



# 2024 QLD Major Projects & Pipeline Report

Toowoomba – 28<sup>th</sup> November 2024





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# 2024 QLD Major Projects and Pipeline Report



Andrew Chapman  
QMCA

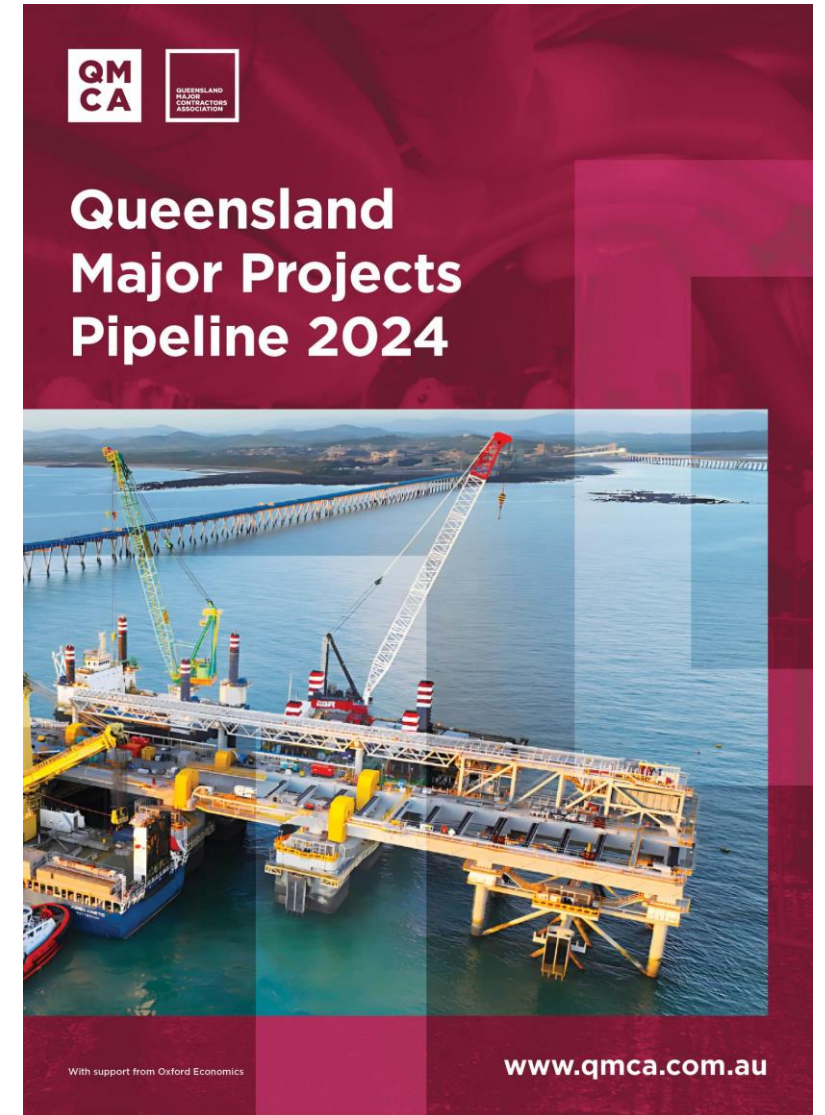






# Agenda

- Key Findings
- Key challenges
- Opportunities
- Recommendations





# Key Findings

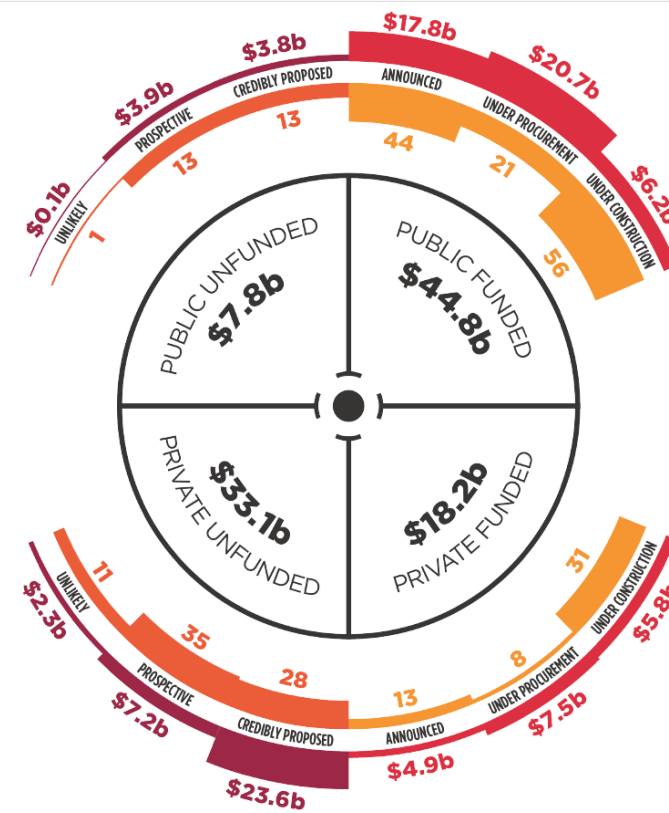




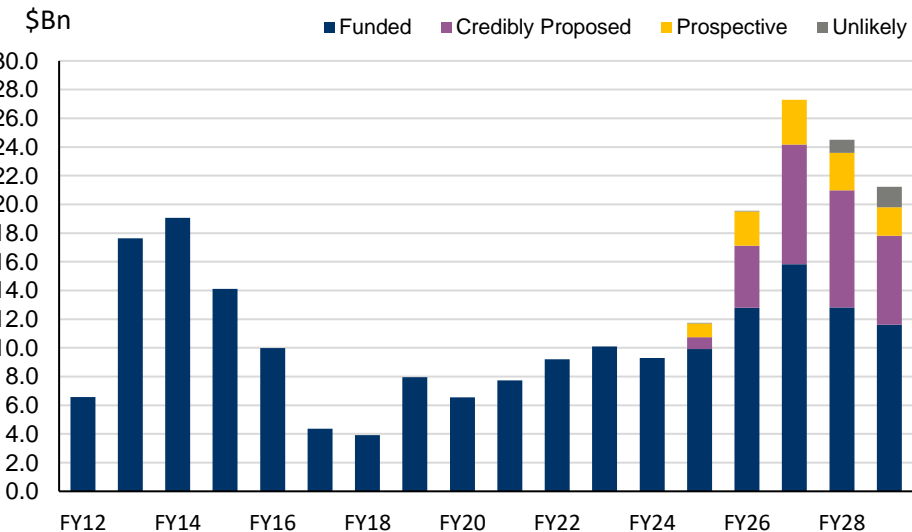
# Key Messages



- Total 5 year pipeline value \$104b
  - \$12b increase on 2023 pipeline
  - 20% of the increase is down to “published” cost increases
- Delivery of work in FY24 was subdued
- Continued growth of mega projects (>\$1b)
- Labour- still need an extra 10,000+ people
- Regional hotspots: Wide Bay, Brisbane & south/ west (Logan-Ipswich- Toowoomba) and Fitzroy



Total Pipeline



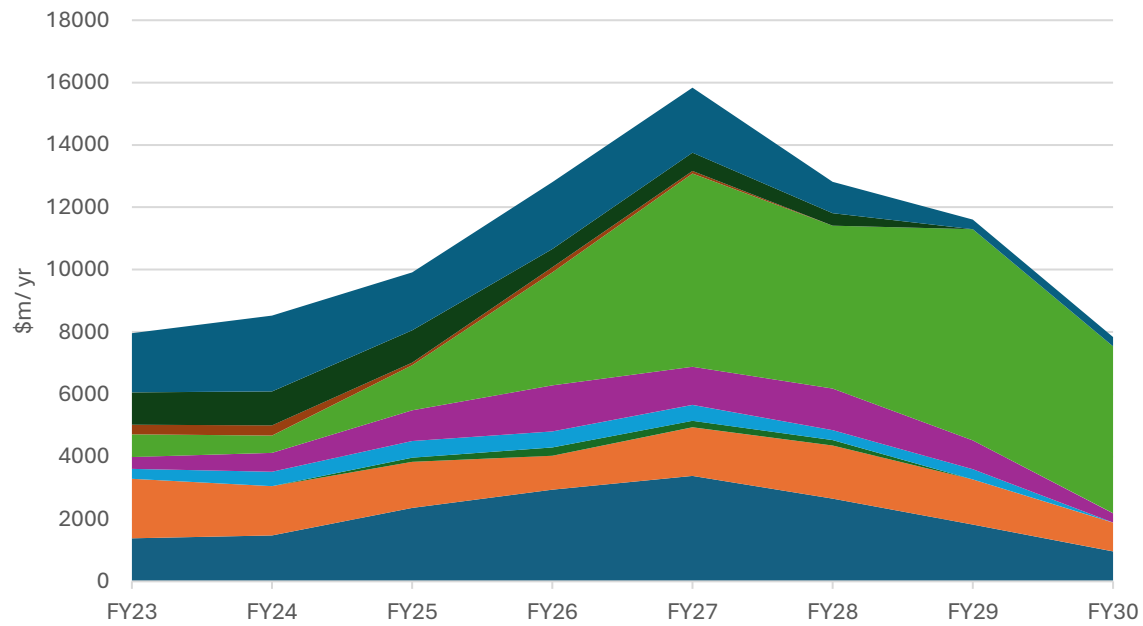




# Pipeline Outlook- Funded Works

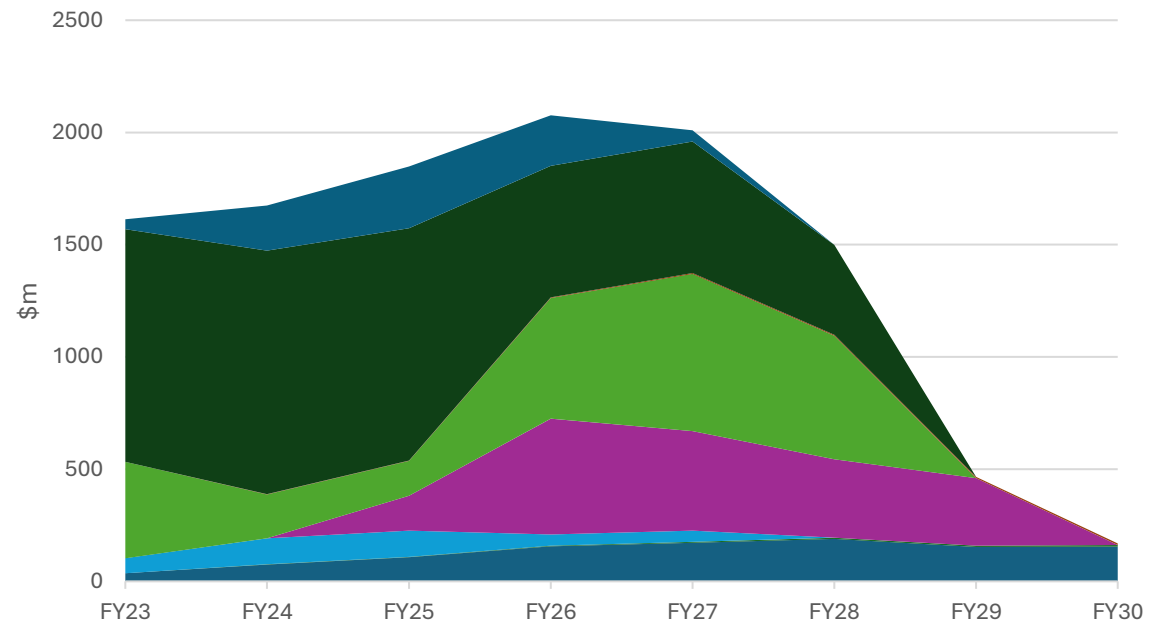


### State Wide



- Roads & Bridges
- Defence
- Pipelines
- Resources & Heavy Industry
- Rail
- Telecommunications
- Water & Sewerage
- Electricity
- Energy
- Marine

### TSBE Region



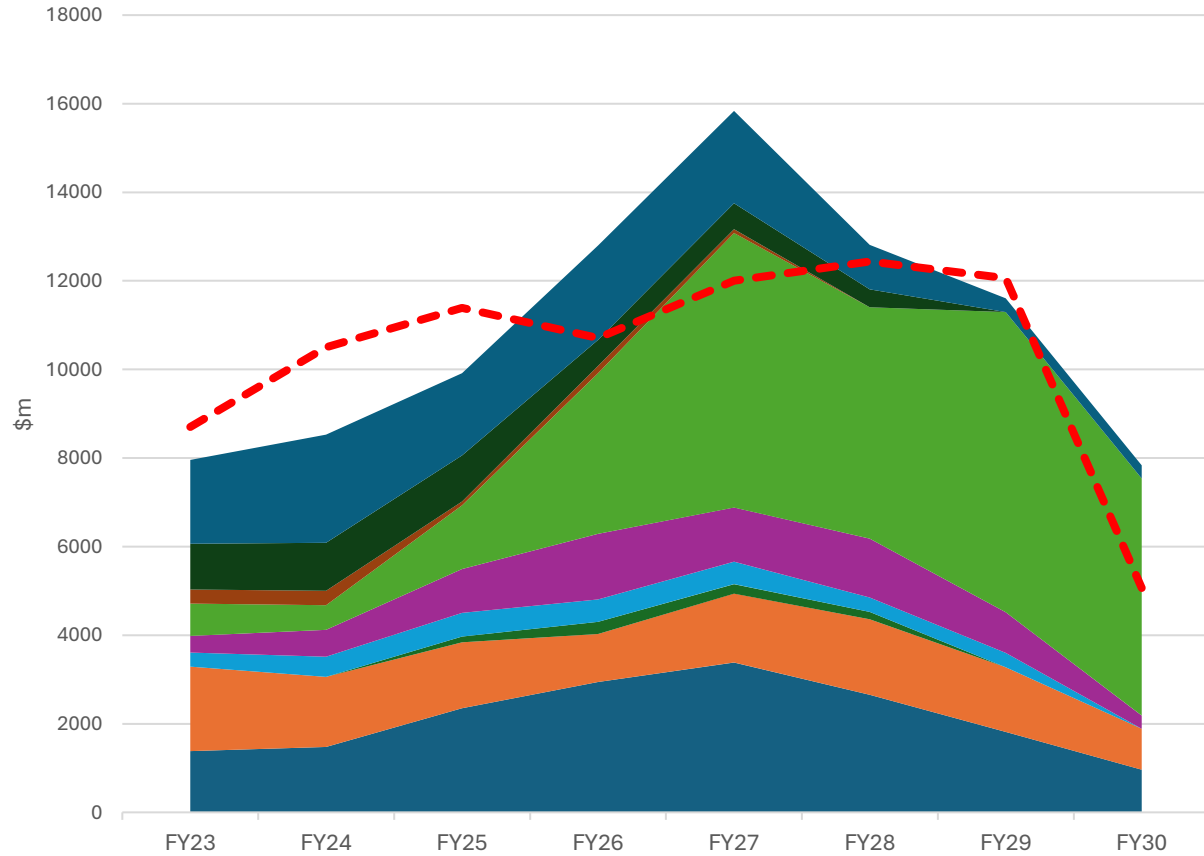
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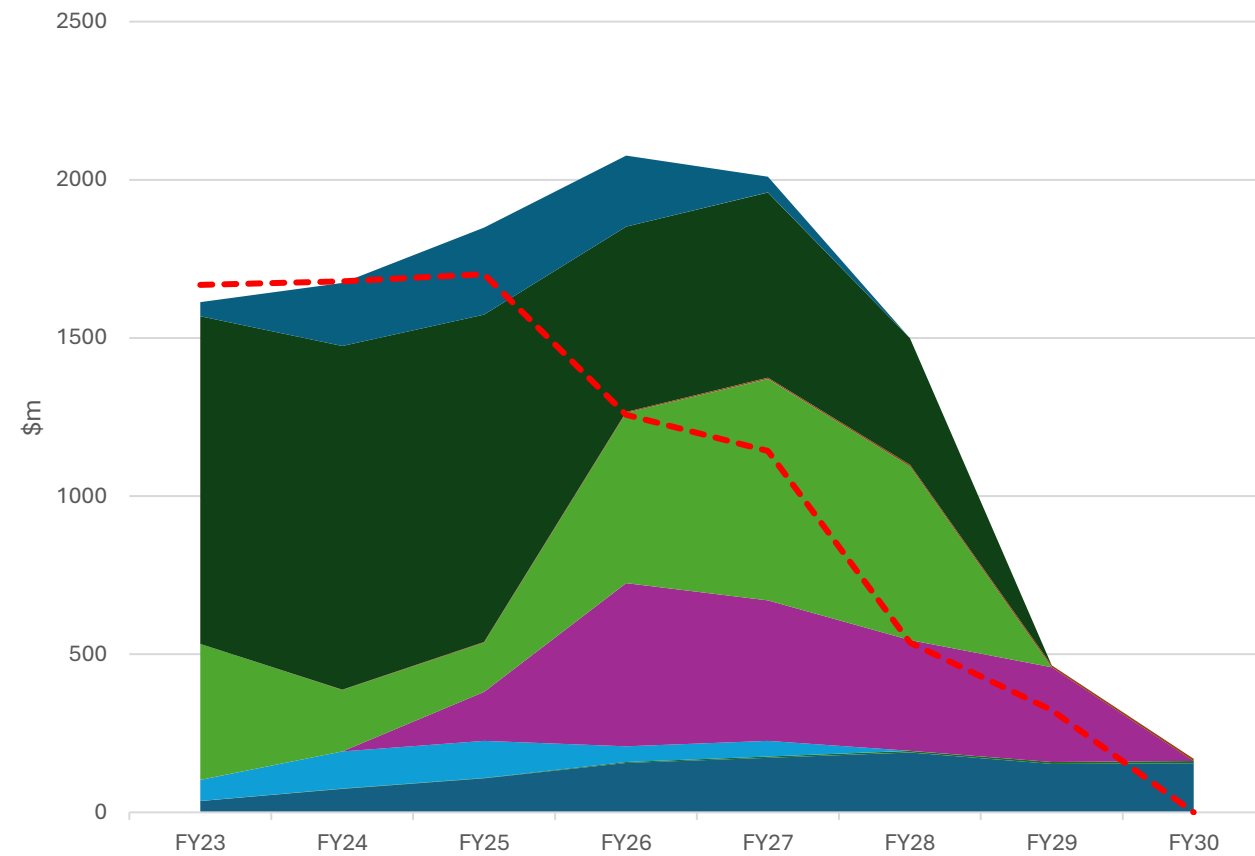
# Pipeline Outlook- Funded Works



State Wide



TSBE Region



- Roads & Bridges
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- Energy
- 2023 QMPPR

- Roads & Bridges
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- 2023 QMPPR

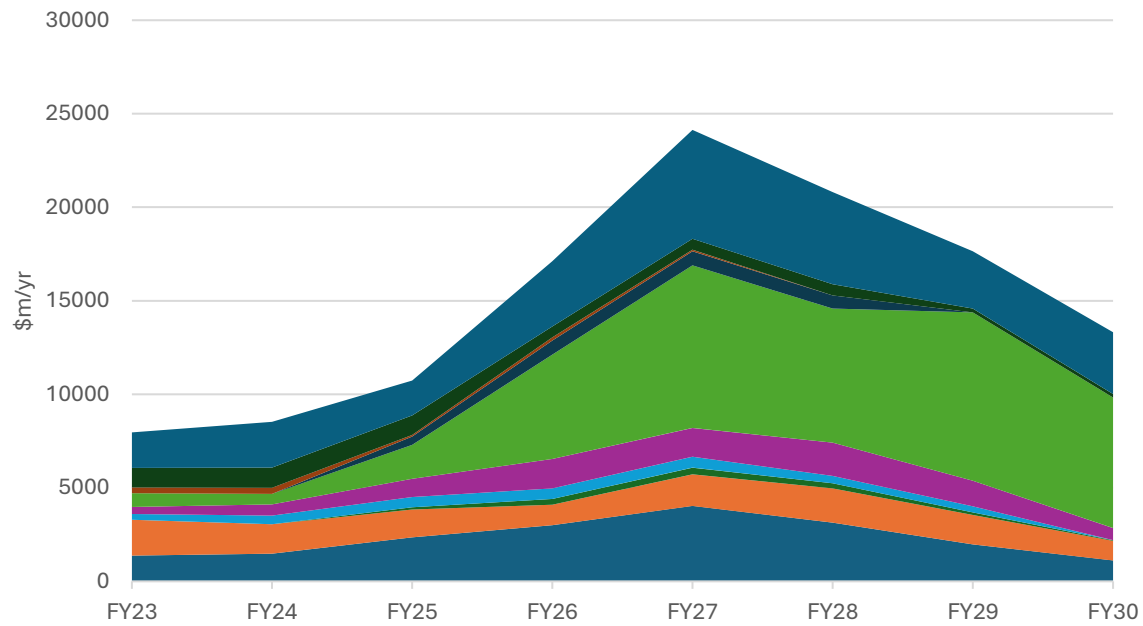




# Pipeline Outlook- Funded + Credibly Proposed

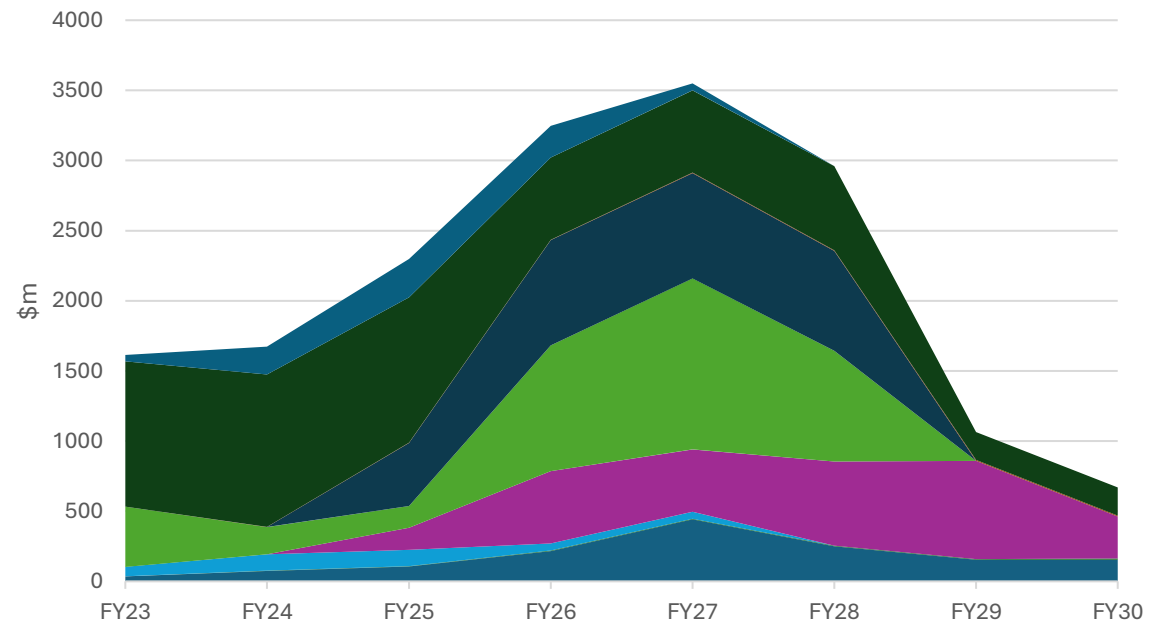


### State Wide



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### TSBE Region



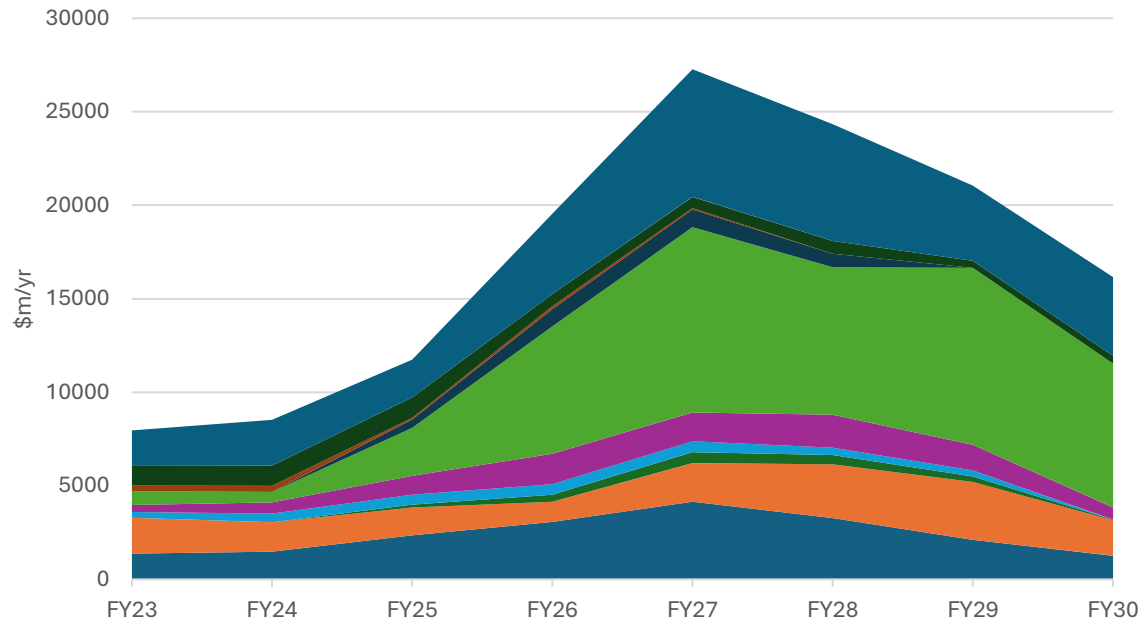
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# Pipeline Outlook- Total Pipeline

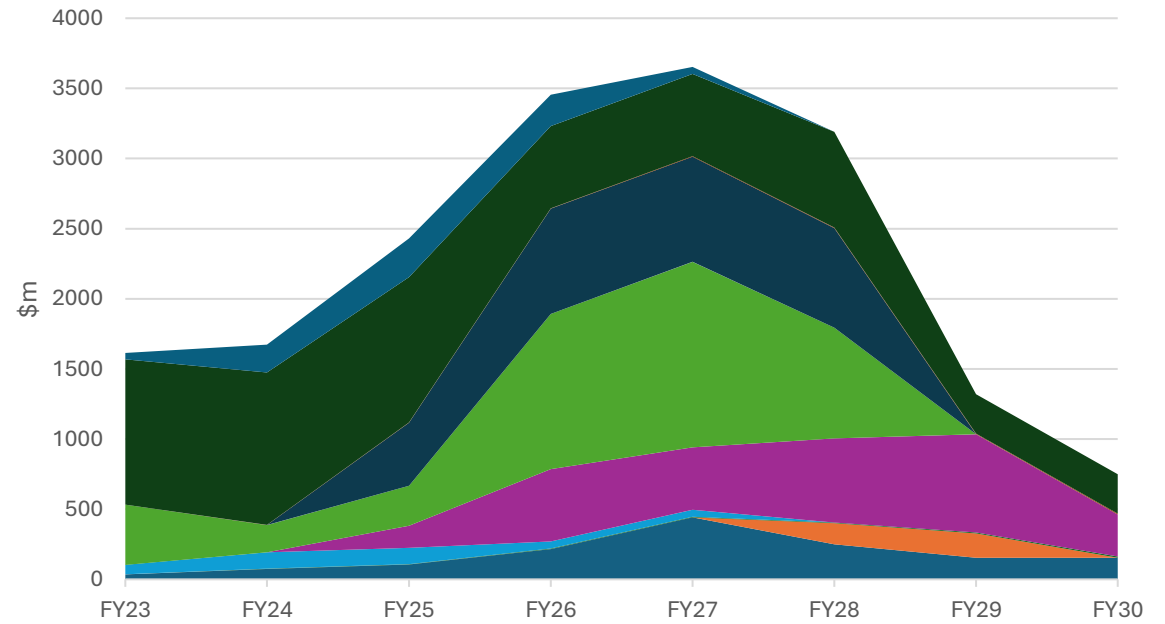


### State Wide



- Roads & Bridges
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### TSBE Region



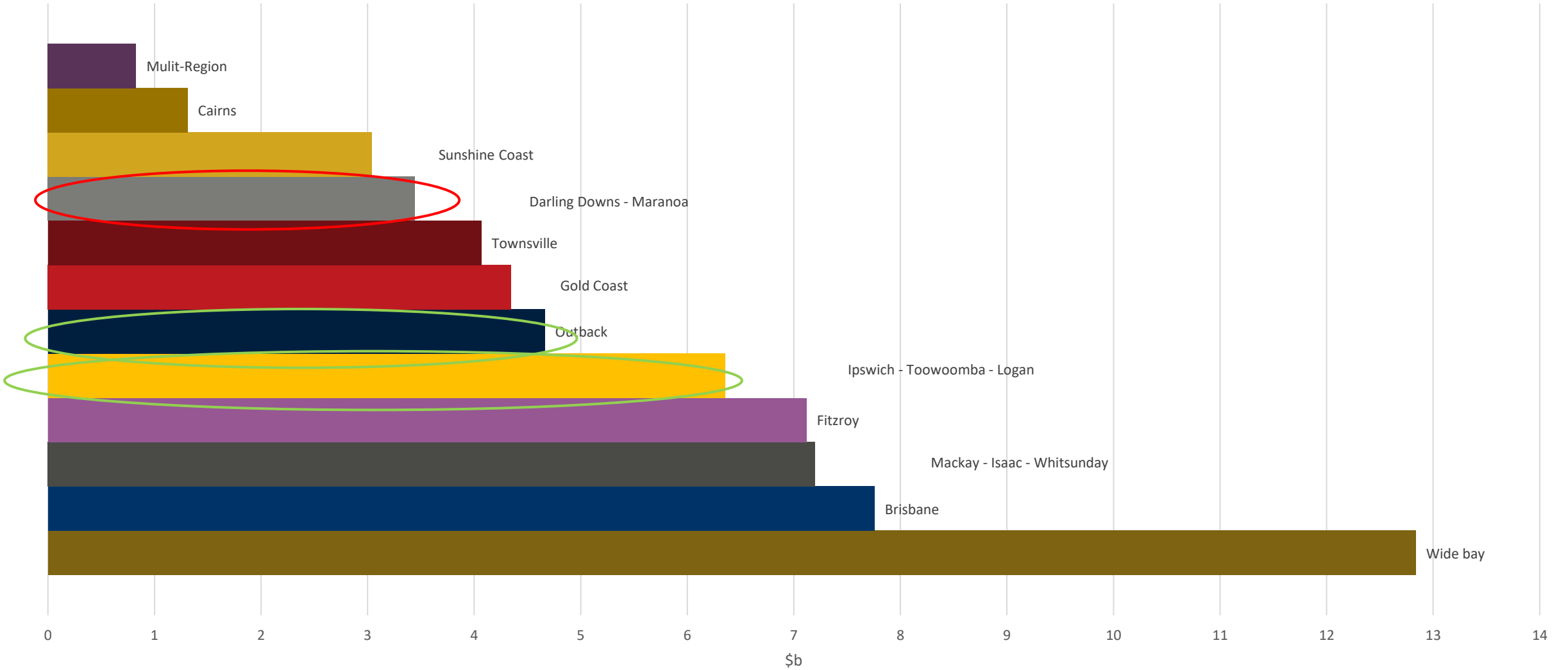
- Roads & Bridges
- Rail
- Marine
- Defence
- Water & Sewerage
- Electricity
- Pipelines
- Telecommunications
- Energy
- Resources & Heavy Industry



# Regional Spend



Regional Analysis



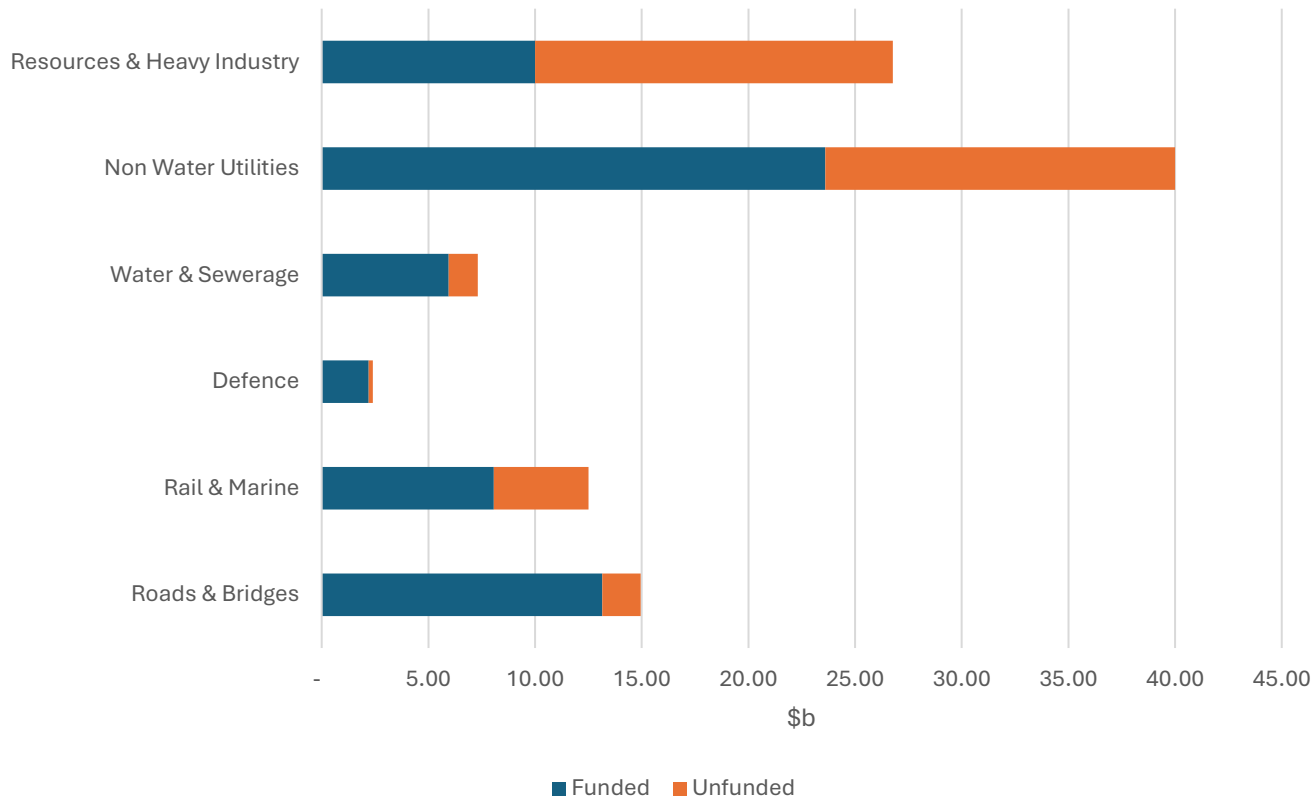




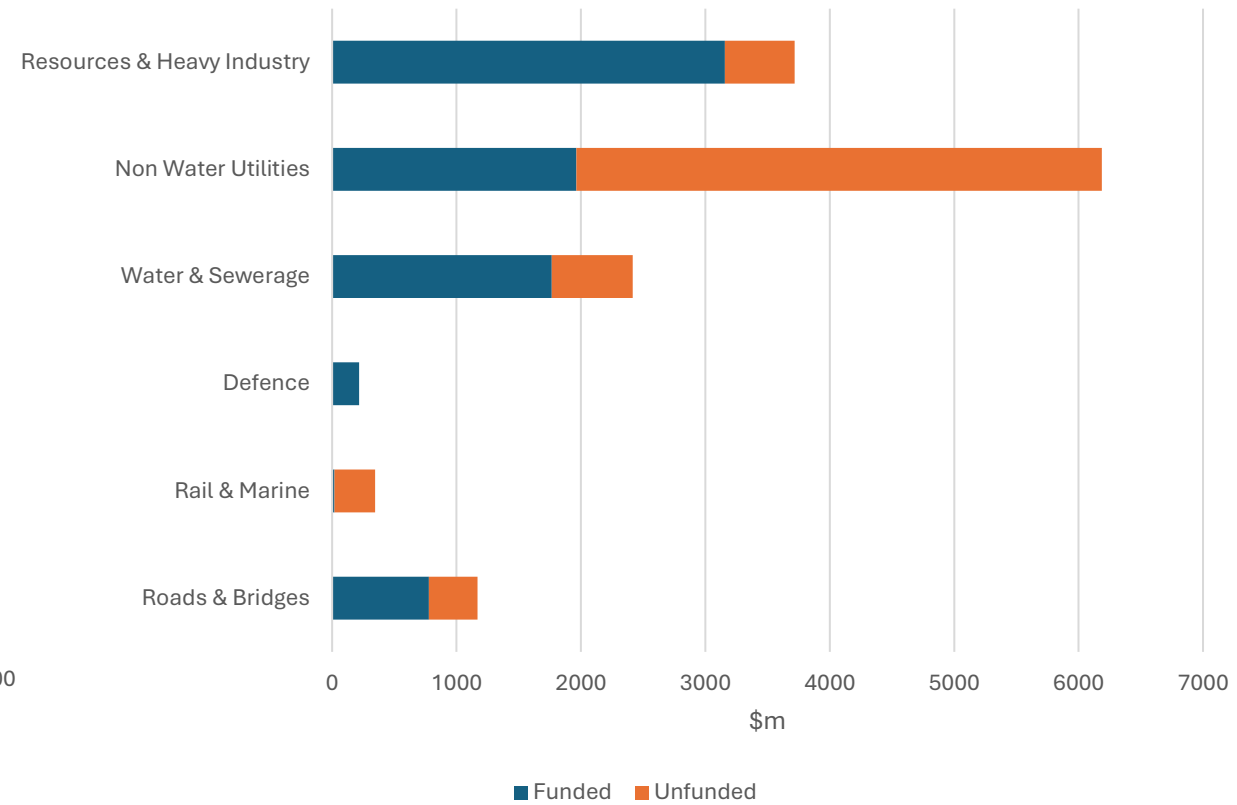
# What Type of investment?



### Sector Analysis- State Wide



### Sector Analysis - TSBE Region





# Key Challenges





# Key Challenges



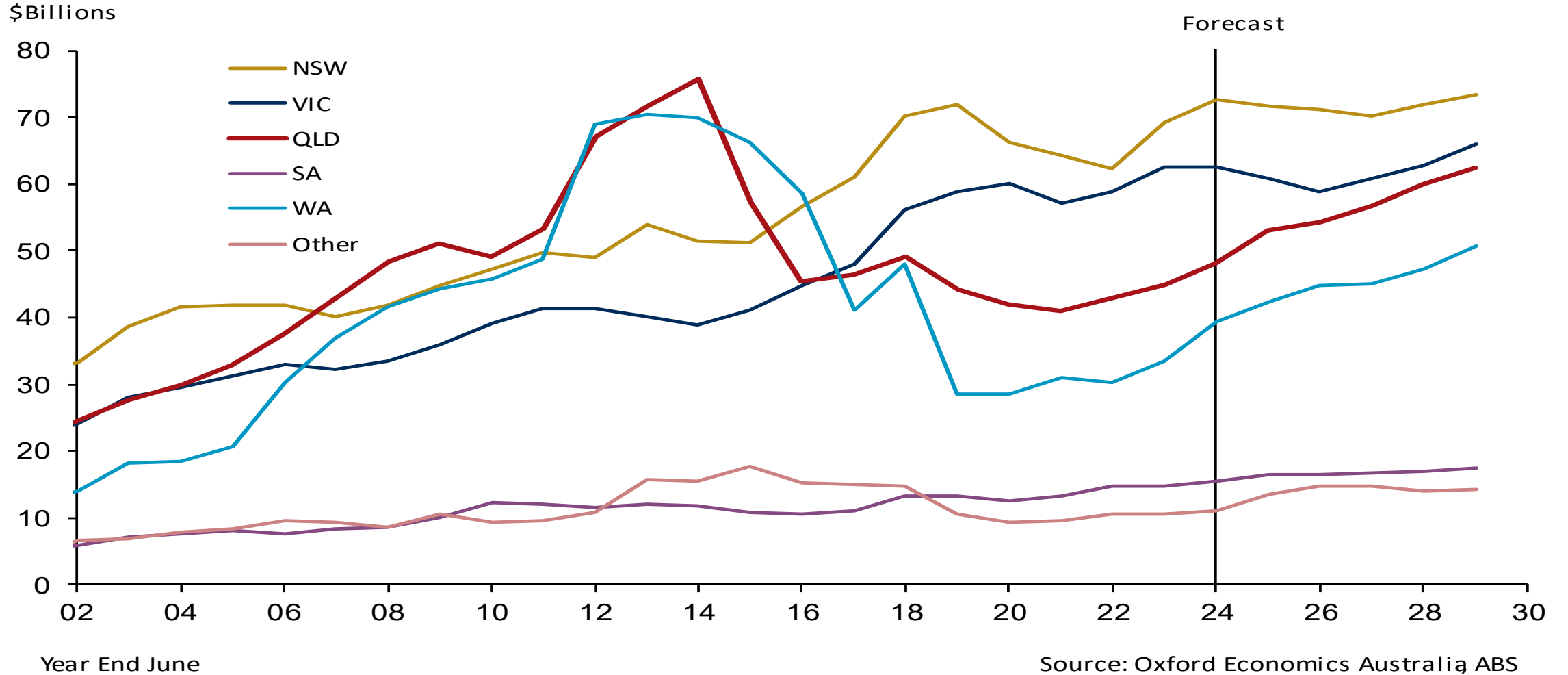
- Competing investments
- Capability
- Capacity
- Productivity
- Cost Pressures
- Pipeline Deliverability:
  - Industry capacity
  - Industry sustainability
  - Pipeline coordination







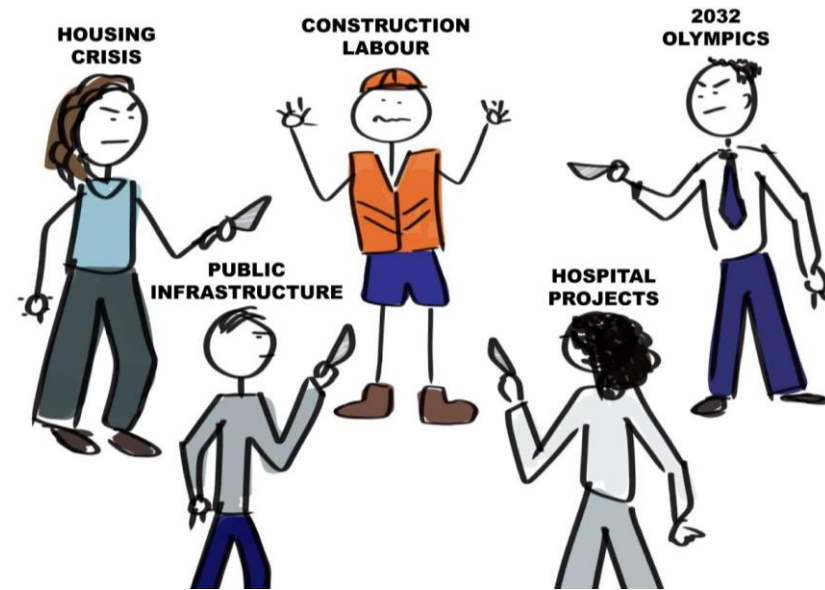
# Competing Investments



Source: Oxford Economics Australia & ABS

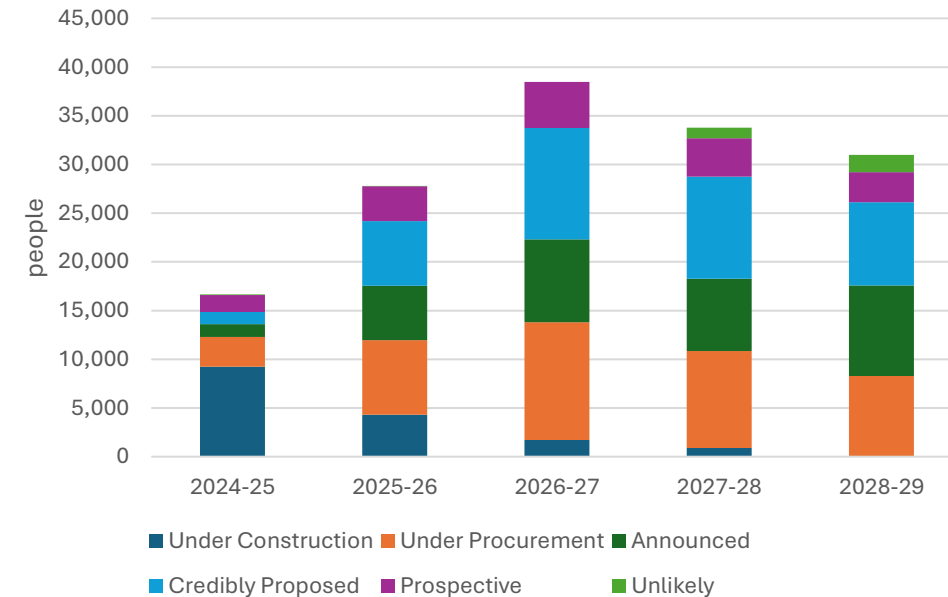


# Capacity



- Labour demand:
  - 30,000 people employed across all of engineering and construction in QLD
  - Approx 55% only in major projects (~17k)
  - Average requirement for the major projects pipeline is 30,000
  - On that basis need to grow the total employment in the industry by 80%
- Current supply capacity of aggregates in QLD:
  - Steel: 1.2Mt/ yr
  - Concrete: 7.5Mm<sup>3</sup>/ yr
  - Aggregate: 52Mt/ yr
- Likely additional demand:
  - Steel: 180,000-200,000t/yr (Major projects ~150-160,000t/yr, Health, Housing & Olympics: 30-40,000t/yr)
  - Aggregates: New quarry sources will be required
  - Asphalt, cement and concrete

Average Labour Requirement by Project Status



Source: CSQ

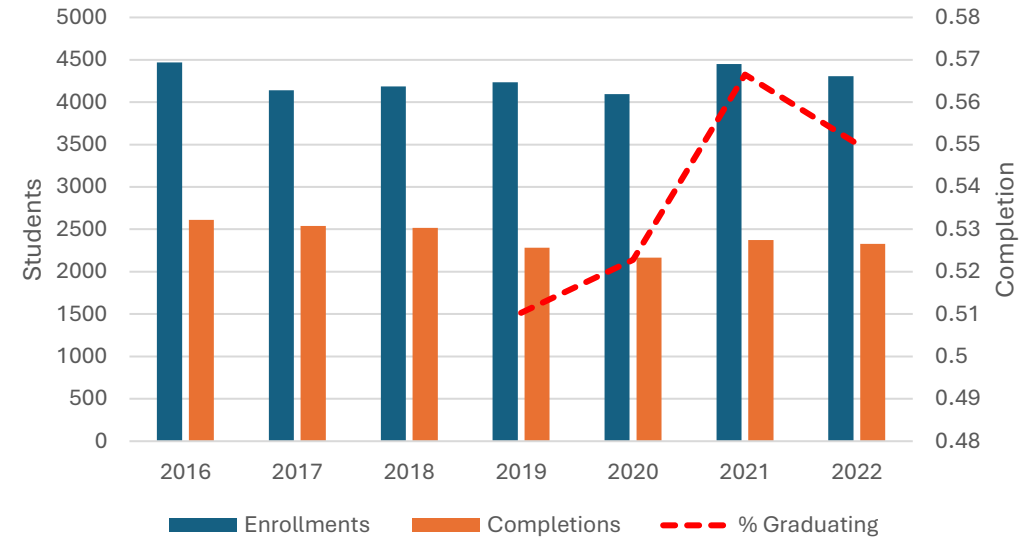


# Capability

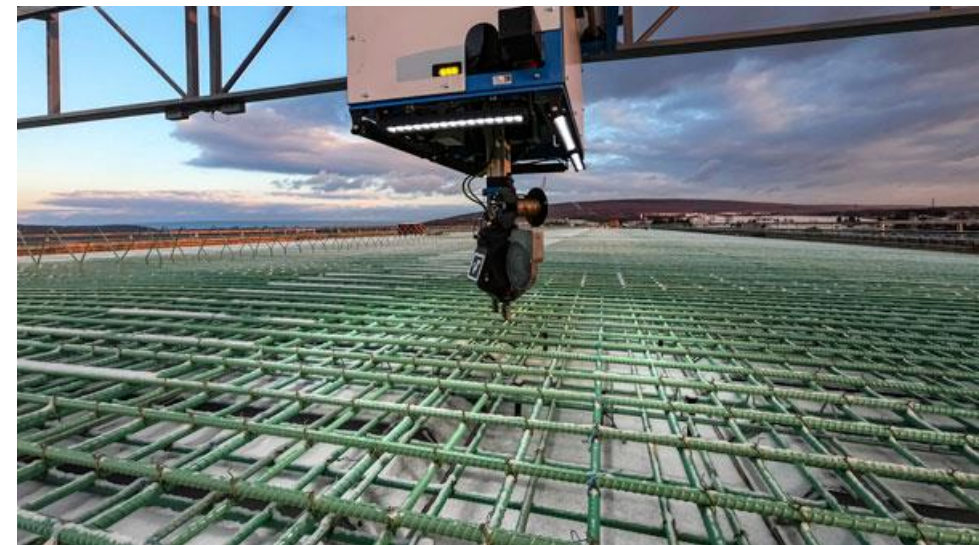
- Engineers:
  - Change in investment requires far more multi disciplinary skill set (civil, mechanical, electrical)
  - Graduating ~50-55% of those that commence
  - Demand is far outstripping supply
- Different technology skill sets as the industry moves to greater modularisation, prefabrication, automation & use of robotics, etc
- Local manufacturing and fabrication – needs to evolve to meet need (energy infrastructure, minerals processing etc)



## Engineering Education



Source: Engineers Australia



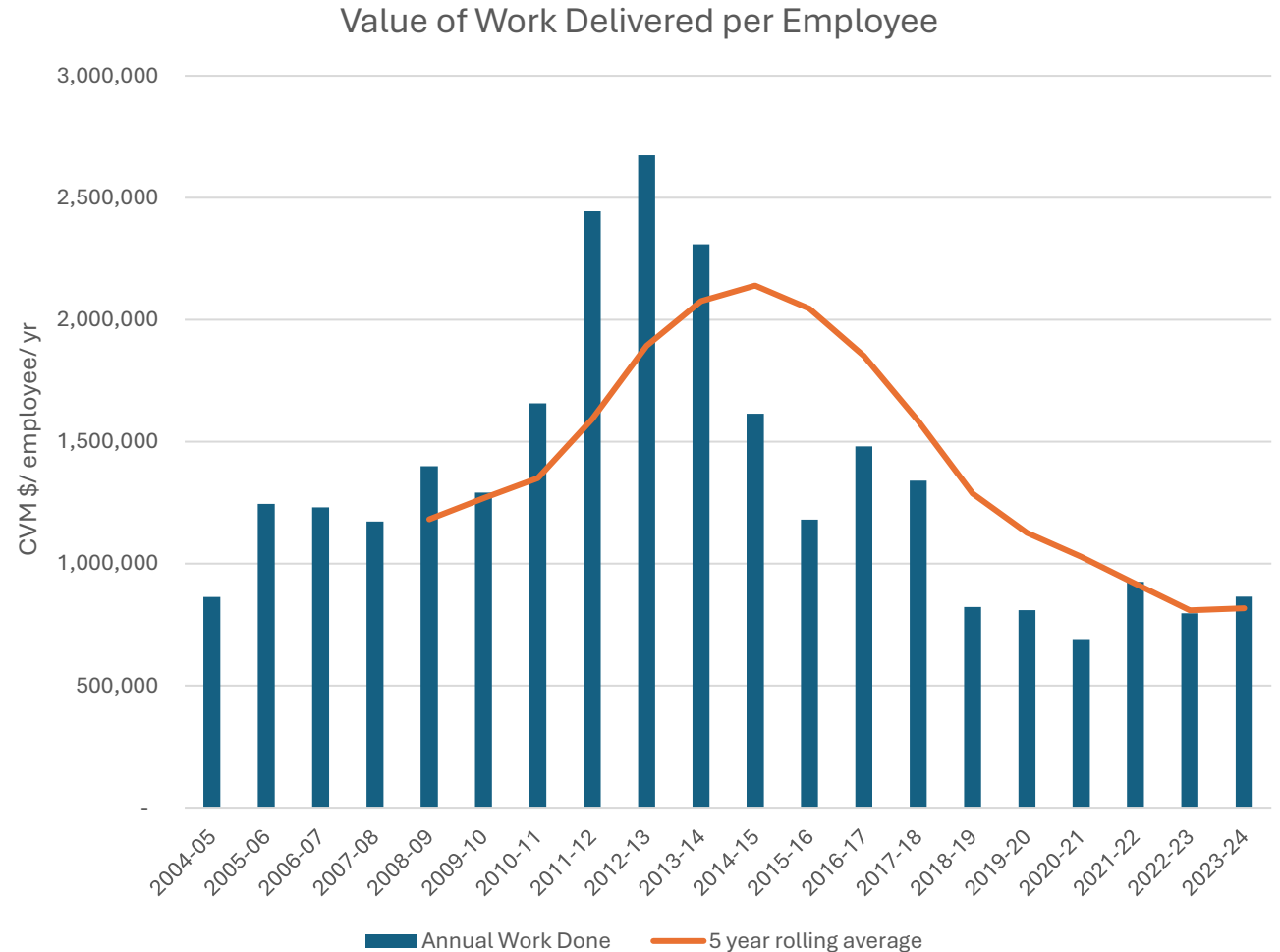




# Engineering & Construction Productivity



- Factors affecting:
  - Technology & innovation
  - Work practices across project lifecycle (planning, approvals, engineering etc)
  - Specifications (technical and operational)
  - Lack of consistent and collaborative procurement and delivery management
  - Industrial relations (3-3.5 effective working days per week)
  - Policy settings affecting industry



Source: ABS



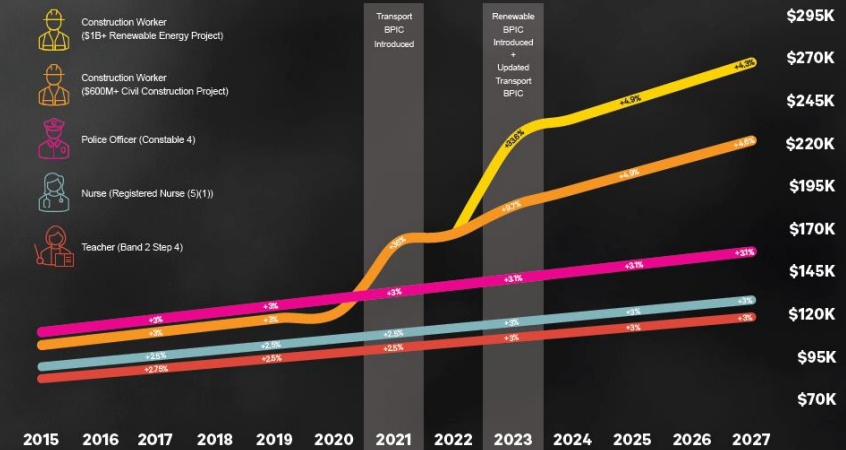
# Cost Pressures



- Policy settings impacting on costs
- Public investment crowding out other capital and trades availability
- Construction cost escalation:
  - 2010 to 2024, construction costs have increased by 51.5%.
  - Construction costs have increased by 32.3% since 2019
  - 2010 and 2020 (pre-pandemic) YoY average was 1.7%.
  - Between 2021 and 2024 the YoY average is now 8.0%.

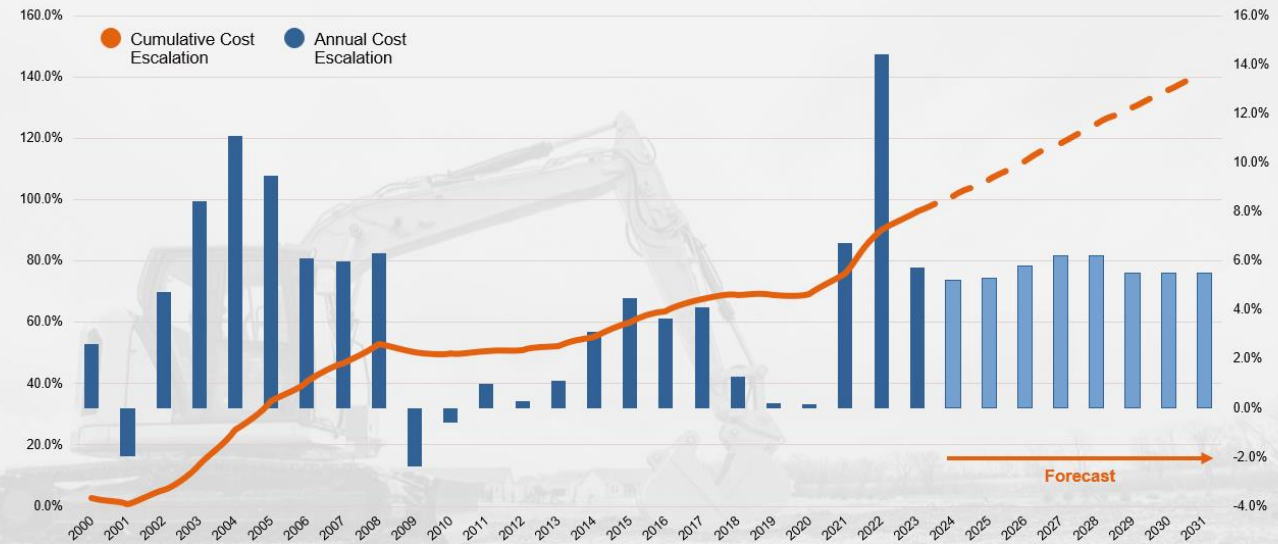
## Wage increases for Queensland construction workers v essential public servants

Earnings are expressed as an annualised salary package (incl. super) for a full-time employee. Earnings are calculated on a 50-hour week (10 hrs M-F), with four (4) weeks of leave taken.



Source: QMCA analysis of BPIC and existing EBAs

Unshackling Queensland's Infrastructure Potential 4



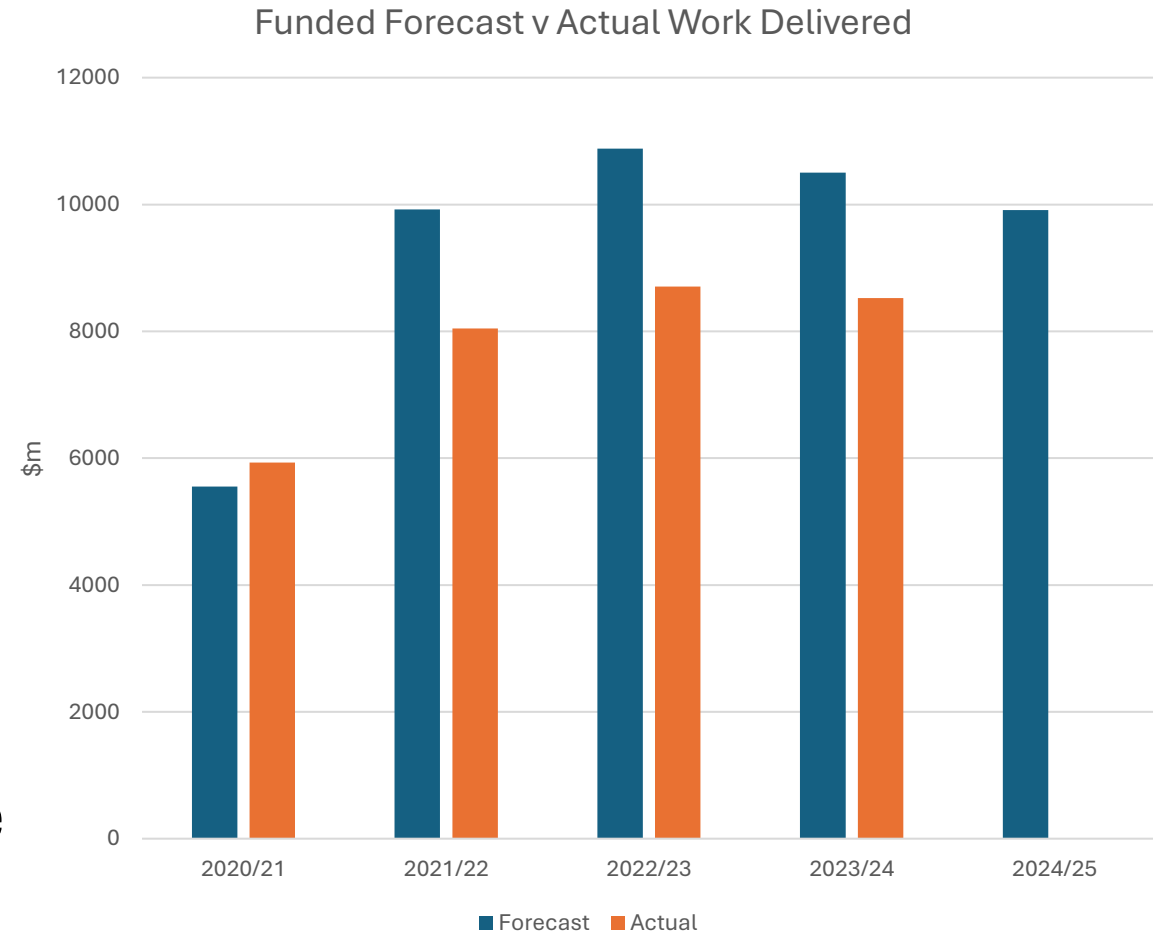
Source: ABS | Arcadis



# Pipeline Deliverability- Industry Capacity



- As the pipeline has grown, industry capacity to deliver has not been able to keep up.
- Between FY21 and FY24 have delivered on average 87% of the projected work
- External issues (Fed Gov't investment review) and productivity impacts have constrained delivery capacity
- Improving output and capacity by 10% and we are close to delivering the funded works





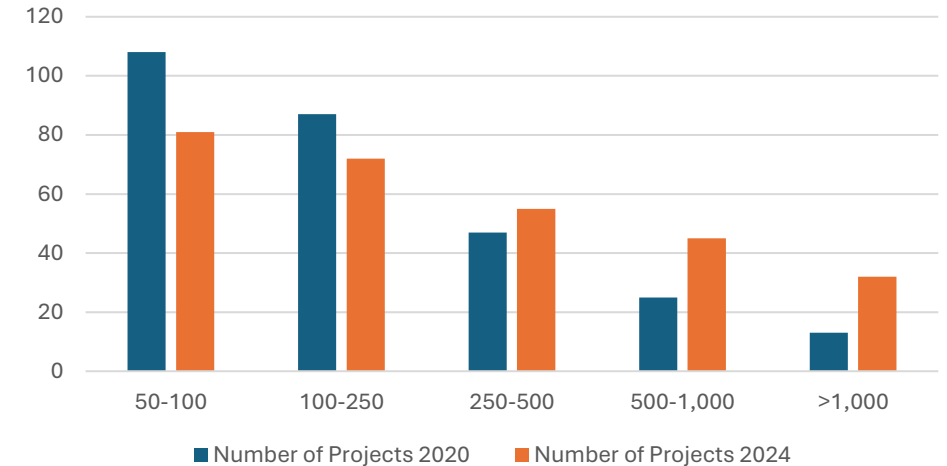


# Pipeline Deliverability – Industry Sustainability

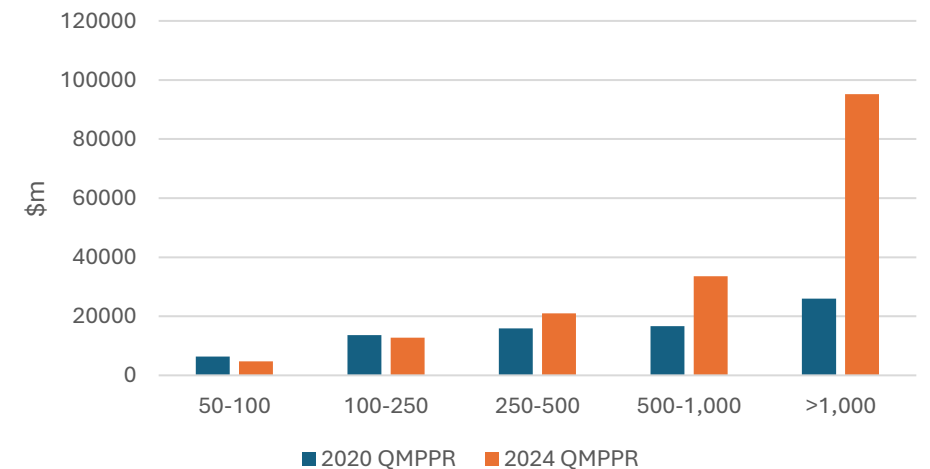


- Growth of the mega project- Since 2020:
  - 25% reduction in number of projects under \$100m
  - 146% growth in number of projects over \$1b
  - total value of projects over \$1b is 267% higher
- The sustainability of the industry relies on a diversity of work size
- Cost effective administration of projects?

Number of Projects



Pipeline Size (\$m)

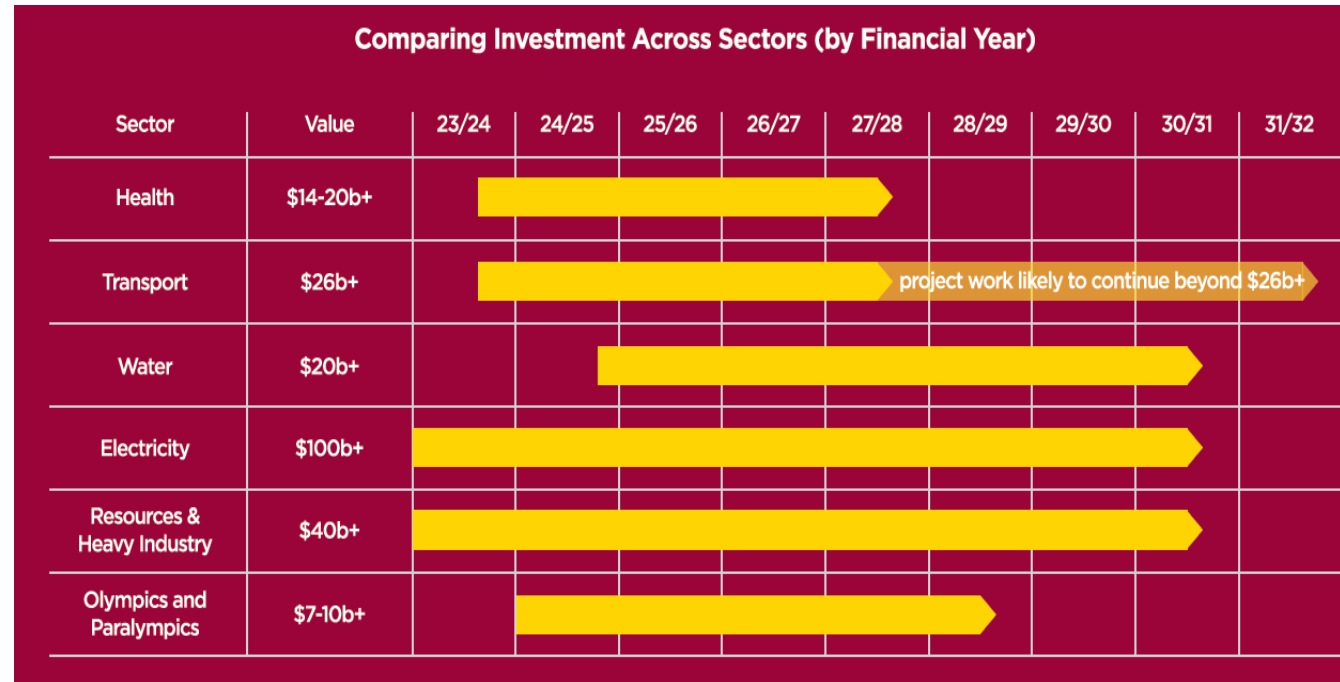




# Pipeline Deliverability – Coordination and Collaboration



- Lack of a whole-of-government, sequenced approach to project delivery
- Lack of Collaborative procurement means less surety around cost and time
- Project development and approval process is too long and cumbersome
- Project specifications are too tight and don't enable high levels innovation that can help drive productivity





# Opportunities & Recommendations

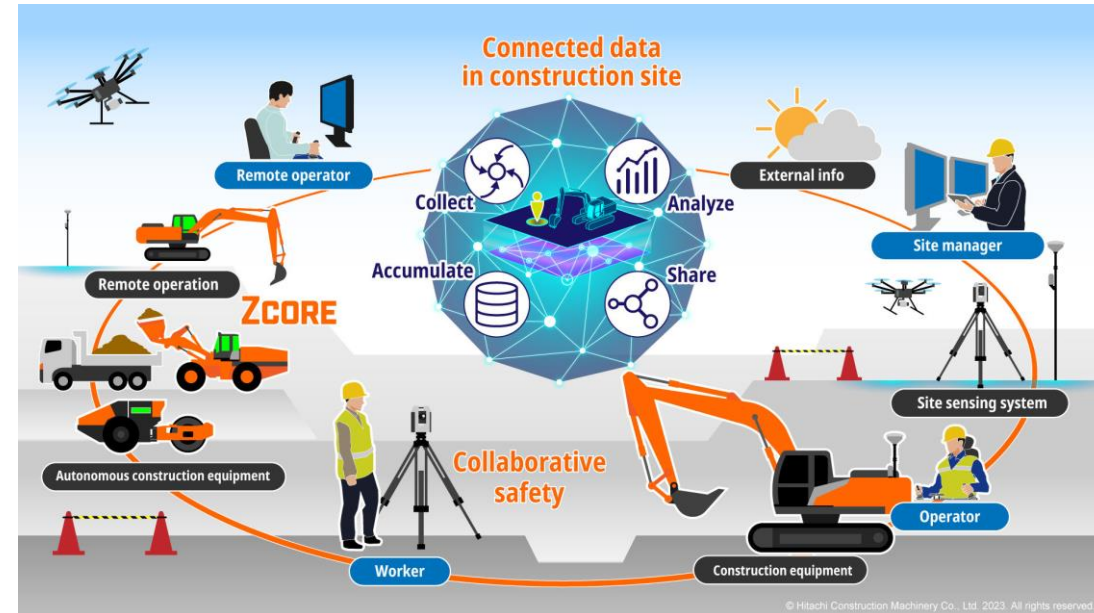




# Opportunities



- Supply chain capacity- early investment in
- Value for money: Fit for purpose design and construction
- Productivity:
  - Digital tools, automation and construction methodologies
  - Policy settings changes
- Private sector investment
- Coordination of the pipeline
- Changing policy settings to enable safe productive work







# Recommendations



- Deliverability:
  - Funding & financing
  - Supply chain capacity
  - Labour supply (and training)
  - Technology and innovation
- Sustainability:
  - Entire industry engagement
  - Procurement and collaboration
- Pipeline Coordination:
  - Streamline and remove excesses in project development and procurement
  - Prioritisation across the entire pipeline to help stimulate growth and investment (not boom bust)







CAN WE  
BUILD IT?<sup>™</sup>  
YES  
WE CAN!







Thank you to  
contributing authors:



# Queensland Major Projects Pipeline 2024



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# 2024 QLD Major Projects & Pipeline Report

Toowoomba – 28<sup>th</sup> November 2024







# Director, Workforce Capability

## CSQ - Construction Skills Queensland

### Kim Hetherington



# Building a skilled and resilient workforce in construction



**Kim Hetherington** / Director, Workforce Capability

**CSQ** | STRONGER FUTURES  
IN CONSTRUCTION



# Contents

- Industry Outlook
- Construction Workforce
- QMPP Labour & Skills
- Facing the Challenge Ahead







# Industry Outlook

# Key Labour Demand Drivers

## Government Investment

QTRIP

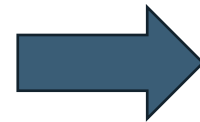
Clean Energy Transition

Qld Housing Strategy

Education & Training  
Package

Qld Health Capacity Expansion  
Program

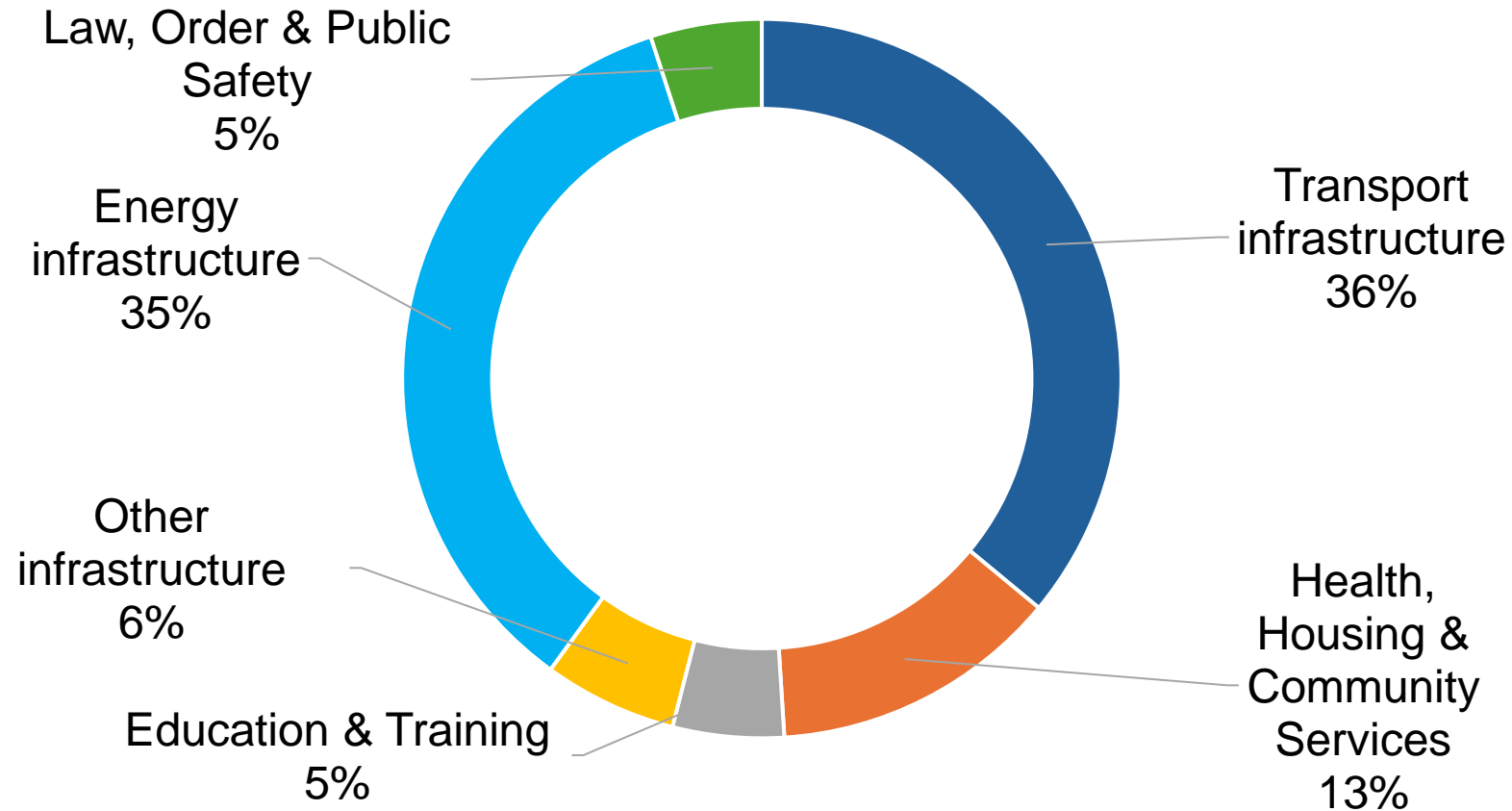
QLD Water Strategy





# QLD Government Capital Purchases

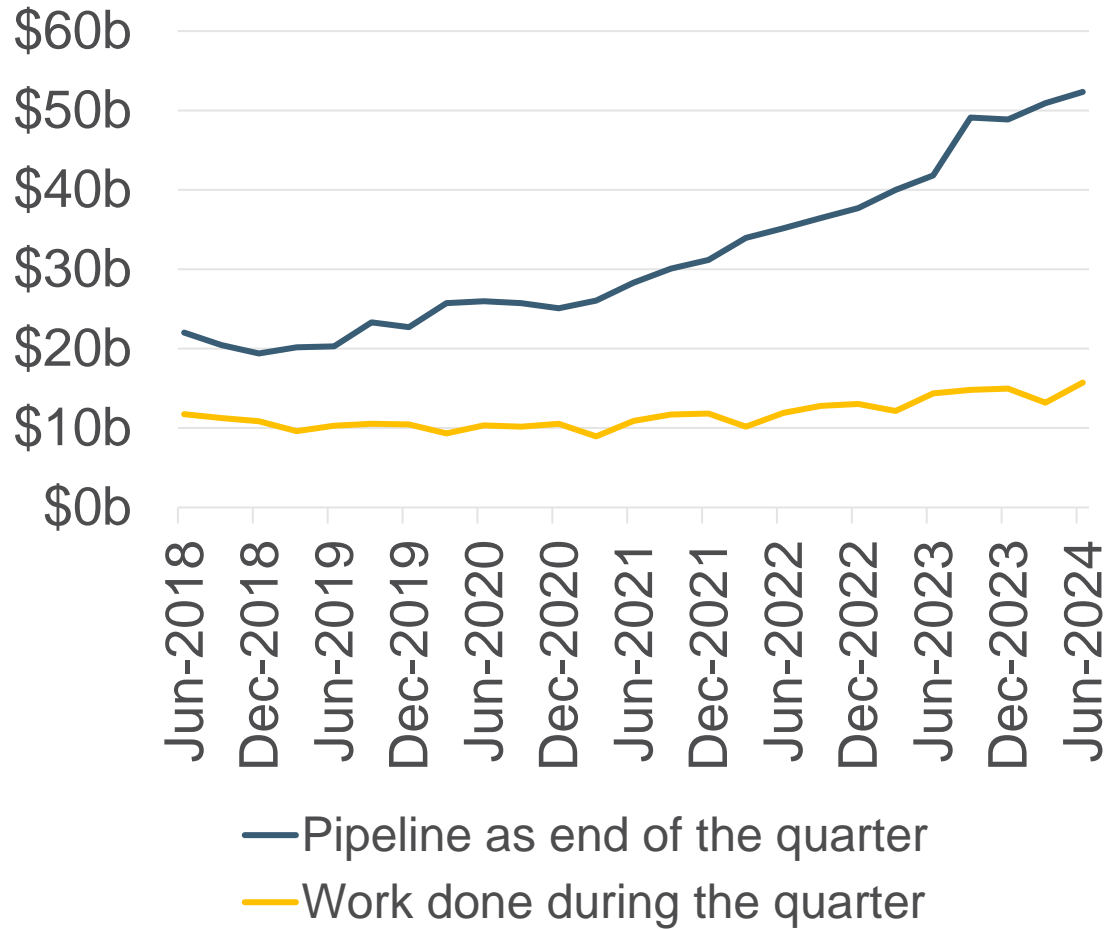
## Capital Purchases by Purpose for 2024-25



Source: The State of Queensland (Queensland Treasury) - 2024–25 Queensland Budget; CSQ

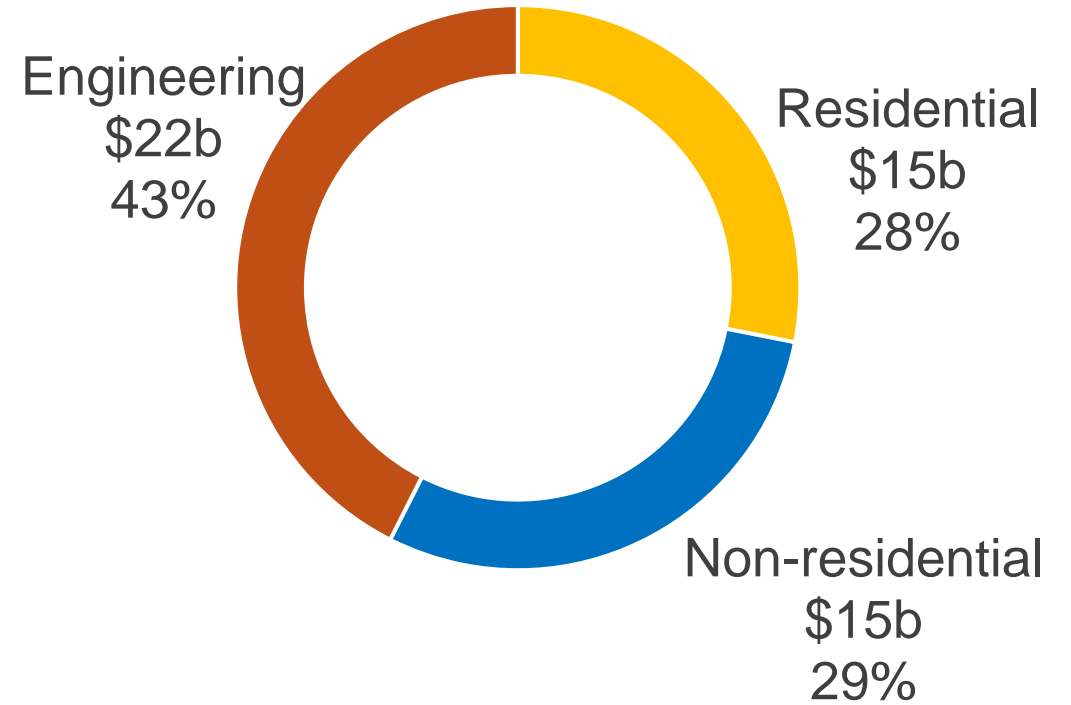
# QLD Construction Activity

## Pipeline & Work Done



Source: ABS

## Pipeline as of June 2024: \$52b

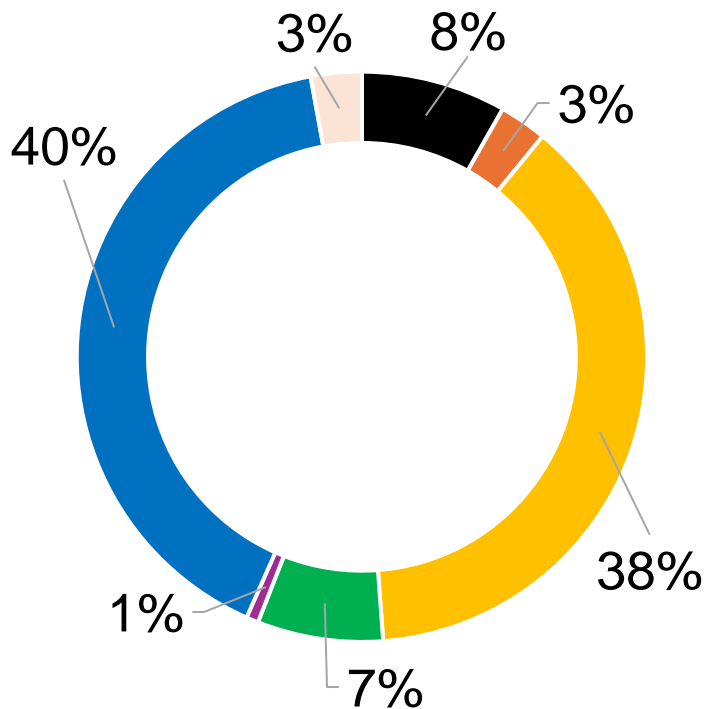


Source: ABS

# QLD Engineering Pipeline (yet to be done)

## As of June 2024: \$22b

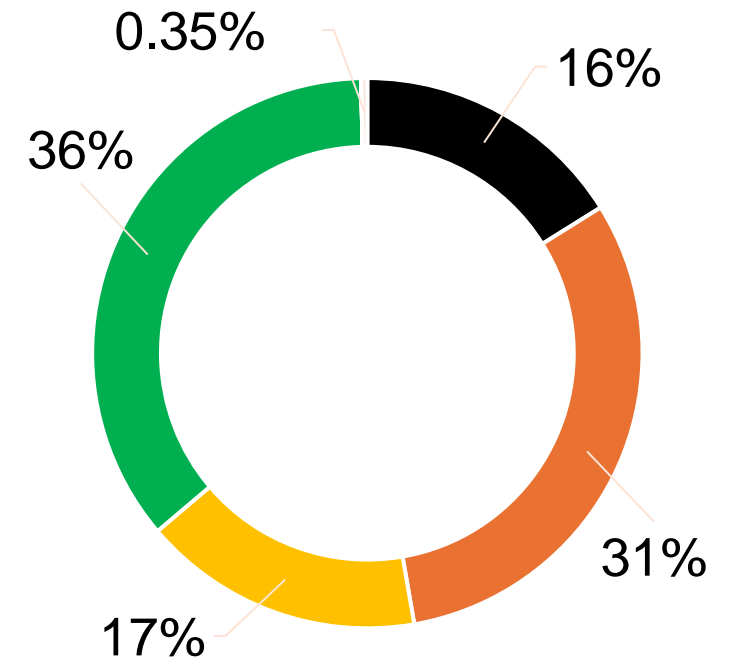
### Private Sector



Source: ABS

- Roads, highways and subdivisions
- Bridges, railways and harbours
- Electricity generation, transmission etc. and pipelines
- Water storage and supply, sewerage and drainage ;
- Telecommunications
- Heavy industry
- Recreation and other

### Public Sector



Source: ABS

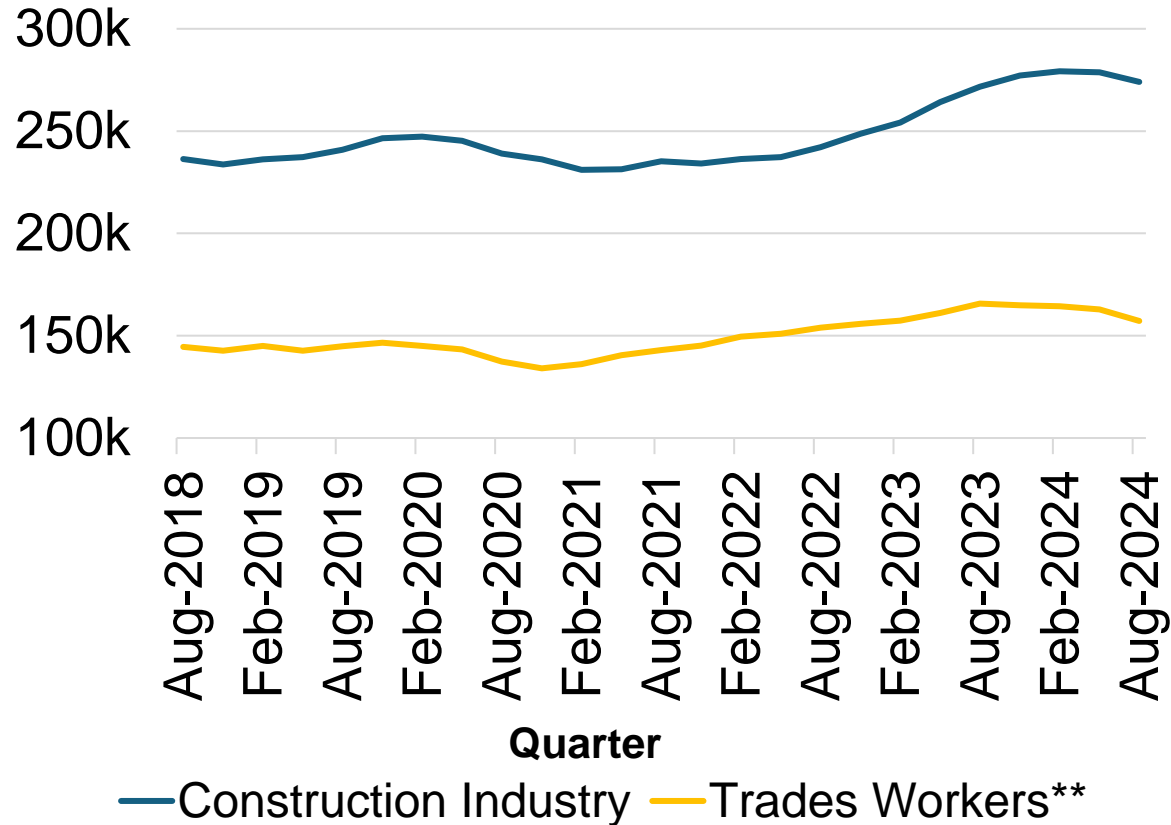


# Construction Workforce



# Employment

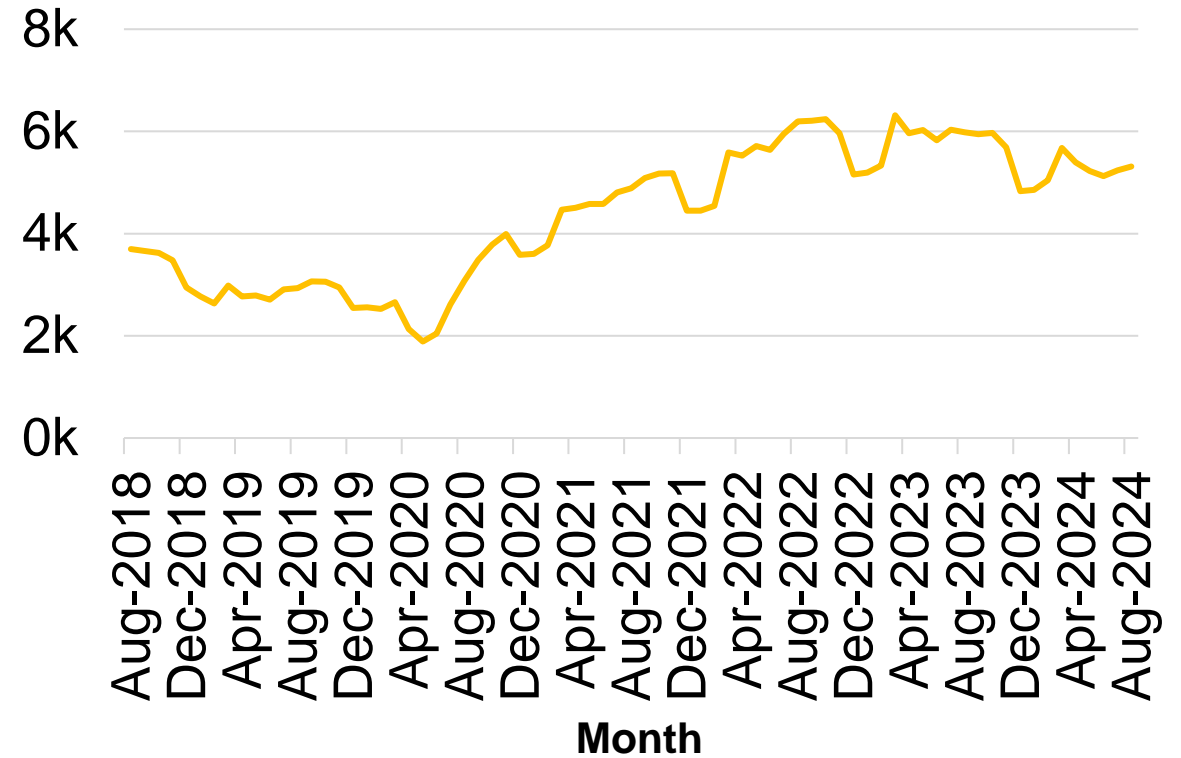
## Construction Employment, QLD\*



Source: ABS; JSA; CSQ

\* Averages of preceding 4 quarters

## Internet Vacancies for Trades Jobs\*\*, QLD

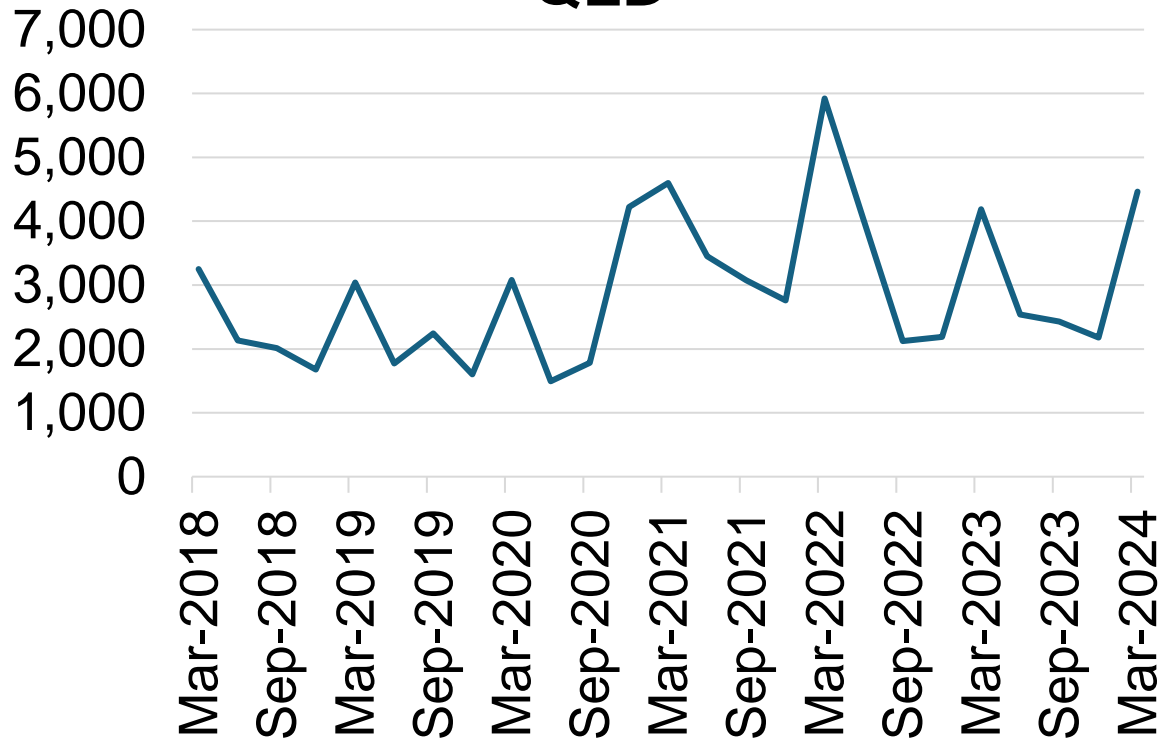


Source: ABS, JSA; CSQ

\*\* Includes trades, labourers and machine operators

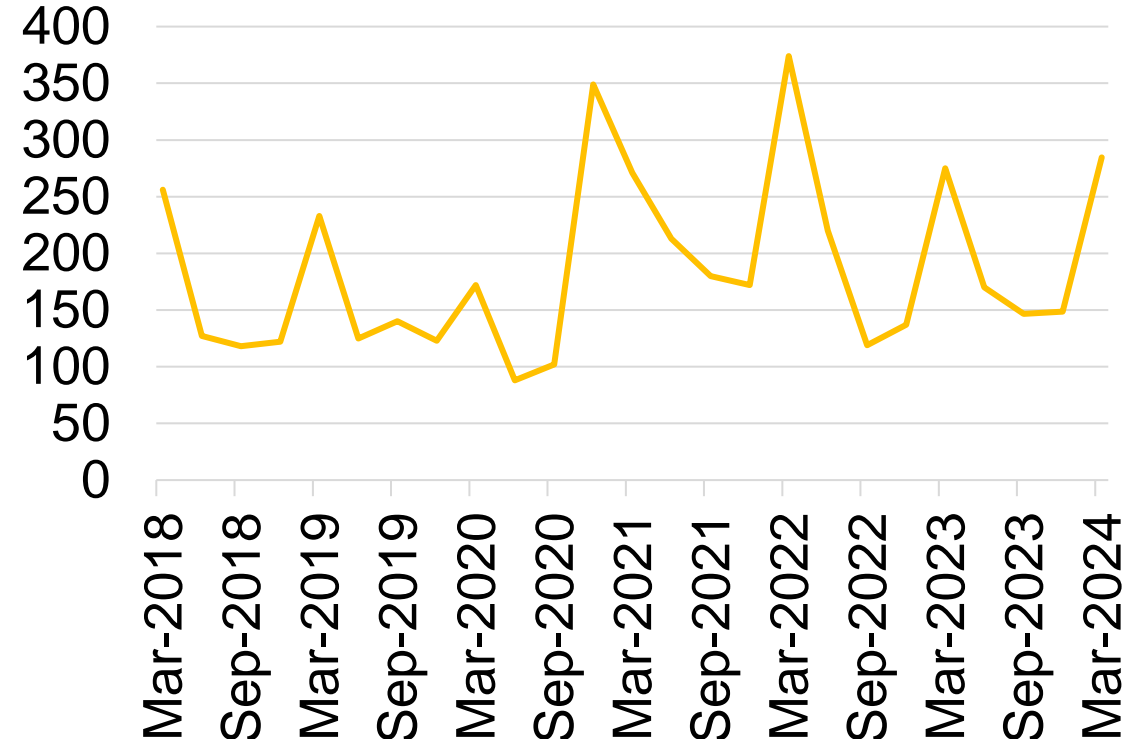
# Building our own

## B&C Apprentice\* Commencements QLD



Source: NCVER (Based on March 2024 Database); CSQ  
\*pursuing construction qualifications

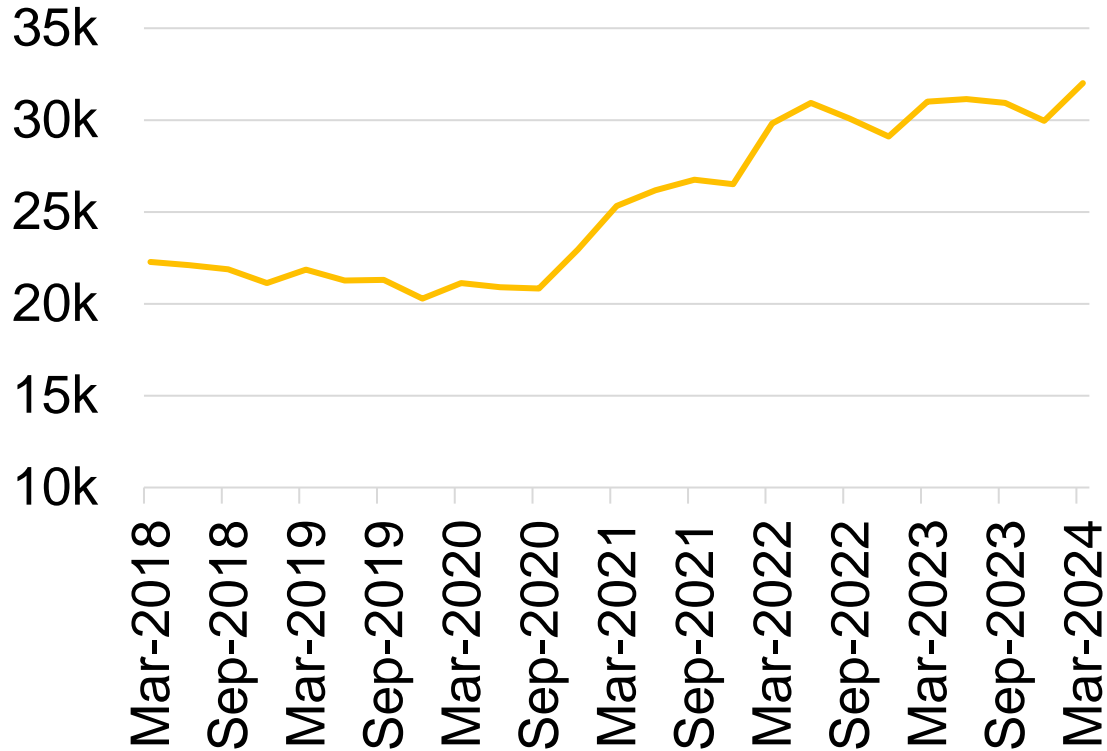
## B&C Apprentice\* Commencements Darling Downs - Toowoomba



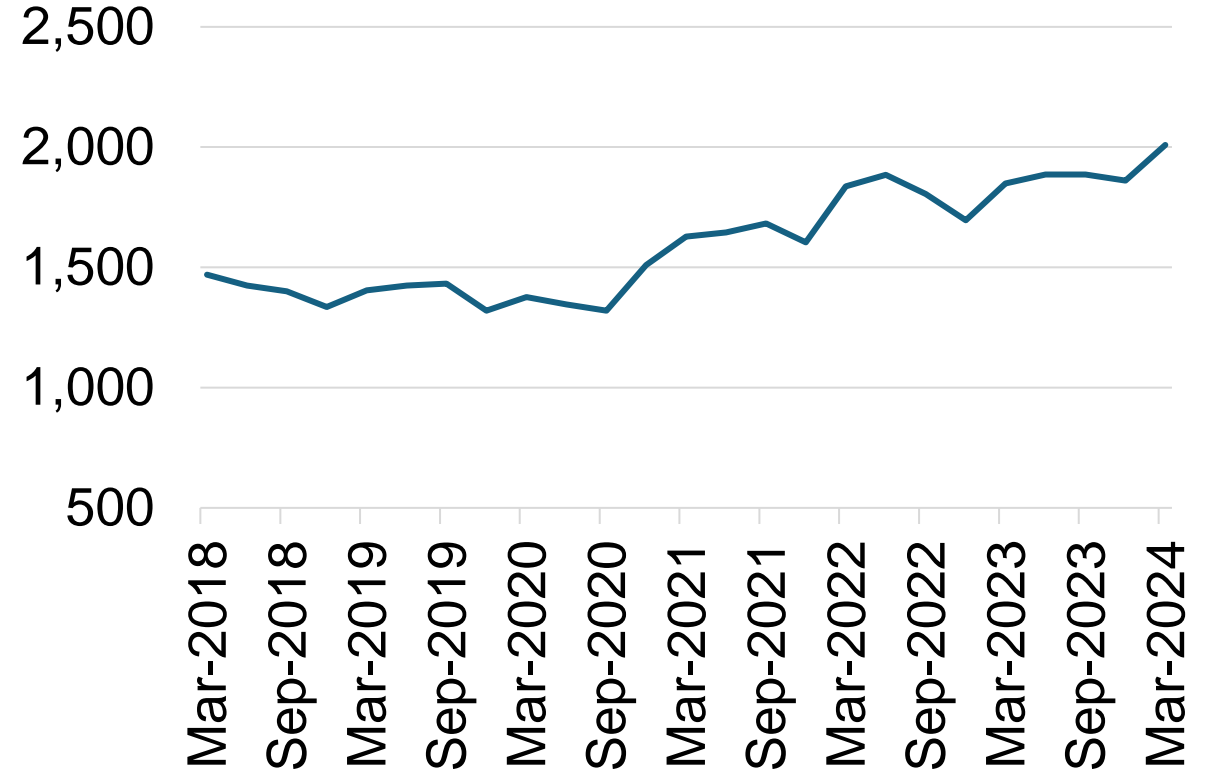
Source: NCVER (Based on March 2024 Database); CSQ  
\*pursuing construction qualifications

# Building our own

## B&C Apprentices\* In-training, QLD



## B&C Apprentices\* In-training Darling Downs - Toowoomba

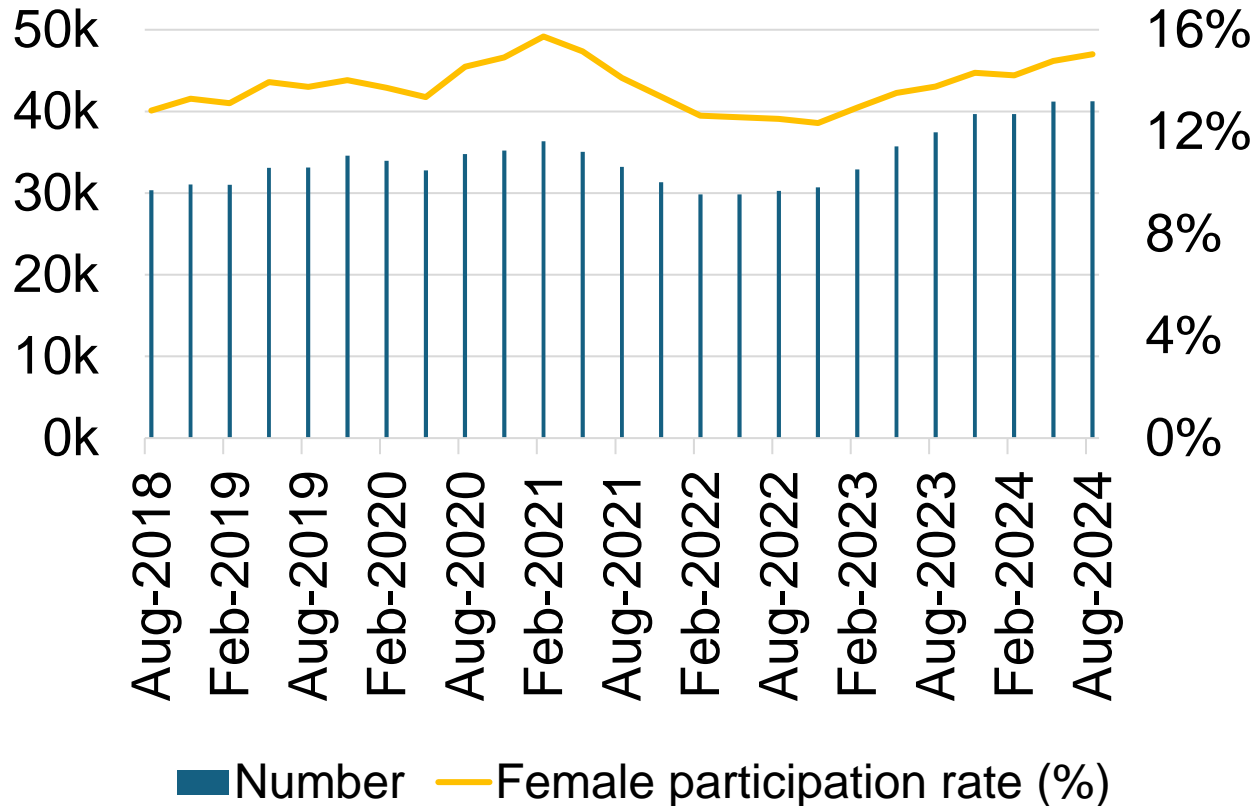


Source: NCVET (Based on March 2024 Database); CSQ  
\*pursuing construction qualifications

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\*pursuing construction qualifications

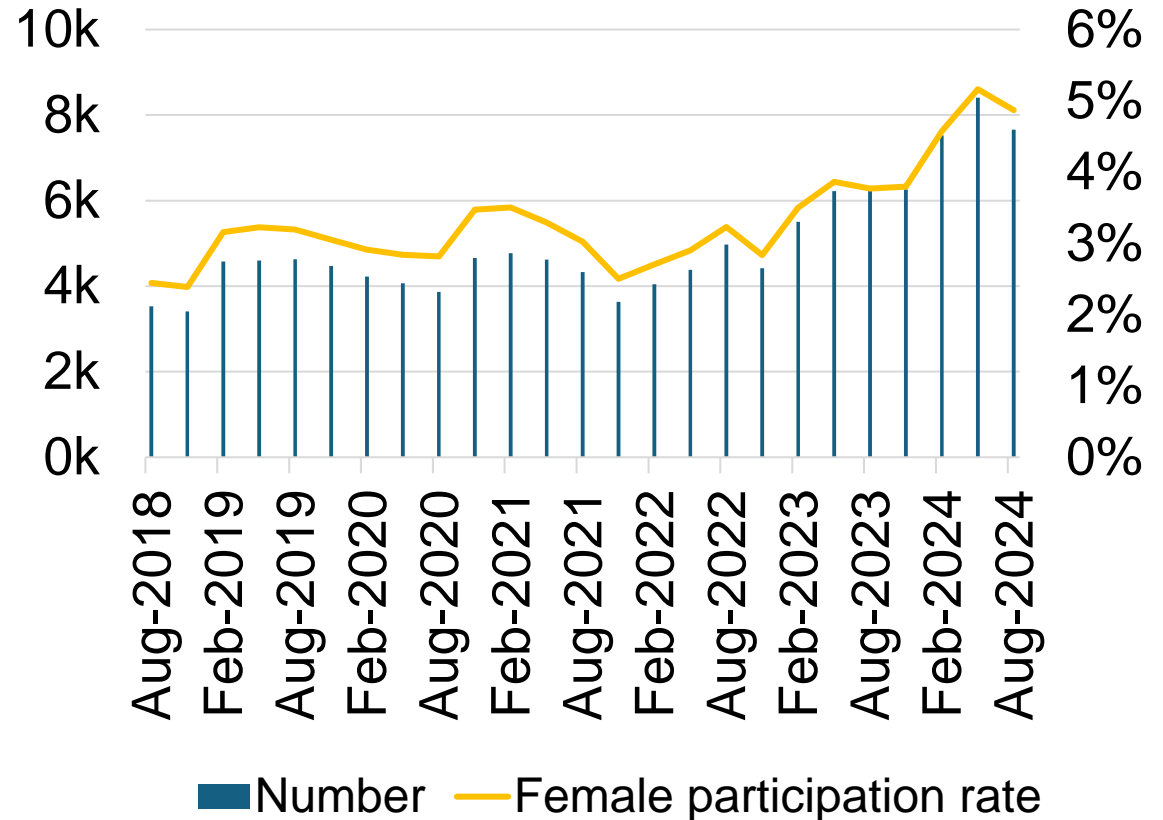
# Females in Construction - QLD

## Employment in Construction Industry\*



Source: ABS; CSQ  
\*Average of preceding 4 quarters

## Trades Workers\*\* in Construction Industry\*



Source: ABS; CSQ  
\*\*Includes trades, labourers and machine operators  
\*Average of preceding 4 quarters



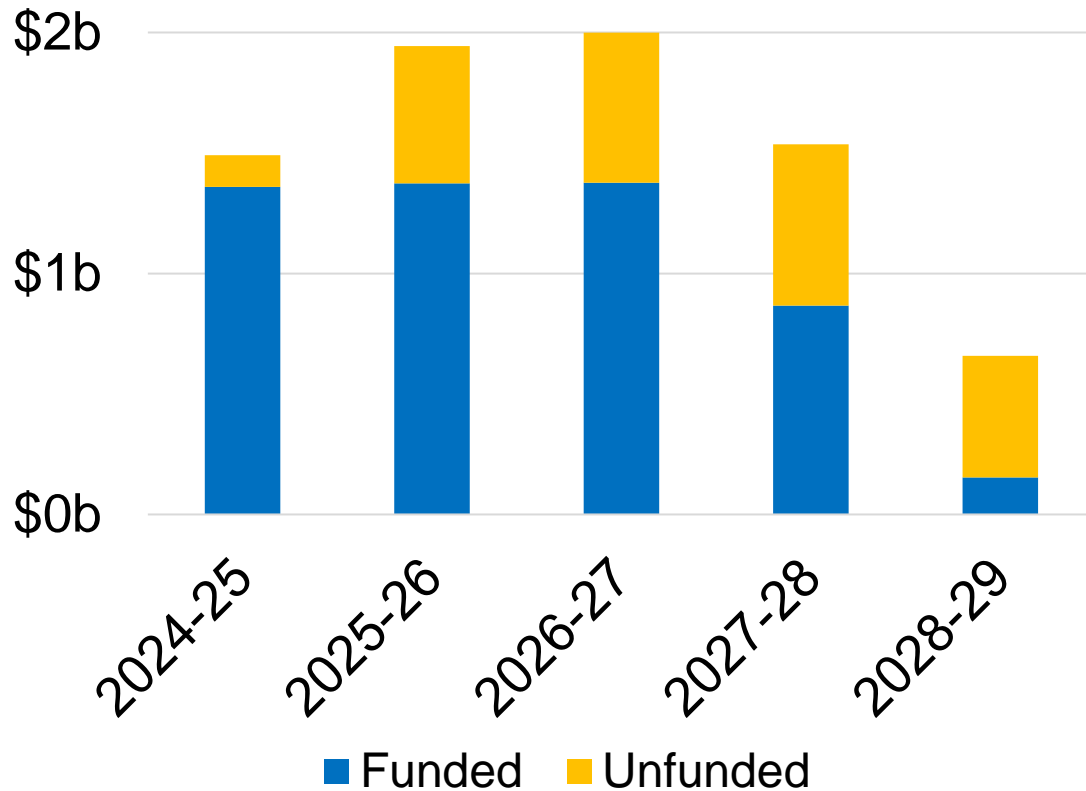


# QMPP

## Labour & Skills

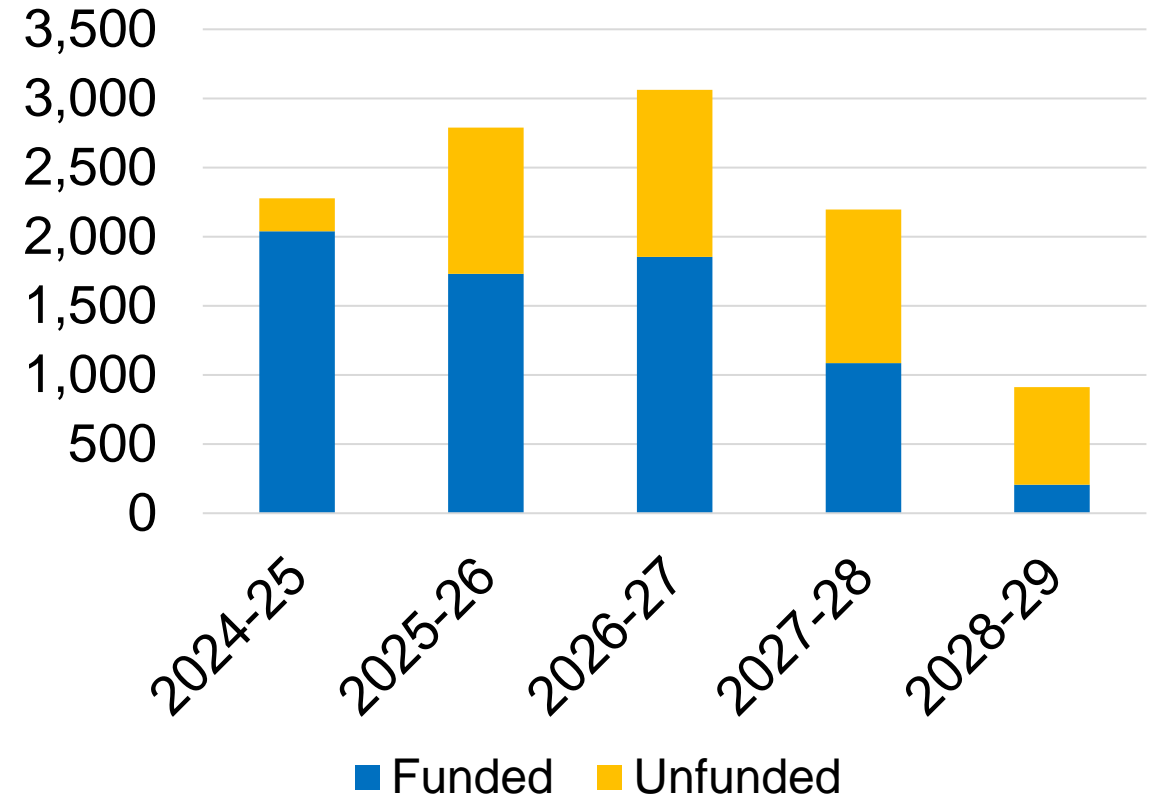
# QMCA Engineering Projects: Darling Downs - Toowoomba

## Pipeline by Funding Status



Source: QMCA; CSQ

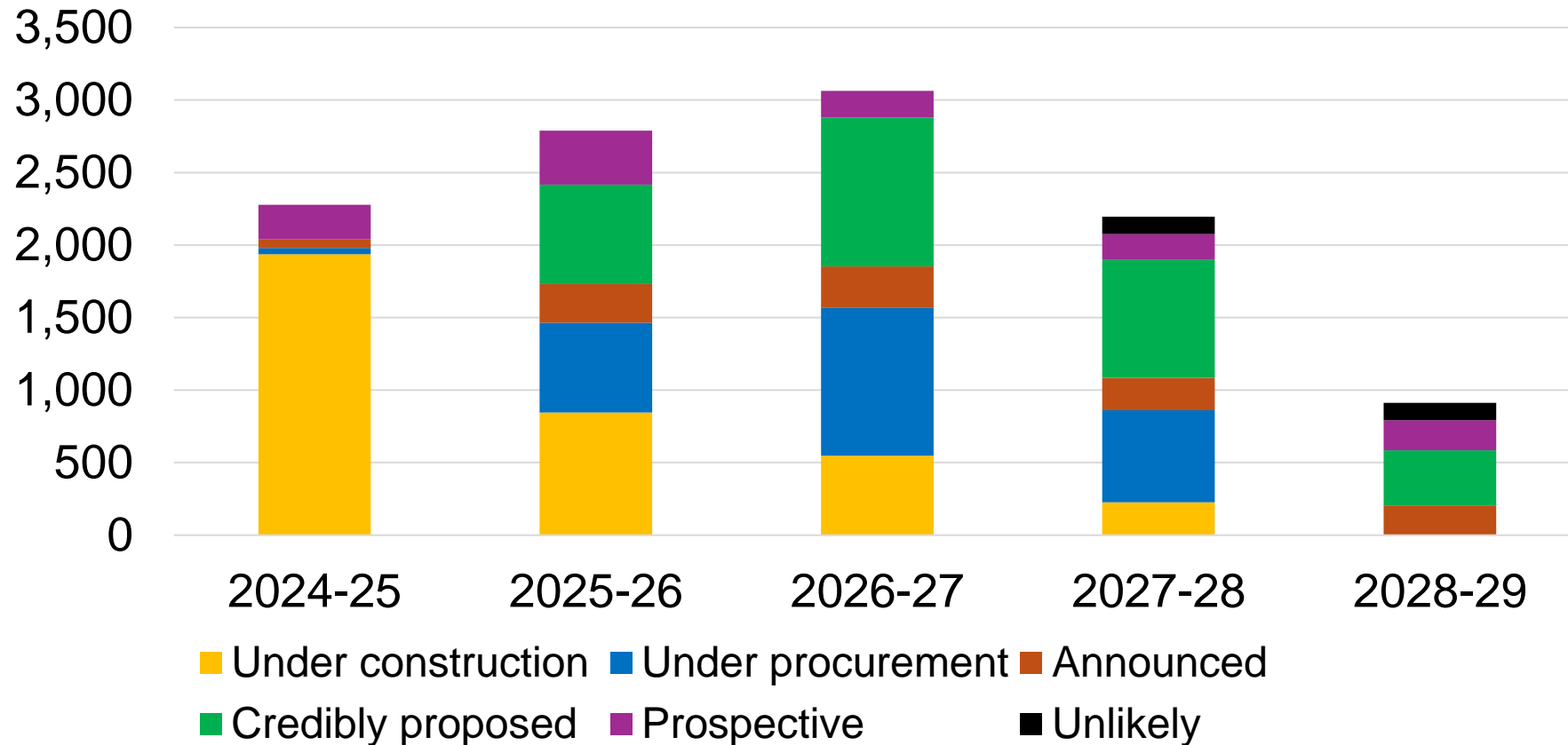
## Average Labour Requirement by Funding Status



Source: QMCA; CSQ

# QMCA Engineering Projects: Darling Downs - Toowoomba

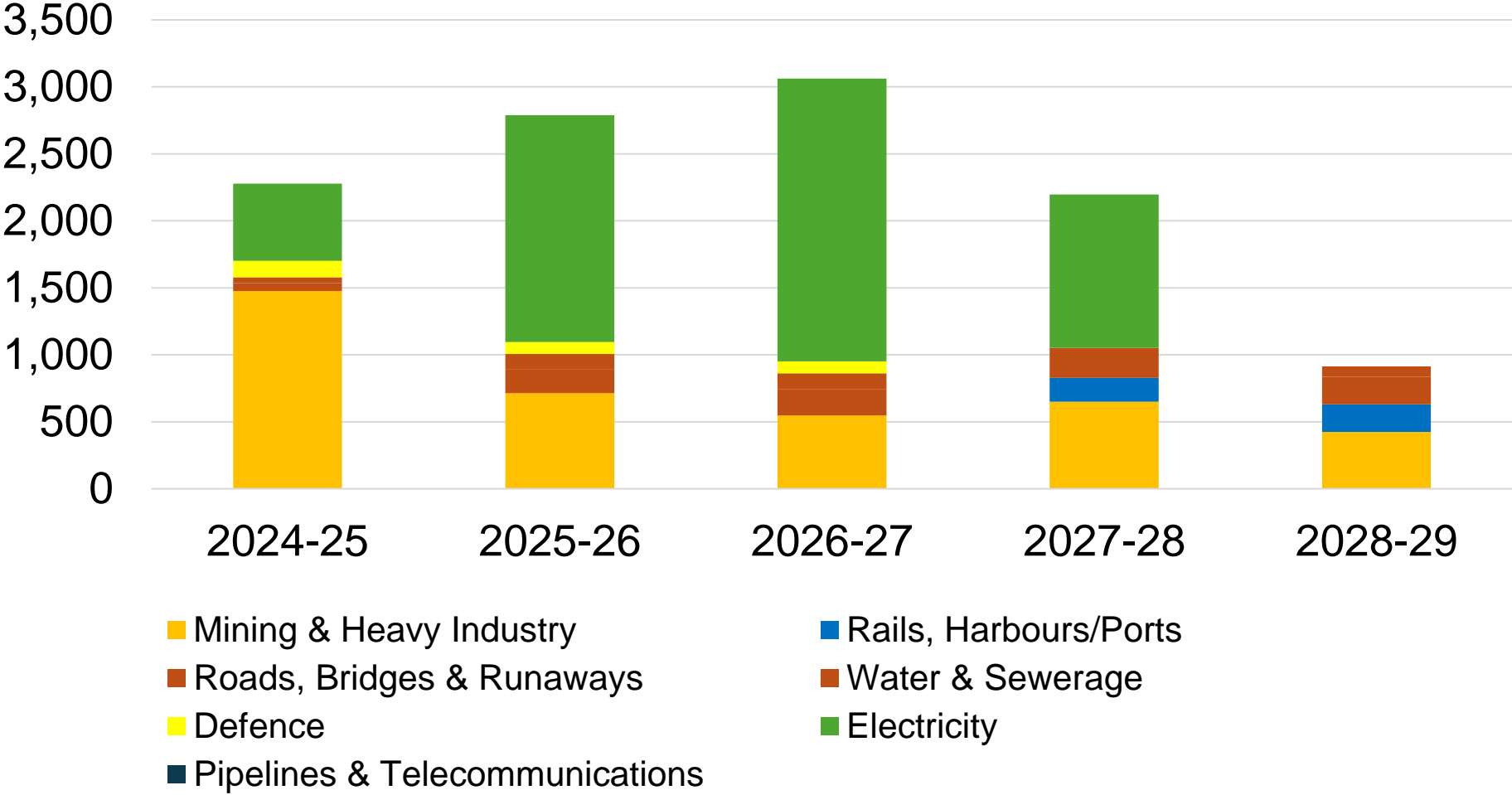
## Average Labour Requirement by Project Status



Source: QMCA; CSQ

# QMCA Engineering Projects: Darling Downs - Toowoomba

## Average Labour Requirement by Project Sector

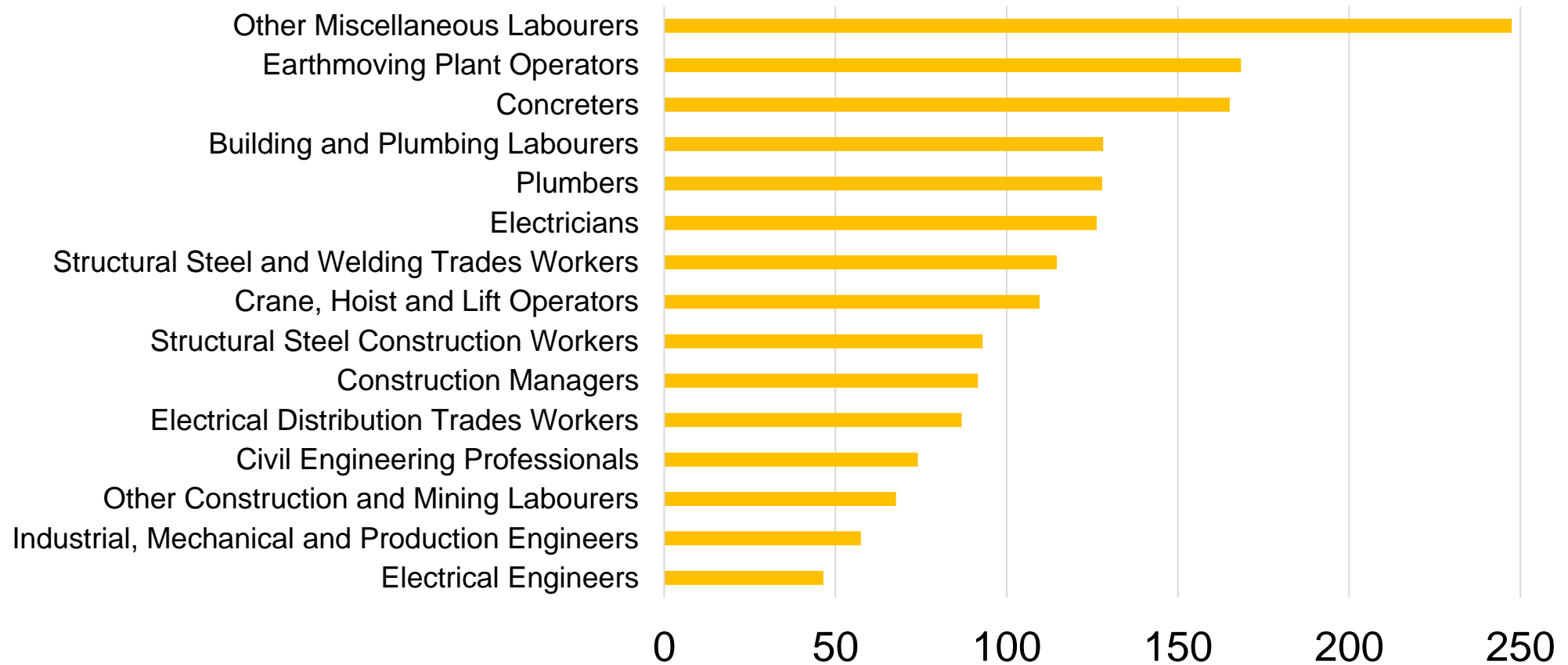


Source: QMCA; CSQ



# QMCA Engineering Projects: Darling Downs - Toowoomba

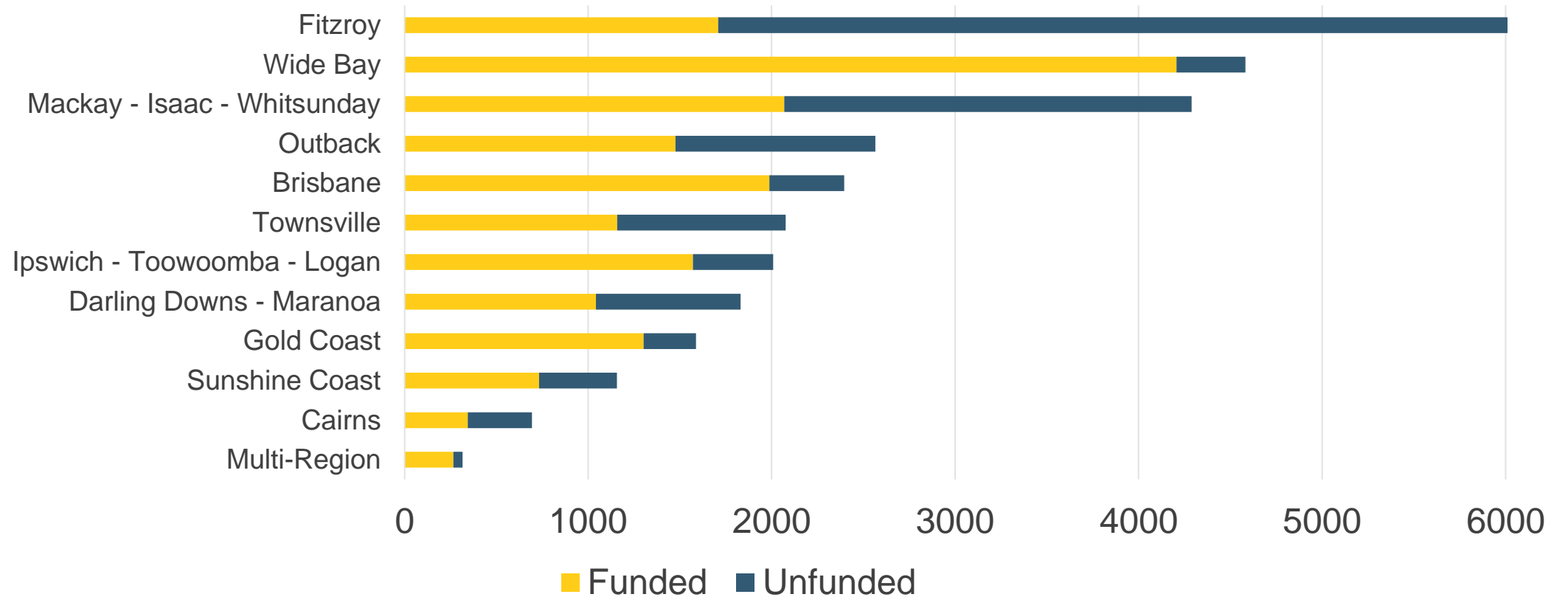
## Key Construction Occupations in Demand Average (2024-25 to 2028-29)



Source: QMCA; CSQ

# Regional labour requirement - QMPP

## Labour demand by region and funding status, average (2024-25 to 2028-29)



Source: CSQ for QMCA



# Facing the Challenge Ahead



# What does industry need to do?



Breakdown barriers for underrepresented groups

Attract & retain apprentices

Improve apprentice completion rates



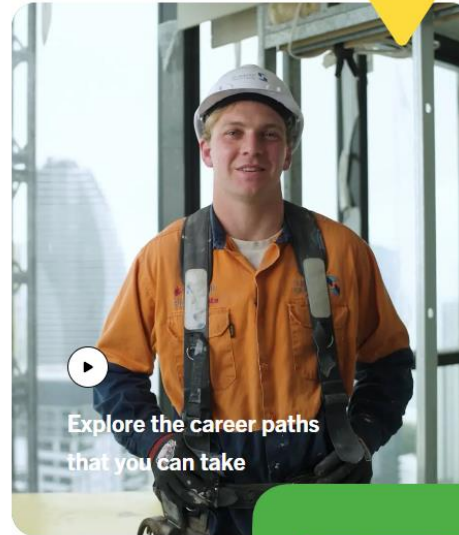
# Be part of the solution

## FIND YOUR PATHWAY

Be a part of one of the biggest and most exciting industries in Queensland.

WHY CHOOSE CONSTRUCTION?

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Explore the career paths that you can take

**CONSTRUCTION PATHWAYS**

THINKING OF A CAREER IN CONSTRUCTION?

**Construction offers:**

- Excellent job stability and earning potential
- Great work/life balance
- In-demand skills and travel opportunities
- Opportunities for earning whilst you are learning through an apprenticeship/traineeship
- Many construction pathways - over 60 job types
- Lots of funded training to grow your career
- Varied work and job sites with changing scenery
- Great career progression on and off the tools

**Choosing between uni or non-uni?**

There is a lot to think about when choosing a career. It's easy to feel overwhelmed by the options and pressure to make the right choice.

Don't stress, you're not alone. Many young people haven't decided what they want to do yet and it is not uncommon to change over time. What is important is joining an industry where you can succeed.

To find out if a construction pathway is right for you, visit [constructionpathways.csq.org.au](http://constructionpathways.csq.org.au)

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# Spotlight Story



**Tiara Edwards**  
Civil Construction  
Labourer / Plant Operator

*“Females or younger people, don’t hold back. Even if you’ve never done it before, trial it out because you just never know.”*



# Key Takeaways

- QLD's construction activity pipeline is projected to maintain its upward trend.
- Residential activity may reach 2023 levels or slightly higher as we close out 2024.
- Non-residential activity, particularly hospital builds, and engineering work, remain buoyant.
- Labour shortages, material supply constraints, and cost escalation persist as key challenges.
- Population growth, NET ZERO transition, and the Brisbane 2032 Games are driving record infrastructure investment across the state.





**Thank You**







# Panel Discussion

- Moderator: Lance MacManus
- Panelists:
  - Aaron Zamykal - Actualisation AI
  - John Whitehead- Trimble
  - Ben Sommerville – John Holland





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Toowoomba – 28<sup>th</sup> November 2024







# 2024 QMPPR

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## Queensland Major Projects Pipeline 2024



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