

Digital Transformation & AI Integration Strategy 2026–2029

Operations, Engineering & Commercial — Elastomers Australia

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This document outlines Elastomers Australia's strategic roadmap for digital transformation and artificial intelligence integration over the 2026–2029 period. It addresses the operational challenges identified through the 2025 internal capability assessment, current technology landscape, and priority investment areas aligned to the Company's growth objectives under the FY26 Business Plan.

Elastomers Australia operates in a capital-intensive, safety-critical industry where operational efficiency, workforce competency, and product quality directly determine margin performance and competitive positioning. This strategy recognises that the Company's scale — 350+ field technicians, 4,000+ sqm manufacturing facility, 30,000+ engineering drawings, and distributed client sites across Australian mining operations — creates both a significant opportunity and a pressing need for technology-led transformation.

1. EXECUTIVE SUMMARY

The Board has endorsed a three-year digital transformation programme targeting four strategic pillars: (1) Workforce Intelligence, (2) Engineering Knowledge Digitalisation, (3) Factory Operations Optimisation, and (4) Sales and Customer Intelligence. The programme is budgeted at \$2.4M over 36 months and is projected to deliver measurable ROI of \$8.2M–\$11.4M across the same period, driven primarily by workforce training efficiency gains, quality defect reduction, and sales process acceleration.

- Estimated annual training cost reduction: \$1.1M–\$1.4M (shift from \$6,000/technician to <\$400/technician)
- Manufacturing defect rate reduction target: 40% within 18 months via AI quality inspection
- Engineering knowledge retrieval time reduction: 70–80% through AI document intelligence
- Sales cycle acceleration target: 25% reduction in average deal closure time
- New hire time-to-competency target: 14 weeks ! 8 weeks (43% improvement)

2. CURRENT STATE ASSESSMENT

2.1 Workforce & Training

Elastomers Australia employs 350+ field technicians across screen installation, maintenance, and

manufacturing roles. The workforce is characterised by high turnover (estimated 22% annual attrition in field roles), geographically distributed deployment, and significant variation in experience levels from first-year apprentices to 20+ year veterans.

Current training delivery is primarily classroom-based and relies heavily on senior technician mentorship. The EA Learning Management System (LMS) holds compliance training records but lacks interactive capability. On-the-job training quality is inconsistent across sites and supervisors. Key risks include:

- Institutional knowledge loss as senior technicians approach retirement (8 technicians 55+ years)
- Inconsistent installation quality due to informal knowledge transfer
- Regulatory compliance exposure — WHS obligations require documented, verifiable competency
- High cost of errors: average screen installation rework cost estimated at \$18,000–\$45,000 per incident
- Safety incidents attributable to inadequate training: 3 recordable incidents in FY25 (target: zero)

2.2 Engineering Knowledge Management

The Engineering Division maintains an archive of approximately 30,000 engineering drawings, specifications, material data sheets, and product design documents accumulated over 40+ years of operation. This archive represents significant IP but is largely inaccessible in practice:

- Drawings stored across mixed systems: CAD server, shared drives, paper archives, and email
- Average search time for specific drawing: 45–90 minutes (engineer self-reported)
- No semantic search capability — technicians must know exact part numbers or drawing codes
- R&D team duplicates effort: ~15% of new screen designs contain elements identical to archived designs
- Client customisation requests require manual search through product catalogue — average response time: 3 days

2.3 Manufacturing & Quality Control

The Dandenong South manufacturing facility processes approximately 2,800 screen panel sets annually. Current quality control relies on manual visual inspection by QC technicians at three checkpoints: post-moulding, post-trimming, and pre-dispatch. Defect detection rates and process consistency vary by shift and individual inspector.

- Current defect escape rate (defects reaching client): 2.3% of panels dispatched (industry benchmark: <0.8%)
- QC throughput constraint: manual inspection limits to 320 panels per shift (capacity bottleneck)
- Three full-time QC inspectors employed at fully-loaded cost of \$380K/year
- High-value claim incidents: 4 in FY25, average claim value \$67,000 — total \$268,000 in warranty costs
- No real-time production monitoring — shift supervisors rely on end-of-shift paper dockets
- 14 fixed-position cameras installed in production area — currently used for security only

2.4 Sales & Customer Intelligence

Elastomers Australia's sales team of 6 account managers and 2 business development representatives serves approximately 180 active client accounts across mining, quarrying, and industrial sectors. Sales intelligence is largely relationship-driven with limited use of data analytics:

- CRM system (Salesforce) adopted in 2023 — data quality inconsistent, adoption variable
- No systematic account intelligence gathering — competitor activity monitored ad hoc
- Tender response preparation: average 18 hours per response (engineers and sales collaborating)
- Win rate on competitive tenders: 34% (FY25) — below industry average of 41%
- Customer churn analysis performed annually only — no early warning indicators
- New account prospecting relies on trade shows and referrals — no digital lead generation

3. STRATEGIC PILLARS & INITIATIVES

Pillar 1: Workforce Intelligence — Immersive VR Training Platform

The highest-priority and highest-ROI initiative is the deployment of an immersive VR training platform for screen installation technicians. This initiative directly addresses workforce competency, training cost, and safety compliance challenges identified in Section 2.1.

The proposed platform will deliver immersive simulation of all screen installation procedures (per EA-SOP-001) allowing technicians to practise complex, high-risk tasks in a safe virtual environment before deployment to live sites. The platform will integrate with the existing LMS for competency tracking and reporting.

- Phase 1 (Pilot — 6 months, 50 users): Screen Installation Module — full procedure simulation with assessment
- Phase 2 (Rollout — 350 users): Maintenance, Safety Induction, and Equipment Familiarisation modules
- Phase 3 (Advanced): AI-powered avatar instructors, real-time feedback, adaptive difficulty
- Hardware: Meta Quest headset fleet, proprietary multi-headset charging stations, ArborXR MDM
- LMS integration: xAPI/SCORM compliance for competency reporting and WHS audit trail

Financial case: Current training cost per technician estimated at \$6,000/year (including supervisor time, travel, classroom, and rework due to competency gaps). VR platform cost per technician: approximately \$336/year at full rollout. With 350 technicians, projected annual saving: \$1.98M against platform cost of

\$147,000/year. Payback period: < 3 months from full deployment.

Pillar 2: Engineering Knowledge Digitalisation — AI Document Intelligence

The Company's 30,000+ document archive represents decades of engineering expertise that is effectively inaccessible due to the absence of intelligent search and retrieval capability. An AI Document Intelligence system will transform this archive into a queryable knowledge base accessible to engineers, technicians, and the R&D team.

The system will enable natural language queries against the full document archive, returning relevant drawings, specifications, and procedures with source citations and confidence ratings. Integration with the engineering workflow will allow technicians in the field to retrieve site-specific installation drawings via tablet or headset overlay.

- Natural language search across 30,000+ drawings, SOPs, specifications, and product catalogues
- Intelligent extraction: material properties, dimensions, tolerances, and assembly sequences
- R&D support: surface similar historical designs when creating new screen configurations
- Client-facing: reduce product customisation response time from 3 days to < 4 hours
- Audit trail: all document retrievals logged for engineering accountability and ISO compliance

Pillar 3: Factory Operations — AI Vision & Quality Monitoring

The 14 existing production cameras represent an untapped asset. An AI-powered vision system layered over these cameras will automate defect detection, monitor production throughput in real time, and generate automated work orders for maintenance and quality rectification — without requiring new hardware investment.

Computer vision models will be trained on Elastomers Australia's specific defect taxonomy (surface voids, delamination, dimensional non-conformance, hardness variation indicators) to detect quality issues at the point of production rather than at post-production inspection. Integration with the work order system will automatically route defects to QC technicians with photographic evidence and priority classification.

- Automated defect detection at moulding and trimming stations — target: detect 95%+ of defects at point of manufacture
- Real-time production dashboard: panels completed per hour, defect rate, throughput vs target
- Automated work order generation: defects classified by severity (Critical / High / Medium), routed to QC
- Shift supervisor reporting: AI-generated end-of-shift production report replacing paper dockets
- Predictive quality: identify patterns preceding defect clusters (material batch correlation, temperature, press cycle time)
- Target reduction in defect escape rate: 2.3% ! 0.8% within 12 months (saving ~\$180K/year in warranty costs)

Pillar 4: Sales & Customer Intelligence — AI-Assisted Sales Platform

The sales function represents the highest leverage point for accelerating revenue growth without proportional headcount increases. An AI Sales Intelligence platform will provide account managers with real-time company research, strategic opportunity identification, and AI-drafted outreach — allowing the team to focus on relationship development and negotiation rather than research and proposal drafting.

Key capabilities will include automated account profiling for prospect and existing client accounts, strategic alignment mapping (identifying how EA's capabilities address each account's pain points), competitive positioning intelligence, and AI-generated first drafts of proposals and email outreach for human review and personalisation.

- Account intelligence: automated research on prospect companies, recent news, tender history
- Opportunity identification: AI analysis of account activity patterns to flag upsell/cross-sell triggers
- Tender response acceleration: AI drafts structure and technical content — engineers review and refine
- Win rate improvement target: 34% ! 45% on competitive tenders within 18 months
- Proposal turnaround target: 18 hours average ! 6 hours average

4. TECHNOLOGY ARCHITECTURE & DATA SOVEREIGNTY

All AI systems deployed under this strategy will comply with Australian data sovereignty requirements. Processing of Elastomers Australia's proprietary engineering drawings, client data, and operational data will occur exclusively on Australian-hosted infrastructure. The Company will not use platforms that process Australian business data offshore without explicit board approval and legal review.

- Primary infrastructure: Microsoft Azure Australia East (Sydney) — ISO 27001 certified
- AI processing: Azure OpenAI Service (Australian region) for all document and sales intelligence workloads
- VR platform hosting: on-premises LMS with Azure AD identity integration
- Vision AI: edge processing at Dandenong South facility — camera footage does not leave site network

- Data classification: all engineering IP classified as "Restricted" — encrypted at rest and in transit
- Vendor IP policy: Elastomers Australia retains ownership of all custom AI models trained on EA data

5. INVESTMENT & FINANCIAL SUMMARY

Initiative	Year 1	Year 2	Year 3	3-Year Total
VR Training Platform	\$147,000	\$147,000	\$147,000	\$441,000
AI Document Intelligence	\$85,000	\$42,000	\$42,000	\$169,000
Factory Vision & QC AI	\$320,000	\$85,000	\$60,000	\$465,000
AI Sales Platform	\$65,000	\$48,000	\$48,000	\$161,000
Infrastructure & Security	\$120,000	\$80,000	\$80,000	\$280,000
Change Management & Training	\$95,000	\$45,000	\$30,000	\$170,000
Contingency (15%)	\$137,000	\$68,000	\$61,000	\$266,000
TOTAL INVESTMENT	\$969,000	\$515,000	\$468,000	\$1,952,000

6. RISK ASSESSMENT

Risk	Likelihood	Impact	Mitigation
Change management resistance	High	Medium	Structured communication plan, champion programme, pilot before rollout
Data quality — engineering archive	Medium	High	Phased digitisation, metadata tagging programme Q1 2026
Cybersecurity — AI system integration	Low	High	Azure security baseline, penetration testing, ISO 27001 compliance
Vendor dependency	Medium	Medium	IP ownership clauses in all vendor contracts, annual exit planning review
ROI realisation delay	Medium	Medium	Milestone-based payments, quarterly ROI tracking dashboard
Regulatory change (AI governance)	Low	Medium	Monitor emerging AI legislation, legal review annually

7. IMPLEMENTATION ROADMAP

Q1 2026	VR Training Platform — Pilot Launch (50 users, Screen Installation Module). AI Document Intelligence — Initial document ingestion (engineering drawings subset). Factory Vision — Camera integration assessment and vendor selection.
Q2 2026	VR Training Platform — Pilot outcomes review. AI Sales Intelligence — Pilot with 3 account managers. Factory Vision — Pilot deployment at 4 camera positions (post-moulding station).
Q3 2026	IT Experience Centre Launch — showcase all AI/VR capabilities to clients and prospects. VR Training Platform — Full 350-user rollout commencement. Factory Vision — Full camera coverage, automated work order integration.
Q4 2026	AI Document Intelligence — Full 30,000 document archive ingestion complete. Sales Platform — Full team rollout. First annual ROI review against projections.
2027–2028	Advanced AI capabilities: predictive maintenance, AI avatar instructors in VR, customer-facing portal, integration of AI across all business units.
2029	Full digital transformation completion. External recognition programme (Industry 4.0 certification). Exploration of AI-enabled new revenue streams (data-as-a-service, predictive screen performance).

8. GOVERNANCE & ACCOUNTABILITY

- Programme Sponsor: Pat (CEO) — quarterly review, budget approval authority
- Programme Owner: Melanie Contreras (Head of IT) — day-to-day delivery accountability
- Technical Authority: David Waller (Head of Engineering) — sign-off on engineering requirements
- Steering Committee: CEO, Head of IT, Head of Engineering, CFO — monthly meeting
- Vendor management: all vendor contracts reviewed by EA legal counsel before execution
- IP protection: external legal review of all IP ownership and licensing clauses
- Reporting: monthly dashboard to Steering Committee, quarterly board update
- Benefits realisation: independent review at 12 and 24 months against projections in Section 5

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