

Rail Industry Stakeholder Survey October 2016

A survey by the Australasian Centre for Rail Innovation





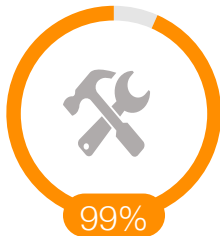
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Executive Summary

Seldom has the Australian rail sector been the subject of a comprehensive stakeholder survey. This report by the Australasian Centre for Rail Innovation (ACRI) summarises the views of rail industry participants on the challenges, opportunities and future strategic directions for the industry.



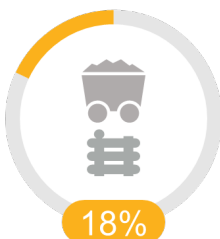
Operational Efficiency

99% of respondents believe that improving operational efficiency is critical or important. Improving strategic planning and asset management are nominated as the areas where most improvement could be made.



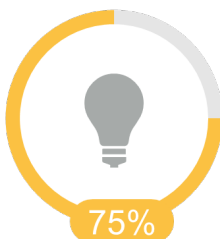
Regulation and pricing

56% of respondents said that economic regulation of the industry needs improving. The lack of consistency in regulatory process across jurisdictions, the need for rail corridor preservation and reform of road pricing to put rail on a level playing field are identified as the most important issues.



Industry structure

Only 18% of respondents think the current industry structure is “about right”. Almost 60% hold the view that the sector would benefit from greater vertical integration. Views on government operation of railways are mixed.



Technological change

Just over three quarters of respondents think technological change will be influential in the rail industry over the next 20 years with automated control and operations nominated as having the biggest impact.



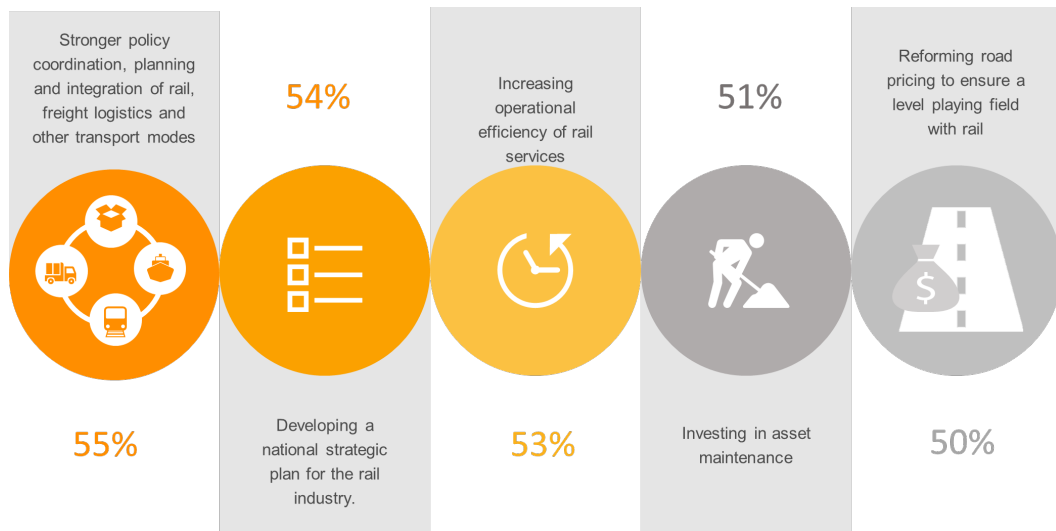
Industry research

84% of respondents told us that the industry needs a stronger knowledge base. Benchmarking performance and understanding customer needs were the areas nominated as priorities.

Directions for change

The strategic priority identified as most important for the rail industry is the need for stronger policy coordination, planning and integration of rail, freight and other transport modes. It was nominated by 55% of respondents as one of their top eight strategic priorities.

The five most important strategic priorities identified by the respondents are:



Note: Percentages indicate the proportion of respondents that nominated each option as one of their top eight priorities

Results by respondent group

Responses were also examined to assess whether there was any variation across respondent sub-groups in terms of views on key issues confronting the industry and views about strategic priorities for the future.

The three groups examined were;

- Senior Executives, comprising 24% of the sample
- Middle Managers, comprising 32% of the sample
- Others, comprising 44% of the sample

In the majority of topics examined revealed only minor differences between the three groups, as set out in Table 1.

Table 1 Summary of findings

Category	Consistency of views between respondent groups
Impediments to industry growth	<i>No significant differences</i> <ul style="list-style-type: none"> • General agreement on most important factors impeding industry growth
The need for greater efficiency	<i>No significant differences</i> <ul style="list-style-type: none"> • Very high levels of support for better integration of rail with other transport modes observed across all groups
Effectiveness of regulation	<i>Some observed differences</i> <ul style="list-style-type: none"> • Senior Executives and Middle Managers appear to have more confidence in the effectiveness of economic regulation than other respondents. • Other respondents (below Middle Managers) had difficulty formulating a view on effectiveness of regulation and most selected 'don't know'. • Agreement across groups regarding key areas for improving rail industry regulation.
The importance of technological change	<i>Some observed differences</i> <ul style="list-style-type: none"> • All groups expect automated control and operations to have the largest impact. • Some variation in the expected level of impact of other technologies.
Strategic priorities	<i>Some observed differences</i> <ul style="list-style-type: none"> • Differences in the ranking of strategic priorities between groups • However, there is broad agreement on priorities that should be ranked in the top 10.

Note: The results in this table represent Synergies' observations of the data. We have not performed statistical tests on the data to test for differences between the sub groups.

About this survey

In August 2016 ACRI conducted an on line survey of people working in the Australian rail sector. The purpose of the survey was to gather stakeholder views and perceptions about commercial, regulatory and public policy issues confronting the rail industry in Australia.

For the purposes of this survey, the rail industry includes “above” and “below” rail infrastructure and operations; bulk freight, heavy haul and intermodal customers; consultants; regulators and government policy makers.

ACRI intends to repeat the survey in future years so as to build a picture of how issues and perceptions change over time.

The survey will assist in promoting dialogue about challenges, opportunities and future strategic directions for the industry and to help the industry identify and promote its key priorities.

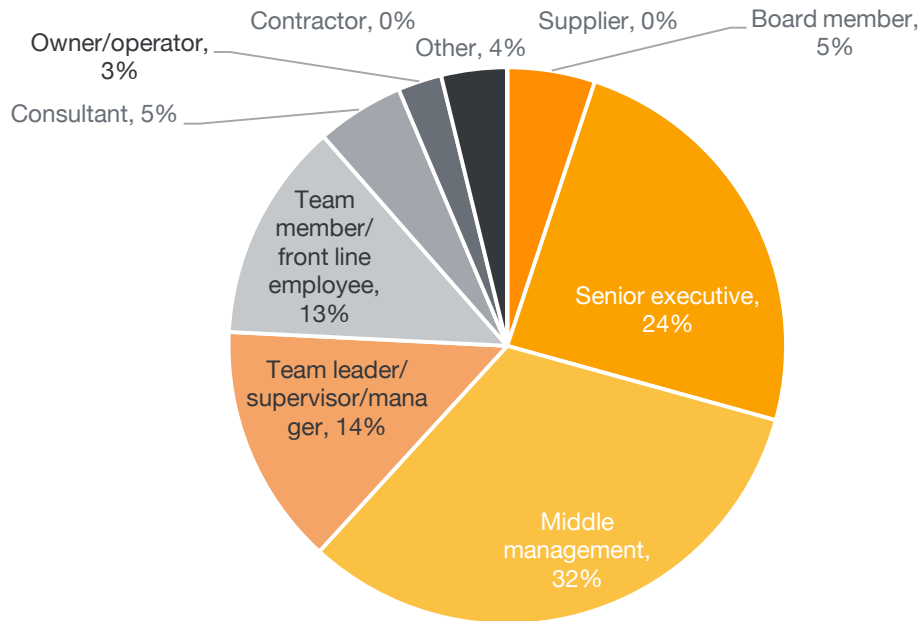
The results presented in this report are not intended to meet a statistical standard and may be affected by statistical biases. They are intended to provide general insights into the views of industry stakeholders and identify strategic priorities for the industry.

Who completed the survey

The online survey was sent to rail industry representatives on ACRI’s customer database and recipients were invited to forward the survey to their colleagues. A total of 157 industry participants were surveyed.

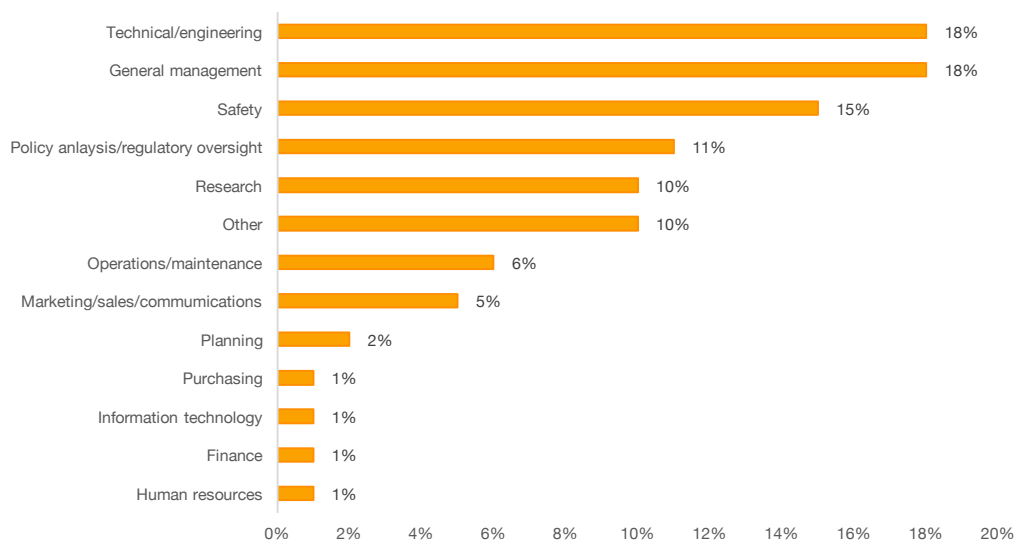
Just over half of respondents (56%) were industry decision makers, holding positions at the middle management or senior executive level. In addition, two thirds of respondents had ten or more years rail industry experience. The collective experience of respondents demonstrates their deep understanding of the rail industry.

Figure 1 Respondent's position



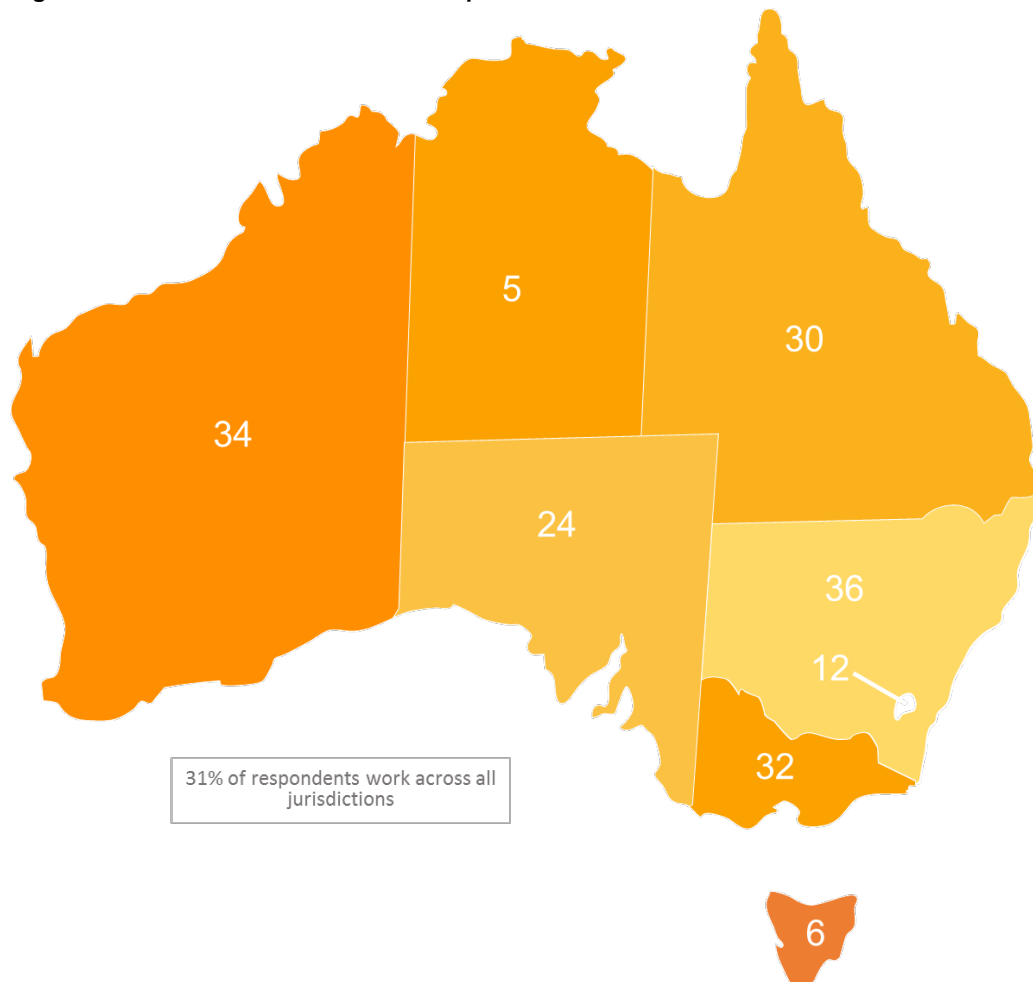
A cross section of occupations within the rail industry is represented in the respondent sample. General management and technical or engineering roles were the most common occupations, both accounting for 18% of respondents.

Figure 2 Occupation of respondents



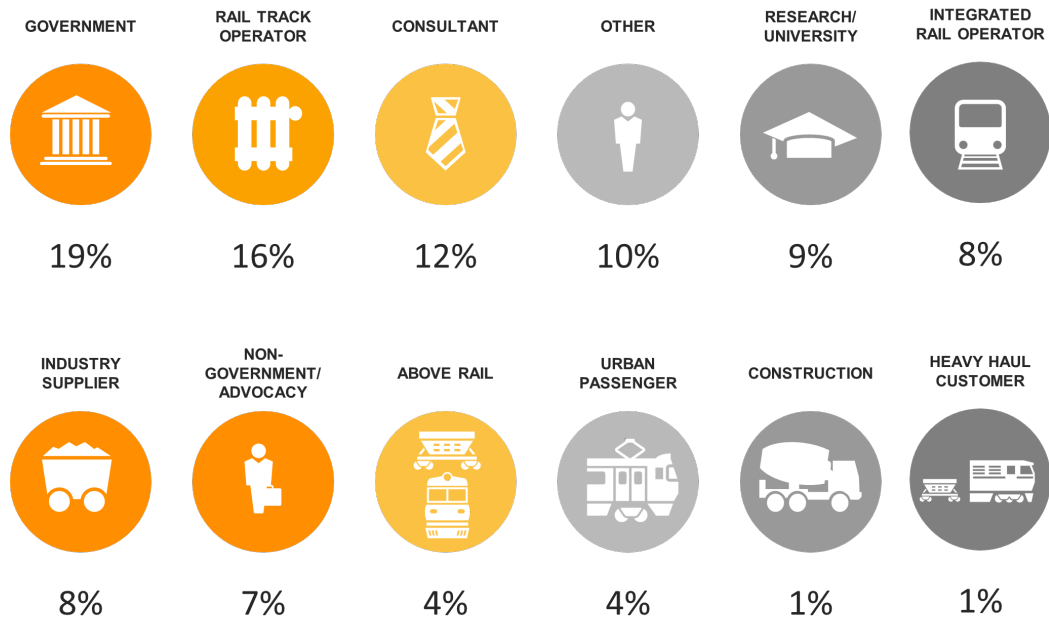
All jurisdictions were represented. The majority of respondents work in more than one jurisdiction, with almost 80% of respondents working in multiple jurisdictions and 31% working across all jurisdictions.

Figure 3 Place of work – number of respondents



A cross section of industry stakeholders was represented in the respondent sample, including government, regulators, commercial rail customers and researchers. The majority of respondents had a high level of experience in the rail industry, with 65% of respondents working in the rail industry or as a commercial customer of rail services for ten or more years.

Figure 4 Stakeholder category of participants



The big issues

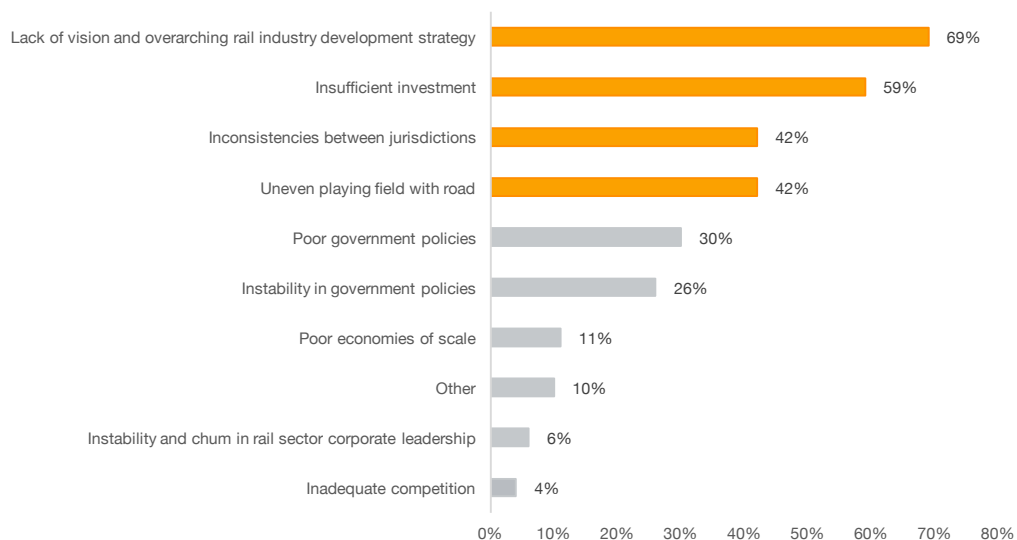
This section examines the key issues emerging from the survey, bringing the results together under the themes of growth impediments, efficiency, regulation, technology and industry structure.

Impediments to industry growth

Lack of an overarching vision and strategy is seen as the main impediment

Survey respondents identified the lack of a vision and overarching strategy for the industry as the most important factor that has held back the growth of the rail industry in Australia over the past 20 years. When asked to select the three main hindrances to growth, 69% of respondents identified this factor. Insufficient investment was also identified as a key hindrance, being nominated by 59% of respondents. An uneven playing field with road and inconsistencies between jurisdictions were both nominated by 42% of respondents.

Figure 5 Factors holding back rail industry growth



Note: Percentages indicate the proportion of respondents that selected a factor as one of their top three priorities

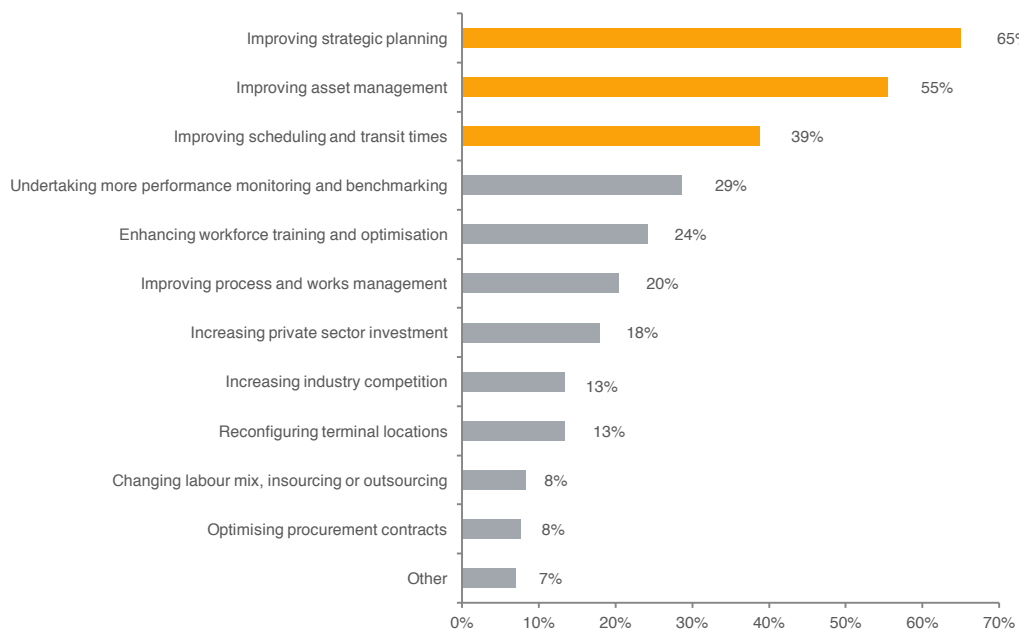
The need for greater efficiency

Improving the operational efficiency of the rail sector is seen as critical to its ongoing success

Almost all (99%) of respondents believe that improving operational efficiency is either critical (70%) or important (29%) for the success of the sector.

Figure 6 presents a breakdown of the factors people thought were priorities for improving efficiency.

Figure 6 Participant's views on priorities for improving efficiency



Note: Percentages indicate the proportion of respondents that selected an item as one of their top three priorities

Greater efficiency through improving strategic planning

Improved strategic planning was identified by 65% of respondents as one of their top three priorities to improve efficiency. In a separate section of the survey, the need for an effective national strategic plan for the rail industry was strongly supported 54% of respondents.

Improving asset management

Improving asset management was the second highest priority, identified by 55% of respondents as one of their top three priorities.

Improving scheduling and transit times

39% of respondents nominated improvement in scheduling and transit times as one of their top three priorities. In another section of the survey, almost 80% of respondents agreed that transit times need to be improved.

Better regulation

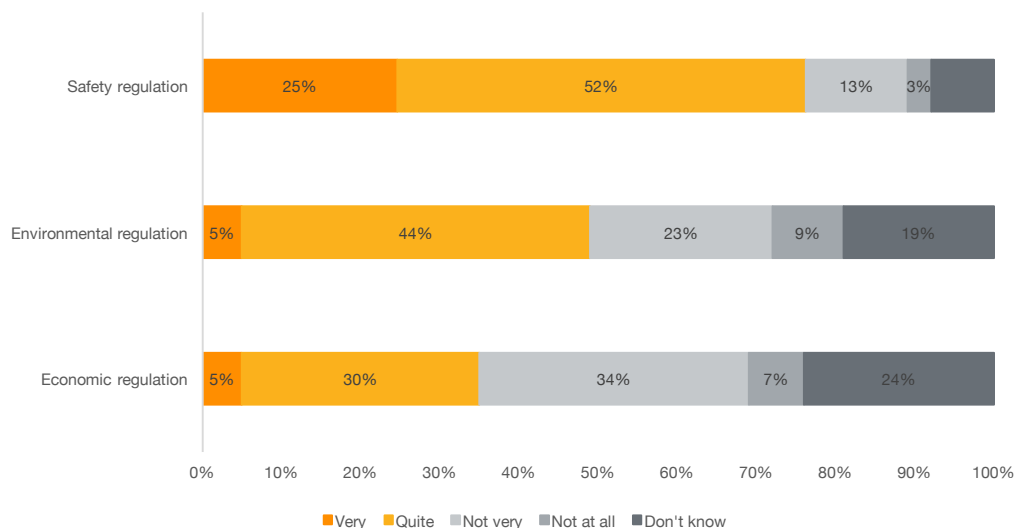
Economic regulation requires improvement

There was some dissatisfaction with the effectiveness of economic regulation in the rail industry. In aggregate, only 35% of respondents said that economic regulation of the rail industry was very or quite effective. Examining the results by respondents' position revealed senior executives and middle managers had more confidence in the effectiveness of economic regulation than other respondents; 42% of senior executives and 43% of middle managers responded that economic regulation was very or quite effective, compared to 25% of remaining respondents.

Environmental and safety regulation were viewed more favourably

Environmental regulation was thought to be very or quite effective by 49% of respondents and safety regulation was thought to be very or quite effective by 77% of respondents. Comparing responses by the respondent's position suggested there was slightly more confidence in the effectiveness of safety regulation among senior executives and middle managers than among other respondents. 79% of senior executives and 80% of middle managers responded that safety regulation was very or quite effective, compared to 73% of other respondents. The three groups were closely aligned in their assessment of the effectiveness of environmental regulation.

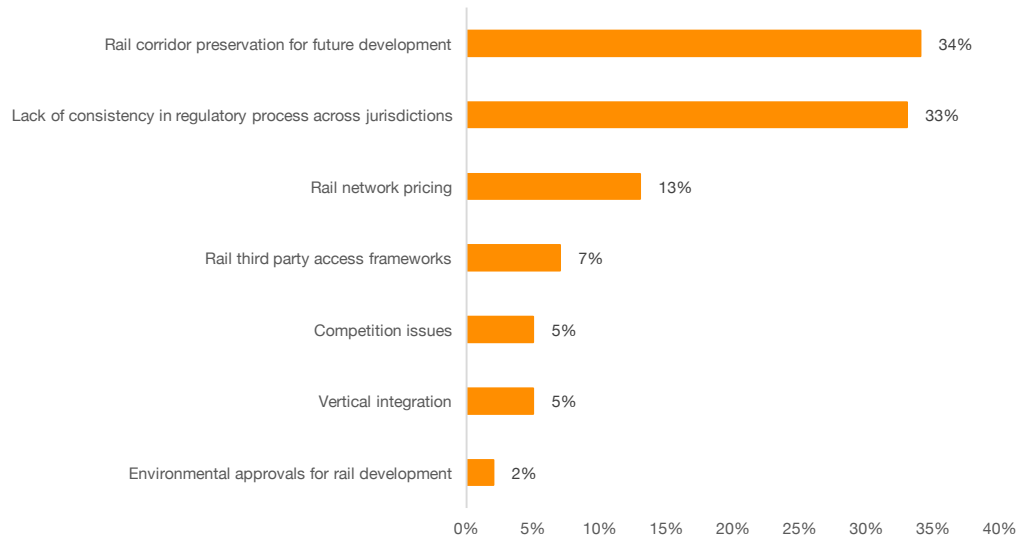
Figure 7 Respondent's views on effectiveness of rail industry regulation



Rail corridor preservation and consistency across jurisdictions are the most important regulatory issues

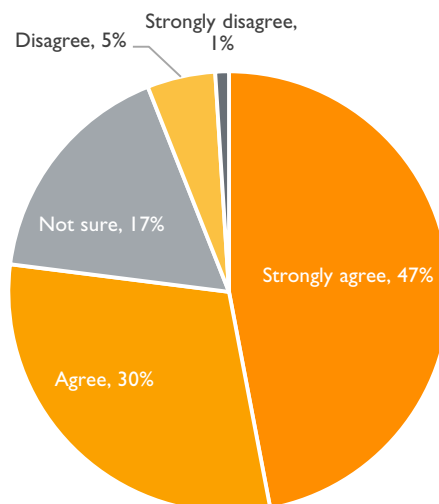
The key areas for improvement in regulation of the rail industry were identified as rail corridor preservation for future development and addressing inconsistencies in regulatory process across jurisdictions (Figure 8). Out of seven regulatory issues presented to respondents, these were identified as the most important issues (34% and 33% of respondents respectively).

Figure 8 Most important rail industry regulation issues



There is broad agreement on the need for road pricing reform

Respondents identified reform of road pricing as a key issue for economic regulation. The survey results show that 47% of respondents strongly agree that road pricing needs reforming to ensure a level playing field with rail. In total, 77% of respondents agree or strongly agree with the sentiment and only 5% of respondents disagree or strongly disagree.



The importance of technological change

Technological change is expected to be very influential

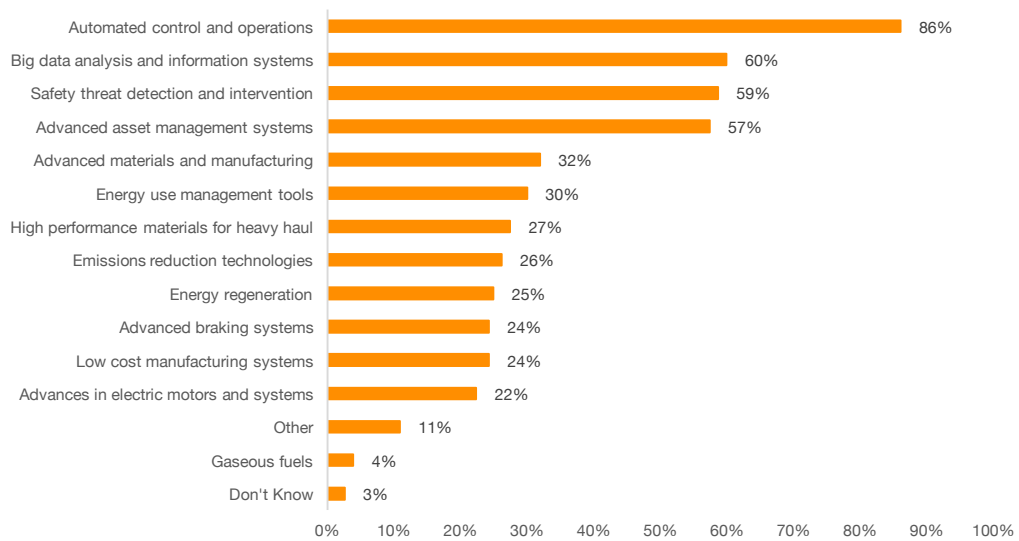
The rapid pace of technological change is having an impact on all industries and the rail industry is no exception. Just over three quarters of respondents were of the view that technological change will be very influential for the rail industry over the next 20 years. Technology can be used to improve operational efficiency, safety and reduce costs. However, with rail as with many industries, the choice of which technology best meets the industry's requirements is important.

Automated control and operations is expected to have a large impact

Among the types of technology that might have an impact on the industry, automated control and operations was a standout. It was identified by 86% of respondents as one of the top 5 technologies impacting the industry. Other key technologies expected to impact the rail industry are:



Figure 9 Technologies expected to have the greatest impact on rail industry

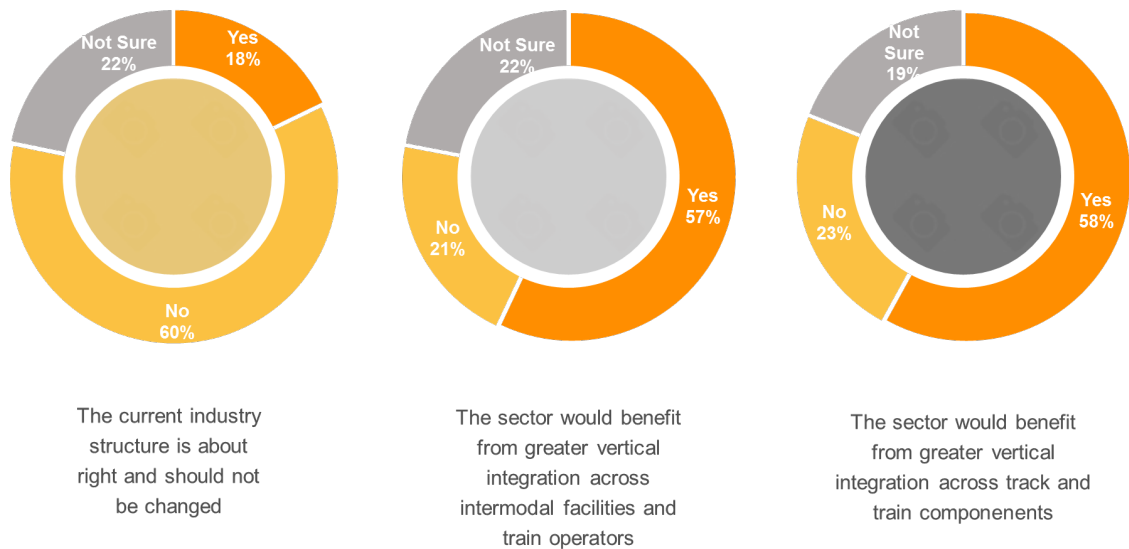


A desire for structural reform

The sector would benefit from greater vertical integration

Of the 157 survey respondents, only 18% indicated they think the current industry structure is about right. The majority of respondents supported greater vertical integration to promote efficiencies. Vertical integration across track and train components was supported by 58% of respondents while vertical integration across intermodal facilities and train operations was supported by 57% of respondents.

Figure 10 Respondent's views on industry structure

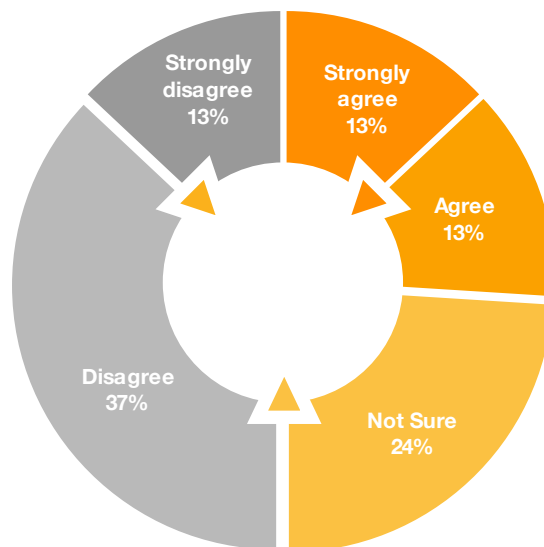


Government operation of railways is contentious

Government operation or management of railways was one of the more divisive areas explored in the survey. When asked to indicate the level of agreement or disagreement with the statement “Government should not operate or manage railways”, 50% of respondents disagreed or strongly disagreed. Around one quarter thought the opposite – that is, agreed or strongly agreed that governments should not be involved in operations or management. One quarter were not sure.

Respondents working for an integrated rail operator indicated the highest level of disagreement (75% disagreed or strongly disagreed). Interestingly, government employees indicated a very high level of agreement with the proposition that government should not be involved (of 30 respondents 29 agreed or strongly agreed).

Figure 11 Response to the statement that governments should not operate or manage railways

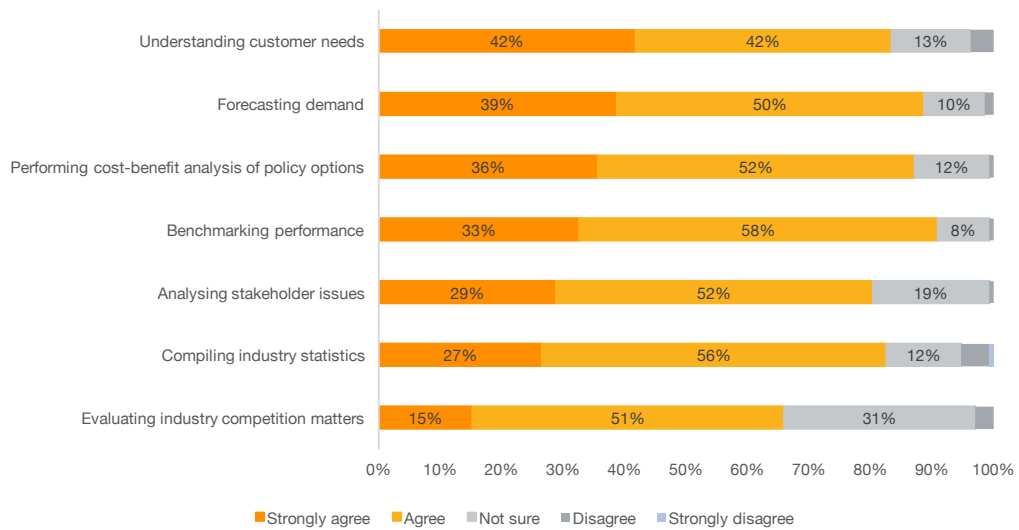


Building a stronger knowledge base

There is support for increasing industry research, particularly into benchmarking performance

There is broad support for increased industry analysis and economic and policy research, with 84% of respondents indicating the industry needs a stronger knowledge base (Figure 12). Benchmarking performance was identified as one of the most beneficial research areas, supported by 91% of respondents. Forecasting demand and performing cost-benefit analysis of policy options were other key areas identified.

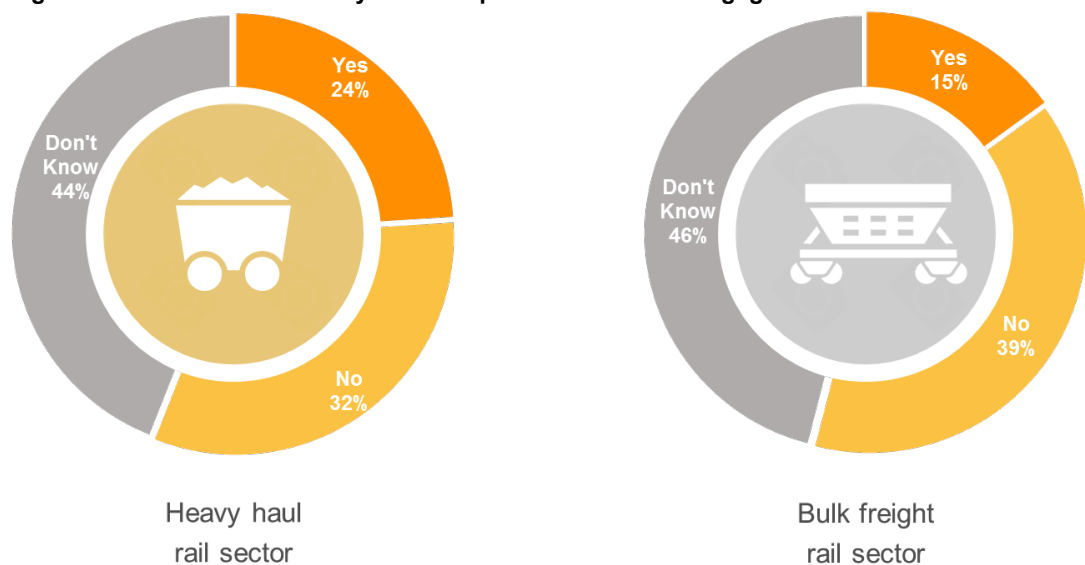
Figure 12 Priority research areas



Understanding customer preferences

About one third of respondents said that the industry is not adequately engaging with its customers. About 45% did not know whether best practice engagement strategies are being used. These results suggest that there is scope for further work in this area.

Figure 13 Does the rail industry use best practice customer engagement



Strategic priorities

The top five priorities identified by respondents are summarised below:



While there are some differences in views between senior executives, middle managers and other respondents with regard to the relative level of importance given to each priority, there was broad agreement between these respondent groups about the top 10 priorities for the industry.

Better integration of rail with other transport modes

The highest priority identified by survey participants was stronger policy coordination, planning and integration of rail, freight logistics and other transport modes. Better integration of rail with other transport modes is clearly a priority for the rail industry and was nominated by 55% of respondents as one of their top eight strategic priorities for the rail sector.

Developing a national strategic plan

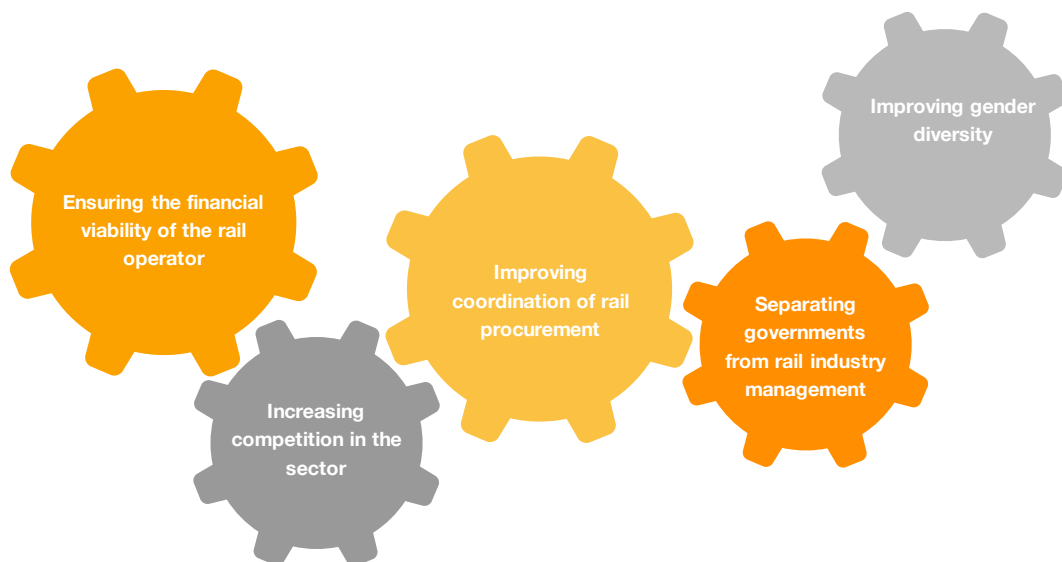
Developing a national strategic plan for the rail industry was a close second in the list of key strategic priorities identified by respondents. Given that respondents also identified the lack of an overarching development strategy as the top hindrance to the growth of the industry over the past 20 years, there is clearly a demand for greater strategic planning that encompasses all jurisdictions.

Increasing operational efficiency

The third highest ranked strategic priority was increasing the operational efficiency of rail services. Respondents identified improving strategic planning, improving asset management and improving scheduling and transit times as the top three ways in which this may be achieved.

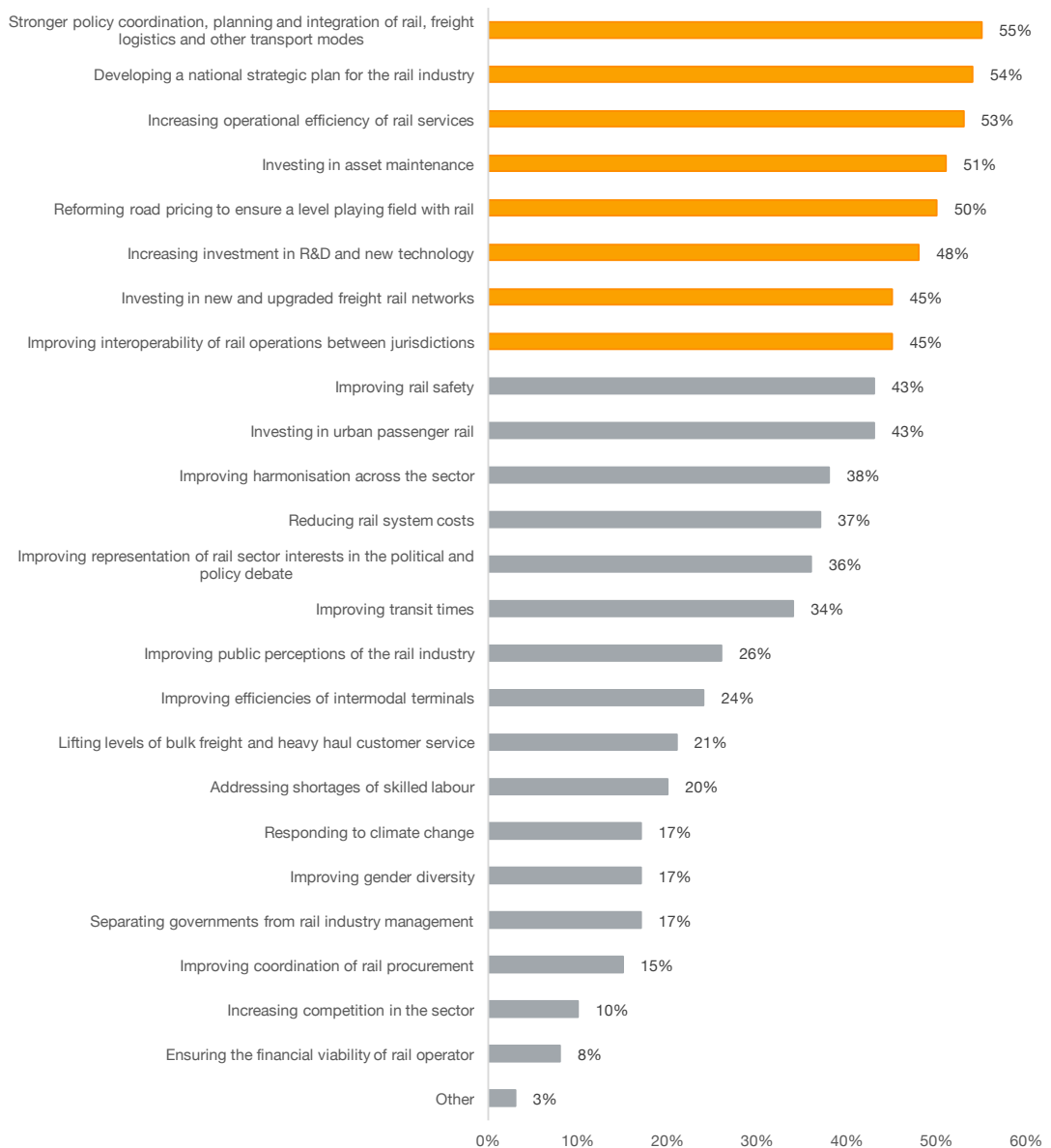
Lowest ranked priorities

The lowest ranked strategic priorities are:



These may be areas where the rail sector is viewed as already performing well or they may not be considered critical to the success of the industry.

Figure 14 Strategic priorities for the next decade



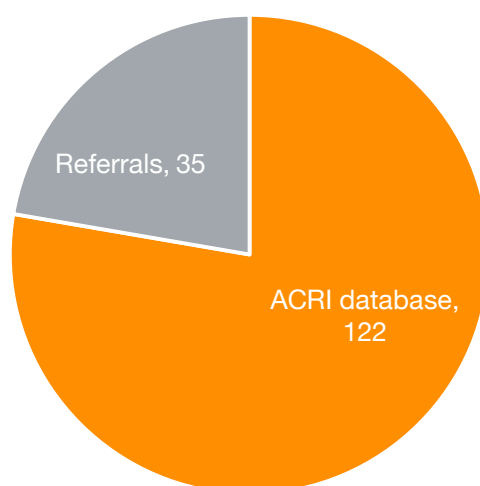
Note: Percentages indicate the proportion of respondents that nominated each option as one of their top eight priorities. For example, 55% of respondents rated the development of a national rail plan in their top 8 priorities.

A. Additional survey details

Respondent demographics

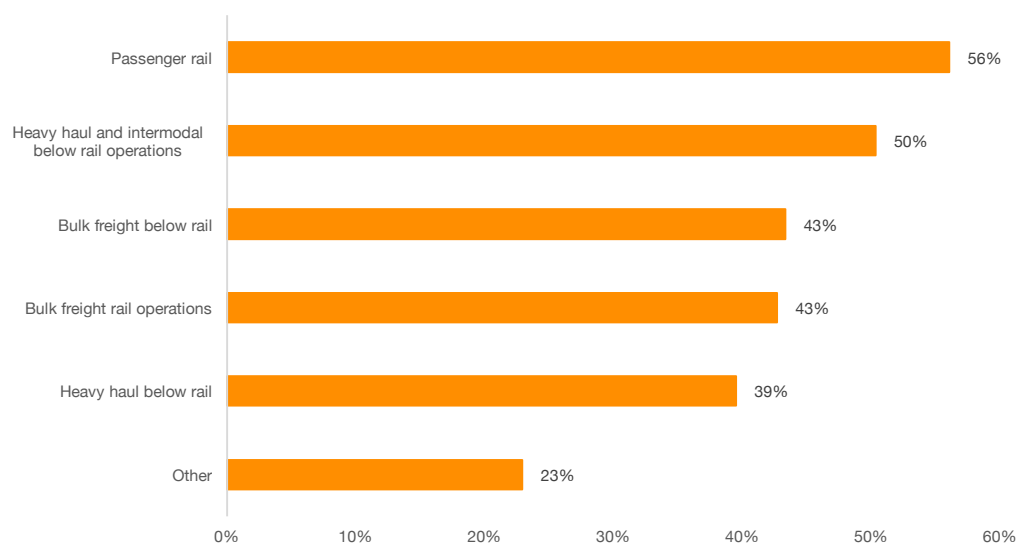
Figure 15 Split of respondents between ACRI database and referrals

Note: 26.1% of those on the ACRI contact database responded.



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Figure 16 Industry sector of respondents



Note: 35 respondents worked across all five listed industries

Figure 17 Respondent's length of experience in rail industry

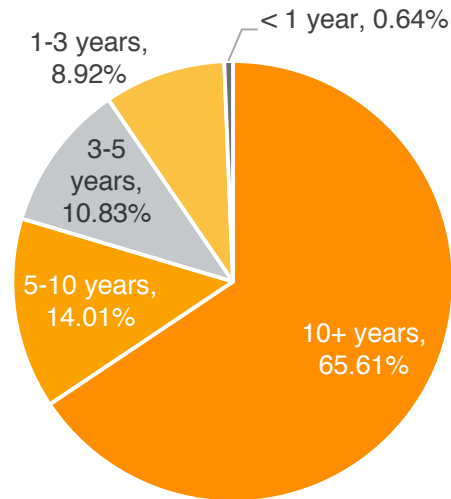


Figure 18 Respondent's stakeholder category

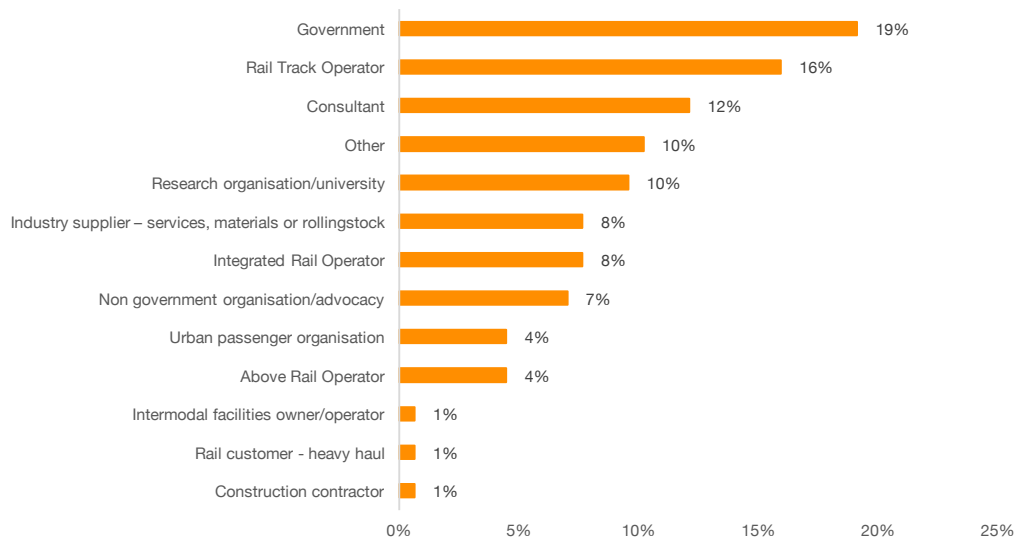


Figure 19 Respondent's organisation size

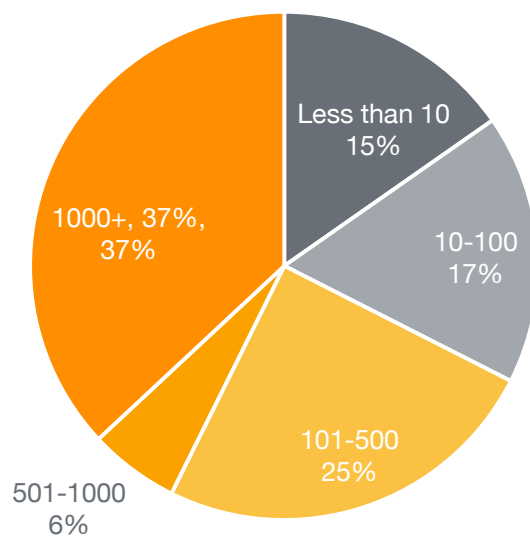
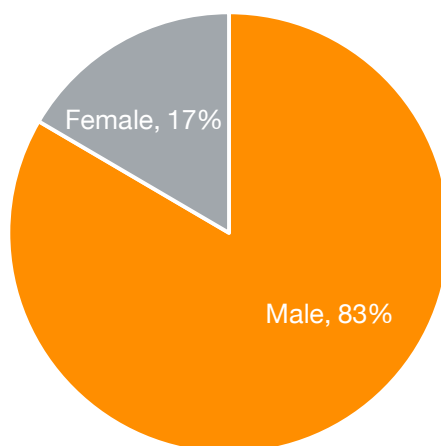


Figure 20 Respondent's gender



Strategic priorities for the rail industry

Figure 21 Respondents views on efficiency of the rail industry

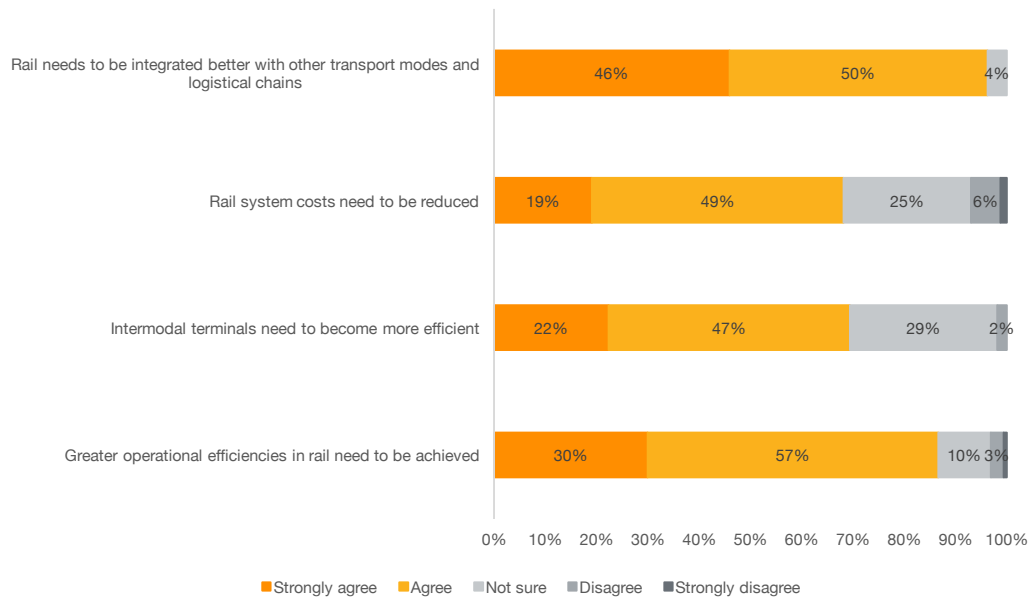


Figure 22 Respondents views on economic regulation of the rail industry

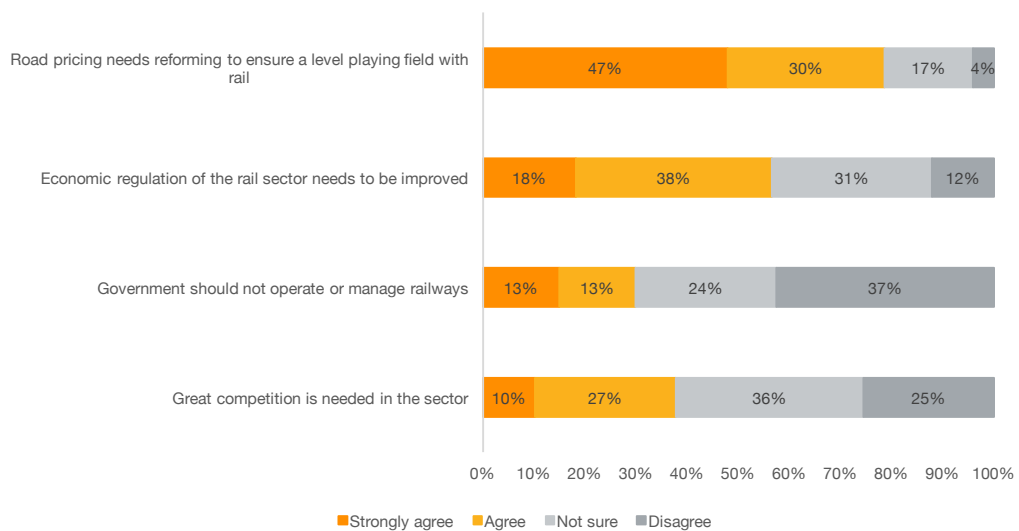


Figure 23 Respondents views on national planning

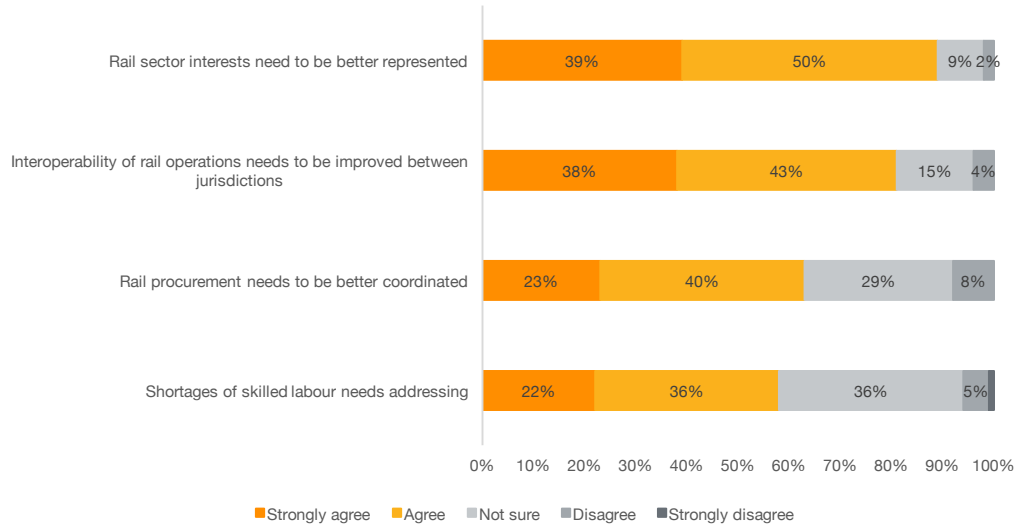


Figure 24 Respondents views on investment

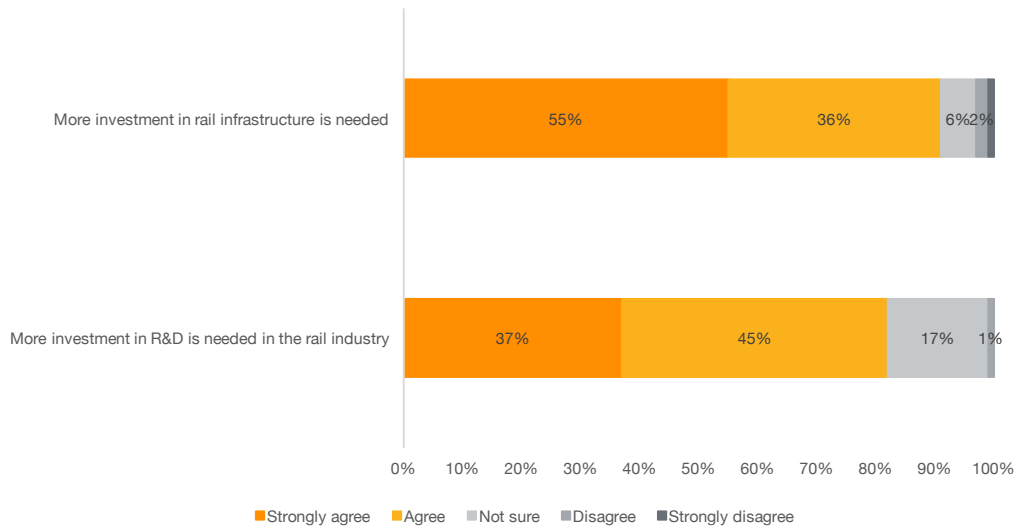


Figure 25 Respondent's views on service performance

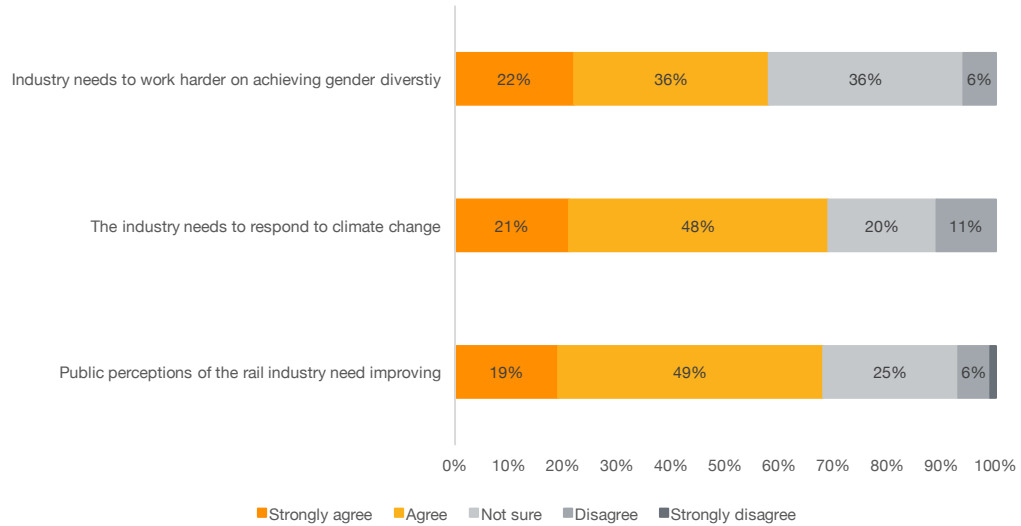
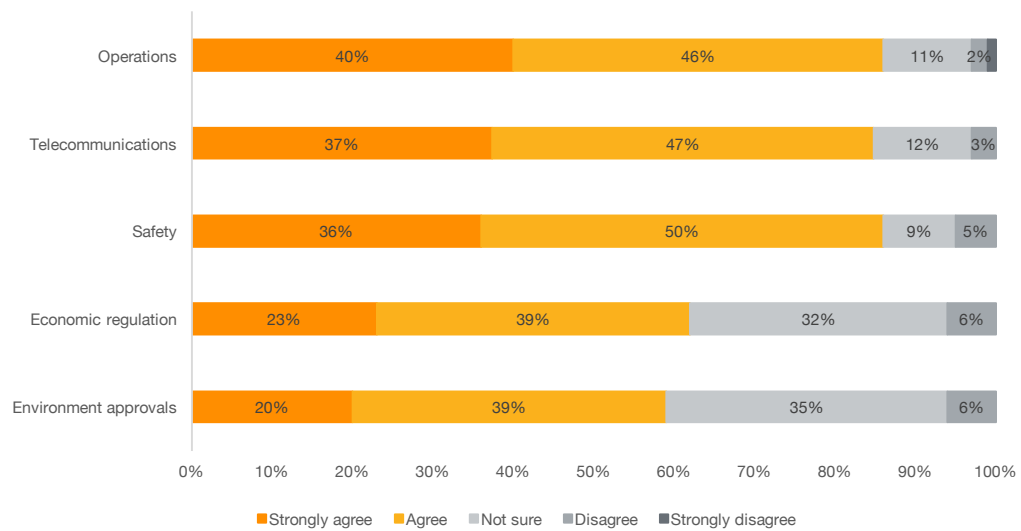
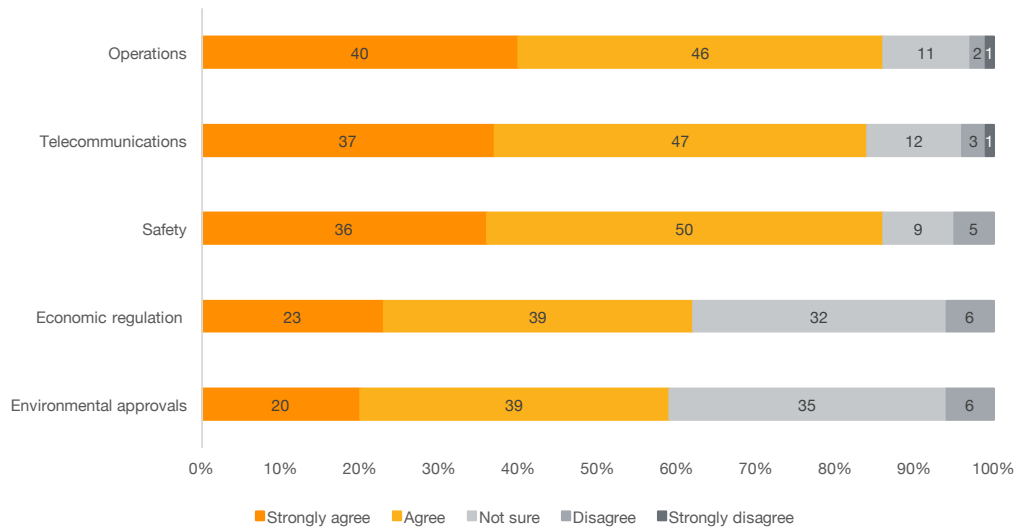


Figure 26 Social and environmental responsibilities



Regulation and pricing

Figure 27 Areas where jurisdictional harmonisation would benefit the industry



Main barriers to harmonisation and cooperation across jurisdictions

The most commonly nominated barriers to achieving harmonisation and cooperation across jurisdictions were;

- State based regulatory systems
- Politics
- Lack of commercial incentives for organisations to cooperate
- Businesses operate in silos, do not learn from national and international experience and have a view that their way is best
- Legacy investments with long asset lives and different timing of investment cycles across organisations leading to high cost of harmonisation, particularly with rapidly changing technology
- Lack of strategic leadership and an overarching plan to drive harmonisation of technology

Technological change and R&D priorities

Figure 28 Level of influence of technology in the rail industry over the next 20 years

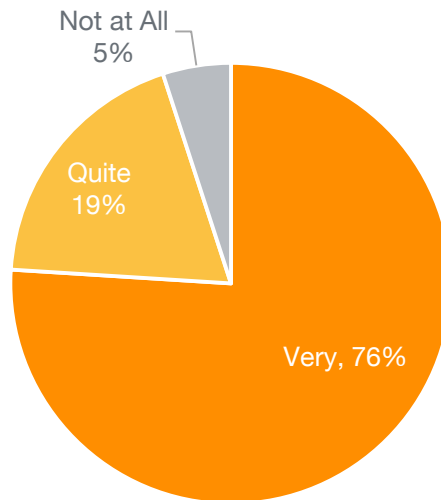
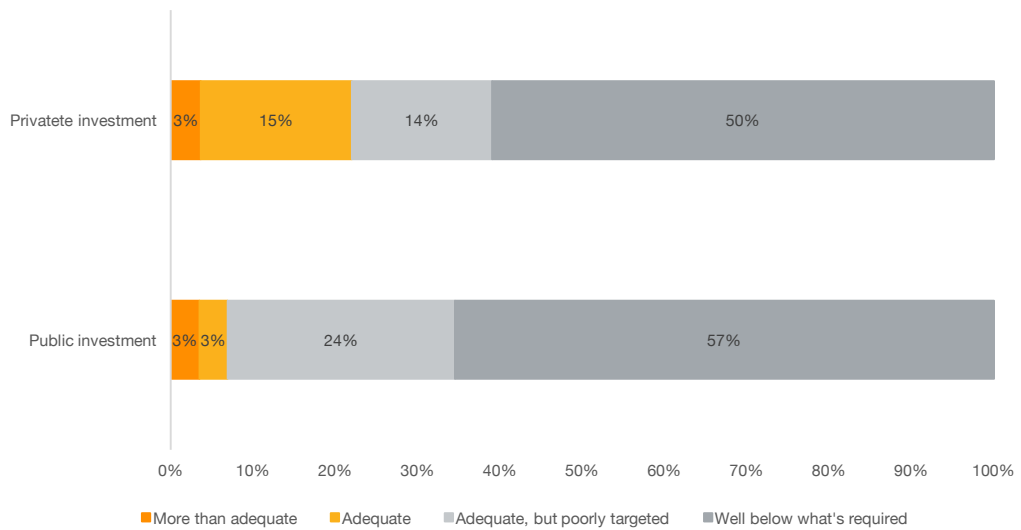


Figure 29 Adequacy of current level and targeting of R&D investment



Industry structure

Structural reforms required for the rail industry

When asked to nominate structural reforms required in the rail industry, the most common response from survey participants was to harmonise standards and regulations across jurisdictions. Other common responses included;

- Improving responsiveness to customer needs
- Improving cost effectiveness and preventing unwarranted investments by regulated businesses
- Privatisation of various rail infrastructure and services
- Stabilising government policy
- Policy to allow effective competition with road
- Increasing investment, with particular mention of inland rail

Customer engagement

Figure 30 Participant's views on whether industry currently uses best practice customer engagement

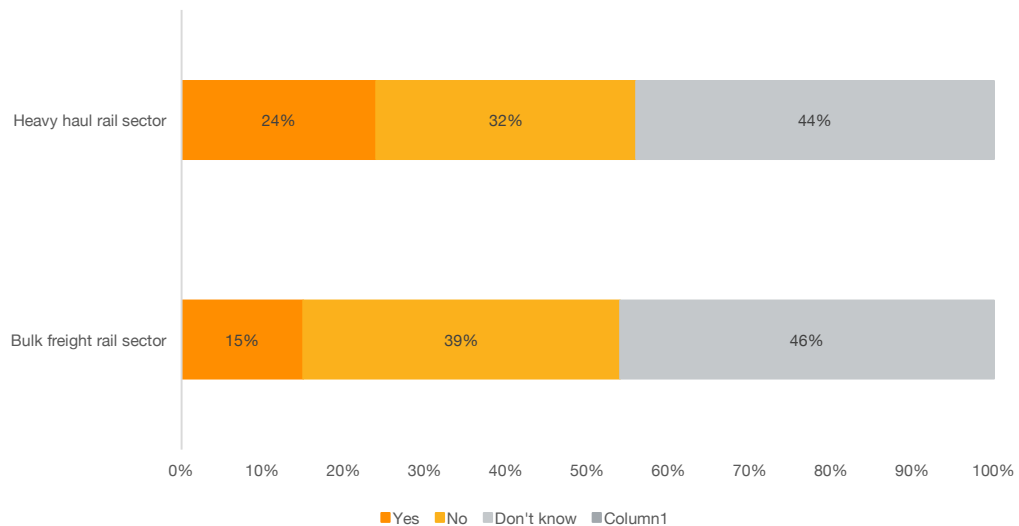
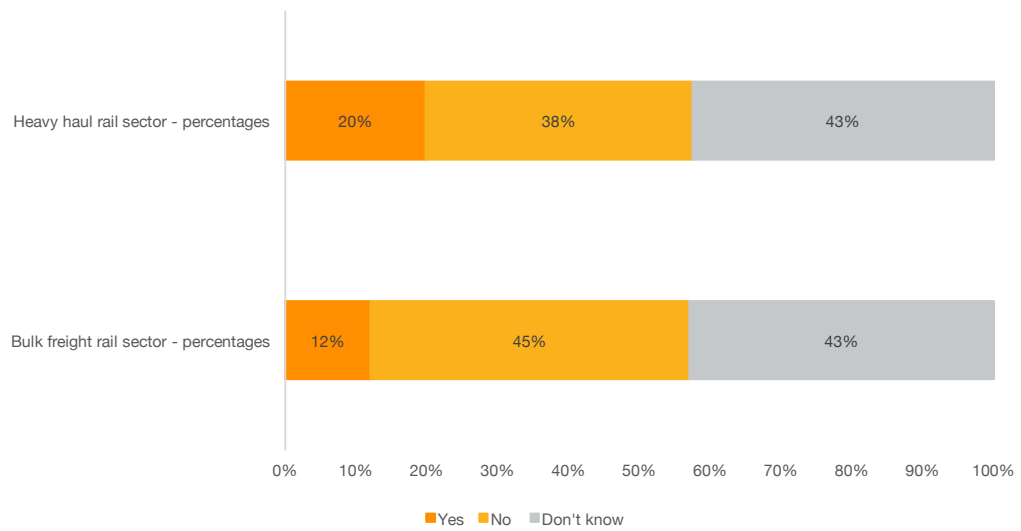


Figure 31 Participant's views on whether rail customers have sufficient input into shaping future direction and strategies for the industry



B. Survey results by respondent sub-groups

This appendix presents a breakdown of the rail survey results for three separate respondent groups. The groups are defined as:

- Senior Executives, comprising 24% of the sample (or 38 by number)
- Middle Managers, comprising 32% of the sample (or 51 by number)
- Others, comprising 44% of the sample (or 68 by number)

The analysis examines whether there is any variation across these groups in terms of views on key issues confronting the industry and views about strategic priorities for the future. We caution that the sub-samples are relatively small, so minor variations are unlikely to be statistically significant. This memo focuses on those differences that are likely to be material.

We have examined responses to five categories:

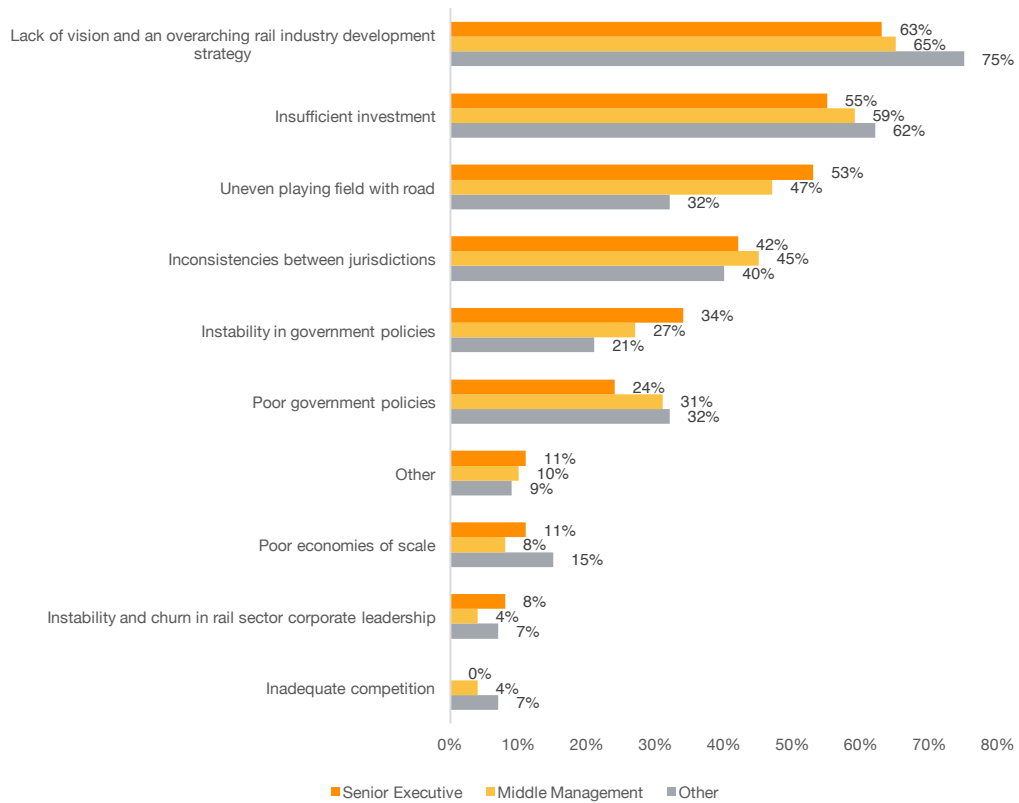
- Impediments to industry growth
- The need for greater efficiency
- Views on effectiveness of current regulation
- The relative importance of technological change
- Strategic priorities

Impediments to industry growth

In aggregate, survey respondents identified a lack of vision and overarching rail industry development strategy as the most important factor that has held back the growth of the rail industry in Australia over the past 20 years.

There was a high level of agreement between the three groups regarding the relative importance of the nominated factors. All respondent groups nominated 'a lack of vision and an overarching rail industry development strategy' as the most important factor (nominated by 63% of Senior Executives, 65% of Middle Managers and 75% of other respondents) and 'insufficient investment' as the second most important factor (55%, 59% and 62% respectively).

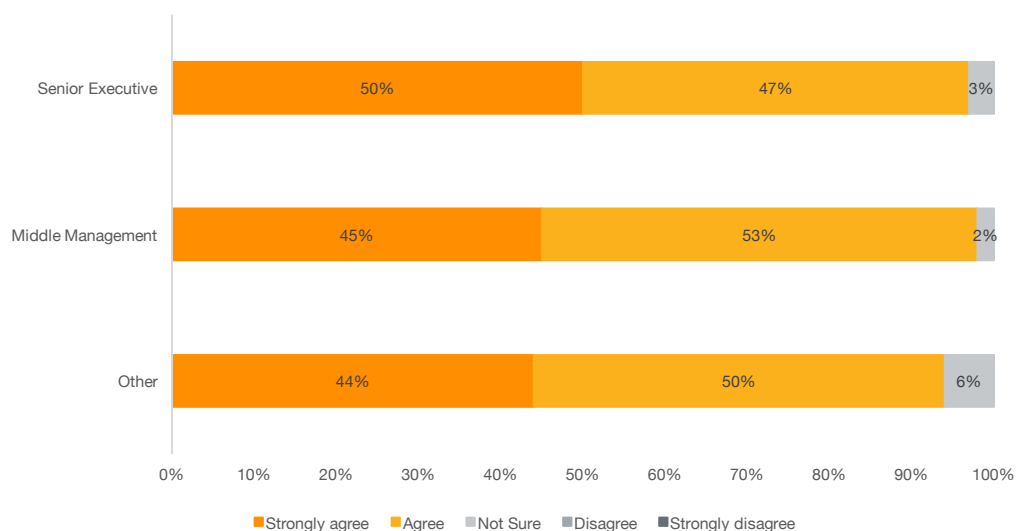
Figure 32 Factors holding back industry growth



The need for greater efficiency

There was a similar level of agreement between the two groups about the need for rail to be better integrated with other transport modes and logistical chains. Of Senior Executives, 97% agreed or strongly agreed while 98% of Middle Managers and 94% of other respondents agreed or strongly agreed.

Figure 33 Participant's views on the need for rail to be better integrated with other transport modes and logistical chains



Better regulation

Senior Executives and Middle Managers appeared to have more confidence in the effectiveness of economic regulation than other respondents, although a higher portion of other respondents did not express a view. With respect to safety regulation and environmental regulation, views were more closely aligned. In all three groups of respondents, there appeared to be a lower level of satisfaction with economic regulation than environmental regulation and safety regulation.

Economic regulation was thought to be either very or quite effective by less than half of the respondents for each group (42% of Senior Executives, 43% of Middle Managers and 25% of other respondents).

Figure 34 Respondents views on economic regulation of the rail industry

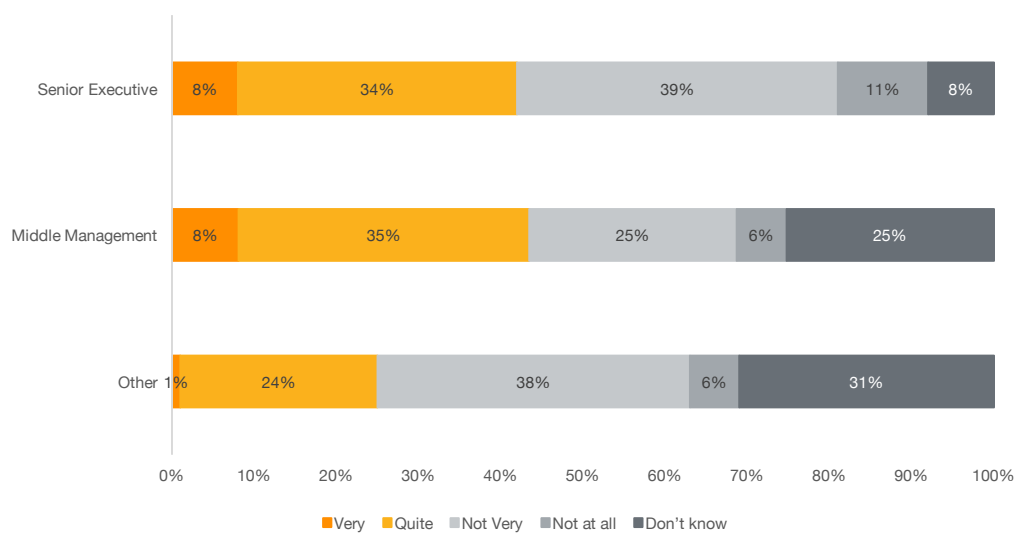


Figure 35 Respondents views on safety regulation of the rail industry

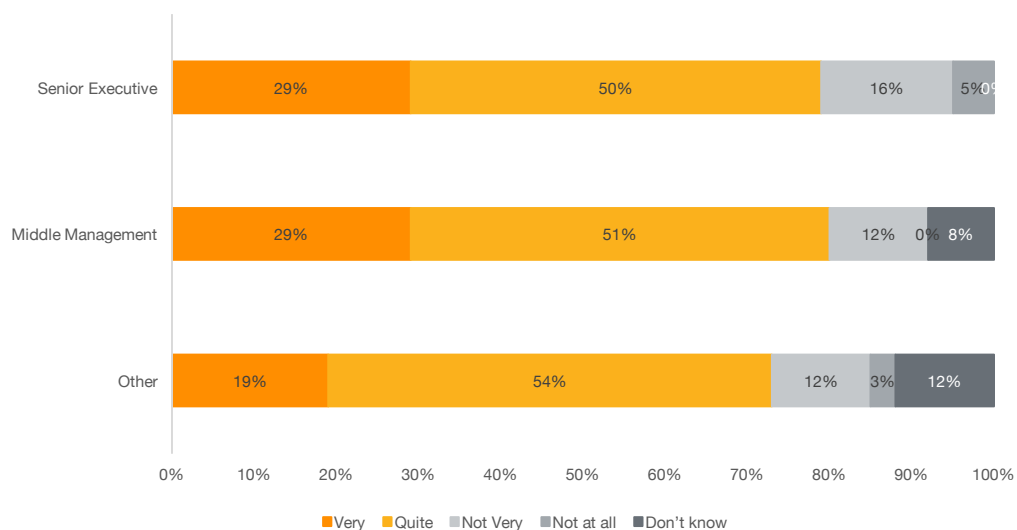
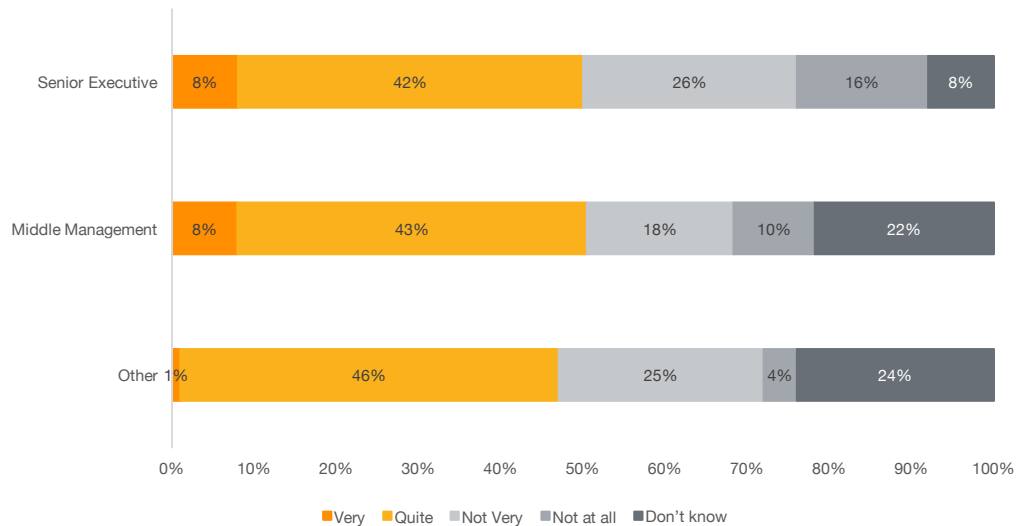


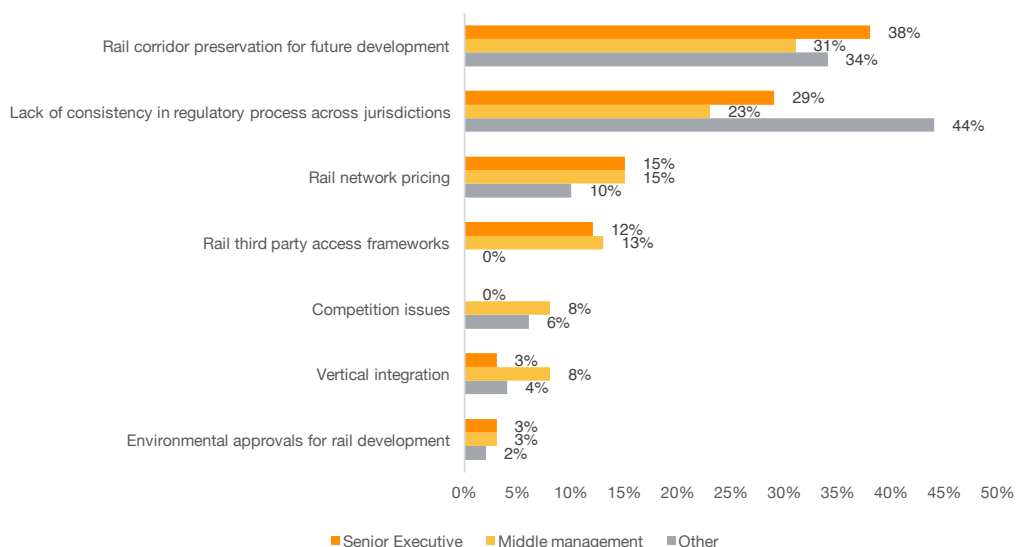
Figure 36 Respondents views on environmental regulation of the rail industry



There was broad agreement across the groups about the key areas for improvement of regulation in the rail industry. Out of seven regulatory issues facing the Australian rail industry, rail corridor preservation was identified as the most important issue by 38% of Senior Executives and 31% of Middle Managers, making it the highest ranking issue for those groups. Lack of consistency in regulatory processes across jurisdictions was the highest ranking issue for other respondents, being nominated by 44% of that group as the most important regulatory issue.

The second highest ranked issue for other respondents was the highest ranked issue for Senior Executives and Middle Managers and vice versa. That is, lack of consistency in regulatory processes was the second highest ranked issue for Senior Executives and Middle Managers while rail corridor preservation was the second highest ranked for other respondents.

Figure 37 Most important rail industry regulation issues

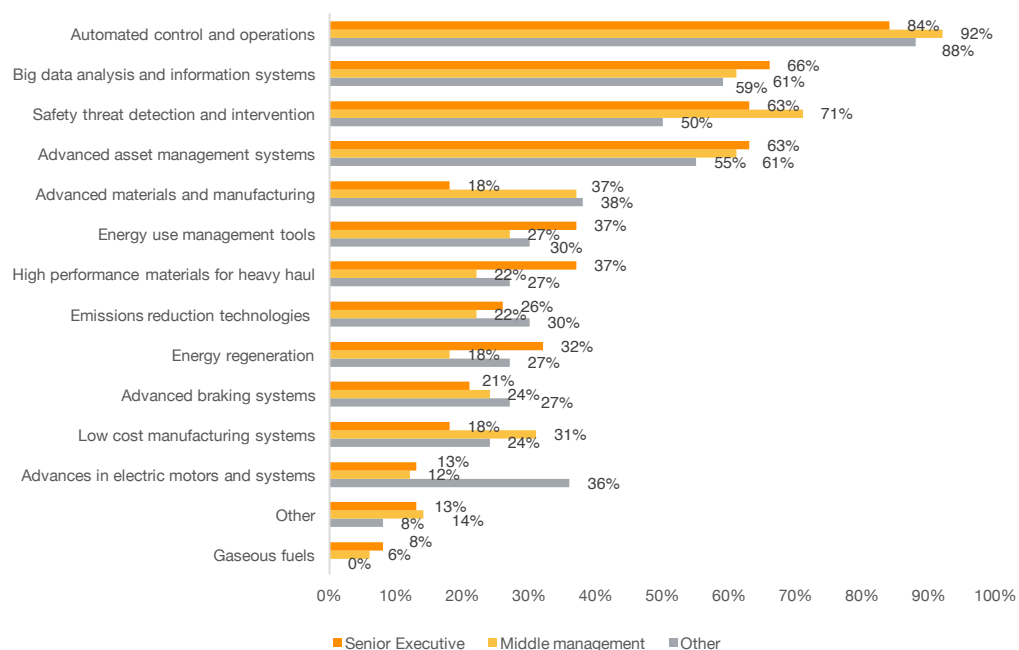


The importance of technological change

While there was some variation among the groups with respect to the technologies expected to impact on operations or industry structure, all three groups expected automated control and operations to have the largest impact. The other three technologies identified by a substantial portion of respondents were;

- Big data analysis and information systems
- Safety threat detection and intervention, and
- Advanced asset management systems.

Figure 38 Technologies expected to have the greatest impact on rail industry



Strategic priorities

Examining the strategic priorities by respondent group revealed differences in views regarding the relative importance of various priorities. Figure 39 over page shows the percentage of respondents that nominated each option as one of their top eight priorities.

The only priority listed in the top five for all groups was “developing a national strategic plan for the rail industry”.

Nevertheless, there was broad agreement on the top ten strategic priorities. Among the highest ranked across all three respondent groups were;

- stronger policy coordination, planning and integration of rail, freight logistics and other transport modes; and
- reforming road pricing to ensure a level playing field with rail.

In the case of investment in asset management, the views of Senior Executive diverge from the other two groups – with Senior Executive giving this item a relatively lower priority.

Figure 39 Strategic priorities for the rail industry

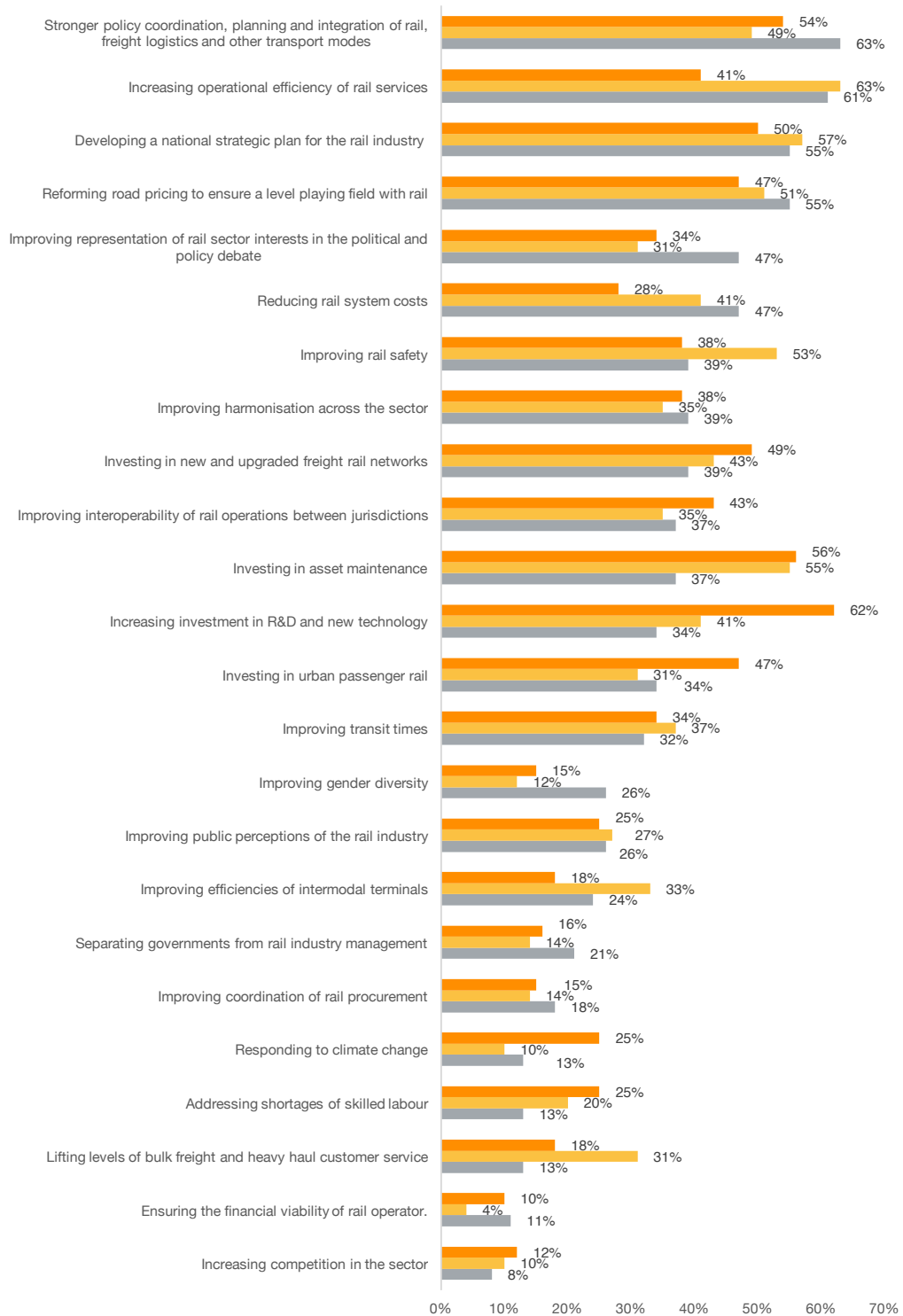


Table 2 Strategic priorities for the rail industry

Strategic Priority	Senior Executives		Middle Managers		Others	
	Rank	%	Rank	%	Rank	%
Stronger policy coordination, planning and integration of rail, freight logistics and other transport modes	1	63%	6	49%	3	54%
Increasing operational efficiency of rail services	2	61%	1	63%	9	41%
Reforming road pricing to ensure a level playing field with rail	3	55%	5	51%	6	47%
Developing a national strategic plan for the rail industry	3	55%	2	57%	4	50%
Reducing rail system costs	5	47%	8	41%	14	28%
Improving representation of rail sector interests in the political and policy debate	5	47%	14	31%	12	34%
Investing in new and upgraded freight rail networks	7	39%	7	43%	5	49%
Improving harmonisation across the sector	7	39%	11	35%	10	38%
Improving rail safety	7	39%	4	53%	10	38%
Investing in asset maintenance	10	37%	3	55%	2	56%
Improving interoperability of rail operations between jurisdictions	10	37%	11	35%	8	43%
Investing in urban passenger rail	12	34%	14	31%	6	47%
Increasing investment in R&D and new technology	12	34%	8	41%	1	62%
Improving transit times	14	32%	10	37%	12	34%
Improving public perceptions of the rail industry	15	26%	17	27%	15	25%
Improving gender diversity	15	26%	21	12%	21	15%
Improving efficiencies of intermodal terminals	17	24%	13	33%	18	18%
Separating governments from rail industry management	18	21%	19	14%	20	16%
Improving coordination of rail procurement	19	18%	19	14%	21	15%
Lifting levels of bulk freight and heavy haul customer service	20	13%	14	31%	18	18%
Addressing shortages of skilled labour	20	13%	18	20%	15	25%
Responding to climate change	20	13%	22	10%	15	25%
Ensuring the financial viability of rail operator.	23	11%	24	4%	24	10%
Increasing competition in the sector	24	8%	22	10%	23	12%
Other	25	5%	25	2%	25	1%

C. Rail Industry Stakeholder Survey Questions

Demographics

1. Which States and Territories do you cover in your work role? (please select all that apply)
 - ☐ Queensland
 - ☐ New South Wales
 - ☐ Australian Capital Territory
 - ☐ Victoria
 - ☐ Tasmania
 - ☐ South Australia
 - ☐ Western Australia
 - ☐ Northern Territory
 - ☐ National (I work across all jurisdictions)

2. Which sectors of the rail industry do you cover in your work role? (please select all that apply)
 - ☐ Passenger rail
 - ☐ Bulk freight rail operations
 - ☐ Heavy haul rail operations
 - ☐ Bulk freight below rail
 - ☐ Heavy haul below rail
 - ☐ Other (please specify)

3. How long have you worked in the rail sector or been a commercial customer of rail services?

< 1 year1-3 years3-5 years5-10 years10+ years

4. Which stakeholder category best describes your current involvement in the rail industry?:
 - ☐ Rail Track Operator
 - ☐ Above Rail Operator
 - ☐ Integrated Rail Operator
 - ☐ Industry supplier – services, materials or rollingstock
 - ☐ Construction contractor
 - ☐ Rail customer – bulk freight or heavy haul
 - ☐ Intermodal facilities owner/operator
 - ☐ Logistics operator/freight forwarder
 - ☐ Urban passenger organisation
 - ☐ Long distance passenger organisation
 - ☐ Non government organisation/advocacy
 - ☐ Research organisation/university
 - ☐ Government
 - ☐ Consultant
 - ☐ Investor
 - ☐ Other (please specify)

5. Which category best describes your current role?

- ☐ Policy analysis/regulatory oversight
- ☐ Technical/engineering
- ☐ Safety
- ☐ Finance
- ☐ General management
- ☐ Human resources
- ☐ Marketing/sales/communications
- ☐ Operations/maintenance
- ☐ Planning
- ☐ Purchasing
- ☐ Research
- ☐ Information technology
- ☐ Other (please specify)

6. Which category best describes the size of your organisation in terms of employees?

- ☐ Less than 10 ☐ 10-100 ☐ 101-500 ☐ 501-1000 ☐ 1000+

7. Which category best describes your position?

- ☐ Board member
- ☐ Senior executive
- ☐ Middle management
- ☐ Team leader/supervisor/manager
- ☐ Team member/front line employee
- ☐ Contractor
- ☐ Supplier
- ☐ Consultant
- ☐ Owner/operator
- ☐ Other – please specify

8. What is your gender?

- ☐ Male
- ☐ Female

Strategic priorities for the rail industry

9. In your view what are the **three main factors** that have held back the growth of the rail industry in Australia over the past 20 years?

- ☐ Inconsistencies between jurisdictions
- ☐ Poor government policies
- ☐ Instability in government policies
- ☐ Uneven playing field with road
- ☐ Inadequate competition
- ☐ Insufficient investment
- ☐ Instability and churn in rail sector corporate leadership
- ☐ Poor economies of scale
- ☐ Lack of vision and an overarching rail industry development strategy
- ☐ Other (please specify)

10. Please indicate whether you agree or disagree with each of the following statements

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Greater operational efficiencies in rail need to be achieved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermodal terminals need to become more efficient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail system costs need to be reduced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transit times need to be improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greater competition is needed in the sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bulk Freight and Heavy Haul customer service levels need lifting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More investment in rail infrastructure is needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic regulation of the rail sector needs to be improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road pricing needs reforming to ensure a level playing field with rail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government should not operate or manage railways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail needs to be integrated better with other transport modes and logistical chains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An effective national strategic plan is needed for the rail industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better harmonisation is needed across the sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail procurement needs to be better coordinated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interoperability of rail operations needs to be improved between jurisdictions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail sector interests need to be better represented in the political and policy debate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Public perceptions of the rail industry need improving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More investment in R&D is needed in the rail industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail safety needs to be further improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shortages of skilled labour need addressing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The industry needs to work harder on achieving gender diversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The industry needs to respond to climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Please select **eight strategic priorities** that you would like to see the rail sector focus on over the next decade.

- ☐ Increasing operational efficiency of rail services
- ☐ Improving efficiencies of intermodal terminals
- ☐ Reducing rail system costs
- ☐ Improving transit times
- ☐ Increasing competition in the sector
- ☐ Lifting levels of bulk freight and heavy haul customer service
- ☐ Investing in asset maintenance
- ☐ Investing in new and upgraded freight rail networks
- ☐ Investing in urban passenger rail
- ☐ Ensuring the financial viability of rail operator.
- ☐ Reforming road pricing to ensure a level playing field with rail
- ☐ Separating governments from rail industry management
- ☐ Stronger policy coordination, planning and integration of rail, freight logistics and other transport modes
- ☐ Improving harmonisation across the sector
- ☐ Improving coordination of rail procurement
- ☐ Improving interoperability of rail operations between jurisdictions
- ☐ Improving representation of rail sector interests in the political and policy debate
- ☐ Improving public perceptions of the rail industry
- ☐ Increasing investment in R&D and new technology
- ☐ Improving rail safety
- ☐ Addressing shortages of skilled labour
- ☐ Improving gender diversity
- ☐ Responding to climate change
- ☐ Developing a national strategic plan for the rail industry
- ☐ Other (please specify)

Operational efficiency and productivity

12. How would you rate the importance of improving efficiency and productivity in the rail sector?

- ☐ Critical to the ongoing success of the sector
- ☐ Important but not one of its top priorities
- ☐ Not important
- ☐ Don't know

13. What areas do you think would most improve efficiencies in the rail sector? (select three most **important** priorities)

- ☐ Improving scheduling and transit times
- ☐ Reconfiguring terminal locations
- ☐ Improving strategic planning
- ☐ Enhancing workforce training and optimisation
- ☐ Changing labour mix, insourcing or outsourcing
- ☐ Improving process and works management
- ☐ Improving asset management
- ☐ Increasing private sector investment
- ☐ Undertaking more performance monitoring and benchmarking
- ☐ Optimising procurement contracts
- ☐ Increasing industry competition
- ☐ Other (please specify)

Regulation and pricing

14. How effective is the regulation of rail in your state/territory?

	Very	Quite	Not Very	Not at all	Don't know
Economic regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. What is the relative importance of the following regulatory issues for the Australian rail industry? Please rank the issues in order of importance (1 being highest importance, 7 being least important):

- ☐ Rail third party access frameworks
- ☐ Competition issues
- ☐ Rail network pricing
- ☐ Vertical integration
- ☐ Environmental approvals for rail development
- ☐ Rail corridor preservation for future development
- ☐ Lack of consistency in regulatory process across jurisdictions

Or

- ☐ Don't know

16. Do you think the rail industry would benefit from a more harmonised and cooperative approach across jurisdictions?

Better harmonisation and cooperation is needed in:	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Telecommunications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic regulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental approvals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. If you agree that better harmonisation and cooperation is needed in one or more of the areas referred to in the previous question, what are the main barriers to achieving this?

[Please provide comment here]

Technological change and R&D priorities

18. How influential do you think technological change will be for the rail industry over the next 20 years?

Very	Quite	Not Very	Not at all	Don't know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Which areas of technological change do you believe will have the most profound impact on operations and/or industry structure? (please select the five most important)

- ☐ Advanced materials and manufacturing
- ☐ Low cost manufacturing systems
- ☐ High performance materials for heavy haul
- ☐ Automated control and operations
- ☐ Advanced asset management systems
- ☐ Safety threat detection and intervention
- ☐ Big data analysis and information systems
- ☐ Energy regeneration
- ☐ Advanced braking systems
- ☐ Energy use management tools
- ☐ Advances in electric motors and systems
- ☐ Emissions reduction technologies
- ☐ Gaseous fuels
- ☐ Other (please specify)

OR

- ☐ Technological change will not greatly impact the industry

20. How would you describe the current level and targeting of investment in R&D in the rail industry?

	More than adequate	Adequate	Adequate, but poorly targeted	Well below what's required	Don't know
Public investment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private investment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Customer engagement

21. In your view, does the rail industry use best practice to engage with its customers and understand their needs?

	Yes	No	Don't know
Bulk freight rail sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy haul rail sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. In your view, do rail customers have sufficient input into shaping future direction and strategies for the industry?

	Yes	No	Don't know
Bulk freight rail sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heavy haul rail sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Industry consolidation and restructuring

23. Do you think there is scope for improving efficiencies in the rail sector through consolidation and/or restructuring?

	Yes	No	Don't know
The sector would benefit from greater vertical integration across track and train components	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The sector would benefit from greater vertical integration across intermodal facilities and train operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The current industry structure is about right and should not be changed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. In your view are any particular structural reforms required for the rail sector?

[Open-ended question]

Industry analysis, economic and policy research

25. Do you think the industry needs a stronger knowledge base informed by industry analysis and economic and policy research?

Yes	No	Don't know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If yes to Q25:

26. What types of research and analysis would be most beneficial?

More high quality, independent research and analysis is needed in:	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Compiling industry statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benchmarking performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analysing stakeholder issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evaluating industry competition matters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding customer needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Performing cost-benefit analysis of policy options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forecasting demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





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