2027 Occupation Standard Classification for Australia (OSCA) Update

A Submission to the Australian Bureau of Statistics

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Recommendations

1. **Reflect operational complexity across all transport modes:** Classification should distinguish occupations by skill intensity, multi-year training requirements, and supervisory responsibility, rather than relying solely on broad groupings or formal education proxies. This ensures the statistical record aligns more closely with operational realities in road, rail, ports, air, and warehousing.
2. **Recognise emerging and cross-functional occupations:** OSCA should include new and evolving roles with measurable labour market presence, such as digital logistics specialists, automation coordinators, sustainability officers, and cybersecurity professionals within supply chain contexts. Proper classification of these roles ensures they are visible in labour statistics, supporting analysis and policy deliberation.
3. **Ensure consistent representation of skill levels and progression:** While OSCA does not define career pathways, it can accurately differentiate skill levels, supervisory responsibility, and operational complexity within occupations. This enables clearer understanding of workforce composition, training intensity, and potential supply constraints.
4. **Enable responsive updates where labour market evidence supports emerging or high-demand occupations:** Classification should be informed by robust evidence of occupational activity, ensuring that critical and evolving roles are captured in a timely manner. This maintains OSCA's relevance as a statistical tool in a rapidly changing sector.

1. Introduction

The Australian Logistics Council (ALC) welcomes the opportunity to contribute to the 2027 update of the Occupation Standard Classification for Australia (OSCA). Australia's freight and logistics industry is a critical enabler of national economic productivity, connecting producers, manufacturers, retailers, and consumers across extensive road, rail, ports, air, and warehousing networks. Accurate occupational classification underpins workforce planning, career guidance, targeted skills investment, and migration frameworks.

While OSCA provides a statistically rigorous framework, from an industry perspective there are key limitations. Highly skilled and shortage-critical roles are not consistently represented at appropriate skill levels. Emerging occupations in digital logistics, automation, sustainability, and cybersecurity are largely absent. Furthermore, current classifications often obscure distinctions in training, operational complexity, and supervisory responsibility, limiting the statistical visibility of roles that are critical to supply chain resilience.

ALC recommends that OSCA 2027 focus on improving the granularity and operational relevance of occupational classifications. Accurately capturing skill intensity, training requirements, and evolving functions of the logistics workforce will enhance OSCA's statistical integrity and its utility for workforce planning, education, and policy analysis, while remaining clearly within the ABS's core statistical mandate.

2. Context

The freight and logistics sector is operationally complex and highly integrated. Roles frequently span multiple transport modes and functional domains, yet current occupational classifications often treat them as discrete categories. This separation limits the ability to capture skill intensity, training investment, and operational responsibility across the sector.

For example, **articulated and rigid truck drivers** share overlapping competencies, including route planning, mass and fatigue management, regulatory compliance, and contingency management. Articulated truck drivers typically require three to five years of combined formal and on-the-job training to operate safely and efficiently, while rigid truck drivers possess similar operational competencies. Existing classification frameworks do not reflect this overlap, obscuring the full scope of skill intensity.

Rail occupations exhibit similar complexity. Locomotive drivers undergo two to three years of structured training, incorporating simulators, track-based exercises, and route-specific certification. Signal operators, track maintenance technicians, and network controllers are responsible for safety-critical infrastructure and operations. Yet their distinctions in skill intensity and operational responsibility are not consistently represented.

Port and maritime roles require multi-year on-the-job experience combined with technical expertise. Crane operators and stevedores manage complex, high-risk operations, while marine pilots, harbour masters, and intermodal terminal operators coordinate freight movements across modes. Air freight occupations, including pilots, loadmasters, ground handling supervisors, and cargo coordinators, require extensive certification and operational training, navigating regulatory and safety-critical environments.

Warehousing and distribution roles further illustrate the sector's complexity. Forklift operators, warehouse technicians, and logistics coordinators combine accredited training with practical experience, often in automated, high-throughput environments. Supply chain managers oversee multi-modal operations, integrating planning, operational coordination, and compliance. Emerging roles in automation, digital systems, decarbonisation, and cybersecurity further increase skill intensity and operational complexity.

Capturing this breadth of skill, training, and operational responsibility within OSCA classifications is essential to ensure the statistical framework reflects workforce reality, supports labour market analysis, and provides credible data for informed decision-making.

3. Alignment with OSCA Maintenance Strategy and Observed Gaps

The OSCA Maintenance Strategy[1] establishes a structured and transparent framework for classification updates. However, from a freight and logistics perspective, several limitations are evident. Firstly, classification updates are not formally integrated with workforce policy levers. Consequently, even when an occupation is recognised as skill-intensive or in shortage, this recognition does not automatically inform VET investment, migration pathways, or industry workforce planning. Secondly, consultation windows, while broad, do not prioritise critical industry occupations. Roles experiencing

[1] OSCA maintenance strategy | Australian Bureau of Statistics

acute shortages may therefore be deferred to later update cycles, delaying recognition and policy response. Thirdly, the scheduled frequency of updates — two occupation updates and one structural update every five years — limits responsiveness in an industry where technology, decarbonisation initiatives, and operational practices evolve rapidly. Finally, the OSCA Maintenance Strategy lacks clarity on how classification outputs are applied across career pathways, workforce policy, and national skills intelligence frameworks.

ALC recommends that OSCA 2027 incorporate mechanisms to dynamically recognise emerging and shortage-critical occupations, establish sector-priority pathways to accelerate review for critical roles, and ensure outputs are linked directly to policy instruments affecting workforce development.

4. Critical Occupations and Workforce Challenges

Building on the sector context, ALC identifies a set of occupations that are both highly skilled and subject to persistent workforce shortages. These gaps have direct implications for supply chain resilience, operational performance, and national productivity.

- In **road freight,** articulated and rigid truck drivers face acute shortages, particularly for long-haul and regional routes, despite requiring three to five years of operational experience and regulatory competency. Heavy vehicle mechanics, increasingly responsible for maintaining zero-emission and alternative fuel fleets, are similarly scarce. Truck driver trainers and assessors are critical to expanding workforce pipelines, yet limited availability constrains training throughput.
- **Rail freight** occupations, including locomotive drivers, signal operators, and track maintenance technicians, require extended training and ongoing certification. Shortages reduce network throughput, increase risk exposure, and limit capacity for freight growth.
- **Port and maritime** roles — crane operators, stevedores, marine pilots, harbour masters, and intermodal terminal operators — combine technical expertise with operational judgement. Gaps in these occupations impede port efficiency, cross-modal coordination, and overall freight reliability.
- **Air freight** is an emerging area of concern. Freight pilots, loadmasters, ground handling supervisors, and cargo coordinators operate under highly regulated and operationally intensive environments. Shortages in these roles constrain air cargo capacity, particularly for time-sensitive and e-commerce freight.
- **Warehousing and distribution** functions, including warehouse technicians, forklift operators, logistics coordinators, and supply chain managers, are critical to high-density, automated, and complex facilities. Shortages in these roles disrupt end-to-end supply chain performance. Emerging roles in automation, digital coordination, sustainability, and cybersecurity are increasingly essential but remain largely unrecognised in occupational classifications.

From a statistical and operational perspective, these gaps indicate that current OSCA classifications may underrepresent skill intensity, operational complexity, and emerging labour market activity. By refining occupation definitions to capture these elements, OSCA can provide a more accurate foundation for workforce analysis, education planning, and evidence-based policy development without requiring ABS to extend into policy implementation or workforce management functions.

5. Conclusion

Accurate and responsive occupational classification is essential to sustaining a skilled logistics workforce and supporting national economic productivity. By recognising operational complexity, emerging roles, and career pathways, OSCA 2027 can move beyond descriptive statistical classification to a framework that informs workforce policy, supports skills investment, and strengthens supply chain resilience. ALC is committed to supporting ABS through evidence provision, workshops, and mapping between the Core Skills Occupation List and OSCA 2027.

6. Annex

Occupation	Transport Mode	Typical Training / Experience	Skill Intensity	Shortage / Workforce Pressure	Emerging / Operational Notes
Articulated Truck Driver	Road	3–5 years on-the-job experience, Heavy Vehicle Licence (Class 2+), fatigue and mass management training	High – operational, regulatory, safety-critical	High – long-haul/regional shortages	Shares competencies with rigid drivers; complex route & load management
Rigid Truck Driver	Road	2–4 years on-the-job, Heavy Vehicle Licence (Class 1–2), regulatory knowledge	High	Medium–High	Overlaps with articulated drivers; classification currently separates them
Heavy Vehicle Mechanic	Road	3–5 years apprenticeship, advanced diagnostics, alternative fuel systems	High	High	Increasingly responsible for zero-emission vehicle maintenance
Truck Driver Trainer / Assessor	Road	5+ years operational experience, formal trainer accreditation	Very High	Medium	Critical to workforce pipeline; shortage constrains training capacity
Locomotive Driver	Rail	2–3 years formal and simulator training, route-specific certification	High	High	Safety-critical; ongoing certification required
Signal Operator	Rail	2+ years training, operational certification	High	Medium	Ensures network safety and throughput; classification underrepresents skill intensity
Track Maintenance Technician	Rail	2–4 years apprenticeship, on-the-job safety and signalling training	High	Medium–High	Operational complexity across network; critical to reliability
Network Controller	Rail	2–3 years formal training + ongoing certification	High	Medium	High responsibility for network coordination and safety
Crane Operator / Stevedore	Ports / Maritime	2–5 years on-the-job, OH&S and operational certification	High	Medium	Multi-year training: operational skill intensity underrepresented
Marine Pilot / Harbour Master	Ports / Maritime	5+ years' experience, certification, operational knowledge of port & vessel systems	Very High	Medium	High operational judgement and risk responsibility
Intermodal Terminal Operator	Ports / Rail / Road	2–3 years technical and operational training	High	Medium	Cross-modal operations; skill intensity often overlooked
Freight Pilot	Air	5+ years flight experience, commercial pilot license, cargo-specific training	Very High	Medium–High	Air cargo growth and e-commerce pressures increase demand
Loadmaster / Cargo Coordinator	Air	2–4 years operational training, certification	High	Medium	Operationally intensive; safety-critical
Ground Handling Supervisor	Air	2–3 years operational + compliance training	High	Medium	Manages automated / high-throughput cargo facilities

Occupation	Transport Mode	Typical Training / Experience	Skill Intensity	Shortage / Workforce Pressure	Emerging / Operational Notes
Warehouse Technician	Warehousing / Distribution	1–3 years accredited training + practical experience	Medium–High	Medium–High	High-density, automated, or complex facilities
Forklift Operator	Warehousing / Distribution	1–2 years accredited training + practical experience	Medium	Medium	Safety-critical in automated/large-scale warehouses
Logistics Coordinator	Multi-modal	2–4 years on-the-job + vocational training	High	Medium	Operational planning across modes; skill underrepresented
Supply Chain Manager / Planner	Multi-modal	3–5 years' experience + tertiary qualification	Very High	Medium	Oversees operational integration and planning across modes
Automation / Digital Systems Specialist	Multi-modal	2–4 years technical training / tertiary qualification	High	Emerging	Increasingly critical with logistics automation and digitalisation
Sustainability / Decarbonisation Officer	Multi-modal	2–3 years training, industry certifications	Medium–High	Emerging	Focused on operational sustainability and emissions reduction
Cybersecurity / IT Specialist	Multi-modal	3–5 years tertiary + certifications	High	Emerging	Supports secure and resilient digital logistics systems