



Reimagining the workforce: organisational context assessment of inclusion and innovation in the Victorian rolling stock sector

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Acknowledgements: The authors greatly appreciate the financial support from the Rail Manufacturing Cooperative Research Centre (funded jointly by participating rail organisations and the Australian Federal Government's Business Cooperative Research Centres Program) through Project R3.3.3 – Reimagining the workforce: building smart, sustainable and safe public transport (Victorian Department of Transport and Victoria University). The authors also acknowledge the assistance provided by the Victorian Department of Transport in this study and the following people for their contributions to the development of this project: Chris Eves, Stuart Thomson, Christopher Wong and Larry Jordon.

March 2020

Citation: Young, C., and Parry, N. (2020). *Reimagining the workforce: organisational context assessment of inclusion and innovation in the Victorian rolling stock sector*. With contributions from Heenetigala, K. Rail Manufacturing Cooperative Research Centre, Melbourne.

This report is one of a seven reports relating to the 'Reimagining the workforce: building smart, sustainable, safe public transport' research project. The complete suite of reports is as follows:

1. The Victorian rolling stock context. Literature review.
2. Community perceptions of careers working with rolling stock.
3. Organisational context assessment of inclusion and innovation in the Victorian rolling stock sector.
4. Training for a future rolling stock workforce.
5. The economics of rolling stock manufacturing, maintenance and operations for Victoria's public transport sector.
6. Building smart, sustainable and safe public transport. Workshop context paper.
7. Reimagining the workforce for public transport: interim action plan.

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Project summary

Reimagining the workforce: building smart, sustainable, safe public transport is a collaborative research project between the Department of Transport (DoT), the Rail Manufacturing Cooperative Research Centre (RMCRC), Victoria University (VU) and industry which commenced on 1 July 2019 and will be completed by 30 June 2020. This research aims to provide a starting point for addressing the current knowledge gaps in the transport industry workforce, with a specific focus on above track rolling stock. Its purpose is to understand what practical steps might be taken to address critical skills shortages currently facing the sector, and what is needed to build a sustainable and resilient future workforce.

The project provides a systemic assessment case study of the Victorian public transport rolling stock sector from three perspectives: economic, organisational and community in the broader context of the public transport system. It undertakes a case study approach examining specific organisations across the rolling stock and public transport system in Victoria, and uses an ‘end user-based research methodology’, which is transdisciplinary and combines end user and academic knowledge. Findings from these assessments will be used to inform a workshop with industry in 2020 to identify key actions and develop an interim plan to support these actions.

Our key purpose is to understand:

- The current above track, rolling stock workforce context.
- The barriers, needs, opportunities, benefits and existing strengths of organisations and their ability to respond to current recommendations, and achieve a sustainable, inclusive and innovative future workforce.
- The economics of developing and growing capability within transport organisations’ workforce as a result of the investment in training (Tiers 2 and 3) and potential economic opportunities for small to medium enterprises (SMEs) at a local level. This is being approached via the benefits and costs of local procurement.
- How the 18–30 year-old cohort perceive and understand public transport as a potential employer and their expectations more generally in relation to work.

This research builds upon previous research undertaken by the Australian Rail Association and the RMCRC.

This report is Part A of the organisational review and focuses on the development of the inclusive and innovative culture needed to retain and build the future workforce, and Part B focuses on training and the economics associated with this. As this report is part of an overall assessment of the rolling stock sector, it should also be read in conjunction with *Reimagining the workforce: the economics of rolling stock manufacturing, maintenance and operations for Victoria’s public transport sector* (Jones, et al., 2020), which address procurement issues, and *Reimagining the workforce: community perceptions of careers working with rolling stock* (Ooi and Cormick, 2020), which examines the community and workforce attraction of 18–30 year olds.

Interviewees from organisations and organisational identities have been kept anonymous to enable those who participated to speak more freely. Where they are named, the information has been publicly available or permission has been granted in relation to the material printed.

Executive summary

'At the heart of innovation is change; diversity creates change, inclusion is how you manage it.'

Significant social, environmental and economic changes are driving transformation throughout public transport in Victoria. The focus of investment, changing expectations of work, and technological advancement in recent years have provided opportunities and challenges. The rate of change and the need to build a skilled and agile workforce has brought a number of underlying issues into sharp focus. In particular, it has highlighted:

- The ageing workforce
- An impending skills shortage and the need to rapidly upskill the existing workforce
- Issues with attraction and retention of younger people and women (BIS Oxford Economics, 2018; PwC, 2006).

Public transport is a complex ecosystem comprised of multiple cultures that have been shaped by their historical and physical contexts. This has resulted in entrenched identities and cultures and specific mindsets and knowledge to suit these historical contexts. The rapidly changing environment requires understanding relating to the aspects of this culture that can be leveraged, where change is needed, and how this change can be achieved. It also requires the development of learning cultures where new expertise is blended with existing technical knowledge throughout the workforce. This will present challenges to those with traditional notions of how learning can be undertaken, and who should learn from whom.

Developing inclusive and innovative cultures is critical if organisations are to attract and retain the high quality applicants needed to create an agile and sustainable future workforce. Managers and leaders will need to diversify their skills base if they are to effectively manage the change that this increased diversity will bring to ensure that it enhances, rather than impedes, their progression. It will also be important to identify where there is agency to act, who is able to act, and who should be responsible for those actions.

Innovation and diversity and inclusion are also intrinsically entwined. Successful adoption of innovation throughout the rolling stock sector requires the inclusion of diverse thought and a differently skilled workforce that is able to adapt. These talents exist in different areas of the community, and being able to leverage their attributes and capabilities requires challenging established notions of who should do what jobs based on who they are. This requires social innovation and an understanding of how to manage the risks inherent in this type of innovation, to ensure that the increasingly diverse workforce is functional and able to meet industry demands.

The development of new relationships and structures within organisations and throughout the sector are also critical to enabling the collaboration that is required for healthy growth of the workforce. Technology is evolving and with it, expectations of work and the relationship employees wish to have with their organisations. As this is a long-term proposition where human resources need to partner strategically with their organisations, it will require a whole-of-organisation, whole-of-sector collaboration to achieve outcomes. People skills and understanding of culture is no longer optional, because they are the necessary capabilities required to build the workforce needed for the future.

The purpose of this report is to present findings in relation to the context that currently informs the development of a future workforce and organisations within the rolling stock sector. It is presented here as the overall system surrounding the sector, which provides the context for innovation and inclusion and the challenges, needs and opportunities from within organisations. It also provides a snapshot of the current status of the rolling stock sector in relation to these two areas.

The key findings from this review are:

- Much of the rolling stock sector is actively involved in innovation and inclusion, but where organisations are situated with respect to the implementation process varies widely, and depends on organisational context, capability and the availability of resources and capital.
- The sector contains multiple cultures and subcultures but these are fragmented with a lack of cohesion, particularly with the relationships between large companies and SMEs.
- Workforce profiles are needed that combine skills needing to be retained with skills needed for emerging future technologies, especially the skills that support better strategic planning and implementation of workforce development and training.
- Mechanisms and strategies are needed within organisations to enable better integration, learning outcomes and cohesion, particularly between younger and older cohorts.
- There is a critical need for collaborative strategies and mechanisms across the sector if the current sectorial workforce skills and capability issues are to be effectively addressed.

- SMEs and organisations in regional areas have different challenges and constraints compared to larger organisations or those in urban areas. To enable effective participation in the supply chain, regional organisations and SMEs require the development of specific programs and mechanisms to build capability.
- Improved leadership and management skills are needed to support innovation and inclusion within organisations if the sector is to transform its workforce and productivity with respect to new and emerging technologies.
- Measures of inclusion are emergent and there is a lack of monitoring and evaluation of the workforce at the sector level. Without such measures, it was not possible to ascertain the effectiveness of diversity and inclusion programs.
- There is a key opportunity to leverage the knowledge and expertise across the sector through knowledge sharing mechanisms to support more effective learning and practice.

Methodology

This report uses an iterative decision making assessment process, which is transdisciplinary. This process has been used previously to assess systemic issues in multiple organisational contexts.

This report contains the following elements:

- **An assessment of the sectorial context** surrounding rolling stock that was developed from key elements identified in the literature review (Young, et al., 2020a), and from data collected during interviews undertaken as part of the organisational process.
- **An organisational context review informed by:**
 - > Forty semi-structured interviews across three case study organisations currently involved in the rolling stock sector to ascertain challenges, needs, opportunities and influences related to innovation, inclusion and organisational culture. (See Appendix 2 for details.)
 - > An additional 23 interviews were undertaken with project stakeholder group organisations, organisations across the public transport rolling stock sector in Victoria, and participants of industry workforce development programs. (See Appendix 2 for details.)
 - > A desktop review of 29 organisations who currently participate within the rolling supply chain to ascertain aspects of monitoring and evaluation of innovation and diversity and inclusion that are publicly available. These aspects are presented with findings from the interviews to obtain an indication of the current status of monitoring and evaluation. (See Appendix 2 for details.)
 - > A desktop review to ascertain program highlights of organisations currently involved in, and who support, the rolling stock sector in Victoria.
 - > Observations collected from a RISSB Horizons workshop examining the theme of retention held on 27 September 2019 in Queensland, which was attended by emerging young leaders.

Questions for the semi-structured interviews were developed after initial conversations with stakeholders and uses questions adapted from a previous diversity and inclusion assessment undertaken with emergency service organisations. (See Appendix 3 for details.)

- **An assessment of the SME sectorial context** through two focus groups conducted with industry representatives, targeted interviews with those who work with SMEs in the supply chain and one case study to ascertain their specific contexts and needs.
- **A visual audit of 50 websites** of organisations currently involved in the rolling stock sector in Victoria to ascertain the visual narrative of their workforce currently being conveyed. This assessed website images from home pages and level 1 and 2 subpages of large, medium and small organisations across a number of diversity categories. (See Appendix 4 for details.)

Constraints

The views represented are only indicative of the sector as it was not possible in the time available to undertake a formal sampling strategy, and efforts were made to represent all the different areas pertaining to rolling stock. Interviewees and organisations participated on an opt-in basis, so our findings represent the views of those who chose to engage. Due to sensitivities in the sector, participation of SMEs as case studies was less than those in larger organisations. The views represented in the focus group are those of industry group representatives who work alongside SMEs, and targeted interviews from those who work in SMEs, and also relevant findings from the roundtable undertaken with SMEs as part of the Economic study. Not all interviewees were Victoria-based, although their organisations play a role in the Victorian sector.

Introduction

The public transport rolling stock sector in Victoria is a complex system encompassing trams, trains and buses, and the workforce responsible for the designing, building and maintenance of these assets. The need to address workforce development in this sector is not a new concept and has been the focus of a number of reports since 2006.

Our literature review (Young, et al., 2020a) found consistency in issues pertaining to the workforce in rail and manufacturing including:

- The need to improve organisational culture across the sector
- The need for better cross-sectorial/organisational collaboration
- Issues with employee attraction and retention, particularly in the areas of young people and women
- The need to build a diverse and innovative future workforce that is able to adapt in response to changing community needs and emerging technologies
- The need to build people management capability and new skills within the current workforce.

Since 2006, there has been a substantial duplication of recommendations in relation to the issues outlined above, which suggests that deeper systemic issues are yet to be fully understood or addressed. Other issues found during the literature review were:

- A lack of information in relation to the current workforce composition of the rolling stock sector in Victoria
- There is little formal monitoring of progress found in relation to the workforce, recommendations in reports produced between 2006–2018, or the strategic pathways outlined in the *On Track for 2040 Roadmap* (DIISRTE, 2012)
- The literature is fragmented pertaining to specific areas of industry or type of business and functional area. There is little holistic overview provided of the complexity and diversity of organisations, the organisational cultures within the sector, or identification of strategies for effectively managing these cultures
- There is limited literature in relation to how inclusion and innovation manifests in practice within organisations, and a lack of literature in relation to the bus sector workforce.

If organisations are to transform, it is critical they develop the specific leadership and management capabilities needed to transition their people through these changes so they can become the future workforce that the sector needs. Although there was considerable literature pertaining to specific people-based skills and capabilities needed in future workforces, there is little specific information available that relates to the rolling stock sector. It is also not clear from current documents at what levels these capabilities currently exist in areas of the rolling stock supply chain organisations.

Innovation and diversity and inclusion are intrinsically entwined. Successful adoption of innovation in the rolling stock sector requires inclusion of diverse thought and a differently skilled workforce. These talents lie in many areas of the community, and challenging established notions of who should do what jobs based on who they are rather than their attributes and capabilities, is now an imperative. This requires social innovation and the development of different ways of thinking and seeing the world.

Frameworks for developing an inclusive culture were found to be closely aligned to innovation and safety culture frameworks. These frameworks are established in many organisations and there is potential to leverage these to assist effective implementation of inclusion practice.

The sector context

In order to understand the context within organisations, it is important to understand the system in which rolling stock organisations exist. This is important as it helps to identify some of the root causes of workforce issues, and where and why stressors lie across the broader landscape. This section of the report provides an overview of the overarching context surrounding rolling stock organisations in which their workforce has developed. It provides a synthesis of the literature review (Young, et al., 2020a), and observations and data collected from case study and stakeholder interviews. It presents a conceptual map illustrating past and present factors that have influenced and shaped the current workforce context.

Key findings:

- There have been substantial changes in multiple areas of the rolling stock system resulting in opportunities for innovation and also challenges
- The past contraction and stagnation of areas within the rolling stock sector means that these areas will need greater attention and investment. This particularly pertains to SMEs and some manufacturing areas in the supply chain
- For the sector to be successful in its objectives, it will need to address this issue as a whole, and sector-wide collaboration is now critical.

The current industry context was found to be of a ‘perfect storm’ of influences, shapers and drivers that have resulted in the need to rapidly transform the sector (Figure 1). These influences, shapers and drivers are systemic and interact with each other, requiring a strategic approach that is supported by ongoing actions and initiatives to provide the transitional pathways that will alleviate short- and long-term issues facing the sector. To date, much of the focus has been on addressing the symptoms of these deeper systemic issues, resulting in shorter term reactive responses that do little to address the entrenched issues informing this agenda (Young, et al., 2020a; BIS Oxford Economics, 2018).

Figure 1 illustrates the shapers of the cultural and organisational landscape, and the influences that determined the current sectoral structure. These two elements form the context in which the current changes are occurring. The drivers shown have emerged over the last five years and define the nature of the changes occurring which are catalysing transformation of the sector.

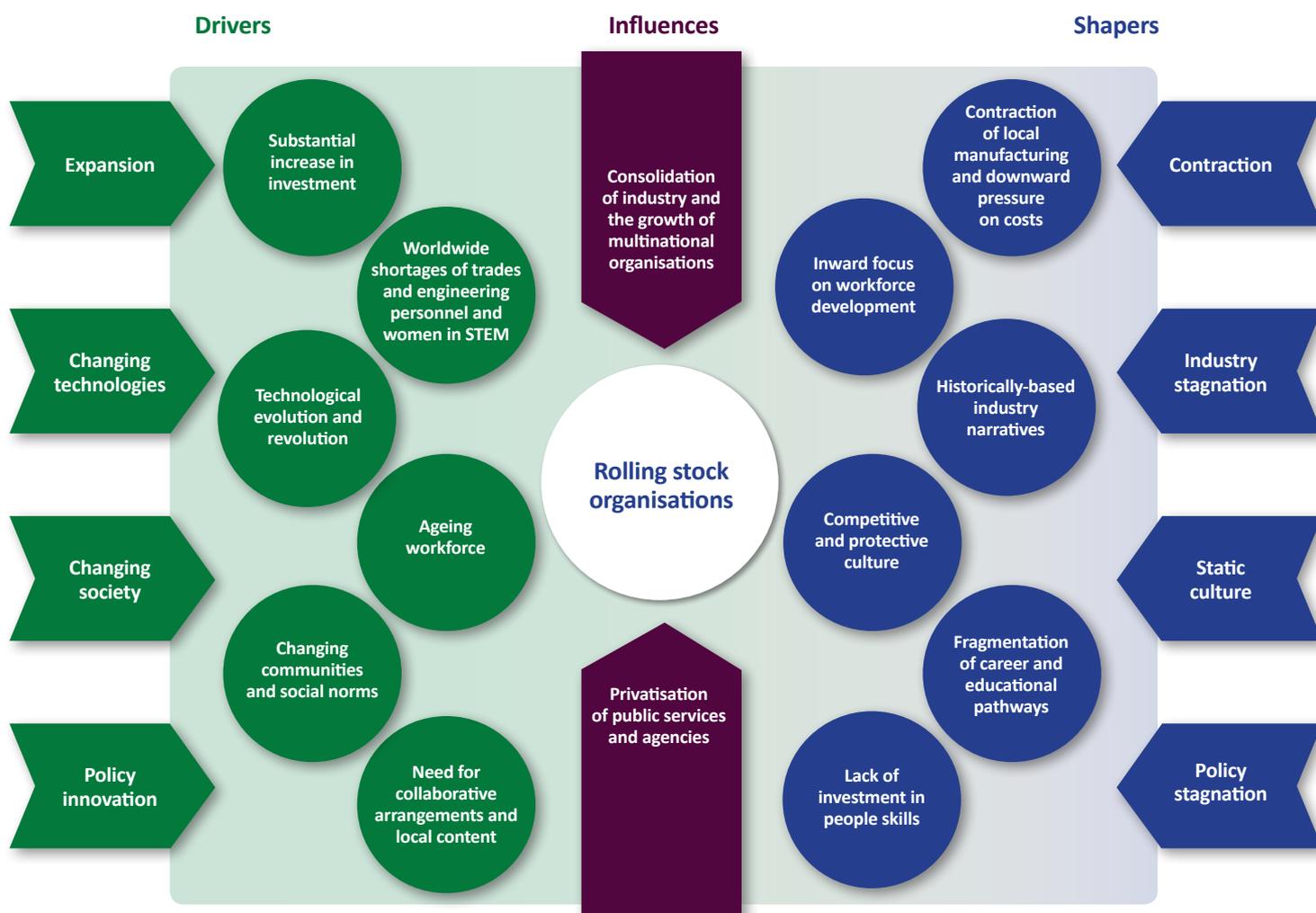


Figure 1: Shapers, influences and drivers of the rolling stock sector context

Key influences

Privatisation of public services and agencies

Privatisation of public service agencies has resulted in increased outsourcing of management of contracts to private contractors and areas of the supply chain to overseas suppliers. The outsourcing and commercialisation of services has changed priorities within these organisations and increased competition across the sector. This has also resulted in downward pressure on cost in the supply chain, and added an additional layer of complexity to the negotiation and execution of contracts.

The privatisation of government job agencies has also resulted in a focus on outputs instead of outcomes, and created structural barriers that restrict workforce participation for those from disadvantaged backgrounds and potential target groups (e.g., younger under-employed people or single parents) (TACSI, 2017).

Consolidation of industry and the growth of multinational organisations

As the economy has changed, many previously Australian-owned organisations have been subsumed into multinational corporations who now make up Tier 1 and some Tier 2 rolling stock organisations. This has provided access to overseas innovation and resources, and established supply chains. Global competition and levels of supply have also reduced margins, which have flowed through to areas of the supply chain. It has also created a multitude of subcultures, many of which have an historical basis. This has resulted in differing value systems within companies that require more skilled management of the workforce.

Key shapers

Contraction of local manufacturing and downward pressure on cost

Since privatisation and the global financial crisis, there has been a considerable restructuring of the economic landscape in Australia. In particular, it has seen a contraction of the manufacturing sector and off-shoring of areas of the supply chain. It has also resulted in considerable downward pressure in relation to cost across areas of the supply chain, which in turn has reduced operating margins, particularly for SMEs. This has limited the ability of some organisations to invest in business growth or upskilling of employees. It has also resulted in the perception of manufacturing as a 'dead end' career, even though there has been some growth in this sector in recent years (Stanford and Swann, 2017).

The increasing diversification of services and products, the short-term and uncertain nature of some supply chain contracts, and the small size of the industry compared to other areas of the economy, has also exacerbated fragmentation and disengagement in areas of the supply chain.

Inward focus on workforce development

The inward focus of workforce development has exacerbated the isolation of the industry from other sectors. This has resulted in a stagnation of workforce development and what was commonly described as an 'incestuous' workforce – where employees change jobs between organisations in the sector and organisations recruit their workforce through industry networks. As a result, some organisations have not developed the leadership, recruitment and management skills or the organisational infrastructure needed to effectively attract people who may not be traditionally part of the industry, and who also have the diversity of thought needed to support innovation and inclusive cultures.

Historically-based narratives

These narratives have been widely acknowledged as the key driver of the sector's current public image and perceptions. This is seen to be at odds with how the industry is evolving or what it aspires to be. These narratives were found to be complex and related to function and task. Challenging historically-based narratives raised are:

- Rail is old fashioned, resistant to change and male dominated. Trades is in decline and maintenance is seen as 'unattractive' (BIS Oxford Economics, 2018; PwC, 2006; Young, et al., 2020a)
- Trades is lower status work requiring 'brawn more than brains' and 'is dirty', and maintenance was seen as particularly unattractive to potential job seekers
- The manufacturing industry is in decline (Stanford and Swann, 2017).

These narratives were seen as out of alignment with the current growth of manufacturing, and the increasing complexity of tasks and high level of skill needed to perform these tasks, particularly in trades and technical areas. Not all narratives identified were negative, with manufacturing SMEs, regionally-based organisations and bus-related organisations described as having historical narratives that were closely connected to their local communities.

Competitive and protective culture

The pervading culture that has shaped the sector's organisational and institutional structures has traditionally been competitive and protective, resulting in cultures and structures that have developed, for the most part, autonomously from other industries. Subcultures informed by the historical narratives have shaped cultures in different areas of the sector, while hierarchical and siloed structures in many organisations have also impeded collaboration and created inefficiencies.

The 'family' aspects of the culture prevalent in the sector were identified as increasing protectiveness and manifesting in values such as loyalty, reliability and steadfastness.

Lack of investment in people-based skills

The focus on the development of technical skills has led to a lack of investment in the development of people-based skills, resulting in some organisations being poorly prepared and lacking in areas of skill needed to manage, attract and retain increasingly diverse job seekers. It was notable that in some organisations, expenditure on workforce was seen as a cost to the business as opposed to an investment.

Fragmentation of career and educational pathways

The fragmentation of previous career pathways (particularly in relation to trades), was seen by the majority of interviewees as the largest barrier to entry of younger people into the sector. The demise of technical colleges, chronic under-investment in training and TAFEs, and reduction of apprenticeships were identified during the interviews as having created a system that is confusing and unfocused for employees and potentially suitable applicants (Ooi and Cormick, 2020; Young, et al., 2020b). The current marketing by universities was also seen to be compounding this problem, as it was felt it had created a perception that 'you need a degree for everything', resulting in suitable candidates not seeing the potential of training for trades-based careers.

In terms of higher education career pathways, the current lack of industry-specific modules in engineering degrees and a lack of exposure to the industry resulted in engineers working in public transport organisations by default rather than by design (Ooi and Cormick, 2020).

Key drivers

Worldwide shortages of trades and engineering personnel and women in science, technology, engineering and mathematics (STEM)

The shortage of trades and engineering personnel and women in STEM has resulted in low participation rates of females in education relating to trades and engineering (Ooi and Cormick, 2020). This has increased market competition for job candidates as multiple industries compete for the limited pool of available talent. Some organisations stated that they were unable to compete with higher wages being offered in other industry sectors locally and overseas.

Need for collaborative arrangements and local content

Due to the expansion of the industry, technological innovation and procurement requirements, collaboration between multiple parties and beyond the sector is now an imperative. The need to service local content, social procurement and innovation requirements within contracts requires the formation of long-term relationships across the extended supply chain to enable this. Collaborative arrangements between industry, research, education and training bodies are also needed to ensure the provision of fit-for-purpose training that supports the development of sector-specific skills was identified as critical by many interviewees (Young, et al., 2020b).

Substantial increase in investment

Following a long period of chronic under-investment in public transport infrastructure, the substantial increase in investment over the last two years has resulted in rapid growth and increased competition for contracts. This is placing considerable pressure on individual organisations and resulting in growing pains in areas of the supply chain. It is particularly challenging for capital-poor organisations that have constrained capital and resources to work with.

Changing communities and social norms

The last ten years has seen substantial changes in local Australian communities who have become increasingly ethnically diverse. This is changing the pool of talent available but was seen to present opportunities and challenges. There have also been considerable changes in some social norms and increased awareness of the critical role that effective inclusion plays in attraction, retention, safety and efficiency of the workforce. There are also changing expectations of job seekers and industry standards in relation to workplace and learning environments, and conduct within the workforce (Young, et al., 2020a).

Technological evolution and revolution

The global evolution of technology (particularly digital technologies such as Artificial Intelligence [AI]), is revolutionising the nature of work. It is changing the type of work being undertaken, while also driving the creation of new job profiles and skills. This has resulted in greater demand for skills – such as engineering globally – that has compounded the lack of skilled workforce available (Women in Rail, 2015). There is a need to upskill the current workforce in line with this, and for ongoing learning within organisations if they wish to remain competitive.

Changing technologies have also shifted the notions of expertise, with many younger members of the workforce having greater levels of expertise in new technologies than older employees. This, in turn, can challenge traditional notions of who should learn from whom.

There is now a need for more effective collaboration between research, industry and government to support the knowledge exchange needed to enable sustainable growth of innovation and expertise across the supply chain.

Ageing workforce

The ageing workforce is the result of the longevity of tenure, and the increased age at which employees retire from the workforce was seen to be at the heart of the current workforce issues by many interviewees. It was also seen to present a considerable sectorial risk due to a potential loss of industry knowledge and skills as this cohort retires, heightening the need to transform the sector to attract and grow a more diverse and younger workforce. It was also seen to have resulted in a lack of career progression in some areas of organisations, and a gap in leadership development within organisations and throughout the sector.

Organisations and their workforce

This section of the report details findings from interviews with three case study organisations and interviews undertaken with a number of stakeholders across the rolling stock sector. It provides a snapshot of organisations and how they are evolving in relation to innovation and inclusion.

The changing characteristics of rolling stock sector organisations

Analysing characteristics across time can provide a way of understanding how organisations are changing. A range of characteristics were elicited from the interviewees in relation to their organisations and the sector as a whole (Table 1). The characteristics show the evolutionary process that has been occurring, past organisational characteristics, current characteristics and characteristics needed in the future. Overall, what they show is that organisations have evolved and will need to continue to evolve.

Table 1: Perceived past, present and future characteristics of rolling stock organisations

Past	Current	Future
Long-term linear planning for an organisation	Short-term complex planning	Long-term strategic and systemic planning.
Hierarchical, vertical organisational structure, siloed	Hierarchical, vertical and horizontal organisational structures, siloed	Horizontally and vertically aligned, flexible and adaptive organisational structures
Predictable and complicated	High levels of uncertainty and complicated becoming more complex	Ongoing change, uncertainty and complexity
Mid-range demographic workforce	Ageing demographic workforce	Mixed demographic workforce
Autonomous	Fragmented	Connected
Homogenous closed workforce	Increasingly diverse opening out workforce	Diversified inclusive open workforce
Ample resources	Constrained resources	Investment optimisation
Singular product and service focus	Diversification of product and service focus	Diversified whole-of-lifecycle product and service focus
Secure workforce supply	Competition for workforce supply	Sustained workforce supply
Secure – job for life	Casualisation of the workforce – jobs for the length of a contract	Meaningful vocation – many jobs for life
Clear entry career and educational pathways, closed network	Lack of clear entry career pathways, expanding networks	Established vocational pathways and networks
Hierarchical leadership	Hierarchical moving to inclusive leadership	Inclusive leadership
Autonomous arrangements	Public/private partnership arrangements	Collaborative enterprise arrangements

Understandings and perceptions of inclusion and innovation

Key findings:

- The need for a more inclusive workforce was perceived as positive and a necessity. While the concept of inclusion was understood, deeper understandings of its application were observed to be developing.
- Innovation is seen as an established business imperative with diverse understandings, and there were multiple examples given of practical application in this area. There was, however, limited understanding in relation to social innovation.

Perceptions of need for inclusion and innovation

Interviewees saw the need to diversify their workforce as positive and a necessity, particularly in relation to increasing participation of women and younger people. It was also acknowledged that aspects of this were long-term and challenging, and that progress and outcomes were often context-specific. In terms of implementation, this was sometimes described as being at odds with overarching objectives. For example, targeting cohorts was reported to have resulted in people being employed who were not necessarily suited to the job and leaving as a result. It was also reported that the need to upskill people and support differently-abled people could result in reduced productivity.

It was observed that ethnically diverse cohorts were seen as the 'norm' in some organisations (particularly in the trades-based areas), but that this level of diversity was not present in relation to upper management or executive levels.

Understandings of inclusion

There was strong understanding identified in relation to what inclusion was and meant. The most common was being focused on respecting and valuing difference and valuing the whole person – their experiences, expertise and potential, regardless of their background or circumstances.

It was notable that some interviewees who saw themselves as inclusive also described aspects of their behaviour that did not reflect this. For example, a number of interviewees indicated that they saw themselves as inclusive, but later in the interview described situations where they were not tolerant of people who were different. A small percentage of interviewees presented stereotypical understandings of those from diverse cohorts, and a lack of understanding or tolerance as to why diverse cohorts' needs should be accommodated. Inappropriate behaviours and comments of others in the workplace in relation to diverse individuals and cohorts were also reported by a small percentage of interviewees. This suggests that although the concept of inclusion is being adopted and socialised, a deeper understanding of how this is applied is still maturing.

Understandings of innovation

The understanding of innovation was found to be more varied and across four broad themes:

- Continuous improvement and learning (learning from each other, improving products and processes, continuous improvement)
- Creating efficiency (making things better, being more efficient)
- Adapting to change (ability to adapt, challenging the status quo, new lines of thinking, positive change)
- Competitive advantage (creating an edge, keeping up with the times, new products).

We observed a correlation between the function of the interviewees and their understanding of innovation. For example, managers tended to understand it in broader terms of continuous improvement, broader change and competitive advantage, whereas trades-based interviewees were more likely to articulate it as learning, efficiency and product. It was notable that human resource-related managers saw innovation more through a social innovation lens, associating it with learning and changing the status quo. Management of technically-based innovation risk was well recognised, but there was substantially less understanding of the management of social innovation particularly in relation to the associated risks.

These understandings indicate an applied understanding of technical innovation across all case study organisations, with examples given by many interviewees of how they had innovated in their specific areas. However, it also indicates a limited understanding of social innovation.

Working environment

Key findings:

- In terms of inclusion, it was felt that environments had improved but that there was still need for further improvement, particularly in relation to the creation of psychologically safe spaces, appropriate behaviours and improvement of facilities.
- In terms of innovation, environments were found to be supportive with open dialogue, but there was further work needed in relation to data hoarding and socialising new technologies.

Inclusion

The majority of interviewees felt included in their work teams and supported at a local level. However, a number of interviewees in lower level teams expressed a disconnect with the upper levels of their organisations and parent companies. This was not present in the SME case study due to the small size of the workforce.

In terms of creating a psychologically safe space, some interviewees reported that this was a work in progress as it took time to build the necessary trust. It was also not consistent across organisations, with some interviewees reporting high levels of trust, and others in more hierarchical structures and with strong legacy cultures reporting it as 'a work in progress'. There were examples given by some diverse individuals at management level of being spoken to inappropriately, demeaned by other managers, and also being seen in terms of cultural stereotypes.

In terms of the physical environment accommodating needs of those from diverse backgrounds, interviewees description of their workplaces varied from basic to excellent. It was acknowledged by a number of interviewees that in relation to the trades-related areas, this had been more challenging in Victoria due to the number of older facilities that had very basic amenities. Many organisations reported that improvements had been undertaken or were in the process of being undertaken. It was reported by some interviewees that limited facilities were available in relation to cultural needs (such as prayer rooms) and that in some cases amenities for female staff members were very basic.

One interviewee raised that accommodating different needs could be challenging, as other workers sometimes could perceive this as unfair.

In relation to training, very few of the interviewees had formal training in relation to inclusive practice, while some reported that they had received training.

Smart solutions found in relation to this included:

- Making provision for those needing to pray to go to local prayer areas close to the facility
- Bringing together a group of women to make a series of recommendations in relation to the workplace improvements and using these to inform what needed to be done.

Innovation

All organisations were described as being supportive and providing opportunities to individuals in relation to job-related learning through online, formal and peer-to-peer learning. It was notable that the primary way of learning reported in all organisations was peer-to-peer learning in trades-based areas. Being able to address mistakes in constructive ways was also a common theme.

There were established mechanisms for discussing improvement in relation to tasks in meetings and informal discussions described at all levels, and there was a good level of autonomy to enact innovations in local areas, provided it did not exceed certain financial thresholds and was in line with parent company agendas. It was, however, raised by some interviewees that top-down approaches could 'stifle' innovation, and that there could be tensions between the tacit knowledge of those on the floor who worked with the product on a day-to-day basis and the theoretical knowledge of engineers where 'things worked on paper'. It was also raised by many interviewees that some areas of an organisation could be resistant to new technologies and change. Data hoarding and lack of collaboration between different areas of companies and across the sector was an issue, indicating that negative competition could be adversely affecting progression in this area.

All case study organisations offered access to training and were described as being responsive to training needs, and two offered inclusion-related training.

In order for innovation to flourish, there needs to be an environment where learning and knowledge exchange is encouraged. The summary case study below provides an example of a best practice example of an innovative manufacturing environment.

Summary case study: Creating an innovative environment in manufacturing – Knorr-Bremse

Knorr-Bremse actively encourages innovation at all levels of the company. The teams in trades-related areas are given autonomy to make decisions in relation to innovation to their work provided it does not exceed their financial delegation. Innovations developed by employees are used in their facilities.

Young engineers work on the floor with technicians and tradespeople to gain an understanding of the practical application of their work. The principle that supports this is that it is important to have a theoretical as well as a practical understanding of the work they undertake. They also draw extensively on their older employees who have deep-seated knowledge in relation to their product.

There is open communication between tradespeople and engineers in relation to problem-solving, and there are established processes and procedures in relation to product innovation. All members of the organisation have access to online learning that provides a suite of training programs to improve their expertise.

Knorr-Bremse also actively invest in innovation and are part of a global initiative by Knorr-Bremse subsidiary Merak (based in Spain), whose aim is to improve the environmental performance of air conditioning (Knorr-Bremse, n.d.).

Governance

- Governance for diversity and inclusion is variable across the organisations, whereas governance relating to innovation was found to be well established.
- Development of governance was found to be context-specific, and the maturity of the frameworks reflected the investment focus and agendas of the upper levels of the organisations.
- Governance in lower levels of the organisations was found to include formal and informal governance arrangements.
- There was little governance found in relation to management of the risks associated with diversity and inclusion.

Diversity and inclusion

Policy in this area was found to be emergent and variable. Two organisations have mature policy frameworks with formalised policies and established advisory committees and specific plans, one organisation has an overarching policy, and two have policies relating to flexible work arrangements.

Responses to the question related to responsibility in this area found the most common response was 'everyone' (60%). The remaining responses were varied and included the Managing Director/CEO, the HR team, the team leader, my supervisor, and the Executive Leadership Team. This variation suggests a lack of clarity and the need for further development to provide clearer lines of accountability at a local level, particularly in relation to management of risks.

Innovation

In relation to innovation, formal and informal governance were described, with established formal policies, procedures and mechanisms present. Informal 'rules' were described (particularly in relation to trades-based areas and smaller organisations), although they followed procedures governing how they undertook their tasks. There were also established policies and risk management in relation to technological innovation.

Responses in relation to the question as to who was responsible varied with interviewees describing it primarily as the responsibility of a specific department within the organisation, with one organisation describing it as primarily everyone's responsibility.

Monitoring and evaluation

- Publicly available monitoring and evaluation of strategic objectives related to innovation and diversity and inclusion was found to be inconsistent across the rolling stock supply chain.
- Monitoring and evaluation were prevalent in large organisations, with many of them using standardised reporting frameworks such as the Commonwealth Government's Work Gender Equality Agency (WGEA), Corporate Social Responsibility (CSR) and the Global Reporting Initiative (GRI) to report on innovation and diversity and inclusion, as well as the reporting of measurements in their Annual Reports.
- Seventy-five percent of organisations reviewed made reference to, or provided information in relation to, innovation and diversity and inclusion on their websites.

The implementation of inclusion and innovation is a long-term proposition, and needs to be implemented and measured strategically. In order to gain an indicative status of the current levels of monitoring and evaluation in these areas, we undertook a desktop review of publicly available organisational reports that included annual reports, CSR, GRI and sustainability reports. Twenty-nine organisations were reviewed, with the sample composed of nine large, twelve medium and eight small organisations known to be engaged in the Victorian rolling stock sector.

Eight of nine large organisations had strategic objectives related to diversity and inclusion and innovation, with the exception being a family-owned enterprise. Measurement related to diversity and inclusion included gender and cultural diversity representation in the workforce, measurement of workforce engagement and health, and measurement of programs and activities. In relation to innovation, measurements included innovation awards and industry recognition, R&D investment costs, and program and activities reporting.

Information and data on websites represented 72 percent of publicly available data available in relation to diversity and inclusion. Due to the lack of verification available, however, it was considered information only rather than verified reporting.

In relation to SMEs in terms of Innovation, one organisation measured progress in the form of an award for innovative product development. Fourteen organisations had references to innovation and five diversity.

In relation to the case study organisations, it was found that there were well-established monitoring and evaluation processes in relation to innovation in all case study organisations, which were formal (part of regular reporting requirements) and informal (meetings and direct reporting to supervisors and managers).

All organisations had data pertaining to male/female representation of the workforce, which was publicly available on their websites. There were also reported increases in relation to participation of women in the workforce.

Two organisations provided employment information showing a high level of cultural diversity present in their Victorian workforce groups, with one showing 67% and the other indicating 71%. This may indicate that cultural diversity is higher in Victoria in relation to the rolling stock sector in Australia, with ARA reporting 10.35% nationally in their last workforce assessment (ARA, 2014).

In terms of inclusion, all organisations reported that they had undertaken surveys relating to employee satisfaction, including measurements relating to inclusion (such as staff engagement), but many of the measurements were described as emergent.

It was raised that obtaining data in relation to diversity and inclusion could be challenging, as some of the questions were voluntary and subject to privacy requirements.

Communication

Key findings:

- Communication was found to be consistently good at team level in all case study organisations
- Communication gaps were reported between upper and lower levels of the organisations and between different site locations in two case study organisations
- In relation to those from culturally diverse backgrounds, there has been progression in relation to language used in the workplace, indicating further work is needed
- There are examples of best practice communication and innovative use of technology
- There is a need to develop specific training for managers in relation to verbal and non-verbal communication with those from diverse backgrounds.

The majority of interviewees felt that they were able to communicate openly with each other at a team level in relation to innovation, but it was more difficult to communicate issues relating to inclusion. This was primarily through meetings and person-to-person contact.

There was a variation in communication preferences described between the younger (below 30 years of age) demographic who use more digital communication, to the older (above 30 years of age) demographic who prefer person-to-person communication. One interviewee raised that the use of mobile phones had reduced interaction between people during breaks and that it had created less connectivity as a result. Interviewees raised the importance of ensuring that new technologies used in the workplace were communicated in simple language and visual formats to support better understanding.

Interviewees stated that it was important to translate upper level strategic information related to current changes for local contexts, as the lack of information could lead to speculation and insecurity amongst employees. All interviewees valued opportunities to communicate and network with their executive in informal settings.

In terms of communication with those from diverse backgrounds, it was found that there could be challenges with this, particularly in trades-related areas that can have a high level of ethnic diversity. Cultural awareness was also seen as an important aspect of client management particularly for those with ethnically diverse or overseas clients. Skills in relation to this were described as being 'learned on-the-job', with some interviewees displaying a high level of understanding. It was raised that non-verbal communication (such as understanding what cultural differences there might be) was important. For example, in some cultures, looking at people directly in the eyes can be considered rude or intimidating.

Interviewees from diverse backgrounds reported that there had been progress in relation to workplace communication over the last ten years, with racist and sexist comments no longer seen as acceptable in the workplace. There were, however, examples given of a lack of awareness, resulting in inappropriate and derogatory language use. This indicates a need for further work in this area.

There were a number of smart communication solutions identified supporting inclusion and innovation, including:

- Provision of language courses for employees who needed to improve their English language skills
- Development of a script "I am not ok with that" for employees to help them respond to inappropriate behaviour and language in the workplace
- The use of apps to communicate time schedules and important information
- The installation of screens in the workplace providing employees with work-related information.

Not all organisations had dedicated communication resources, and no specific training was found in relation to communicating with those from ethnically diverse backgrounds.

Developing effective communication that supports diversification of the workforce requires developing a shared vision of the future (Young, et al., 2018). Collaborative approaches are important as they help connect current identities and what is important for employees into these future visions. A best practice example of how this can be achieved is Transdev's Journey Maker program, outlined in the following case study summary.

Summary case study: Journey Makers – Transdev

Embedded in the culture of Transdev Australasia, is the notion of employees as being ‘journey makers’ when they join the company. In 2017, a Journey Maker Training Academy was launched “as a key business focus to improve safety, flexibility and wellbeing in the workplace” by training team members “to provide optimal service to the communities they serve” (Transdev, 2019).

The Academy also aimed to increase diversity in the industry. Specifically, it is geared towards people who want to become bus drivers, but do not hold an MR licence or Bus Driver Accreditation. Once training is completed people have developed the competency and capacity to operate a bus. Moreover, the program contributed to an increase of nearly 35 percent in female drivers by the end of 2018 (Transdev, 2018).

Culture

‘We need to create a culture people want to stay in.’

Key findings:

- There is a diversity of cultures and subcultures across the rolling stock sector and within organisations, with a considerable difference between some of them
- Rail was described as the most dominant culture in the sector
- New, more flexible forms of management are needed to manage these cultures effectively
- Specific management skills are needed to manage cultures and develop effective working relationships and positive outcomes.

Key cultural characteristics elicited from interviews and the literature review showed that there is alignment in some areas but considerable divergence in others. There were three distinct overarching cultures found that were determined by the focus of the organisations, and these were rail, bus and manufacturing. Bus was more autonomous as a sector, with rail and manufacturing more connected. All these cultures have been shaped by historical influences and have complex subcategories. Subcategories were context-specific and existed in all organisations. How effectively they coexisted and functioned as whole was very much dependent upon the leadership and management in organisations.

Overarching cultures in the sector

The majority of interviewees perceived rail as the most dominant culture in the sector (Table 2). It was also raised that there was some subculture variation in regionally-based organisations. Manufacturing and bus cultural traits were also seen to be strongly influenced by their historical origins as family-run businesses, and described by many interviewees as having strong connections and involvement with their local community.

Table 2: Perceived characteristics of dominant cultures in the rolling stock sector

Rail	Bus	Manufacturing
<ul style="list-style-type: none"> ■ traditional ■ technically-focused ■ male-dominated ■ hierarchical ■ a family ■ fragmented ■ loyal ■ competitive ■ inflexible ■ patriarchal ■ proud 	<ul style="list-style-type: none"> ■ connection to community ■ people-focused ■ male-dominated ■ non-hierarchical ■ family-owned businesses ■ diffuse ■ innovative ■ collaborative ■ adaptive 	<ul style="list-style-type: none"> ■ connection to community ■ technically-focused ■ male-dominated ■ mixed hierarchies ■ family-owned businesses (SMEs) ■ fragmented ■ innovative ■ competitive ■ adaptive ■ patriarchal

Sub-cultures within organisations

There were multiple subcultures identified beneath these overarching cultures that fell into four broad subcategories:

- Function or task-related
- Legacy
- Age-related
- Context-based.

Function or task-related culture

These cultures are closely related to what people do in organisations and subcategories including trades-based, professional services, engineering, leadership and management, sales, manufacturing and service. Trades-based, manufacturing and some areas of engineering were found to have the most traditional cultures with strong informal rules, particularly in relation to workplace behaviour and hierarchy. They were also seen to present the biggest challenges in relation to the inclusion of women and younger people.

Legacy cultures

These stem from employees of previous organisations and those who have been in organisations for extended periods of time. Subcategories included family-run businesses, government agency cultures, and specific cultures from previous companies who have been amalgamated into larger organisations. Many of these had strong informal rules that could be inflexible, which informed views of work tending to create negative competition between other different cultural groups resulting in an 'us and them' attitude. Legacy cultures were found to be most prominent in older employees in trades who often referred back their previous working context or company during interviews.

Age-related culture

'People don't retire at 50, they keep on working. We need to stop thinking about them as old and start thinking about what they have to offer.'

There was a marked difference in culture between age demographics, particularly in relation to ways of working, learning and expectations between younger and older employees. This was particularly apparent in the trades areas of organisations where more traditional cultures tended to exist. There were a number of managers interviewed who were cognisant of the need to work differently with younger members of the team, and had developed specialised ways of managing this cohort (see the case study on the following page, and 'Retention' on p21). It was also raised that there needed to be more consideration in relation to how concepts of age and work have changed, and the need for specific management of this ageing cohort. One interviewee discussed the mechanical support put in place to assist women – although initially resisted by older employees in the workplace – had actually benefitted them and reduced injuries.

Context-based cultures

Local context was seen as key determinant of the culture by interviewees, with distinct cultural differences described between regional and urban organisations. The increasingly ethnically diverse cohorts in surrounding communities also influenced organisational culture, and one interviewee described how two different ethnically diverse groups reflected community tensions in the workplace. Regionally-based organisations were found to be more reflective of those than family-run organisations, and were described as having strong connections with their local community.

It was noted by a number of interviewees who had come from interstate or other sectors, that Victorian organisations were seen to have a more 'old fashioned' culture in rail than other states or territories. One interviewee attributed this to the strong union presence in Victoria, and to a lack of previous investment in the sector resulting in a lack of development more generally by other interviewees.

There were areas of expertise found amongst interviewees in relation to managing these diverse subcultures effectively. It was acknowledged that it could be challenging, and the larger the organisation, the greater the challenge. An example of best practice is shown in the following summary case study.

Summary case study: Managing diverse cultures – Downer

Downer's Rolling Stock Services Engineering and Asset Management Department have a unique culture that has been created by their General Manager who stated; you 'have to break the rules' if you want to build a diverse and innovative culture that actually works.

The key aspects of this team culture were inclusiveness, trust and openness to difference and change. Employees are actively involved in decision making, but accountability and expectations are clearly outlined. The division was described by team members to be non-hierarchical, and to be a no-blame culture with open communication between all levels of the division. The understanding that supported this is that everyone is valued for what they can contribute to solving issues: 'It doesn't matter who you are, you can walk up to the General Manager and talk to him'.

Members of the team are carefully selected and curated based on their particular attributes. There is also a lot of flexibility in relation to teams, with team members being moved between projects to keep particularly younger members of the division stimulated. Adaptability and resilience are built through the allocation of challenging tasks that stretch individual ability. A key aspect of ensuring this is done safely and grows capability is the provision of support by more experienced members of the team who also maintain accountability for the overall project.

Motivations and values

Key findings:

- Differing motivations and values between organisations and employees were reported as having less impact on cohesion if they were well-managed
- Where there was change present, locally-based motivations and values were more dominant than company motivation and values, which could lead to less cohesion across the organisation
- Values could be understood and enacted differently, which could lead to misunderstandings and conflict.

Assessment of differing motivations and values can provide an indication of cohesion in organisations, and form the basis of decision making for organisations and individuals. They also provide a basis for understanding what types of management strategies are needed. Motivations and values of individuals interviewed were found to be primarily related to the following areas: personal growth, being challenged, contributing to the community, meaningful work, job satisfaction and quality of life. Values described relating to their organisations included being a market leader, customer satisfaction, innovation, profit and employees.

Conflicting values were reported in one company. This was described as an openly acknowledged acceptance of these different values and organisational cultures, resulting in a working relationship that could be challenging at times, but ultimately productive. It was also notable that the strong alignment between the local organisational and personal values resulted in 'loving the job' being the key motivation for those working there.

In another case study organisation who had undertaken extensive work in this area over the last four years, company values were found to be very much aligned with their parent company values, and there was consistent messaging and alignment of purpose found amongst interviewees.

The third case study organisation was in the process of driving organisational change. Values were found to be context-specific and related to function. Upper and lower management were found, for the most part, to be aligned. At lower levels of the organisation, values were more dominated by the informal group values of their immediate team and did not always align with individual values. This was described as resulting in some areas of conflicting values, which management were proactively working through.

There were also value conflicts described by interviewees in trades between younger entrants to the workforce and older employees in all organisations (see also 'Retention' on p21). It is notable that this could lead to different interpretations of how different values were enacted, which could create misunderstandings. For example, respectful behaviour in relation to female employees could be unintentionally patronising, which could be seen by female employees as disrespectful.

Cohesion was varied amongst organisations assessed, and factors that were found to influence this were:

- Where they were in the change process
- The rate of growth within the organisations
- Level of resources and skills available to manage this.

Perceptions of the future

Key findings:

- Those involved in the bus-related organisations were more likely to envisage greater technological changes in the future than those from rail and manufacturing
- Older interviewees particularly those from trade areas were more likely to be pessimistic in relation to the future.

‘Things are happening so fast in terms of technology. It’s good, scary but good.’

Interviewees were asked how their work might change over the next 10 years. Responses to this question varied in relation with those working in the bus-related organisations, who envisaged greater changes occurring in relation to the work they do in the next 10 years compared to rail and manufacturing.

Rail and manufacturing interviewees stated that they could see that there would be some changes in technology – particularly in relation to asset management and planning, and more electronic and digital technology. Others felt that there were limitations to innovation as the result of:

- The low volume and high variety of the work associated with rolling stock, as automation requires high volume and low variety to make it financially feasible
- The need to continue to refurbish and upgrade existing and older models
- New technologies, such as fast rail, would require new infrastructure.

Perceived changes in the bus sector related to innovation of technologies such as electric, driverless and hydrogen buses. Different ways of advertising that used digital technologies and also changes to service delivery based more on customer demand, which would be supported by digital technologies.

‘I don’t think much will change in what I do because it takes a long time for anything to change in this industry.’

Some older employees, particularly those in the trades-related areas, found it harder to articulate what might change in the future.

Retention

Key findings:

- New management and leadership approaches are needed to support retention of diverse cohorts
- Attracting the right person for the job was an important factor in determining whether they were retained or not, but there are challenges in achieving this and new approaches to recruitment are needed
- There is a need to find strategies and mechanisms to enable younger and older employees to work and learn from each other more effectively to assist integration into the workforce, particularly in trades-related areas.

The retention of women and young employees in engineering and trades in organisations is an acknowledged issue across the sector, which has been attributed to poor organisational cultures, mismatching of expectations and an unattractive image (PwC, 2006; BIS Oxford Economics, 2018).

Although these were still found to be factors, the most common issues raised in relation to this were:

- Lack of integration in the workplace between younger and older employees
- The need to find the right applicant for the job, not just fill the job
- Lack of career progression.

It was widely acknowledged by interviewees that younger employees had different world views and notions of work, compared to some older employees. In engineering and professional areas, this was seen, for the most part, in a positive light. Younger employees were also seen to have higher expectations of career progression than previous employees and also needed to be given stimulating tasks that challenged them.

With interviewees from trades-related areas, there was a more negative perception with younger people being described as ‘lazy’, ‘undisciplined’ and ‘unprepared to see things through’. Older employees also expressed a strong desire to pass on their knowledge to them and expressed concern regarding the lack of young people in the workforce. Some examples were given of younger people in trades integrating and working well within these environments. It was notable that in these examples they had been carefully selected prior to entering into the workforce and described as having the right attributes for the job.

Conversely, younger interviewees from trades and engineering areas described older interviewees as supportive and nurturing, but in some areas of organisations they could be hierarchical, slow to change and resistant to the use of digital technology. It was also raised that collaboration was often discouraged outside of the team. In terms of how they viewed work, none of the younger interviewees saw themselves as having a job for life, but saw a job as a pathway to other opportunities. A lack of career advancement, becoming bored, and bad management and leadership were raised as reasons why they would leave an organisation.

It was also worth noting that all large organisations had graduate programs, and provided opportunities for the development of talented young employees in the professional and engineering areas.

This highlights the need to develop people skills, knowledge and strategies to bridge the gap between these two cohorts, and which support better integration of younger new entrants to the workforce. This particularly pertains to managers and employees in production and trade areas.

In terms of women, younger female interviewees were less likely to consider long-term tenure compared to the older women interviewed. This may be related to their age and work preferences rather than their gender. It was raised that the lack of women in management and executive roles could be challenging, as it could add additional pressure on this cohort and gave little for younger female employees to aspire to. The lack of women in trades-related areas was also acknowledged as difficult, and that it was important to provide the appropriate support.

‘I can appreciate, from a female perspective, that the environment might be a little bit intimidating. Unless you had quite a few females coming to the shop floor at the same time.’

The majority of interviewees reported that there were few difficulties retaining employees from ethnically diverse backgrounds. The most common reasons for this cohort leaving was a lack of career opportunities or a lack of available resources to support specific needs. There was low representation reported of this cohort in upper management levels.

A number of interviewees reported that older entry apprentices and employees were found to be more likely to be retained than younger apprentices. Some interviewees attributed this to younger apprentices not having decided what they wanted to do, as well as a lack of career advancement opportunities.

Attraction of good quality job applicants and poaching of employees was raised as an issue, particularly in smaller organisations. This was attributed to competition in the job sector, but also job agencies who could be more focused on outputs rather than outcomes (TACSI, 2017). The driving up of wages due to increased demands in other industry sectors was an additional stressor for organisations who had financial constraints and could be priced out of the market. One example given was Reliability, Availability, Maintainability and Safety (RAMS) engineers who according to the interviewee ‘could ask what they wanted’ due to high demand. Smaller organisations in regional areas had additional challenges, as they were often seen as a less attractive option than larger organisations in urban areas.

‘We should be thinking about opening out to people with mechanical aptitude or an interest but don’t have a trades background, because you can teach this stuff.’

It was raised that in order to attract the right applicants from different cohorts, recruiters needed to try different approaches to recruitment and to focus on more attributes-based approaches to selection. It was also important to look for and create opportunities and leverage opportunities to create new pathways outside of the sector when recruiting specific cohorts. Two best practice examples are shown in the following summary case studies.

There were many examples of those with transferable skills from other industries working in rolling stock organisations who had successfully integrated into their workforce. These included people from the automotive, mining, food and aerospace sectors. It was also raised that it might be possible to leverage talent from other markets (such as domestic electricians), and upskill them to support the emerging need for electrical technicians due to changing technologies.

Summary case studies: Building partnerships – CDC and UGL

CDC Victoria has a proactive Community Engagement (CE) program and partner with like-minded organisations to support social change and empower youth. Through partnering with Australian Rules football club, the Western Bulldogs, CDC run anti-graffiti workshops, helping students understand the difficulty of removing graffiti from buses (CDC Victoria, 2020). In 2019, they engaged with 150 students and 26 teachers in learning life skills such as road safety, team building, leadership and respect (CDC Victoria, 2019).

CDC have also become a Multicultural and Diversity Partner to Werribee Football Club, sponsoring their Multicultural Development Officer and providing resources to enable the club to engage with their culturally diverse community (Werribee Football Club, n.d.). These activities expose younger people to aspects of the bus industry and encourage their participation in addressing issues that the company faces.

UGL have partnered with the Clontarf Foundation, a not-for-profit organisation that exists to improve the education, life skills, and employment prospects of young Aboriginal and Torres Strait Islander men. The Academy has 22 schools in Queensland, New South Wales, Victoria and Western Australia. The aim of the program is to offer academy students access to work experience, school-based apprenticeships and career and employment opportunities. It also offers opportunities for UGL employees to participate in academy activities such as football training sessions, camps and excursions (UGL, n.d.).

Lessons learned

Key findings:

- Organisations had established feedback mechanisms for product innovation to capture lessons learned, but there is considerable knowledge retained by older workers that is not formally captured
- There was less formal capturing of lessons learned from implementing new technologies in the workplace
- There is a need for more formal structures to capture lessons learned in inclusion, as it is a less-established area of practice.

There were established formal and informal mechanisms identified for capturing lessons learned in relation to innovation. It was found that in relation to older employees, they were more likely to retain these mentally (informally), and there is an opportunity to develop mechanisms for recording their extensive knowledge in this area more formally. It was also raised that there needed to be more formalised arrangement in relation to the capturing of lessons learned in relation to new technologies that are introduced into the workplace. Lessons learned raised in relation to this included:

- Introducing new technology into the work environment is a people-based exercise, not a technical one
- The need to ensure that these were introduced face-to-face and not online, particularly with older employee cohorts
- Ensuring that managers and executives understand the technology they are introducing and why it is being introduced so they can explain this effectively to their staff
- To ensure there is ongoing, open and accessible communication for employees until the technology is established with someone who understands the technology properly
- To encourage older members of the workforce to leverage and learn from (but not outsource responsibility to) younger members of the workforce who have greater understanding of areas of new technologies
- To take calculated risks and persevere.

The implementation of inclusion is a relatively new area of practice, which includes a high level of social innovation (Young, et al., 2020a). Practice is emergent and many organisations have learned by doing, and as a result, the processes for reporting and analysing lessons learned in this area are still forming. A number of lessons learned by those undertaking work in this area included:

- No matter how well you do it, not everything works
- You have to remain aware of how things change, and what works one year may not work the next
- You have to set clear boundaries in relation to acceptable behaviours upfront so people understand what these are, and respond fairly and firmly with people who overstep the boundaries
- You have to work with people from the bottom up, and encourage them to contribute to the change rather than impose it
- You have to be proactive and persistent
- Each context is different, and you need to take time upfront to make sure that you are making informed decisions that are appropriate for that context
- Progress is not consistent and you have to be patient
- You need to model the behaviours you want to see
- People need to build trust and safe environments so issues can be addressed effectively as they arise
- Don't try and do it all at once – take one area at a time and do it properly.

It was also stated that these are long-term prospects, and that continuous improvement models that capture lessons and encourage ongoing learning are critical.

Challenges, needs and opportunities

A number of challenges, needs and opportunities were elicited during the interviews.

Key findings:

- The higher level of challenges and needs is indicative of organisations in the process of change, as this often brings greater focus and awareness onto these areas
- The organisational fragmentation and silos and need for leadership suggest an increased awareness and changing expectation of what is useful in organisations, and highlights that traditional structures are no longer serving the workforce
- There is a critical need to develop current leadership skills and build capability in this area.

Challenges

One hundred and twenty-five challenges were found in relation the development of an inclusive and innovative workforce (Figure 2). The largest group of responses pertained to organisational fragmentation and silos, the second largest to management of change, and the third was the lack of employment/career pathway pipelines for organisations to access.

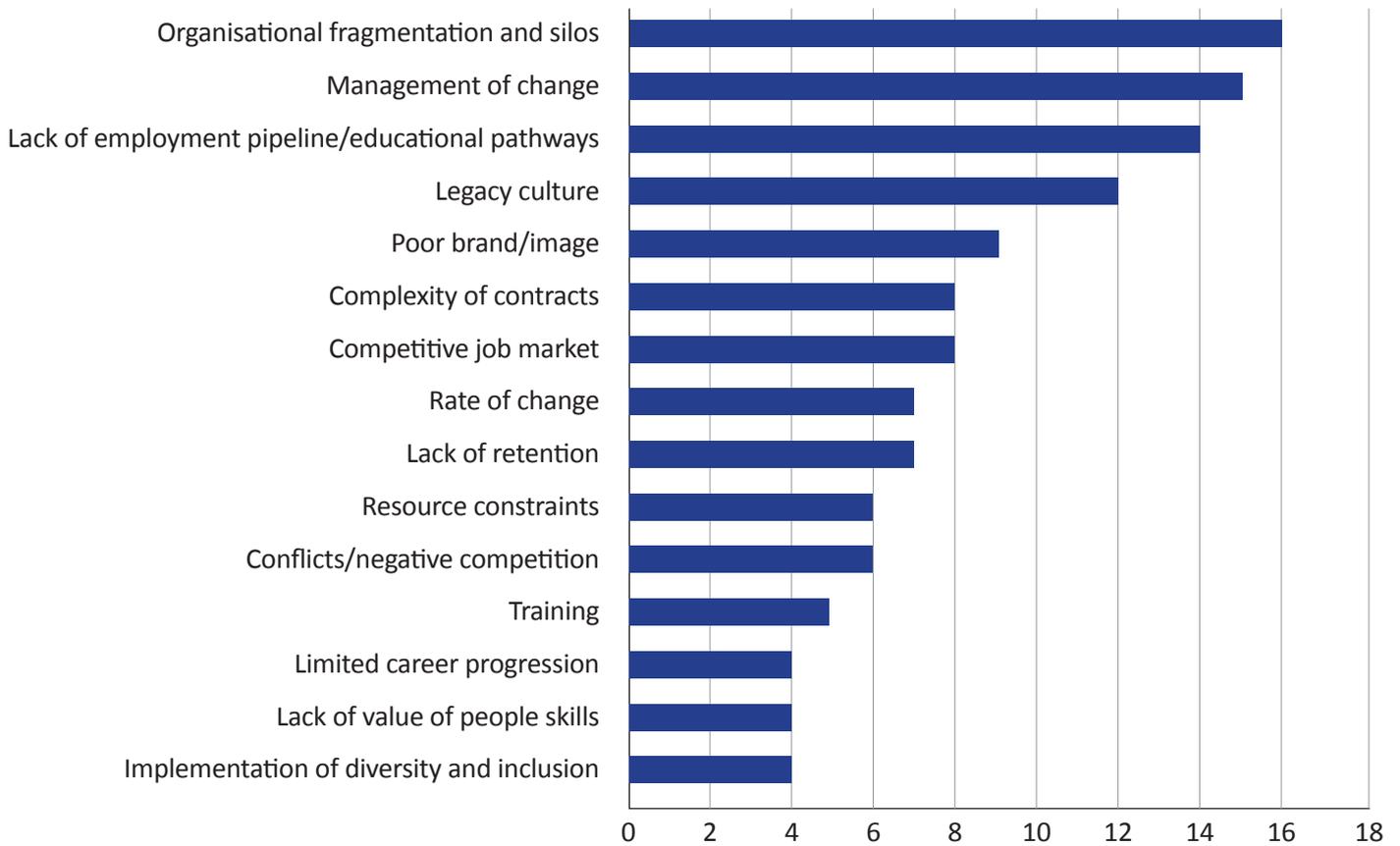


Figure 2: Perceived challenges in relation to innovation and diversity and inclusion

Fragmentation and silo challenges were found to be structural and cultural:

- Disconnects between upper and lower levels in all organisations and different areas within the organisations
- Disconnects between organisations across the sector
- Limited connection between multiple sites nationally resulting in cultural differences and, in some cases, specific identities related to context
- Conflicting agendas and competition between different teams/divisions and companies across the sector resulting in negative competition and fragmentation
- Siloed organisational structures and processes
- Siloed approaches to knowledge generation and knowledge sharing
- Lack of collaborative processes
- Lack of integration between younger and older employees.

Management of change challenges related to:

- Increasing levels of complexity with pressure on everyone to deliver more product in less time and with less resources
- Transaction costs and skills needed to manage the changes and increasing diversification of skills and the workforce
- The increasing complexity and resources needed to manage and administer contracts
- The rate of change being experienced by organisations and reactive management that could exacerbate pre-existing issues
- The lack of value attributed to people-based skills resulting in under investment
- Poor management practices
- Lack of continuous improvement processes.

Lack of employment pipeline and educational pathways challenges – particularly in relation to women and young people in trades and engineering – included:

- Short-term reactive responses to long-term complex issues (the lack of engineers, tradespeople and women in STEM courses) is a global issue and requires a long-term solution
- The demise of educational pathways such as TAFEs and apprenticeships
- Lack of investment in organisations and by government in trades-based training
- Marketing to young people of degrees as the primary future career pathway by career advisors could result in those who may be more suited to trades-based careers not seeing this as a viable pathway
- Lack of collaborative mechanisms and coordination on an ongoing basis to enable multiple parties to work on these issues
- Increased competition for qualified job seekers by other sectors resulting in less available applicants and driving up wages, pricing more capital-constrained organisations out of the market.

Legacy cultures presented challenges such as resistance to change, inflexibility, entitlement, and culturally and inappropriate behaviour. It was stated by some interviewees that this was seen a key factor for disengagement of newer employees, and it was raised by one interviewee that it could also have impacts on wellbeing and workplace safety resulting in them leaving.

Poor brand/image of the sector presented challenges to attracting younger people and women with the image being described as old fashioned and unattractive. Trade-related areas were perceived by job seekers as particularly unattractive.

Lack of retention, primarily of younger people and women in the trades areas. Rationales given for this were the employees not having a 'realistic expectation of the job' and lack of 'suitability' to the work environment.

Rate of change creates challenges as it is now ongoing and is happening in multiple areas. This was described by some interviewees as creating change fatigue and resulting in additional stress and uncertainty, particularly for those in lower levels of organisations.

Increased complexity of contracts requiring substantial time and resources to achieve outcomes was seen to exacerbate the current issues.

Competition in the job market is inflating the costs of employment and pricing some organisations – particularly SMEs – out of the market.

The remaining challenges included:

- **Training** challenges relating to the lack of infrastructure, people who were able to deliver specific training in-house, and tensions between reduced productivity that results from training people and the need to develop skills
- **Resource constraints** challenges – particularly in SMEs – that also impacted on their ability to train and retain staff, and invest in innovation
- **Conflicts and negative competition** challenges across the sector and within organisations could undermine collaboration
- **Limited career progression** challenges – particularly in frontline and trades areas – resulting in loss of staff
- **Lack of value placed on people-based skills** challenges by the sector and within some organisations
- **Implementation of diversity and inclusion** challenges pertained particularly to perverse outcomes, and resistant and antagonistic behaviours from the current workforce. Tokenistic approaches and undermining of female managers by other managers were also raised. It was also raised that the lack of resources needed to support those with specific needs could also result in them leaving.

Needs

One hundred and fifty-two needs were identified (Figure 3). The top three needs were leadership, training and skills, and traits and mindsets. It should be noted that interviewees did not define leaders as just those at the top of organisations, but also included the need for management leadership in their definitions.

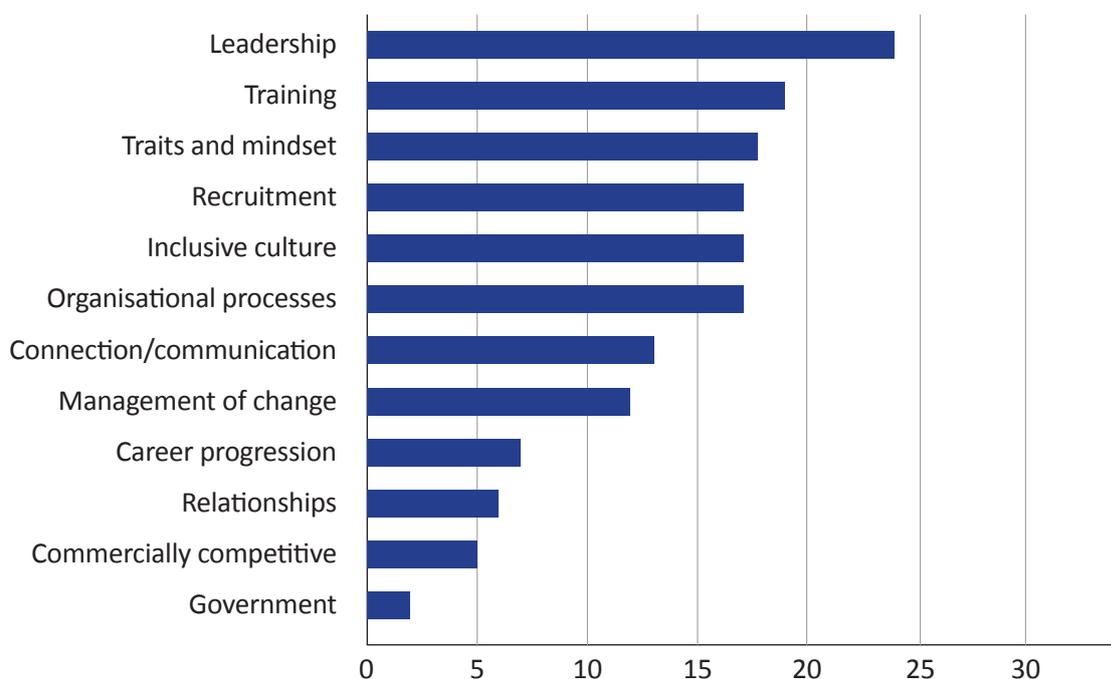


Figure 3: Perceived needs in relation to innovation and diversity and inclusion

Themes that arose from these categories were:

Leadership needs included:

- Authentic leadership that ‘walk the talk’
- Inclusive leadership practice
- For leaders to build and maintain trust
- For leaders to be more aware of the different types of leadership models and how they can be applied
- Proactive leadership
- Professional development of existing leaders in relation to new innovations and leadership approaches
- To consider the different levels of leadership needed in organisations and how they can be developed, particularly in the trades-based areas
- Collaborative and strategic approaches to addressing issues
- Succession planning to ensure that there are capable leaders who are able to step up as older leaders retire from the sector.

Training and skills focused primarily on the type of training needed and included:

- Mechanisms to support mutual learning between younger people and more experienced people in organisations
- To increase apprenticeships, particularly in relation to SMEs
- Identification of what people skills are most needed and where these are needed, and the embedding of these into current training packages
- To review apprenticeship models and develop new models more suited to industry more broadly, and support the constraints of smaller organisations
- To identify niche skills that need to be retained and the types of training that would be most effective
- To embed modules into current engineering degrees that relate to rolling stock
- Develop new courses in relation to refurbishment and retrofitting
- Ongoing training for all employees that is learner-centric and tailored to specific contexts and needs.

Traits and mindsets were also seen as an important with the need for 'new mindsets' and traits including:

- Curiosity
- Openness to change
- Flexibility
- Adaptiveness
- Creativeness
- Passion
- Emotional intelligence
- Cultural intelligence.

Recruitment focused on the following areas:

- Attraction of younger people
- To identify and target different types of job seekers from outside of the traditional cohort
- To develop new job profiles that reflect the needs of the rolling stock sector
- Attribute-based approaches to recruitment
- Better understanding of how to access diverse cohort networks
- Development of non-traditional employment pathways that leveraged skills in other sectors
- Building skills in relation to social media and how this can be used.

Inclusive culture themes focused on:

- Trust-building
- Bottom-up approaches
- Collaboration
- Exposure to different people and different ideas across organisations
- Awareness-raising
- Allocation of time and resources to socialise programs and new technologies
- Strategies for how to effectively manage behaviours
- Specific information in relation to the needs of diverse cohorts
- Cultural awareness training for all employees
- To better leverage knowledge from the diverse cohort already within the workforce.

Connection and communication specifically related to the need for:

- Improved understanding in relation to identifying who the target audience is, and the best forms of communication in relation to this before communicating
- Honest and transparent communication between upper and lower levels of organisations
- Accessible communication with upper management
- Increased networking opportunities for all employees
- Developing communication training in relation to diverse individuals
- Raising awareness in relation to verbal and non-verbal communication with diverse cohorts
- Strategic approaches, particularly in relation to communication for inclusion and innovation programs and activities.

Organisational processes focused on the need for knowledge sharing processes that ensured that established knowledge could be more effectively captured and shared. Improving monitoring and evaluation, and the development of policies to support organisational growth and change.

Management of change pertained primarily to the need for continuous improvement models, the development of frameworks and communication, and the provision of resources to support this.

Career progression related to the development of pathways for employees in trades and frontline areas and the need for more formalised processes to support this.

Relationship-building, specifically included the need for skills and consideration of the time needed to build trust and maintain relationships.

Commercial competitiveness and the need for organisations to be able to maintain this in the face of considerable change.

Government – the need for the government to support change and consider this as part of their procurement process, and provide clear information relating to the opportunities to participate in the supply chain and how SMEs can participate.

Opportunities

Seventy-six opportunities (Figure 4) were identified in relation to innovation and diversity and inclusion. The top three were organisational improvement, to build connectivity and cohesion, and to improve culture.



Figure 4: Opportunities identified in relation to innovation and diversity and inclusion

Organisational improvement. Multiple opportunities were raised that would encourage greater participation from those from diverse backgrounds and also increase innovation. These included:

- To upgrade facilities so that there were appropriate facilities such as prayer rooms, appropriate female amenities and culturally-inclusive social spaces
- To develop more flexible and fluid arrangements, such as job sharing and rotation of staff through different departments
- To develop non-traditional roles related to innovation and inclusion to support the implementation of programs and increase diversity of thought and innovation
- To improve recruitment processes to change them from skills-focused to attribute-based recruitment
- To develop continuous improvement systems and processes
- To develop better governance to improve accountability
- To break down silos and create more inclusive learning environments across organisations
- To improve monitoring and evaluation
- To use technology to improve feedback and communication more broadly within the organisation
- To improve safety processes by integrating inclusion practice within them to support better communication across different areas of the business
- To develop specific behaviour protocols so people know what is expected.

Build connectivity and cohesion opportunities focused on:

- To increase engagement in connecting different areas of the organisations through cultural events that build understanding
- To engage beyond organisations and build networks through diversity
- To target local points of view within organisations and provide feedback mechanisms through the organisation to increase innovation
- To develop informal meetings to connect upper level management with lower levels of organisations
- To build understanding of business systems and how these can be used to connect across organisations to open up access to knowledge
- To build on pre-existing networks and grow these externally to create a more diverse employment pipeline.

Leverage skill and knowledge/internal and external opportunities included:

- To develop mechanisms to support mutual learning between older members of organisations and younger employees
- To develop mentoring and other forms of learning to those coming into the workforce for older members of the workforce to be able to pass on niche skills
- To leverage skills and skilled personnel from other industries, such as those working in the domestic electrical market
- To use attribute-based assessments for trades to identify suitable potential candidates from non-traditional backgrounds
- To provide opportunities for younger people to work in organisations to build their skills before they enter into the workforce
- To identify and use the skills already in the workplace so people don't 'stagnate'.

Improve culture opportunities included:

- To increase trust across the organisations
- To increase the participation of women and young people to create a more rounded workforce
- To develop more diversity programs with employees
- To 'open out' thinking
- To develop safe spaces to enable employees to have difficult conversations constructively.

Add value to business opportunities related to innovation by:

- Leveraging the current need to reuse and recycle through innovative techniques
- Growing the business through diversifying networks
- Improving the ability to address customer needs through innovation
- Engaging with customers – diversity and inclusion is a talking point across the all sectors at the moment
- Increasing wellbeing and retention in the workforce through new technologies that reduce injuries and by providing a psychologically safe working space so people are happy at work.

Planning opportunities related to improvement:

- To strategically plan inclusion strategies, and integrate them into related areas such as wellbeing and risk management to support implementation of programs
- To develop new workforce profiles that anticipated the future workforce
- To develop specific strategic visions in relation to the future workforce for the sector
- To strategically plan recruitment and training
- To strategically plan programs that support integration of new technologies.

Collaboration opportunities focused on collaborating more broadly within and beyond the sector and organisations to increase innovation. An increase of collaborative decision making within organisations to increase engagement with diversity and inclusion programs and support innovation was also raised.

Leadership and management opportunities focused on:

- Improvement of communication at management and leadership levels, particularly in relation to challenging conversations
- Development of new leadership models and their application
- Learning opportunities specifically designed for existing leaders to support them in relation to new technologies and inclusive practice
- Development of bottom-up leadership models for trades areas.

Training opportunities focused heavily on the development of apprenticeships and development of specific modules relating to rolling stock that could be embedded in current training and higher education courses. It was raised that there was an opportunity for industry to work more collaboratively with education providers/government and job agencies to develop new apprenticeship models that were more suited to emerging industry needs and young people's interests. The development of training modules that can be integrated in other training or delivered separately was also raised.

Improve image opportunities reinforced findings that there is an opportunity to refresh the image of the industry to make it more attractive to potential job applicants. There are also opportunities to increase participation of the workforce with the community to educate them about the industry.

Summary

The challenges, needs and opportunities suggest that organisations are starting to address workforce issues and are now starting to look at the deeper issues that underlie previous findings. This is illustrated by the growing awareness of the challenges and needs raised, and the pathways forward that such opportunities offer. It also re-emphasises the scope of the issues facing organisations, and that this is a sector-wide issue that requires the bringing together of multiple stakeholders who participate in the sector if solutions are to be addressed effectively – particularly in relation to larger systemic issues such as training and employment pathways.

'Leaders need to understand that they are on show 24/7 and it doesn't matter what they say. It is how they act that actually has the impact.'

The need for leadership reinforces previous findings in reports and suggests a lack of progression in this area. Authentic leadership was seen as critical to building trust, and was a common theme amongst many interviewees. This indicates that there is a need to think beyond notions of conventional leadership that lead at the front from the top of organisations and teams. There was also an opening out of understanding in relation to the need for a strong leader at the head of the organisation, but also the importance of leadership at all levels of organisations. This suggests that current organisational leaders may need additional support if they are to enable effective organisational and sector transformation. It will also be important to look at improvement of succession planning in organisations and throughout the sector to support continuity during these changes.

The training and skills needs highlight that a more holistic and strategic approach is required to ensure that skills are developed as technology evolves. Of particular concern is the lack of workforce profiles, as this is resulting in reactive responses to training that only provide 'bandaid solutions' to what is a long-term and complex issue (Young, et al., 2020b).

The rate of change and pressure to change being experienced by organisations is apparent in the challenges and needs raised as they focus on areas that are inhibiting growth.

Overview of SMEs in the supply chain

Key findings:

- SMEs are a diverse cohort where capabilities range from low to high and was found to be determined by culture, resources and capital constraints
- There are considerable challenges facing many SMEs, and a need to build leadership, business and management skill to build capability
- There has been a lack of investment in relation to innovation and workforce as a result of the above factors in many SMEs
- There is a critical need to develop programs and leverage existing programs that are tailored to their specific contexts in collaboration with this cohort.

In Victoria, policy developments are driving the need for greater participation of SMEs in the production of rolling stock through local content and social procurement provisions. In order to gain an insight into this, two focus groups with industry representatives who have worked extensively with SMEs in manufacturing were undertaken. An additional five interviews were conducted with those in SMEs and one case study undertaken. Findings from the round table with SMEs undertaken as part of the Economic study are also included.

SMEs were characterised as having a high level of family-owned businesses, which often had entrenched ways of operating and where the younger family members were prepared for leadership positions. Businesses were often resource-constrained and living a 'hand-to-mouth existence' resulting in low operating margins.

Owners were seen as often 'wearing the five hats of business' and 'being in the business rather than running the business,' resulting in reactive management and a lack of business acumen. The leadership demographic tended to be older (in their 60s) and comprised of people who had built businesses through their technical know-how and had not invested in formal education. Many of these owners were looking towards retirement, and this could impact on how they viewed business development and new technology. They were also seen to outsource business capabilities rather than building these capabilities into the business. There was a lack of investment in innovation and workforce development, which limited growth and capability in many of these organisations.

They were also seen to have a high level of connection with their workforce and could be more agile than larger organisations and highly innovative. Younger business owners who had gone to university were observed to be more open to opportunities, new technology and collaboration, which had resulted in positive business growth.

Challenges

There were a number of challenges raised in relation to SME culture and workforce development including:

- Increased competition between rail, defence and infrastructure for employees, and a lack of capital for SMEs to compete for the higher wages offered in other sectors
- Characterised as being very competitive with each other, and of having little understanding of the benefits of multi-party collaboration (such as commercial success, reduced overheads and de-risking of contracts)
- A tendency to focus on attraction rather than retention
- Conventional training approaches that could disengage younger cohorts particularly
- A lack of understanding in relation to younger people's world views in some SMEs
- The lack of new technology in some SMEs was not seen as attractive to young people
- A historical lack of investment in human resources due to turnover not being significant enough to justify investing in people and processes
- Many business owners are ex-tradies who know their trade but have not always built up their skills sufficiently to develop their workforce or businesses effectively
- Websites are often out-dated and not seen as attractive to younger job seekers.

In terms of attraction and retention, there were specific challenges raised for those in some regional areas:

- Small machine workshops were not seen as an attractive option and could also be seen as a career risk for some engineers
- Apprentices and graduates from regional areas tended to move to the city for more attractive career opportunities
- A lack of infrastructure in more remote areas could also act as a deterrent for some job seekers.

Critical needs raised to increase participation in the rolling stock supply chain were:

- A collaborative mechanism to bring together complementary capabilities in different SMEs so that they could effectively bid for contracts
- Coordination of broad-spectrum engagement with SMEs to develop a sectorial approach to address capability and training needs, particularly in relation to people-based skills and business management and development
- Access to technical managers and end-buyers at prime contractor level at the beginning of the procurement process
- Development of new ideas and strategies to attract more diverse talent in collaboration with economic development departments in local government
- Knowledge-sharing mechanisms to share best practice across SMEs
- Programs that build capability and knowledge of enabling systems, technology and materials
- Forums and training to more effectively support understanding and engagement with new technologies.

Capability of many SMEs was often described as low, and skills development of leadership and business management skills were seen as critical to addressing this. The roundtable undertaken as part of the economic study and additional interviews also found highly capable organisations who had a high level of innovation and active programs to increase diversity and inclusion and innovation. Jones, et al. (2020) raised that a few of these high capability SMEs had declined to be involved with the rolling stock sector. It was also raised that it was important to sell the value and benefit of undertaking training to SMEs, and to build understanding of the need to change and why they need to invest in building workforce capability and new technologies. Tailored plans and programs that are developed in collaboration with SMEs and shaped to their specific needs and context were seen as critical to their success.

Opportunities

Opportunities identified during the focus groups included:

- Interaction, coaching and mentoring of SMEs over extended periods of time to support development skills and capabilities that are aligned with current contract requirements
- Development of flexible, tailored and targeted courses that are driven by SMEs needs and tailored to their context
- Joint venture collaborations to bring SMEs together to support development of local content, and build a sector-based approach to building capability and bidding for contracts
- External coordination to develop a comprehensive strategy that addresses the above training and capability needs
- Provision of case studies of collaborations that work
- Work with councils in regional areas to develop plans to attract people to area (e.g., marketing about better cost of living, working close to home)
- Start-up incubators, online forums and design jams to support innovation and socialise technology
- Leveraging previously successful programs such as the AICD course and Leadership 21.

Visual audit of the rolling stock sector's organisational websites

Key findings:

- The dominant image displayed across all websites was of 30–50 year old males of Anglo-Saxon appearance and blue-collar employees
- There was low representation of the under 18 age demographic, the 18–30 age demographic, and those of Aboriginal and Torres Strait Islander (ATSI) origin
- Representation of women in larger organisations was above the current industry levels of participation of 18% (ARA, 2018)
- Representation of women in smaller organisations was low
- The key website narrative was the promotion of products, with images of products representing 78% of the images reviewed. SMEs displayed the highest representation of products on their websites
- There is a need to understand – particularly in SMEs – what visual narratives best engage and promote their workplace to potential job seeker cohorts.

Fifty-one organisations that are currently considered part of the supply chain in Victoria by the Department of Transport were audited, with the aim of understanding the overarching narratives that organisations convey to these potential job seekers. These were categorised using the ABS categories: large (>200 employees), medium (20 to 200 employees) and small (<20 employees). Their representation across the sample is large (51%), medium (37%) and small (12%).

The audit was undertaken by viewing website homepages and level two and three subpages, and through a statistical analysis.

In relation to geographical location, 90% of the companies were located in Melbourne areas, with the remainder located in regional Victoria. In terms of organisational ownership, 20% had overseas ownership and 80% domestic.

Image distribution across organisations

Out of a total of 2,909 images, the websites of large organisations contained the highest percentage of images with 61%, medium organisations had 34%, and small organisations had 6%. Interestingly, medium organisations had about 3% more images on their homepages than large organisations (Figure 5).

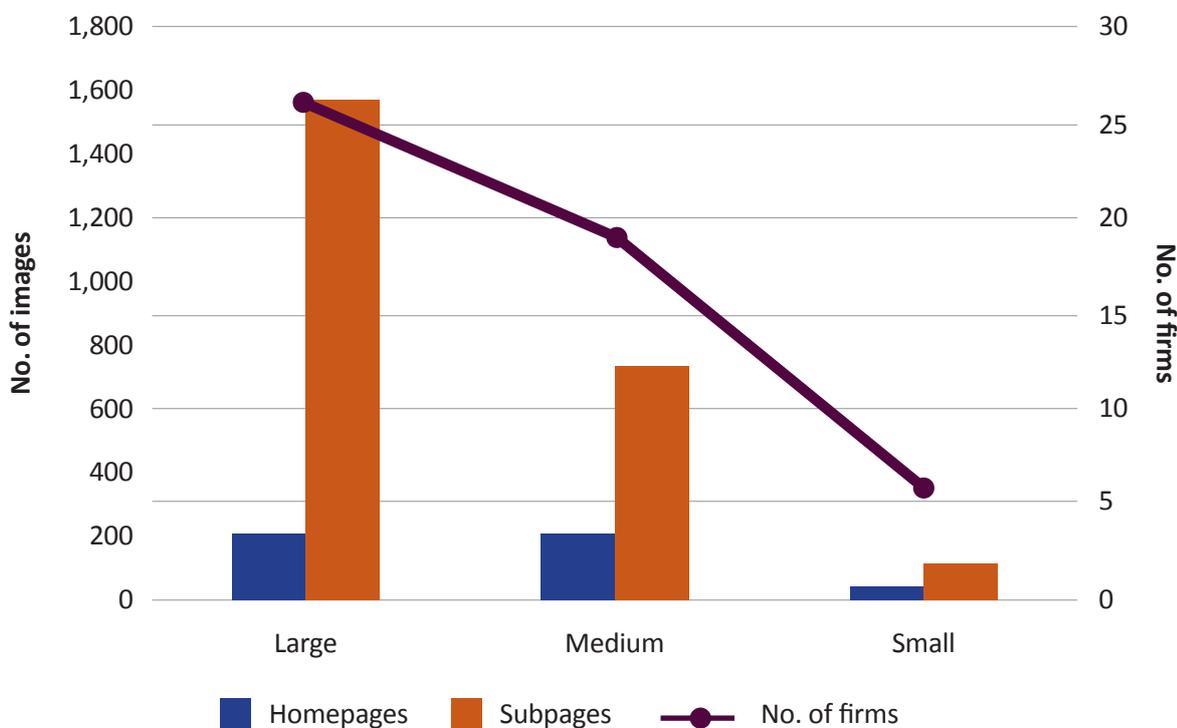


Figure 5: Distribution of images across organisational categories

Image distribution of products and people

Aggregated images showed 73% of the images are of products and 27% of people, of which 23% are employees and 4% are passengers or general public (Figure 6).

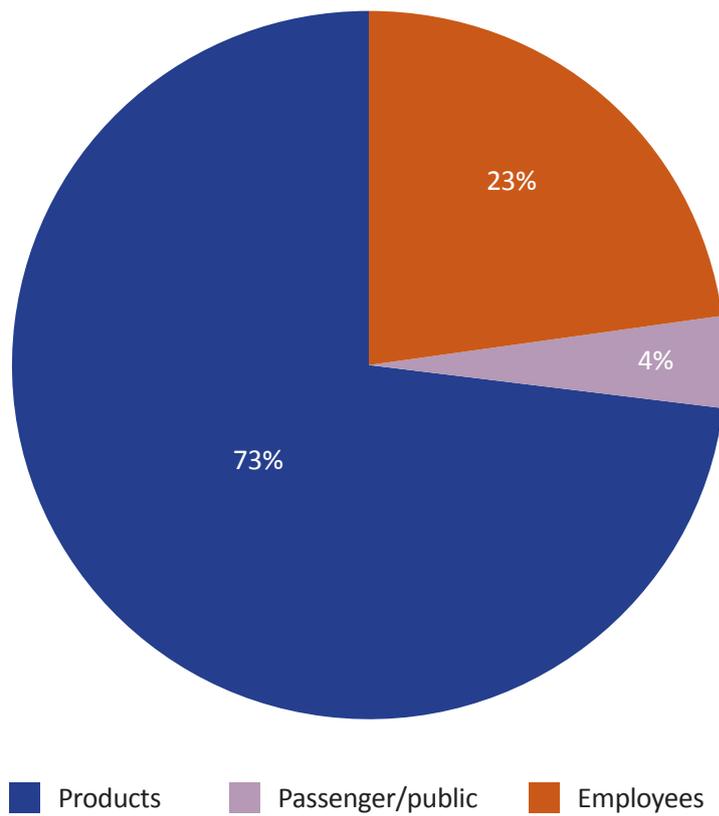


Figure 6: Representation of aggregated images people and product

Large organisations had the highest level of representation of people (33%), and small organisations had the highest representation of products (89%) (Figure 7).

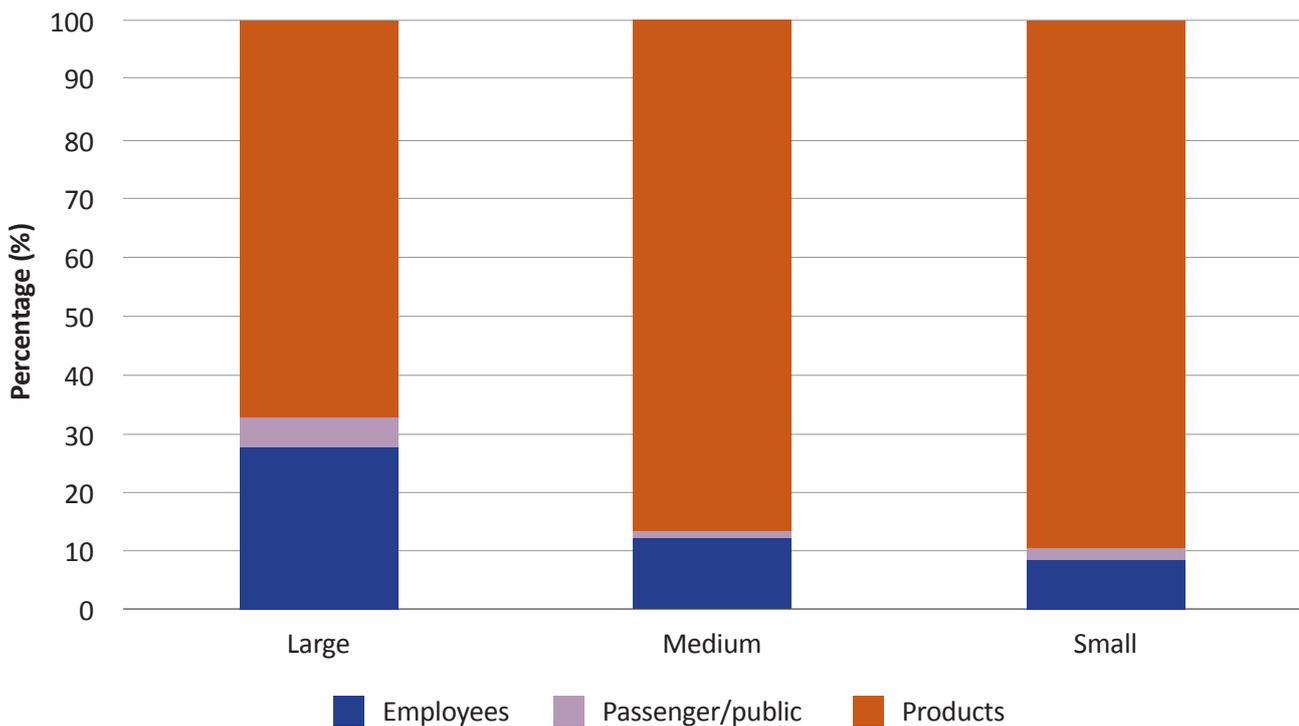


Figure 7: Representation of aggregated images people and product across organisational categories

Representation of cultural origin

Images of individuals and groups representing cultural origin were found on all websites. The predominant category represented were those of Anglo-Saxon appearance (64%), with smaller representation of those from culturally and linguistically diverse (CALD) (35%) and Aboriginal and Torres Strait Islander backgrounds (1%) (Figure 8).

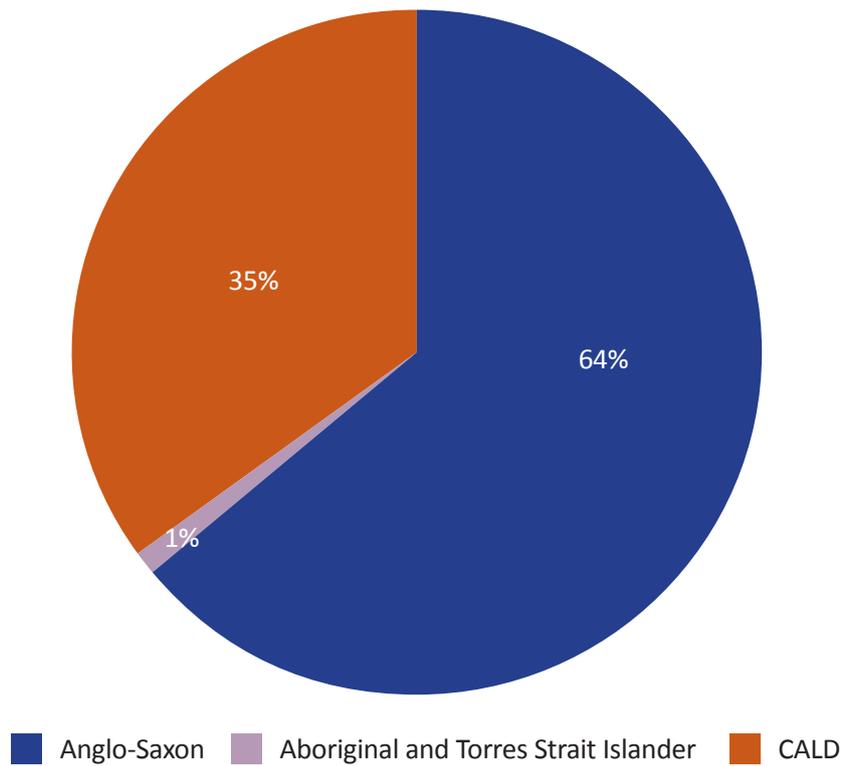


Figure 8: Aggregate representation of cultural origin of employees

In terms of how these images were distributed in different organisations, small organisations had the lowest representation of ethnically diverse individuals. Large organisations were the only organisations to have explicit representation of those of Aboriginal and Torres Strait Islander backgrounds (Figure 9). Thirty-two percent of images were group images, with group images of Anglo-Saxon appearance being 52%, only slightly higher than those with those with some representation of ethnically diverse backgrounds being 48%.

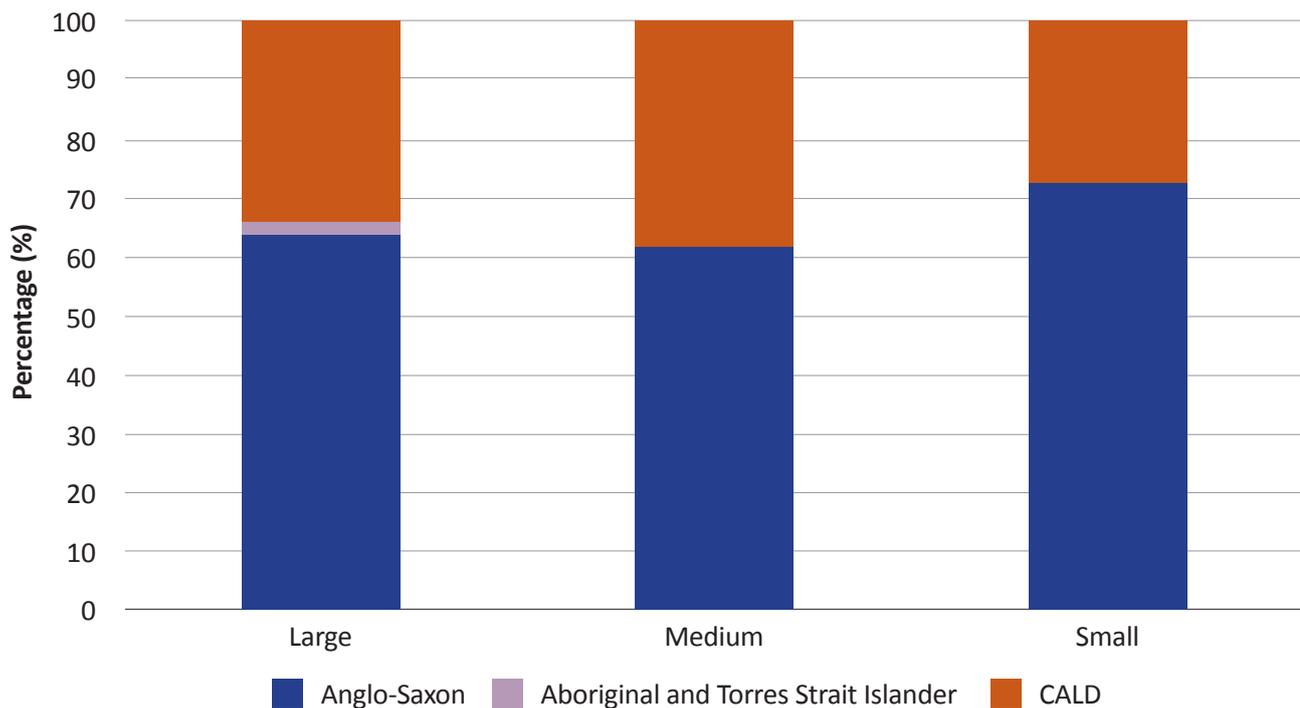


Figure 9: Aggregate representation of diversity across organisational categories

Representation of age diversity

The largest representation of images related to age was in the 30 to 50-year-old category (54%), with the next largest category being the 50+ category (Figure 10).

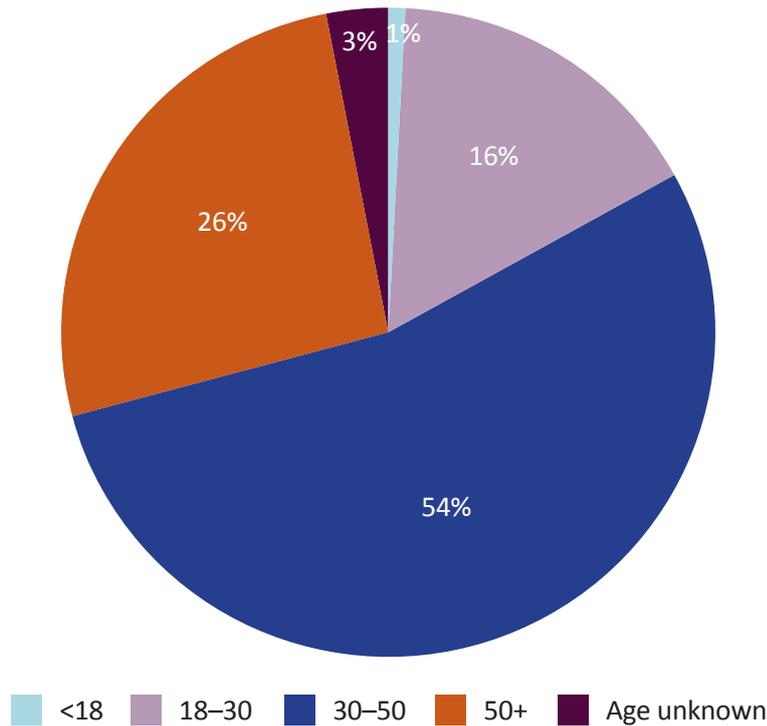


Figure 10: Distribution of representation of age demographic of employees

Distribution of these images across the different organisational categories (Figure 11) found that the largest representation across all organisations was the 30–50 age demographic. The lowest representation in large organisations was of those under 18 (2%), and there was no representation of the under 18 demographic in medium organisations. Small organisations had the highest representation of 32% in the 50-year + category and representation of those under 18 was 4%, but they also had the lowest representation of those in the 18–30 year demographic at 4%.

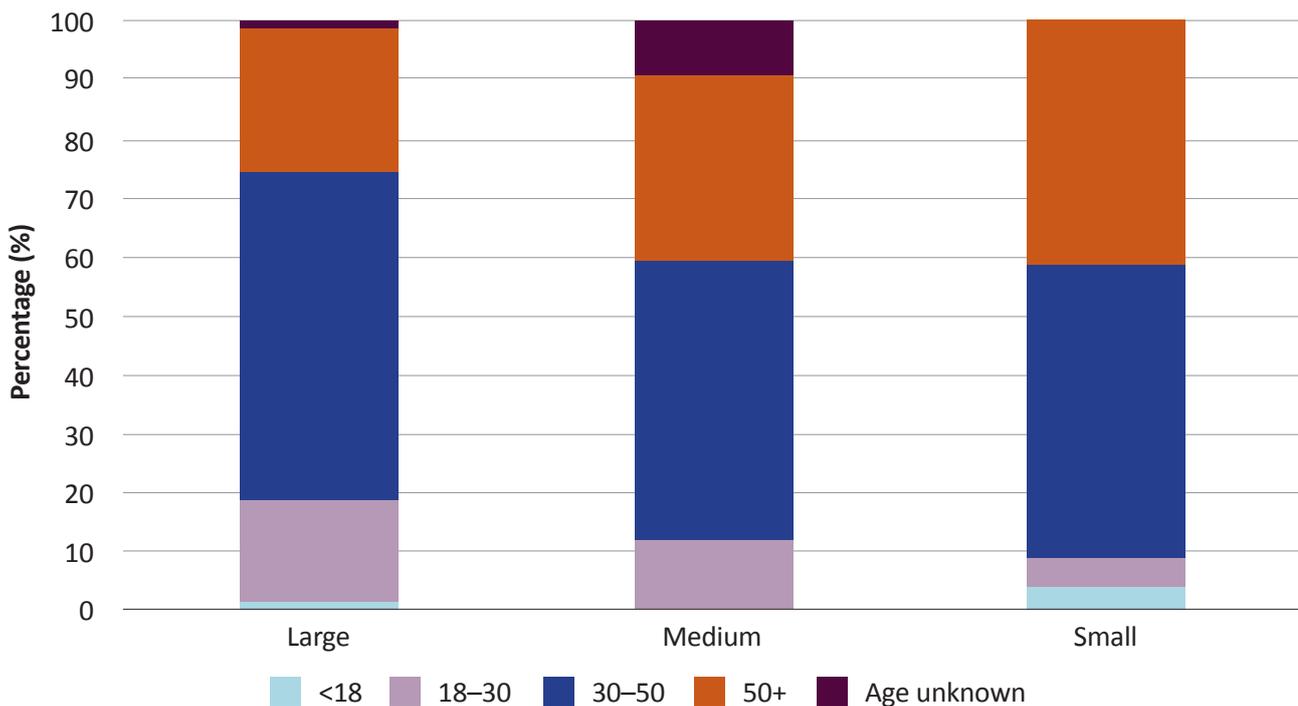


Figure 11: Representation of distribution of age demographic across organisational categories

Representation of male and female images

Images related to representation of male and women female images (group and individual) comprised of 67% of images of males and 33% of female images (Figure 12).

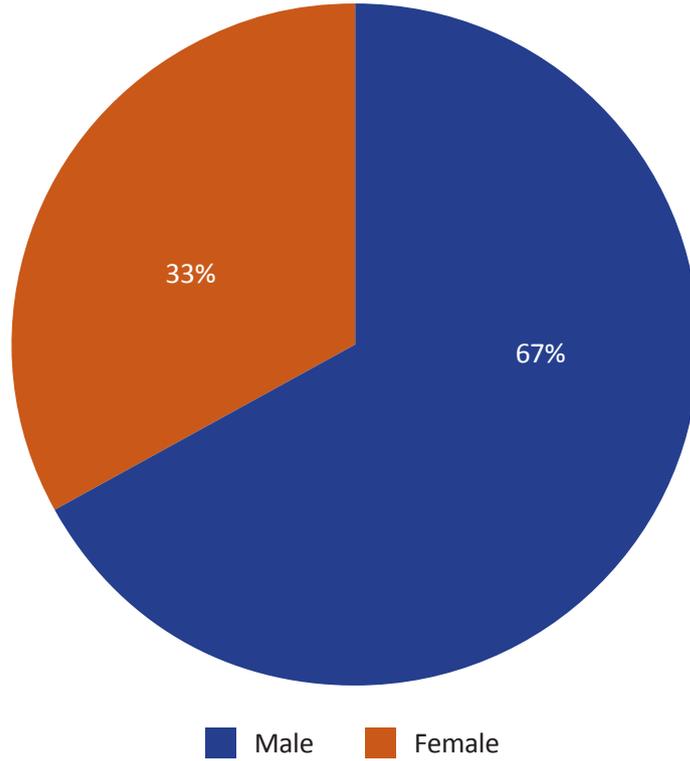


Figure 12: Aggregated representations of images of male and female images

In terms of the distribution of these image categories across all organisations (Figure 13), the largest representation was of individual male images (41%) and the lowest was of all female group images (5%).

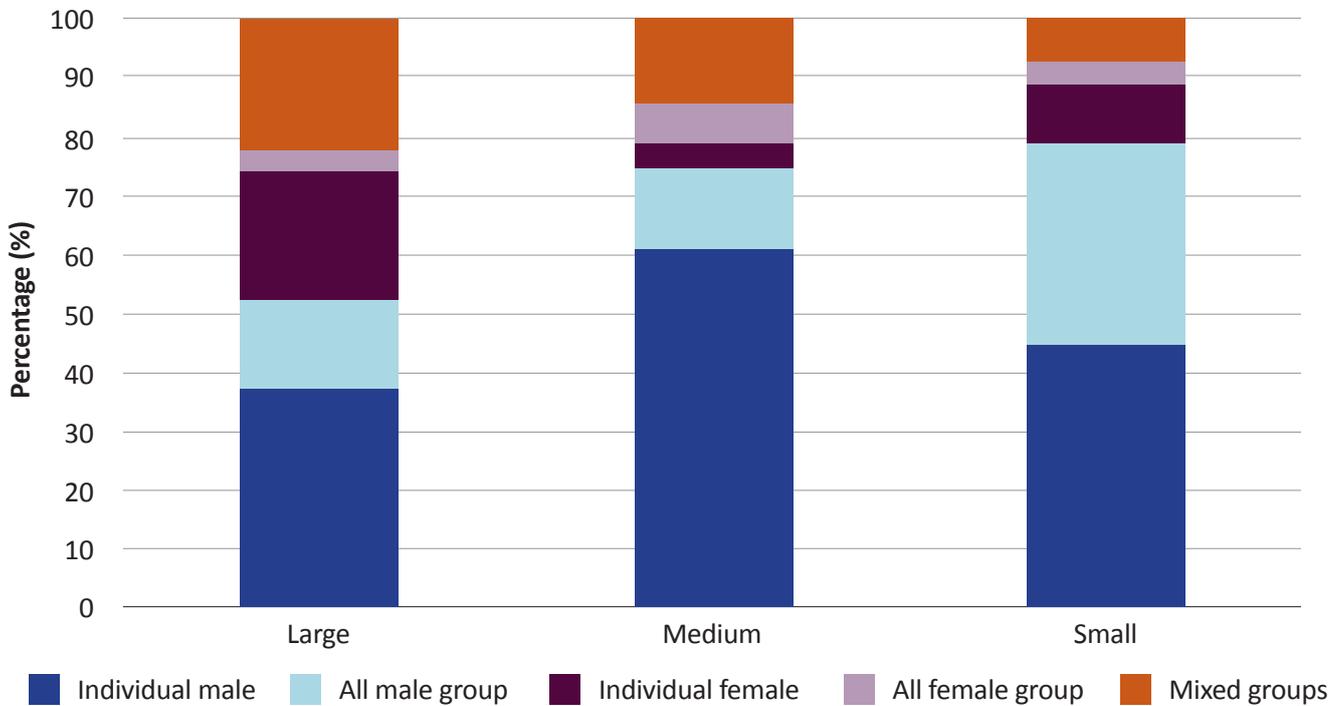


Figure 13: Representation of distribution of age demographic across organisational categories

In terms of distribution of images of individuals, medium organisations had the largest representation of individual male images (61%). The highest representation of individual female images was in large organisations (22%), and the lowest was in medium organisations (4%). In terms of group images, the highest representation across all organisations was of mixed groups (20%), followed by all male groups (16%), and the lowest representation was of all female groups (5%). Small organisations had the largest representation of all male groups (34%) and medium organisations had the highest representation of all female groups (7%). It is notable that in terms of the mixed groups, the representation above 50% representation of women was 1%, and only present on large organisational websites.

Representation of occupations

Occupations were aggregated to the different occupational areas of blue-collar and white-collar based upon their clothing and task (Figure 14). Representation was higher in blue-collar (59%) than white-collar workers (41%).

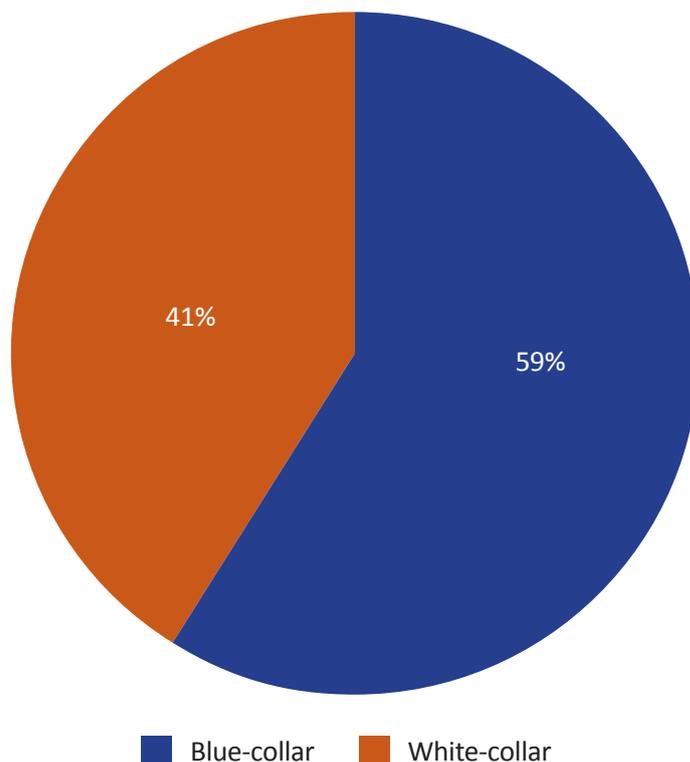


Figure 14: Aggregated allocation of representation of blue and white-collar employees

Distribution across different organisational categories (Figure 15, overleaf) found the largest representation of blue-collar workers was in medium organisations (75%), with small organisations containing more images of white-collar workers (55%). This was attributed to small organisations having substantially larger representations of products, and images of people tended to represent CEOs, managers and business owners rather than their workforce.

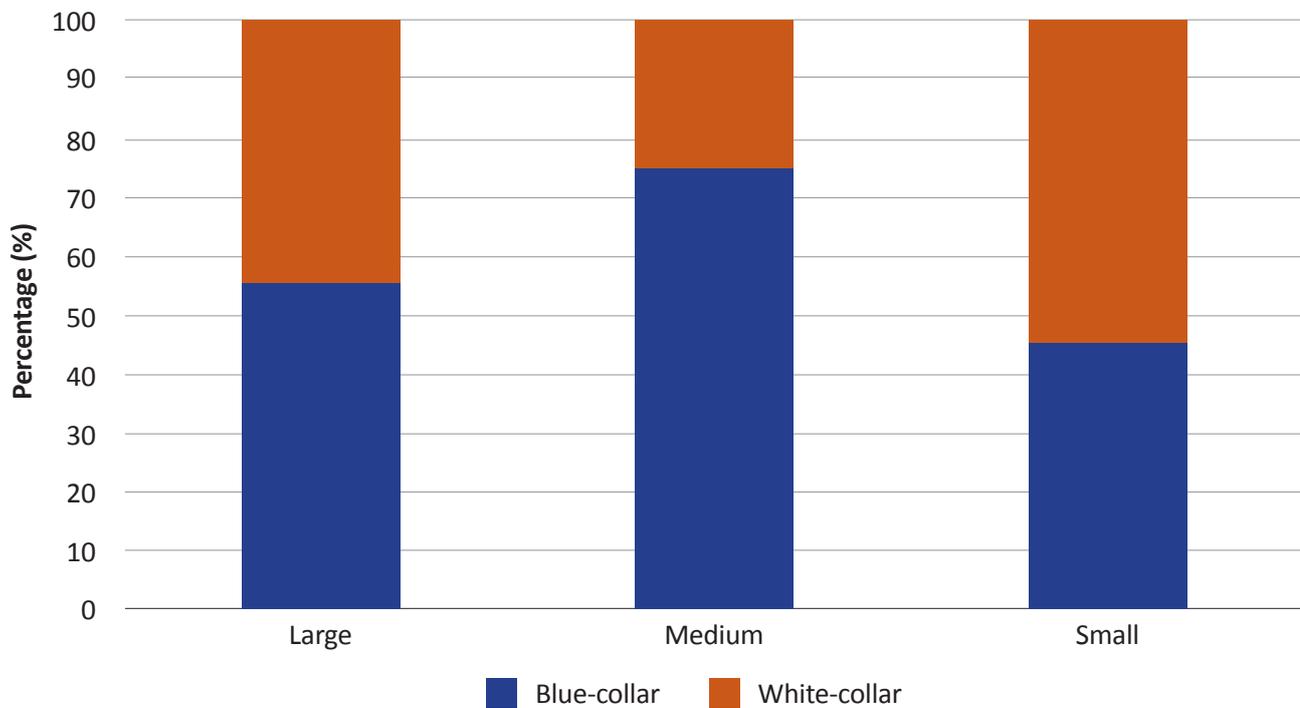


Figure 15: Distribution of blue and white-collar employees across organisational categories

Summary

It is widely acknowledged that the sector as a whole has a poor image, and there is a need to improve communication and branding (BIS Oxford Economics, 2018; PwC, 2006). Websites are the virtual shopfront for businesses through which those outside of the business gain access to information about their organisations. Images on websites tell their own story and create a powerful messages to those who view them: the type of organisation, what it does and how it does this. Images are also critical in terms of ensuring engagement with a website (Garett, et al., 2016.)

For the most part, websites related to the rolling stock sector have focused on the promotion of products. The need to rapidly expand and diversify its workforce, however, means that these websites also need to engage with and ‘sell’ their organisations to potential job seekers to those beyond the traditional talent pools who may not have knowledge of the sector. This indicates a need to improve understanding in relation to how websites can be leveraged to enable improved use of websites in relation to attracting potential employees – particularly for SMEs.

Two examples of websites reviewed that were considered to provide strong people-based narratives were Ventura Buslines and Aurecon.

The current snapshot of innovation and inclusion implementation

'The world doesn't turn at one speed and neither does this industry.'

The implementation in relation to inclusion and innovation is an active space in the rolling stock sector and organisations were found to be at different stages of implementation. Recent years have seen organisations beginning to focus on this agenda, and the number of program highlights and industry support programs for the sector illustrate this (Appendix 5).

Inclusion practice is developing in organisations, but was found to be largely informal in smaller organisations, and different approaches to implementation are emerging, such as:

- Bottom-up, top-down development of shared values, narratives and strategies using bottom-up methods encompassing the entire organisation and programs developed around this that are supported by ongoing learning.
- Top-down development of a strategy, and then targeted programs to support this that are embedded and reviewed each year and built upon.
- Organic growth with little formal structure that grew either in response to the local demographic or from bottom-up initiatives by individuals.

Monitoring and evaluation of diversity and inclusion continues to be an issue in terms of the workforce at a sector scale but measurements have been developed. The Australian Rail Association (ARA) has ongoing measurements in relation to representation of women in the rail sector workforce between 2014–2017 using the WGEA reporting tool, which show increases of 17–21% between 2014–2017 (Young, et al., 2020a). ARA (2014) profiled the rail workforce, providing a baseline for measurement of the rail workforce nationally, however there has been no evaluations since then. There was no measurement found in relation to this for the bus industry or SMEs.

Measurement of inclusion is still measured primarily through increases in diversity and delivery of programs. Inclusion measurements are emergent, and some companies interviewed were reporting benefits such as a competitive advantage, increased engagement and greater connectivity. Whether these programs continue to be sustained and built upon for the longer term will be a key determinant of their effectiveness.

At an organisational scale, the majority of large organisations have reporting in relation to workforce composition and diversity. Inclusion measurements, however, were emergent and often not public. Measurement in SMEs was inconsistent and, at times, non-existent nor publicly available. There was also a lack of maturity in many organisations in relation to continuous improvement in relation to inclusion and formal risk management of the social innovation aspect of this.

In relation to organisational policies and processes, larger organisations were generally much more mature in terms of their policies and processes than their SME counterparts. In terms of implementation, however, it varied across organisations and was very much determined by the local context and management.

In terms of physical work environments, there was increased awareness of the need to adapt working environments and how they needed to be adapted to specific requirements of diverse cohorts. All case study organisations had upgraded or were in the process of upgrading their facilities in relation to this. The prevalence of older facilities in Victoria that did not accommodate the needs of diverse employees (particularly in SMEs), was raised as a challenge – particularly for those with capital constraints.

Improvements in relation to working environments was reported in case study organisations. Progress was slower in different areas of organisations, and very dependent on management and the level of legacy cultures.

In terms of culture, there was progress reported by the majority of interviewees in relation to employees becoming more aware in relation to appropriate behaviours and changes in relation to this. This was variable across case study organisations and specific to management and context.

In relation to specific diverse cohorts, the following was found:

- **Younger people:** In recent years, there has been considerable attention on attraction and retention of young people in all areas of rolling stock, with numerous support programs that include mentoring and talent development. All of the large organisations had graduate programs, and four of them are listed in the Top 100 Graduate Programs by the *Australian Financial Review* in 2019 (*Australian Financial Review*, 2020). Programs offered in terms of trades-related areas tended to be more conventional and there was less offered in terms of career pathways. Interviewees in this demographic were found to be highly engaged and motivated. A number of programs have also been developed in relation to young leaders and are provided by industry bodies such the ARA, RISSB and RATA.

- **Cultural diversity:** There did not appear to be any barriers in relation to acceptance, but there were barriers raised in relation to career progression – particularly in trades-related areas, with poor representation at executive and upper management levels. There were also challenges in relation to a lack of resources to facilitate the different needs of some diverse cohorts. Data suggests that cultural diversity representation may be under-reported at a sectorial level, and it should be noted that privacy requirements can present challenges to obtaining data in this area. There was progress reported in relation to improvement of communication in the workplace to ethnically diverse individuals, but there were also indications that there needs to be more formalised awareness in some trades-related areas.
- **Women:** There has been increased representation in organisations, with some increases of women at management and leadership levels, but representation is still low – particularly in rail, manufacturing and trades-related areas. In terms of inclusion, there were indications that although the concept of women in the workforce is understood, many of the challenges raised in previous reports are still present and ongoing work is needed. Organisations also offer a number of programs and support for women in their workforce such as mentorship programs and leadership development. Many of them reported participation in women’s networks and forums facilitated by peak bodies such as the ARA, Geelong Manufacturing Council and the Victorian Government.

In relation to innovation, the following was observed:

- There was a high level of knowledge contained in the majority of organisations in relation to adaptive innovation of products. There was limited knowledge found in relation to organisational and social innovation.
- Collaboration is increasing, but there are still substantial sector-wide cultural and institutional challenges in relation to this.
- Large organisations and some SMEs were found to be collaborating with research institutes and other organisations to develop new technologies, but these tended to be the exception rather than the rule in relation to SMEs. One organisation was part of an overseas collaboration and larger organisations also had access to overseas research through their parent company.
- Uptake of new technologies in the workplace was inconsistent and varied within organisations and SMEs, and was reported as being very much dictated by cost constraints, resources and openness to new technologies.
- Processes are well established in all organisations, and there were well-established formal and informal mechanisms for problem solving in relation to the technologies they use.
- SMEs indicated a high level of innovation in some organisations, but a lower level of capability and less collaboration with each other.
- Many organisations (including SMEs) have been engaged with the Rail Manufacturing Cooperative Research Centre (RMCRC). However, there was still limited collaboration found with Australian-based research institutes.
- A number of programs have been developed by the Victorian Government and the rail sector to support innovation, and they have also have appointed a rail advocate for Victoria which was a recommendation of the *On Track 2040 Roadmap* (DIISRTE, 2012).
- Social innovation was identified in some organisations, but there was limited formal monitoring and evaluation in relation to this.

In terms of collaboration, across the sector as a whole, there has been some progress in collaboration between larger organisations in relation to contract bids. There was also direct collaboration with universities and larger organisations and also with large and SME organisations, such as the RMCRC. Collaboration between large organisations and SMEs was minimal, with only one example being found during our review. There was poor collaboration reported between SMEs organisations. There was however, collaboration with other organisations out of the sector in relation to inclusion activities, with a number of organisations developing partnerships to support activities.

In relation to the image of the public transport sector, it is still perceived by interviewees to be poor. Some organisations, however, had done considerable work in this area to redefine their organisations that resulted in benefits for these organisations. The community report indicates that this has had little impact in relation to changing perceptions of career options relating to public transport across the broader community.

The changing context

'Some people survive change and other people don't.'

The context for rolling stock organisations is highly dynamic, and the emergence of multinational, multimodal organisations over the last 10 years who form partnerships to bid for contracts, is illustrative of this. As a result, the current context for inclusion and innovation has to be viewed in terms of these dynamic changes. Figure 16 shows a strategic process of transformation and its various phases, that can be applied to any introduction of new elements, for example, increasing diversity in an organisation. Although presented as a linear process, it is dynamic and can deflect back to previous areas in response to internal and external shocks.

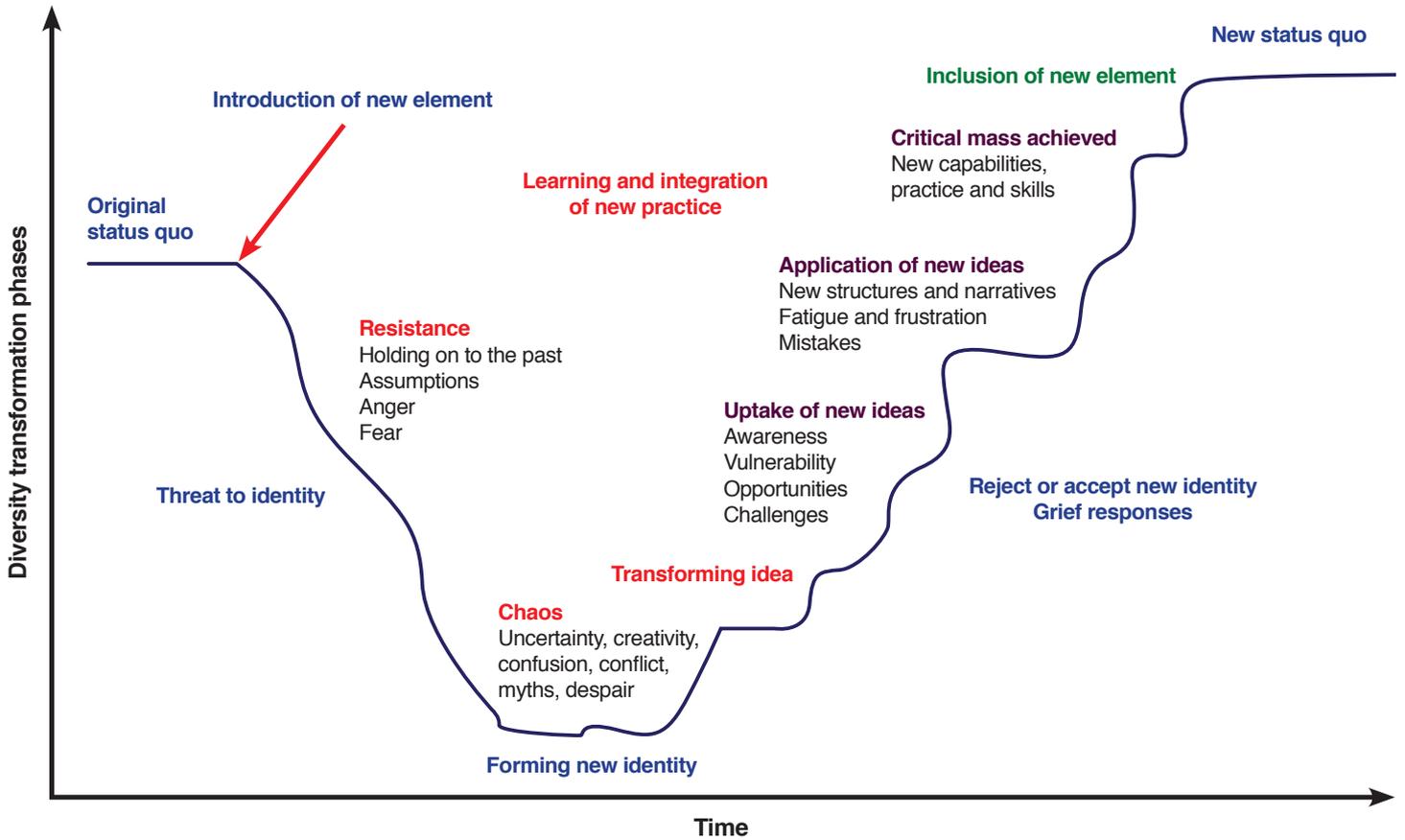


Figure 16: The transformation process (adapted from Young, et al., 2018).

There is currently no consistency in relation to where rolling stock organisations across the sector are in the process of transformation, with some at the beginning of the process and others well advanced. Their ability to enact changes in their organisations was found to be dependent on the following factors:

- Availability of resources and capital
- Leadership and management
- Current organisational focus
- Strategic and business capability and skills
- People capability and skills
- Organisational culture
- Openness to new technology and learning
- Access to knowledge
- Geographical context.

These factors determine and shape capability and can manifest as pressure points in areas of the supply chain, as areas of lower capability struggle to manage the increasingly complex requirements and agendas. There were also pressure points reported within organisations, particularly at management level in relation to balancing the competing demands of their customers and their workforce.

In terms of SMEs, the current focus of contracts in relation to local content and social procurement offers a chance to revitalise this area of the supply chain. Our research shows that there are a number of long-standing issues in relation to this – the most dominant being the previous contraction of the industry and the changing market structure. In many SMEs, this has resulted in lower capability, limited ability and a lack of incentive to invest in the workforce and innovation. In terms of inclusion, there was a high level of cohesion and inclusion, but that did not always result in a more diverse workforce. It will also be important to identify and support emerging innovative SMEs who will become part of the rolling stock industry in the future.

Transformation is a long-term issue, and technological changes and the need to diversify the workforce are likely to continue for the foreseeable future. Strategic approaches that manage transformation, and the social and technological risks systemically are critical. Two of the key challenges for the rolling stock sector in Victoria in relation to this are (Young, et al., 2020b):

- There are currently a number of different ideas of what the sector could become, but no tangible vision of what it wants to become, and
- There are no available workforce profiles that provide a picture of the skill sets needed across the sector for future innovation or inclusion to guide strategic planning of training or workforce development.

This provides an opportunity for the sector to provide a shared vision of not only what organisations are becoming, but what they aspire to become. To achieve this, they will need to consider the impact of Industry 4.0 and determine what it means for the sector. Reports such as *The Future of Work* (World Economic Forum, 2019), detail future job trends, however there are indications that the rolling stock sector may not follow these types of trajectories and will need to maintain a higher level of manual skills than other industrial sectors. Many organisations have expertise in specific niche and trade skills, which are considered to be critical to the sector for the next ten years which will need to be maintained. It will be important to identify and leverage these more strategically, particularly in relation to the development of apprenticeships and internal and external organisational training.

Conclusion

‘We’ve done a lot, but we still have a lot of work to do.’

The context surrounding the sector is complex and dynamic, and many of the issues facing organisations are the result of the changes in the social, technological, economic and policy landscape in which these organisations exist. The current context is one of a sector in the process of transformation, where long-term issues will now need to be addressed if the sector is to realise the opportunities on offer.

Building innovative and inclusive organisations is a long-term proposition and one where progression is not always straightforward. What we have identified is that there has been substantial work undertaken over the last ten years and that organisations are developing, but there is still considerable work to be done to ensure that they keep progressing. Early adopters of inclusion and innovation are now starting to emerge as leaders and also see benefits in relation to this. There is a key opportunity for organisations to partner and leverage local research institutes more widely to support locally developed R&D across the sector.

In relation to inclusion and innovation, progression is not consistent across the sector or within organisations, with organisations ranging from immature to mature in relation to implementation. Capabilities are also variable across the sector, with many SMEs having low capability in relation to enacting the changes needed to develop these capabilities. This variability in capability in SMEs will need to be addressed to support the local content and social procurement requirements of contracts. This will require willingness of SMEs to change, and resourcing of collaborative mechanisms to support the development of skills needed and bidding for contracts. It will also require that this cohort collaborate with each other and develop new identities.

The rolling stock industry in Victoria was found to be fragmented and to contain multiple cultures and subcultures. Some of these co-existed, whilst others were found to create tension and conflict. The largest determinant of whether this happened was how well these were being managed. The greatest area of tension raised was between younger and older employees and between different operational areas within organisations, resulting in poor outcomes. This was particularly pronounced in the trades areas and manufacturing environments.

The family aspect of legacy cultures prevalent across the sector was positive and negative. It has resulted in a protective environment that nurtures younger people and provides the basis for connectivity in teams. Conversely, it could be hierarchical, patriarchal and resistant to new ways of learning and change. It could also be exclusionary of those who did not ‘fit in’ to the family. The strong connections to community in regional, bus and SMEs organisations is a strength that could be better leveraged by the sector as a whole.

‘We have a leadership problem in the sector, our leaders are all getting older and we haven’t grown the leaders to follow us when we lead.’

It is important for existing leaders at all levels in organisations to continue to develop new skills and knowledge so that they can effectively build the inclusion and innovation needed to guide their organisations through the transitions that will transform them. They will also need to build capability in relation to the management of the strategic risk that is associated with inclusion and innovation. There has been considerable focus on the development of leadership with younger employees. There is a possibility that this may result in a potential leadership gap between current leaders and when this cohort is ready for higher level leadership. Attention to succession planning in relation to this will be critical for the sector and organisations to maintain continuity.

‘People leave teams and managers, not organisations.’

People-based skills and capabilities are particularly important for supporting inclusion and innovation, but were described as having lesser value than technical skills in some organisations (particularly in the trades and technical areas). There will also need to be consideration given to the needs of managers to ensure that they have the necessary skills and support needed to implement programs, while balancing the increasingly complex needs of their teams and the risks associated with these.

In relation to attraction of the future workforce, organisational needs are currently focused on the development of a pipeline of skilled and appropriate entrants, and the need for clearer educational and career pathways and exposure of potential job candidates to the industry prior to entry. This is a long-term prospect that will require collaboration between organisations, government and training institutes if the sector is to address these issues. There are also strong indications that approaches to recruitment need to focus on the attributes of job applicants as much as their technical skills to ensure they are employing ‘the right person for the job’, not just a person to fill the job.

There are a number of knowledge gaps that are impeding forward progression for the sector including:

- A lack of vision of what the sector wishes to become
- There are no workforce profiles that show what different future workers will do
- How best to facilitate the transfer of knowledge and learning, particularly in relation to older and younger employees and between organisations
- What skills need to be retained for the future and what skills need to start being developed for the future
- What collaborations are needed to address issues such as the development of training, who needs to be part of these collaborations, and who should facilitate them
- What mechanisms will enable better collaboration between SMEs and also between SMEs and larger organisations
- What the impact of Industry 4.0 over the next ten years on the rolling stock sector will be, and what this means in terms of its workforce
- A lack of data in relation to monitoring and evaluation of inclusion and innovation across the sector.

There are also a number of opportunities including:

- To develop a narrative of what the industry wishes to become
- To develop workforce profiles containing inclusion and future technology skills
- To develop mechanisms that support greater collaboration and knowledge sharing across and beyond the sector to address critical issues, support practice and increase R&D
- To develop specific programs and support mechanisms to build capability in SMEs
- To leverage the strengths that already exist in organisations and the sector as whole
- To develop monitoring and evaluation in relation to the workforce so progress can be ascertained and planning more effectively undertaken.

The rolling stock organisations in Victoria are at a pivotal point in their development. The current context opens up the opportunity to revitalise the workforce and sector. As the sector is a sum of its parts, it is only by all of these parts working together that meaningful outcomes can be achieved. To become an innovative and inclusive sector, they will need to form alliances that are able to collaborate effectively for the longer term. This will not necessarily be a comfortable process for many, as it will mean they need to reconcile aspects of their past and form new identities. Ultimately, how successful they are will depend on whether organisations embrace change, how well they collaborate, and whether the mechanisms needed to support the sector as a whole are developed and properly resourced.

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Appendix 1: Working from the inside out: End user research methodology

The 'Working from the inside out' methodology was developed in 2006 to support development of a behaviour change program in a private company. It has since been used extensively to develop programs for local government, and is used by the team at Victoria University to develop decision making frameworks, and support practice and policy in areas such as climate change adaptation, strategic management of natural hazards, and an economic framework for green infrastructure. Working from the inside differs from many conventional research methods as it is not driven by the discovery of theory-driven ideas that are peer reviewed, but provides an evidence base through combining different forms of knowledge and integrating these into decision making systems as part of the process. Its key focus is on the needs and context of those making the decisions and how they will be using the research. To understand this, researchers need to think from 'inside' the end users' context.

Stages of end user research are illustrated as a series of tasks, and the process starts with ascertaining the end user need and working outwards through the different tasks (Figure 1A). The ultimate goal is the integration of the research into the end users' decision making context to enable uptake and use. A key aspect of this process is defining the boundaries in relation to the key area of research for the system, and the key drivers and influences, so they can be assessed.

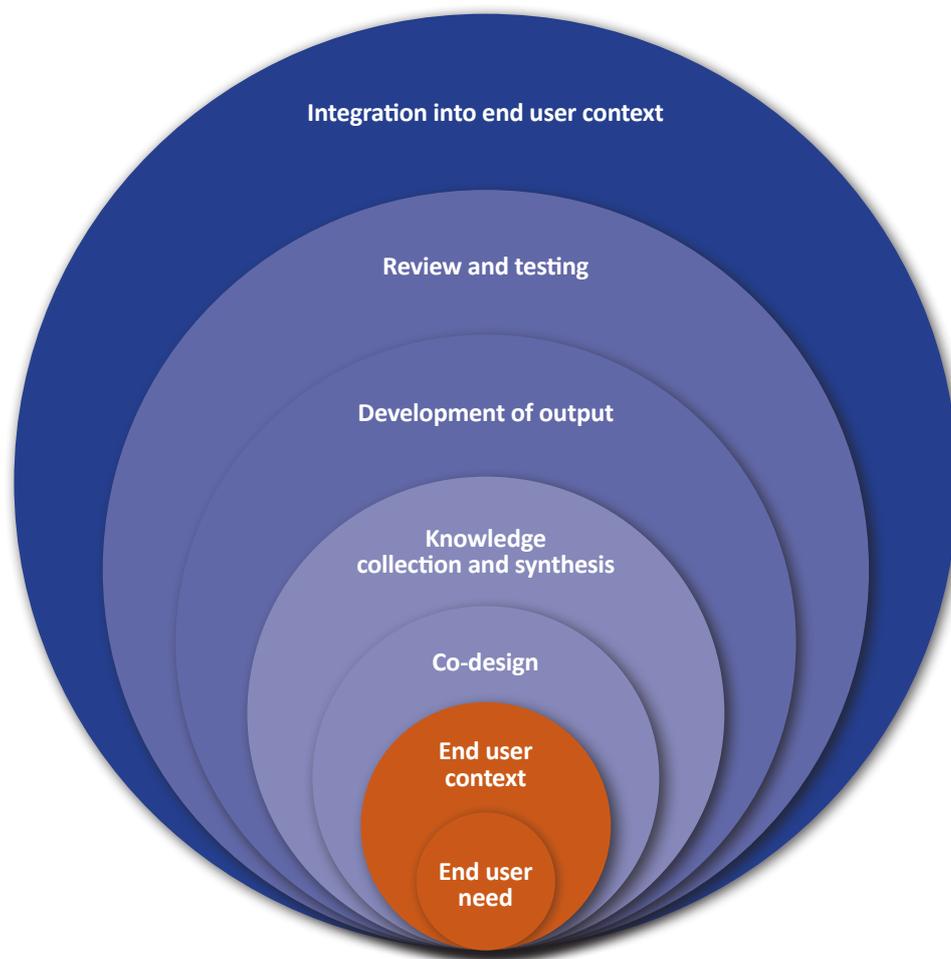


Figure 1A: Key tasks undertaken during the research process. (Source: Young, C. [July 2016]).

Appendix 2: Methodology for organisational assessment

This assessment was adapted from one used previously to assess diversity and inclusion in the emergency services. Sixty-three interviews were undertaken between the period of 1 October 2019–7 December 2019. These included thirty-five semi-structured interviews of half-an-hour to one hour with people nominated in three large organisations who currently participate in the Rolling Stock sector in Victoria and five interviews with an SME organisation. The interviews covered a variety of professional and operational departments and roles, so different areas and organisational levels were represented. The interviews were structured to gain insight into the following areas:

- Organisational/sector characteristics
- Values and motivations
- Understandings of inclusion and innovation
- Governance
- Communication
- Monitoring and evaluation
- Challenges
- Needs
- Opportunities
- Visions of the future.

Of the 63 interviewees:

- 71% were male and 29% were female
- 81% represented rail sector interests (trains and light rail) and 19% represented bus sector interests.

In relation to the age demographic, the largest group represented were the 50–60 year old demographic, and the smallest representation was the 60+ year old demographic (Figure 2A).

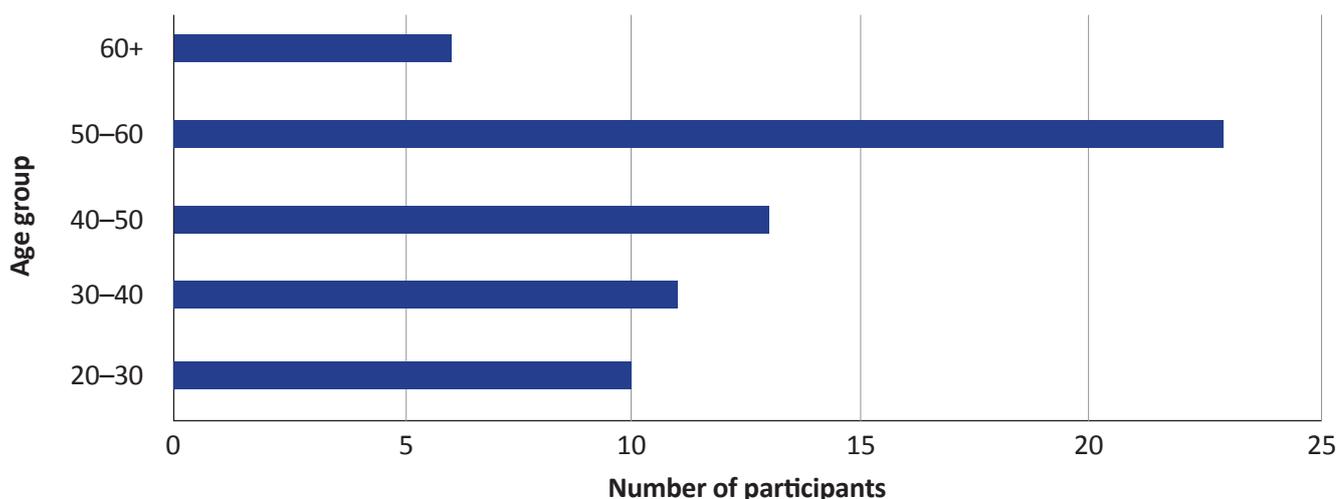


Figure 2A: Demographic composition of research participants

Seventy-six percent of participants worked for organisations who were directly involved in the rolling stock supply chain. 81% of these were large organisations and 19% were SMEs. The remaining 24% who did not work in supply chain organisations included those from peak bodies, government, educational providers, consultants and industry-related networks and bodies (Figure 2C).

In terms of their core functional areas represented within these organisations, 41% worked in technical and trades areas, and 30% in professional areas that included sales, HR, finance, service delivery, logistics, business owners, CEOs and managing directors. The remaining 29% worked in engineering (Figure 2B).

In relation to their roles within these organisations, 16% were executives, 39% were in management, and the remaining 45% were classified as general workforce working below executive and manager level (Figure 2C).

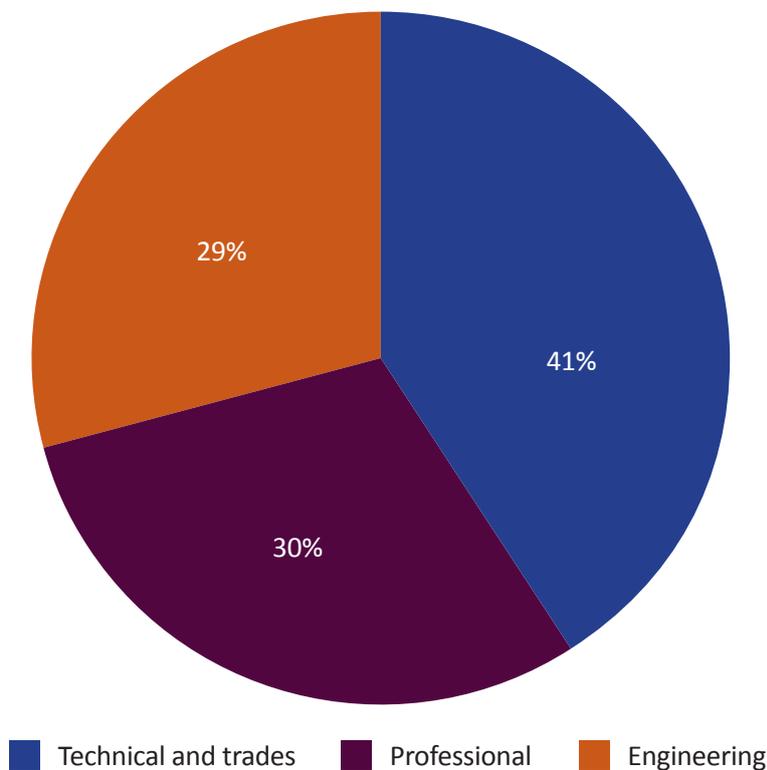


Figure 2B: Core functional areas represented by research participants

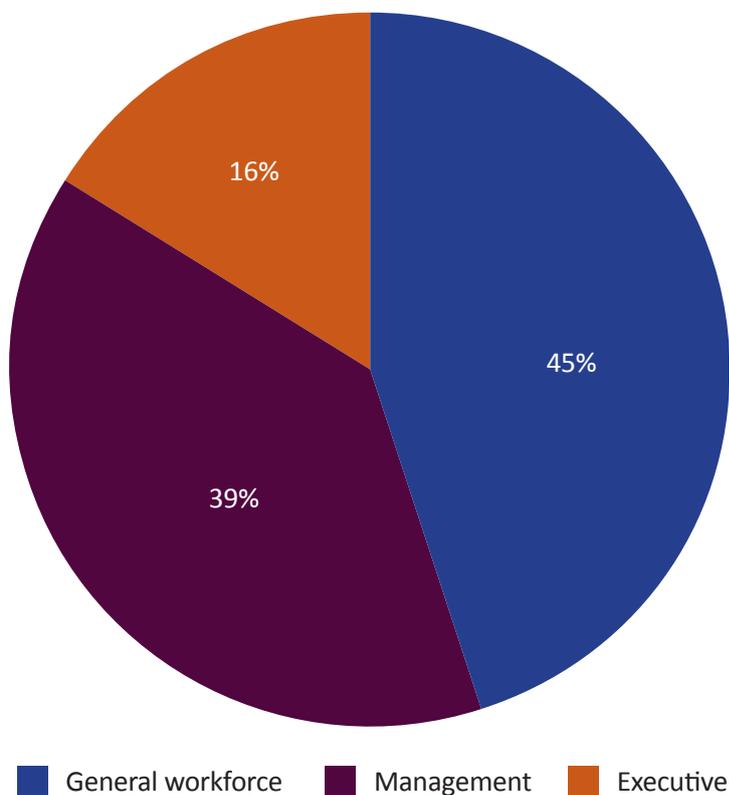


Figure 2C: The roles within the organisations represented by research participants

An additional 23 interviews were also conducted with stakeholders from across the sector to identify examples of best practice, and to collect additional data in relation to the above areas from an organisational and sectorial perspective. Observations were also collected from a workshop exploring the theme of retention of younger people run by RISSB in Queensland on 27 November 2019. Interviewees were from different levels of the organisations, and there was diversity of race, gender and age.

The interviews were recorded and transcribed using Otter software. Key themes and observations were extracted and synthesised from the records using a grounded theory approach. Data was also extracted and subject to basic statistical analysis to ascertain priorities.

The interviews were held under the guidelines of an ethical research plan within Victoria University. This plan carries the following provisos: that interview recordings and any transcripts made are kept confidential, that people and organisations are not identified via reported comments without their consent, and that all quotes are used with permission.

Data was also obtained to supplement the case study interviews and included:

1. Review of publicly available monitoring and evaluation of innovation and inclusion. Twenty-nine organisations currently part of the rolling stock supply chain in Victoria were assessed on their reporting methods. A simple statistical analysis was used to assess two categories for reporting: diversity and inclusion and innovation. The representation for the assessment was: large organisations (31%), medium (41%) and small (28%). The content was sourced through annual reports and sustainability reports (large organisations) and websites (medium and small).
2. A desktop review of programs currently being undertaken by organisations in the Victorian rolling stock sector.
3. A visual audit of websites (Appendix 4).

Appendix 3: Semi-structured interview questions

Age:

Gender:

Length of time with company:

Role/position:

How would you describe your organisation?

What do you think is most important for the organisation?

What is most important to you?

> What gets you out of bed in the morning?

How would you describe the environment you work in?

> Management/leadership/team

> Facilities

> Working environment

What communication is used internally in your organisation, and how is it used?

What do you think inclusion is?

What do you think innovation is?

Do you undertake any reporting in relation to innovation?

Do you have any policies, processes, programs that support either of these?

Who do you think is responsible for inclusion and innovation in your organisation?

What do you see as the challenges to the inclusion and innovation in your organisation?

What do you think is needed to support inclusion and innovation in your workplace?

If you were managing director for a year would you make any changes if so, what would they be?

Do you think diversity or innovation is of value to your business and if so, how?

Have you had any specific training that relates to inclusion and innovation?

How do you see the future in relation to what you do in 10 years, and what do you think is needed now to support this?

Appendix 4: Visual audit methodology

Fifty websites were audited that are currently part of the rolling stock supply chain in Victoria (Figure 4A). The images were initially assessed using a simple statistical analysis and divided into two primary categories:

- **Products** – Train, bus, tram, infrastructure, equipment components, parts etc.
- **People** – Employees (train, tram and bus drivers, tradespeople, technicians, engineers, project managers, administrators, financial clerks, sales workers, corporate executives etc.)

The images from the people category was then assessed using the following subcategories:

- **Diversity**
 - > Demographic (Under 18, 18–30 years, 30–50 years, 50+ years)
 - > Culture and ethnicity – Anglo-Saxon appearance, culturally diverse appearance and Aboriginal and Torres Strait Islander (ATSI), (ATSI images were only categorised if there was explicit reference to their origin).
 - > Gender (men and women)
- **Job type**
 - > Blue-collar workers (Trades and technical)
 - > White-collar workers (Engineering, technical and professional services).
- **Size of organisations using ABS categorisation**
 - > **Large** – employing 200 or more persons (51%)
 - > **Medium** – employing 20 to less than 200 persons (37%)
 - > **Small** – employing less than 20 persons (including non-employing organisations) (12%).

In relation to geographical location, 51 companies were located in Melbourne areas with the rest being located in regional Victoria. In terms of ownership, 20% of organisations had overseas ownership and 82% domestic.

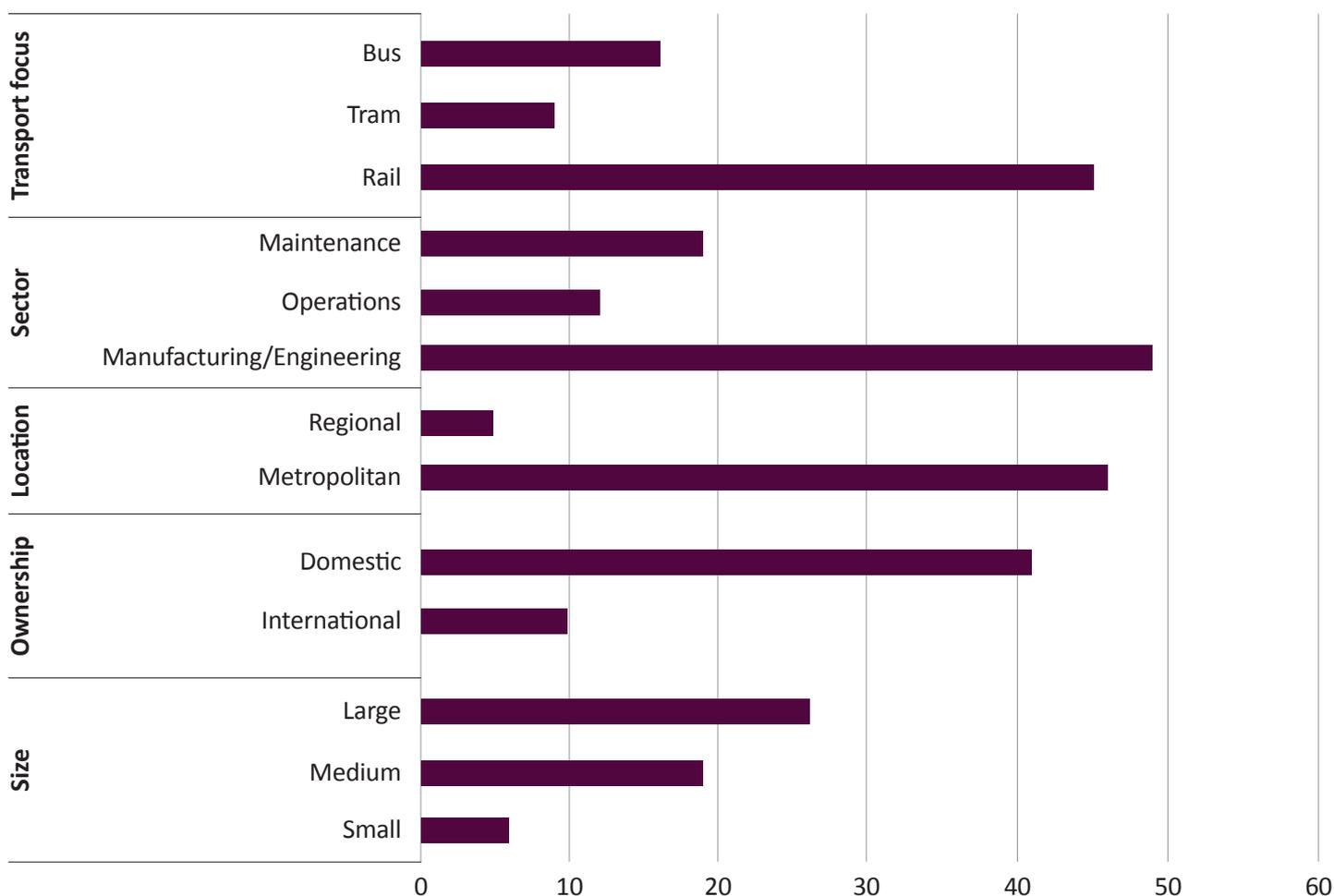


Figure 4A: Overview of the organisations whose websites were visually audited

Limitations

The websites represent a sample of the rolling stock supply chain in Victoria. Conducting an audit of an organisation through their website is constraining because an assessment is subjective and liable to unconscious bias. Images of individuals and groups were categorised by cultural, ethnical and occupational appearance but this methodology is not able to provide a completely accurate people profile.

Appendix 5: Industry highlights

Innovation

Alstom

An organisation-wide programme called 'I Nove You' encourages opportunities for innovation, through creativity, from Alstom employees worldwide. At the 12th edition of Alstom's Innovation Awards ceremony a new category called "Innovation to market" was launched and is part of the Alstom's strategic global plan (Alstom, 2019).

Downer Group

Downer EDI collaborated with CSIRO and the RMCRC to improve control battery technology and increase the lifespan of Downer's trainsets. Downer also collaborated with Deakin and RMCRC in the development of TrainDNA, a data analytics platform (and predictive maintenance technology), which uses machine learning and can predict the remaining lifespan of a train's components (Prime Creative Media, 2019).

Keolis Downer

In 2017, Keolis Downer piloted Victoria's first driverless shuttle bus as a trial around La Trobe University in Bundoora. The project was funded by Victorian Government Smarter Journeys Program (Keolis Downer, 2019).

Transdev

Transdev have partnered with the Victorian Government to trial the first electric bus in Victoria. Volgren in Dandenong undertook construction of the body and body fit out for the bus (Cotter, 2019).

Knorr-Bremse

Air-conditioning solutions are tailored to local conditions and requirements (Knorr-Bremse, n.d.). They are also part of a global initiative by Knorr-Bremse subsidiary Merak (based in Spain), whose aim is to improve environmental performance of air-conditioning.

CDC Victoria

In 2017/18, as part of their innovation investment and onboard safety plans, CDC Victoria launched their Passenger Voice Announcement System (PVA). The PVA provides a welcome message when doors are opened and alerts customers to 'touch on' with their Myki cards. CDC Victoria are the largest bus company in Australia to have adopted a vision-based collision avoidance system called Mobileye, which alerts drivers to potential accidents and cuts reaction times (CDC Victoria, 2019).

Air Radiators

Air Radiators new patented Alu Fin technology (heat transfer product) is an example of the organisation's investment in innovative product development. The organisation received the Inaugural Leader in Innovative Product Development and Commercialisation Award at the 2019 Victorian Government Manufacturing Hall of Fame Gala (Air Radiators, 2019).

Cummins

Cummins uses selective catalytic reduction (SCR) technology to achieve four-cylinder ISF emissions compliance (Cummins, n.d.)

Bombardier

Bombardier Australia received the High Growth Sector Transport Technologies' Award at the Victorian Manufacturing Hall of Fame Awards in Australia 2018. The award recognises outstanding achievements of local businesses in manufacturing and innovation (Bombardier, 2019).

Bolwell

Employs light scanning technology for composites to enable all kinds of parts to be reverse engineered (Bolwell, 2019).

Diversity and inclusion highlights

Transdev

Transdev were awarded the 2019 Workforce Diversity Award at the Australasian Rail Industry Awards, and provides numerous programs that include flexible working, gender neutral parental leave, a Women in Leadership mentoring program, and Domestic and Family Violence Support packages for employees, and is an inclusive place to work (Transdev, 2019a). They also have developed the Journey Makers Program, which is used to support a suite of programs related to increasing diversity and inclusion in their organisation. Transdev's Graduate Program is listed in the AFR's Top 100 Graduate Employers in Australia 2019.

Downer Group

Downer's Innovate Reconciliation Action Plan (RAP) for 2019–2021 reaffirms their commitment to the reconciliation process and builds on the Reflect RAP that we introduced in 2016. This provides the framework for the development of initiatives to improve and increase Aboriginal and Torres Strait Islander employment outcomes (Downer, n.d.). They have three foci for their diversity: gender diversity, generational diversity and cultural diversity. Their generational diversity focuses on workplace flexibility to 'allow older employees to best manage their changing work-life requirements whilst allowing skills and experience to be retained within the business' (Downer, n.d.). Their Graduate Program is listed in the AFR's Top 100 Graduate Employers in Australia in 2019.

Aurecon

Aurecon partners with Engineering Aid Australia, University of Sydney, and Curtin University, to enable the Indigenous Australian Engineering School (IAES) programme. Due largely to the success of the IAES programme, they have approximately 50 Aboriginal and Torres Strait Islander students studying engineering at universities across Australia. (Aurecon, n.d.). Aurecon's Graduate Program is listed in the AFR's Top 100 Graduate Employers in Australia 2019.

V/Line

V/Line received accreditation to be part of Work 180 and are working to achieve gender parity across their organisation. They also have a Culture Council consisting of an Executive Leadership Team and Board Champions in each diversity area who are responsible for sponsoring plans (State of Victoria, 2019).

Ventura Buses

Ventura Buses are running a recruitment campaign focussing on the recruitment of an ethnically diverse and female workforce (Ventura Buses, 2017).

Metropolitan Trains Melbourne (MTM)

MTM have developed the following networks to promote diversity including: The Pride Network, The Women's Network and The Indigenous Inclusion Network. They also have an extensive mentorship program that uses the mentorship circle methodology designed to support all employees and a specific mentorship program for women (Metro Trains Melbourne, 2019). They also champion pay equity, and their CEO is a pay equity ambassador with the Commonwealth Government's Workplace Gender Equality Agency (WGEA).

UGL Rail

UGL has partnered with Autism Spectrum Australia to work towards recruiting a neurodiverse workforce. To prepare employees, specialist training is provided by Autism Spectrum Australia, as well as upskilling and awareness training, and ongoing mentoring to various employee cohorts. They have also partnered with the Clontarf Foundation to support Clontarf activities and encourage participation in their workforce of young Indigenous men (UGL, n.d.). Initiatives for women in UGL include: Xplore for Success, the Emerging Female Leaders Program and accreditation with Work180 (UGL, n.d.). Their Graduate Program is listed in the AFR's Top 100 Graduate Employers in Australia 2019.

Yarra Trams

Yarra Trams Community Partnerships Program provides \$1million of free advertising on trams every year to community organisations to promote diversity and inclusion in Melbourne. Four organisations design advertising displayed on trams for three months of the year (Yarra Trams, n.d.).

Alstom

Alstom have several diversity and inclusion programs, such as ‘Valuing Diversity and Practicing Inclusion’, the purpose of which is to embed diversity and inclusion practices in the workplace. Their Global Diversity and Inclusion Framework uses the rubric “Tell–Train–Track”, while two governing bodies – the Diversity and Inclusion Steering Committee and Diversity and Inclusion Champions Network – develop strategy and promote, facilitate and support the implementation of the corporate diversity initiatives (Alstom, 2018).

Industry-wide initiatives

Australasian Railway Association (ARA)

The ARA Future Leaders Program is a six-month program that brings together emerging leaders from throughout the Australasian rail industry. Young Rail Professional Forums recognise and support young professionals and encourage participation, networking, and knowledge exchange across the industry (ARA, n.d.-c). They also have established a Young Leaders Advisory Board (Y-LAB) 2019, which brings together eight individuals from across the industry to ‘harness the ideas of young talent and consider issues, projects and priorities on the ARA Board agenda’ (ARA, n.d.-b).

Rail Track Association Australia (RTAA)

Rail Track Association Australia (RTAA) provides the “Four Corners” knowledge-sharing event to foster collaboration between railways, suppliers of rail infrastructure and those providing services in the fields of design, consultancy or contracting. It brings together specialists concerned with the design, construction, fabrication, operation and maintenance of railway and associated infrastructure. The RTAA also established an annual diversity award to recognise members ‘who meet standards of excellence in the promotion of diverse and inclusive workforces within their organisation’ (RTAA, n.d.).

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The Women in Transport program provides a package of 15 initiatives to encourage more women to enter and stay in the transport sector. Its aim is to increase the number of women working in transport from 16% to 25% by 2020, and senior role representation to 50% by 2020. Initiatives (Department of Transport, 2019) include:

- Scholarships
- Mentoring programs
- Training for the Future program
- Developing a transport diversity and inclusion strategy
- Public events and forums.

Rail Industry Safety and Standards Board (RISSB)

RISSB Horizons Program supports the next generation of technical professionals and innovators through the provision of workshops for rail professionals under 35 in the rail sector (RISSB, 2019).

Level Crossing Removal Authority

The Training for the Future programs were developed in 2017. The initiative is led by the Level Crossing Removal Authority (LXRA), with input from Metro Trains Melbourne, Public Transport Victoria, V/Line, Transport for Victoria, Rail Projects Victoria, VicTrack and Yarra Trams. It comprises of three programs – GROW, GEN44 and GEN8. These programs support people from disadvantaged backgrounds including asylum seekers, refugees and Aboriginal and Torres Strait Islander people to obtain the skills and qualifications they need to gain employment in the Victorian rail industry (Australian Industry Standards, 2018).

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