

SUPPLIER	INPUT	PROCESS STEP	OUTPUT	CUSTOMER
Maintenance / Operations (Requestors)	Purchase Requisitions	**1. Requisition Review & Validation**	Purchase Orders	Offshore Rigs (materials)
Finance (Budget Approval)	Material Specifications / MSDs	**2. Vendor Selection & RFQ**	Vendor Contracts	Maintenance (spare parts)
Approved Vendor Panel	Approved Budget Codes	**3. PO Creation & Approval**	Delivery Schedules	Operations (consumables)
Logistics / Freight Providers	Vendor Quotes & Proposals	**4. Order Expediting**	Goods Receipts (GRNs)	Finance (PO/GRN for payment)
Legal (Contract Review)	Contracts & Frame Agreements	**5. Goods Receipt & Inspection**	Procurement KPI Reports	HSE (safety-critical items)
Vendors / Finance (AP)	Vendor invoices & goods-receipt notes (GRNs)	**6. Invoice Matching & Release to Finance**	Matched, approved invoices for payment	Finance (Accounts Payable)
Approved Vendor List (AVL) / iktva data	Vendor delivery & quality performance data	**7. Vendor Performance Management**	Vendor scorecards & AVL updates	Maintenance / Operations / iktva reporting

Assessor validation notes

1. REQUISITION REVIEW & VALIDATION

Confirmed with 2 buyers and cross-checked against 5 sampled PRs — boundary holds; the specification-confirmation handoff noted under P1 sits inside...

2. VENDOR SELECTION & RFQ

Validated against the AVL management procedure; RFQ threshold rules matched the DoA matrix during the walkthrough.

3. PO CREATION & APPROVAL

Confirmed via a SAP workflow trace on 3 POs — approval routing matched the documented DoA chain in all 3 cases.

4. ORDER EXPEDITING

Boundary confirmed with buyers, though the informal personal-tracker practice noted under P2 means this step's inputs (vendor quotes/expediting...

Assessment context

Department head: **Faisal Al-Otaibi, Procurement & Supply Chain Manager**. Scope: Assessment covered the full PR-to-PO cycle, AVL/vendor pre-qualification, goods-receipt inspection at the shore base, and vendor performance management for...

Previous findings: First baseline assessment - no prior findings on record.

Field notes — weakest pillars first

- P7 Continuous improvement is this department's weakest pillar and the lowest-scoring of all seven - it operates reactively, driven by the next PO rather than a...
- P4 Performance Measurement is this department's clearest gap. The data Procurement needs - OTD, vendor scorecards, open-PR aging, contract expiries - largely...
- P2 Emergency purchases sit within the 15% target and staff can readily name their top non-value-added activities, but expediting effort isn't consistently...

PROCUREMENT · WHAT TO ACT ON

The lowest-scoring criteria — and the evidence behind them.

1
P7 · CRITERION 6 · CONFIDENCE H
The department independently verifies its own performance: scheduled self-audits, layered process checks, or periodic self-assessment are...
Observed: No scheduled self-audit or layered process check of Procurement's own workflow was found; the department relies entirely on the annual external/internal QMS audit for...

2
P2 · CRITERION 5 · CONFIDENCE M
Split purchasing to avoid approval thresholds and duplicate vendor registrations are systematically detected and prevented by system...
Observed: No system control prevents split purchasing to stay under DoA thresholds or duplicate vendor registrations in SAP; a sample pull found two vendors registered twice...

2
P4 · CRITERION 2 · CONFIDENCE H
Supplier on-time delivery rate and quality rejection rate are tracked per vendor and reviewed in structured monthly supplier review...
Observed: Supplier on-time-delivery and quality rejection data exist in the vendor scorecard extract, but structured monthly supplier review meetings have not been held for the...

2
P4 · CRITERION 5 · CONFIDENCE M
Leading indicators are tracked: open PRs awaiting validation, POs >30 days without GRN, and contracts expiring within 90 days.
Observed: Leading indicators such as open PRs awaiting validation and contracts expiring within 90 days are not tracked as a standing report; buyers pull this manually and...

2
P7 · CRITERION 3 · CONFIDENCE M
Procurement team has implemented ≥2 evidenced process improvements in the last 12 months with before/after data and documented results.
Observed: The team could not point to two evidenced process improvements with before/after data in the last 12 months; a GRN-entry digitisation pilot was started but not...

Showing the 5 lowest of 26 criteria scoring ≤3 — the full list, with unabridged evidence, lives in the assessment itself.

Waste scan — High (19/24)

D	Defects	S2
O	Overproduction	S2
W	Waiting	S3
N	Non-Utilised Talent	S2
T	Transportation	S2
I	Inventory	S2
M	Motion	S3
E	Extra-Processing	S3

Sharpest example (Waiting): Requisitions for non-critical consumables regularly wait 5-8 days for budget approval from Finance/Operations before Procurement can act, and this delay is...

Quick wins — weakest pillars first

- P7 Stand up a quarterly Procurement self-audit checklist
- P7 Re-engage a Procurement representative in the cross-functional procure-to-pay initiative with Finance
- P7 Complete and measure the stalled GRN-entry digitisation pilot
- P4 Reinstate the monthly supplier performance review meeting with a fixed agenda and minutes

5S — physical vs digital

Physical 3.20 (weight 50%) · Digital 2.80 (weight 50%) → weighted **3.00** / 5.00

TOP STRENGTHS OBSERVED

1. Goods-receipt inspection discipline for critical and safety-critical items is genuinely embedded - physical...
2. Ethics, gifts, and anti-bribery policy training compliance is complete and current across all 11 procurement...
3. System organisation (5S) is solid overall - the AVL and contract repository live in a single system of...

TOP CRITICAL GAPS

1. Continuous improvement is reactive and PO-driven, with no departmental self-audit and no evidenced, measured...
2. Performance measurement has real gaps despite the underlying data existing - monthly supplier review...
3. PO workflow controls have not kept pace with volume - no system check for split purchasing or duplicate...

Recommended next step: **Future State Workshop** Next review: **2027-01-22** Assessor: **Karen Whitfield**

Dept. head ack: **Acknowledged - Faisal Al-Otaibi, Procurement & Supply Chain Manager, 22-Jul-2026.** Finalized: **13/08/2026**

The team's receiving-inspection discipline for safety-critical spares stood out as a genuine strength during the walk; the biggest opportunity is turning the vendor scorecard and leading-indicator...

THE MOVE THAT MATTERS

Every gap has an owner and a date.

Each row is a specific gap with a root-cause hypothesis, an accountable owner, a priority-driven due date and — where one applies — a governance gate that must clear before the action can close.

GAP	OWNER	PRI	STATUS	GATE	DUE	EST. COST
Structured monthly supplier review meetings and a standing leading-indicators report (open PRs, POs >30 days without GRN, contracts expiring <90 days) have lapsed and do not run as a routine cadence.	Procurement Performance Lead	H	In Progress	—	2026-10-15	$150,000
No scheduled self-audit or layered process check of Procurement's own workflow exists, and the team cannot evidence two completed, measured process improvements in the last 12 months.	Procurement Continuous Improvement Champion	M	Not Started	—	2027-01-31	—
SAP has no system control to detect split purchasing used to stay under DoA thresholds or to prevent duplicate vendor registrations, and routine low-value POs route through the same multi-layer approval chain as high-value POs.	SAP MM Systems Lead	M	In Progress	—	2026-11-30	$40,000
Repeat late-delivery non-conformances with the same freight vendor for a safety-critical BOP spare category are being re-logged as new NCRs instead of triggering escalation or vendor requalification.	Vendor Quality Lead	H	Not Started	Open	2026-10-01	$75,000
The specification-confirmation handoff with Maintenance/Operations requestors is undocumented and varies by buyer, and mandatory post-event reports for emergency/direct purchases are completed inconsistently (2 of 5 sampled missing).	Procurement Process Owner	M	In Progress	—	2026-12-15	$20,000

HOW TO READ THIS REPORT

What each number actually means.

SIPOC snapshot

Supplier–Input–Process–Output–Customer, a standardised Six Sigma Define-phase tool (ISO 13053-2:2011) — establishes the process boundary before any pillar is scored.

BARS 1–5 scoring

Behaviourally Anchored Rating Scale (Smith & Kendall, 1963). Each level ties to an observable behaviour rather than a vague label: 1 Non-existent · 2 Emerging · 3 Defined · 4 Managed · 5 Optimising.

RAG status

Auto-derived from the BARS score — Green ≥4, Amber ≥3, Red <3 — applied identically to every criterion and every pillar.

Weighted pillar scoring

Each of the seven pillars carries a management-set weight summing to 100%. Overall = Σ(raw pillar score × weight) ÷ 100, out of 5.00. A department scores only once all seven pillars are complete. Reported alongside each department's own weight-sensitivity range, rather than as a single exact figure.

8 Wastes (DOWNTIME)

Ohno's seven wastes (Toyota Production System, 1988) plus Non-Utilised Talent, an eighth waste widely attributed to later Lean practice rather than to Ohno's own text. Severity 1–3 counts only where a waste is marked Observed = Y; the total out of 24 classifies the environment Low (≤8), Moderate (9–16) or High (>16).

5S audit

5S (Hirano, 1995) — scored separately for physical and digital environments (office application per Fabrizio & Tapping, 2006), then combined on a department-specific weighting so 5S is judged where the work actually happens.

Maturity bands

4.00–5.00 High Performer · 3.00–3.99 Solid Foundation · 2.00–2.99 Developing · 1.00–1.99 Critical — a 5-level scale in the same spirit as ISO 9004:2018 Annex A's self-assessment maturity levels.

HOW TO READ THIS REPORT

Extensions to the core model.

Shingo lens

The same 7 pillars, regrouped by the Shingo Institute's Principles → Systems → Tools → Results framework — Results is the overall score itself, not a pillar. A Tools score running well ahead of Principles/Systems flags gains applied without the culture or process to sustain them.

Structured governance worksheets

A gap gated on HAZOP, LOPA or MOC gets that standard's own worksheet fields — HAZOP's node/guide-word/deviation record (IEC 61882), LOPA's scenario and 5-criteria IPL credit checklist (CCPS), MOC's 9-stage tracker including PSSR (CCPS) — recorded alongside, not instead of, the single gateApproved checkbox.

RBPS readiness (optional)

An optional, department-level self-assessment against CCPS's Risk-Based Process Safety framework — 20 elements across 4 pillars (Commit to Process Safety, Understand Hazards and Risk, Manage Risk, Learn from Experience). Entirely separate from the 7-pillar score: never contributes to overallScore or maturity band.

Risk-technique selection

When a gap is tagged 'Prospective risk', a reference table of IEC 31010's risk-assessment techniques (checklist, what-if/SWIFT, HAZOP, FMEA, bow-tie, fault/event tree, Monte Carlo, LOPA) is available alongside the single mechanical Method routing above — a menu, not a second recommendation.

ESTABLISHED METHODOLOGY IS NOT A GUARANTEED OUTCOME

What these methods don't prove.

BARS 1–5 scoring

A single BARS score does not prove competence or predict future performance.

Smith & Kendall (1963); Jacobs, Kafry & Zedeck (1980), Personnel Psychology 33(3)

RAG status

Green does not mean risk-free, and the ≥4/≥3 cut-points are convention, not science. Self-reported status skews optimistic — the 'watermelon' report is why the evidence audit flags unverified greens.

UK HM Treasury project assessment review; Keil et al. (2014), MIT Sloan Management Review 55(3)

Weighted pillar scoring

The weights are management judgement, not a derived optimum — read every score with its weight-sensitivity range, never as an exact figure comparable across organisations.

Saaty (1980); Nardo, Saisana, Saltelli & Tarantola (2008), OECD/JRC Handbook on Constructing Composite Indicators

8 Wastes & 5S

A low waste-severity score means none was observed and evidenced on the visit — not that no waste exists.

Ohno (1988); Liker (2021); Hirano (1995); Fabrizio & Tapping (2006); Bell & Orzen, Lean IT (2010)

Method routing

The recommended method is a starting suggestion from Flow's own heuristic — no standard prescribes routing a gap to DMAIC vs. FMEA vs. TOC by problem type.

ISO 13053-1:2011 and IEC 60812:2018 define the methods named, not the routing between them

Governance gates

Clearing a gate in Flow records that the organisation completed its own approval — it is not itself the safety/regulatory approval. Offshore, the primary anchor is BSEE SEMS, not onshore OSHA PSM.

30 CFR Part 250, Subpart S §250.1912/§250.1928; API RP 75; OSHA 29 CFR 1910.119(l), onshore-analogous

Shingo lens

The pillar→tier mapping is Flow's own classification, and a Tools-heavy flag is a prompt to check whether gains will stick — not proof they won't.

Shingo Institute (Utah State University), The Shingo Model — Three Insights of Enterprise Excellence

HAZOP / LOPA / MOC worksheets

A filled worksheet shows the team recorded a study — not that the underlying hazard, protection-layer or change analysis is technically sound.

IEC 61882:2016; CCPS, Layer of Protection Analysis (2001); CCPS, Introduction to Management of Change

RBPS readiness

A self-reported checklist, not an audit — 'Implemented' does not prove an element is effective or would satisfy a regulator.

CCPS, Guidelines for Risk Based Process Safety

Risk-technique selection

The IEC 31010 table is a menu, not a recommendation — which technique fits a given gap remains the practitioner's judgement.

IEC 31010:2019

PROCUREMENT · EVIDENCE AUDIT

How much to trust these scores.

The evidence base

Assessed by **Karen Whitfield, Lean Six Sigma Black Belt** on 2026-07-22 (2.5 hours). Methods: Gemba Walk, Interview, Document Review. Observed **9** of 14 staff.

Documents reviewed: PR-to-PO SOP v4.2, DoA Matrix (rev. March 2026), AVL Management Procedure, Vendor Scorecard Q2 2026 extract, Emergency/Direct Purchase Procedure, Frame Agreement Register, SAP Open PO Report, Material Master data...

Assessor confidence, per criterion

41 of 41 scored criteria carry written evidence (100%).

High 13 · Medium 24 · Low 4

Verify before acting

Findings (score ≤3) resting on Low or unrated confidence — confirm these before committing money or people to them.

2 — P7 · CRITERION 5 · CONFIDENCE L
Procurement participates as an active contributor in cross-functional improvement initiatives (procure-to-pay...
Assessor note: Only the procurement lead confirmed the initiative's lapse — Finance's side of this was not independently...

3 — P2 · CRITERION 3 · CONFIDENCE L
Vendor expediting effort is tracked per supplier and linked to root cause (late delivery, incorrect spec, poor...
Assessor note: Reviewed two buyers' personal expediting spreadsheets — categories differ between them, so totals can't be...

3 — P4 · CRITERION 7 · CONFIDENCE L
KPI data is trustworthy: each metric has one agreed definition and owner, a verified source of truth, and figures...
Assessor note: The reconciliation step causing the OTD discrepancy could not be located in writing during the visit —...

+1 more in the assessment itself.

Greens to re-check

High scores (≥4) on Low/unrated confidence or without written evidence — the 'watermelon' pattern: green outside, unverified inside.

None — every green in this assessment carries written evidence at Medium or High confidence.

IS THE OVERALL SCORE ROBUST?

If any one pillar's weight moved ±5 points, the overall score would stay between **3.17** and **3.29** — the **Solid Foundation** band holds across the whole range, so the headline verdict does not depend on the weighting.

FLOW · LEAN SIX SIGMA ASSESSMENT GENERATED 13 AUGUST 2026