



# WHEATBELT FUTURES FORUM

3<sup>RD</sup> MAY, 2023

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WHEATBELT BUSINESS NETWORK  
Connecting Business. Growing the Wheatbelt.



**NORTHAM**  
**CHAMBER**  
OF COMMERCE



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## Welcome to Country, Introduction & Housekeeping

Kitty Prodonovich, CEO,  
RCCIWA





**WHEATBELT  
FUTURES FORUM  
3<sup>RD</sup> MAY 2023**

**Vibrant Regions**

Ben MacNamara, CEO, CBH  
Group



# Wheatbelt Future's Forum

## Vibrant Regions

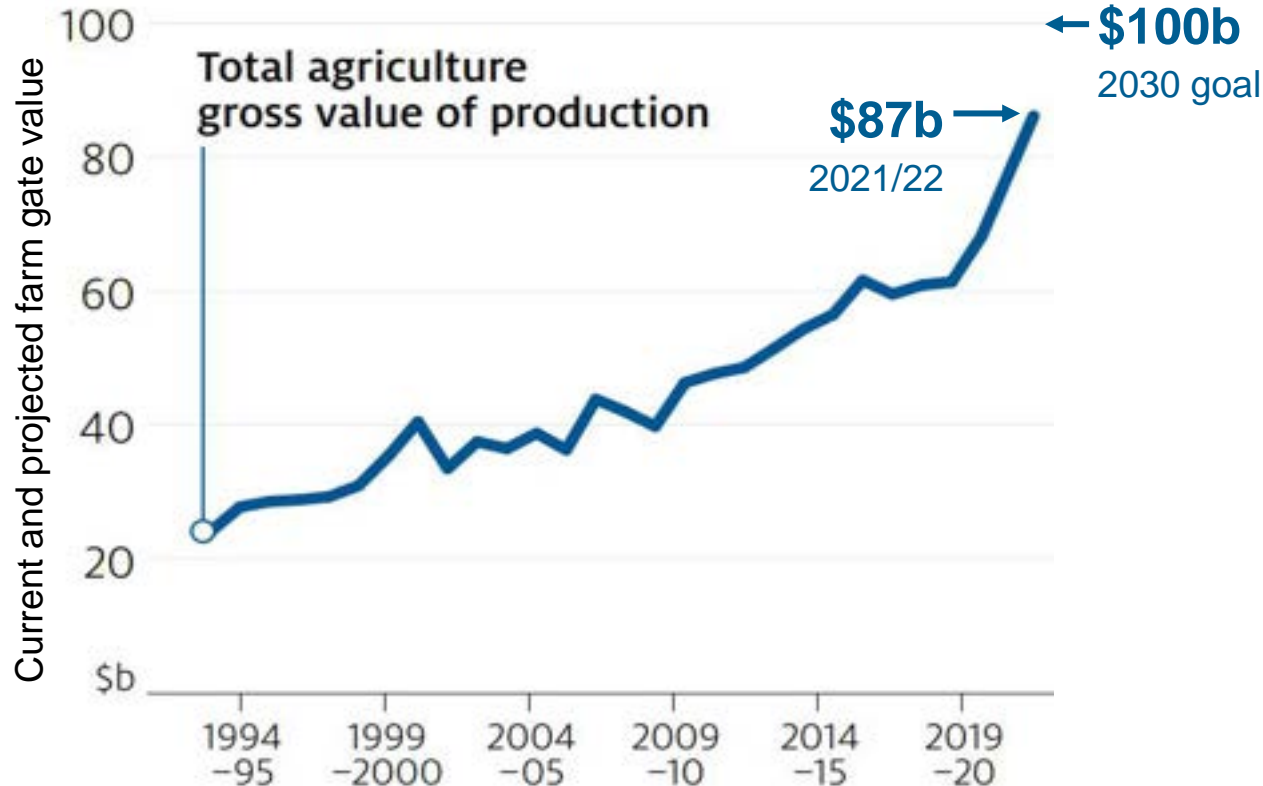


The Fulwood Family – Southern Brook



# Agriculture in Australian and WA

The Australian agri sector is rapidly moving to the goal of \$100 billion by 2030



Source: ABARES

## Australia

- Wheat contributed \$11.5bn in FY22
- Farm production feeds 80m people
- 70% of production is exported
- +300,000 people employed in the sector

## Western Australia

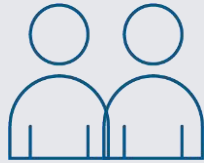
- \$15.5bn exported in FY22, majority was grain
  - \$5.5bn wheat
  - \$3.8bn canola
  - \$2.1bn barley
- ~10,000 people working in the sector\*

# CBH Group overview

CBH operates across the grain value chain from fertiliser to storage, handling, transport, marketing and processing



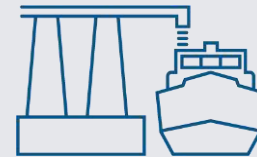
**~3,500 members**  
established in  
1933 by WA grain  
growers



**1,200 employees**  
plus ~2,000  
casuals during  
harvest



**+\$1 billion**  
capital expenditure  
& maintenance  
spend in last 5  
years



**16.7 million tonnes**  
exported in FY22  
largest grain exporter  
in Australia

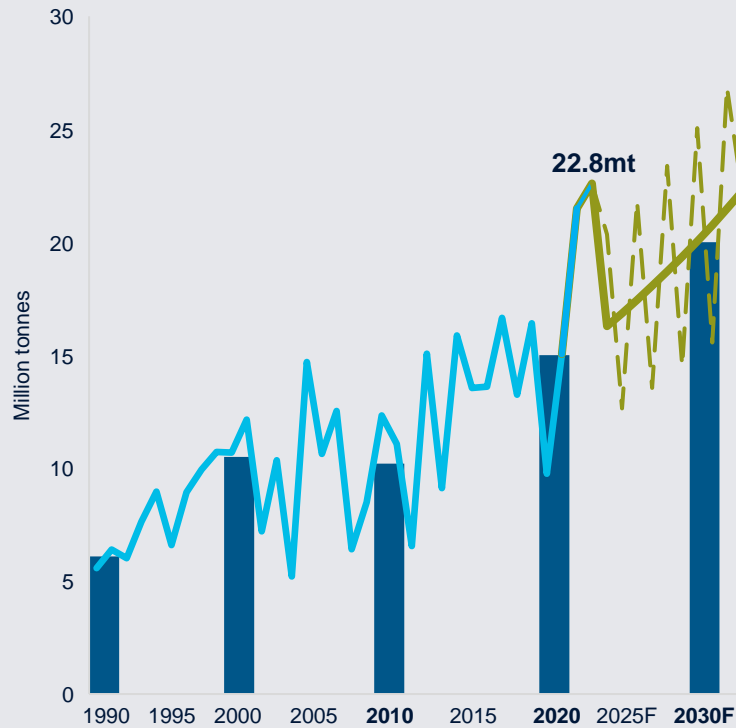


**~\$9 billion**  
annual grain export  
value

# Value drivers for WA grain

Long-term growing crop size and first half price premiums drive strategy

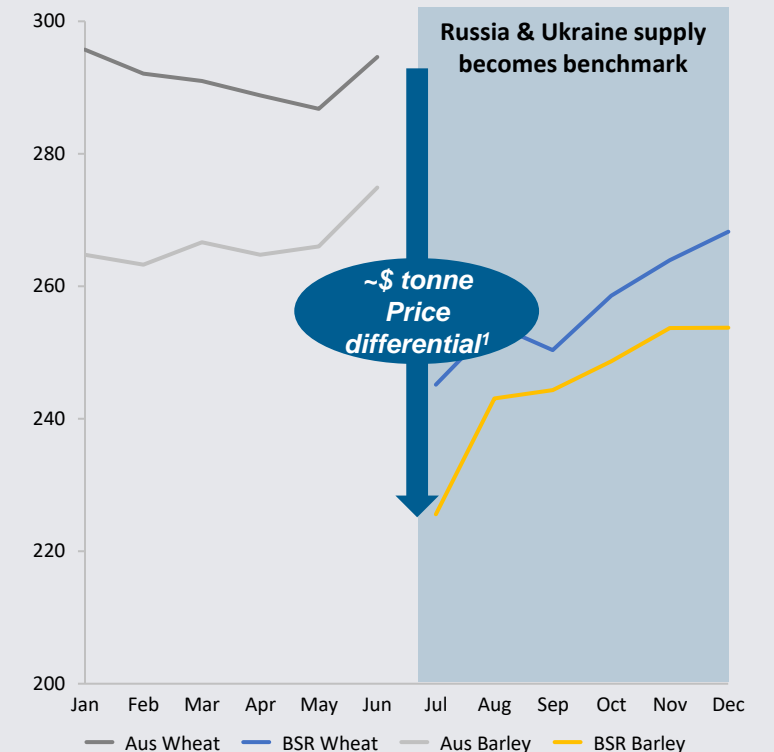
## Growing received crop size



## First half tonnes to port



## First half price premium



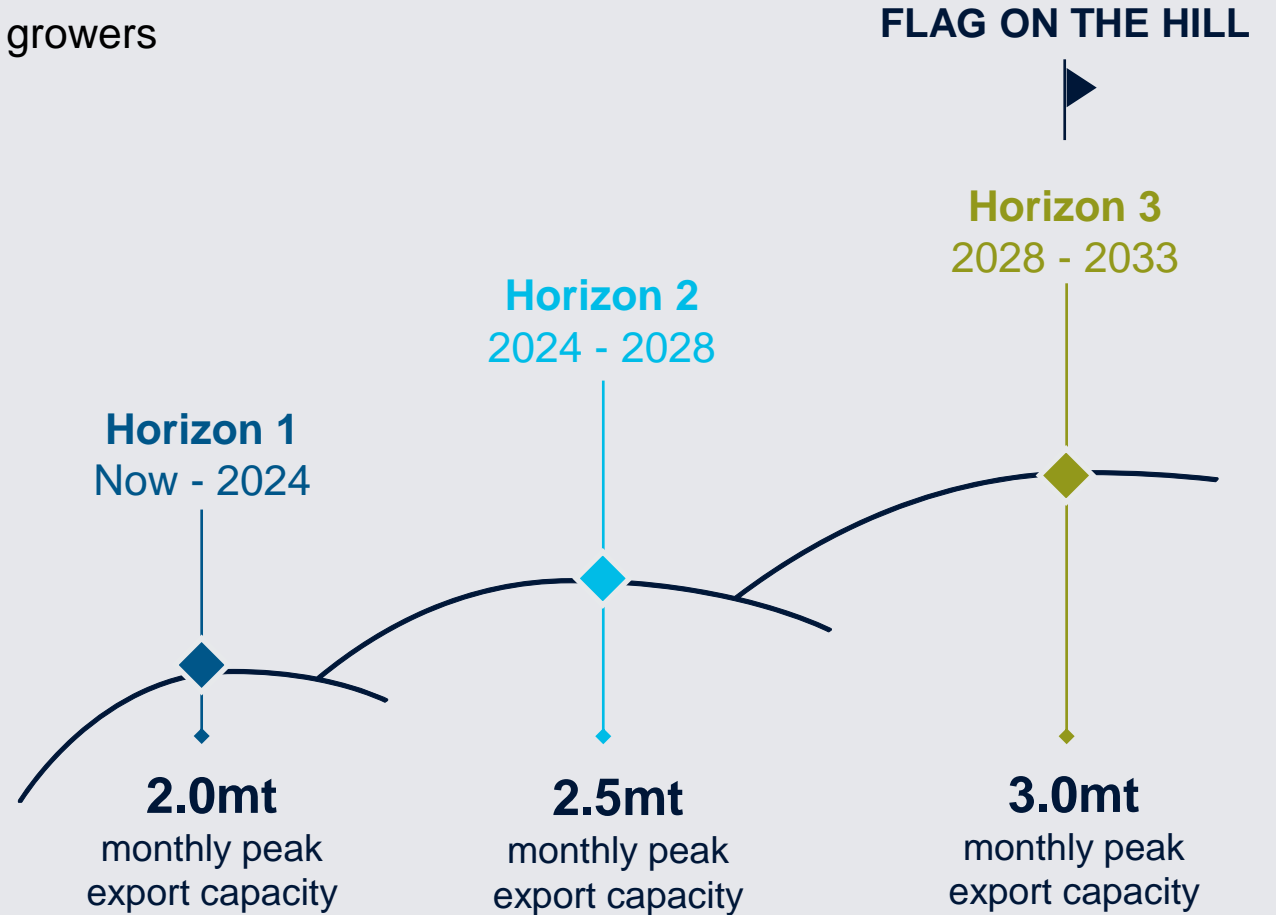
# Path to 2033 strategy

**Purpose:** Sustainably create and return value to WA growers

**Beneficiary:** WA growers, both current and future

## By 2033 we will:

- 1 Be able to **receive** an average **22mt** crop and **out-turn 70%** in the first-half shipping window
- 2 Be able to **market ~50%** of the crop to international customers
- 3 Be able to hold a **15%** market share in the **fertiliser** market





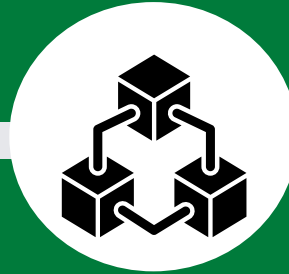
# Three strategic focus areas

These focus areas have the greatest impact to deliver our strategic objectives



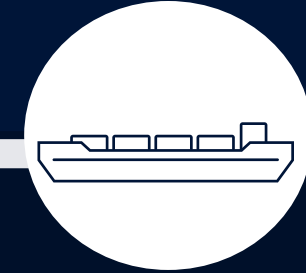
## People

Develop, retain and attract engaged people with the skills we need



## Technology

Right systems, processes, data and reporting to support decision making



## Tonnes to Customer

Dedicated investment in infrastructure and supply chain

# Sustainability Plan

Ensuring our activities and operations are geared for the long-term

Our Pillars	 <b>Markets</b>	 <b>Communities</b>	 <b>People</b>	 <b>Governance</b>	 <b>Environment</b>
	<p>Maintain and open new markets for WA growers</p>	<p>WA grain growers and our communities are viable for the long-term</p>	<p>Attract and retain the best talent</p>	<p>Comprehensive and leading governance practices</p>	<p>Protect the environment in which we operate</p>
<b>Our Focus</b>	<p>Lead the industry in sample collection for residue traceability</p> <p>Increased sales of sustainably certified grain</p>	<p>Ongoing community investment</p> <p>Procure more from our regional vendors</p>	<p>Safe people and safe workplaces</p> <p>Diversity and inclusion</p>	<p>Demonstrate and disclose progress on the Sustainability Plan</p> <p>Board Committee responsible for sustainability</p>	<p>50% reduction of Scope 1 and 2 emissions by 2030</p> <p>Site to Customer net zero emissions by 2050</p>
<b>United Nations Sustainability Goals</b>					

# Opportunities in the Wheatbelt

Flowing from our Strategy and Sustainability Plans



**Regional and  
Community Investment**



**Sustainable Grain**



**Network Investment**



# Regional and Community Investment

The CBH Community Investment fund deploys ~\$1.5 million annually in the regions

**\$1.6M**

Invested in community in 2022

**213**

Organisations supported in 2022



**Sport & Recreation**



**The Arts**



**Health, Safety & Lifestyle**



**Regional Capacity Building**



**Co-op Supply Chain**



**Grass Roots Grants**



**Industry Events**



**Agricultural Promotion**



**Emergency**



**Discretionary**

# Regional and Community Investment

We are refreshing our Community Investment Fund strategy to get better outcomes from our support in the regions

## Horizon 1

*Now - 2024*

### Refresh the Strategy

- Consult with members and stakeholders
- Strategy development
- Deploy funds
- Set clear KPIs

## Horizon 2

*2024 - 2028*

### Measure the Outcomes

- Deploy funds
- Track and assess KPIs
- Assess meaningful / measurable impact
- Report impact through annual Sust. Report

## Horizon 3

*2028 - 2033*

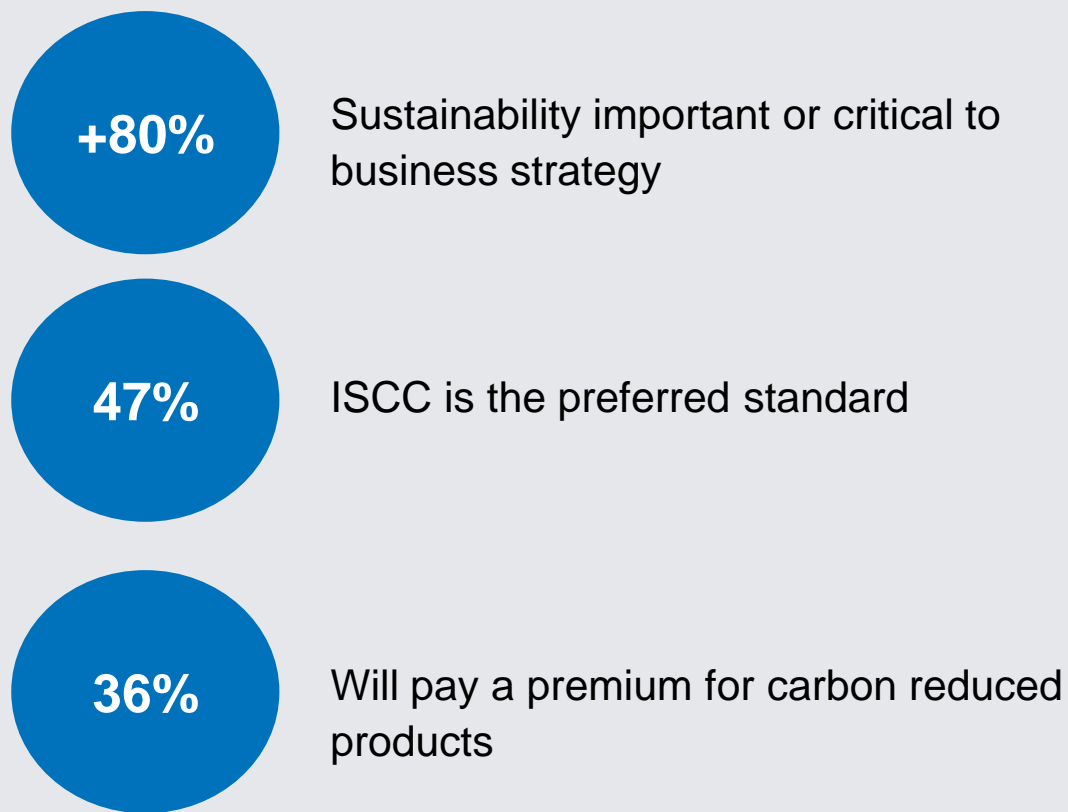
### Refine the Strategy

- Deploy funds
- Assess community / social impact
- Refine strategy to maximise impact

# Sustainable Grain

Maintaining and expanding market access for WA growers

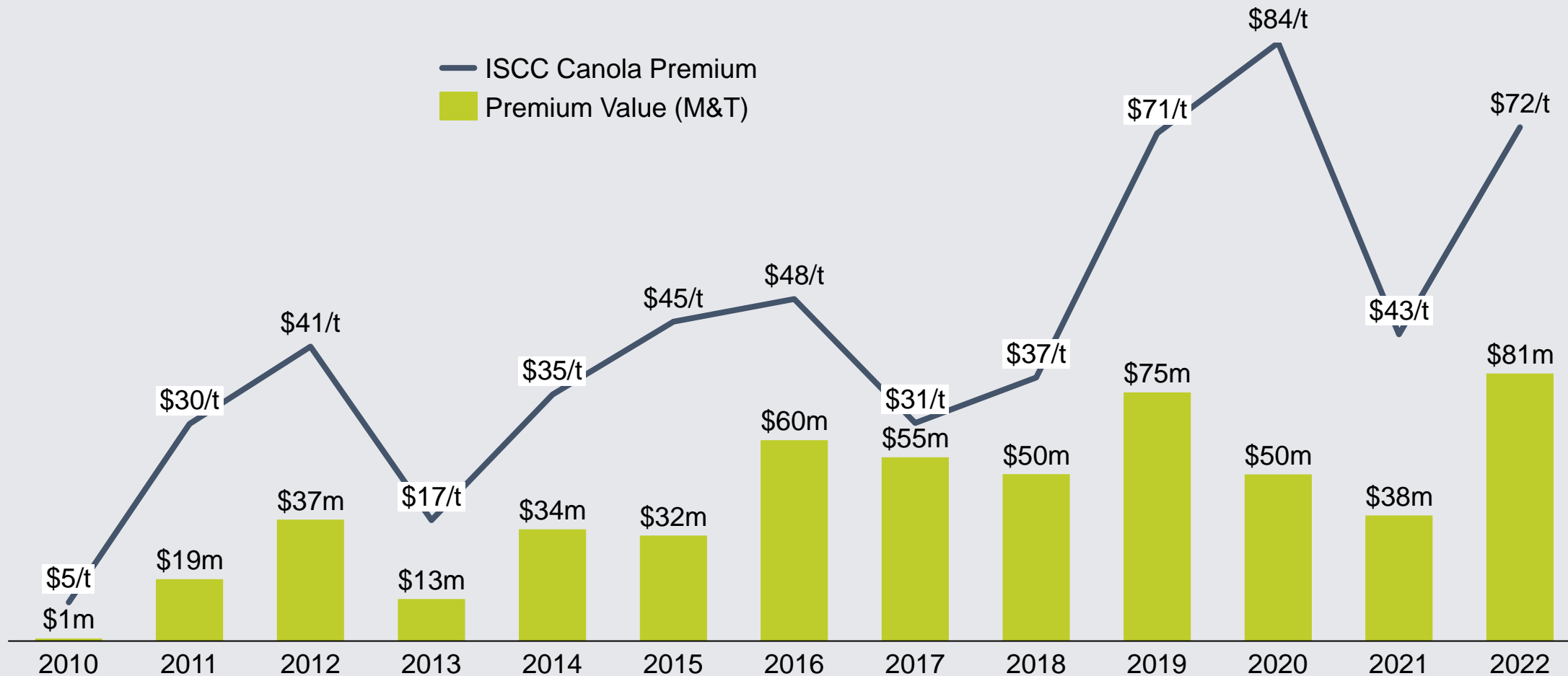
## CBH customer survey findings



- ISCC
  - International sustainability program
  - Completely voluntary for growers
- CBH has used the ISCC certification for 12 years
- Provides growers access to the lucrative EU canola market
- ~20% of CBH grain shipped is certified sustainable via ISCC

# Sustainable Grain

Sustainably certified canola sales to Europe has created >\$500m of value



# Sustainable Grain

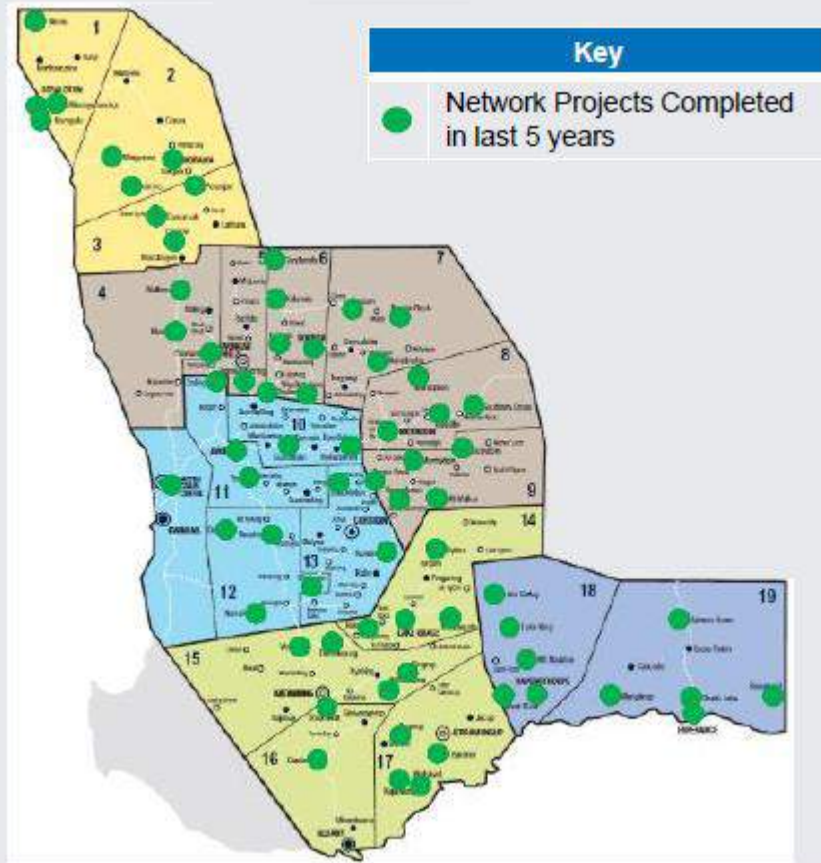
WA growers are well placed to retain and create new markets and customers via our sustainability credentials





# Network Investment

CBH has significantly invested in the network to meet the growing task



Total investment  
**+\$1 billion**  
In last 5 years

Permanent storage added  
**3.0 Mt**  
Since 2018

Total network projects  
**+1,000 projects**  
In last 5 years

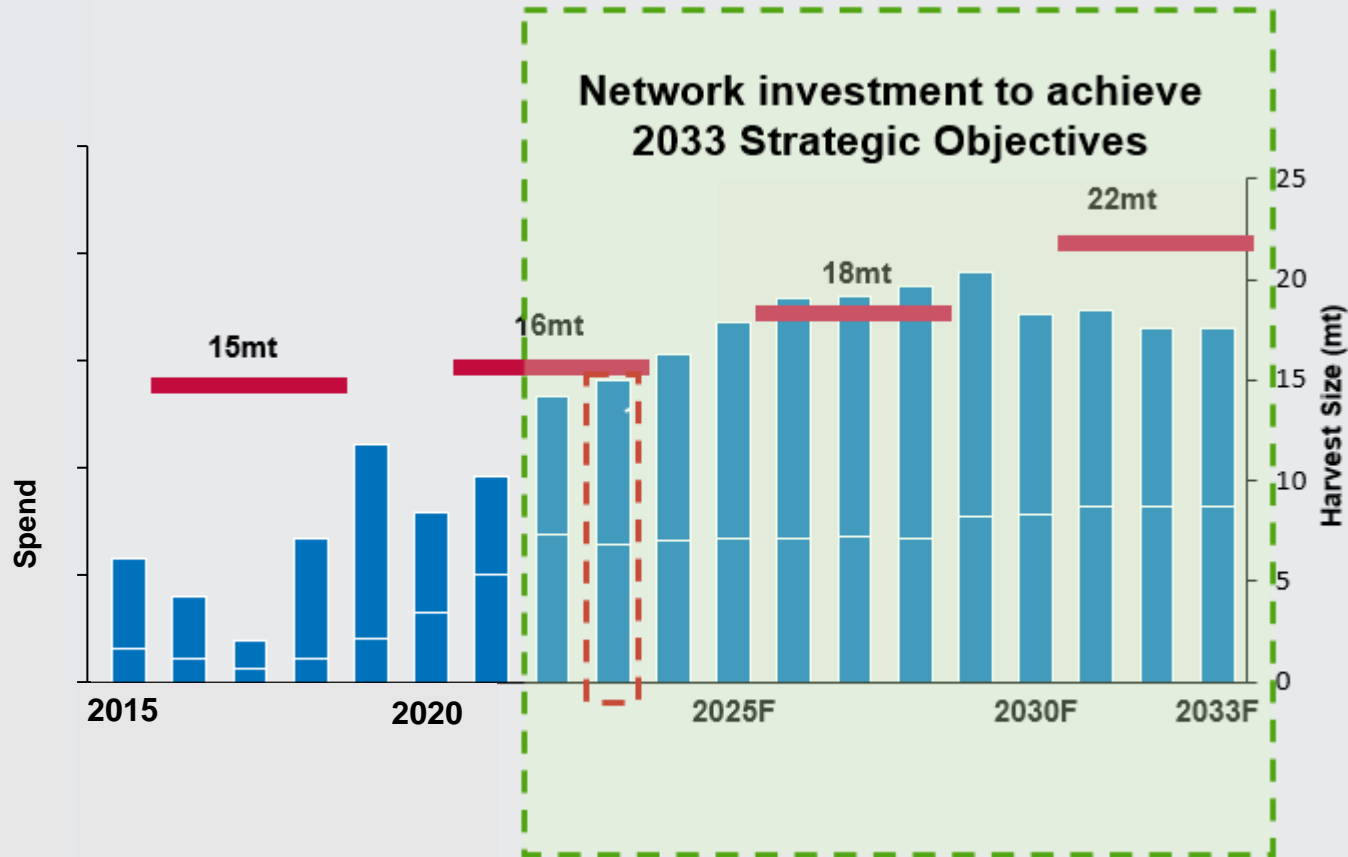
Temporary storage capacity  
**4.5 Mt**  
In last 2 years

Expand and Enhancement  
**98 major projects**  
Since 2018

Govt. ASCI funding  
**\$130 million**  
For outloading rail projects

# Network Investment

CBH plans to invest ~\$4bn in the next decade to achieve the strategic objectives



## Local procurement

- In FY22 1,800 suppliers were engaged
  - 99% were Australian businesses
  - 90% were Western Australia
  - 39% were based in grain growing communities
- Committed to continuing targeting local goods and services from regional providers



| 3 May 2023





# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## **Unlocking Opportunities: Labour Market Insights and Education and Training Pathways in the Wheatbelt**

Kathy Hoare, Director, State  
Workforce Planning, Department  
of Training and Workforce  
Development



# UNLOCKING OPPORTUNITIES

Labour market insights and  
education and training pathways in the Wheatbelt

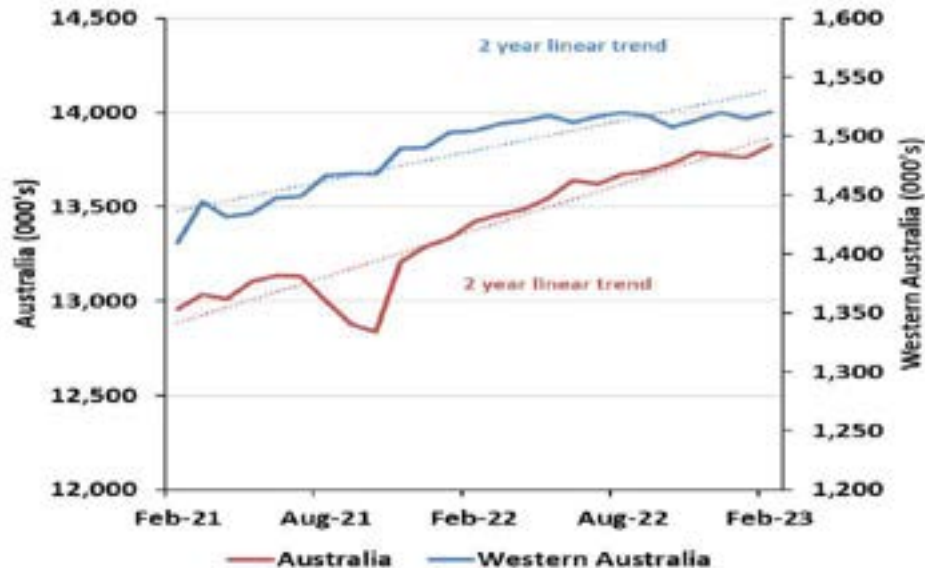
**Kathy Hoare**  
**Director, State Workforce Planning**  
**Department of Training and Workforce Development**

# LABOUR FORCE AND EMPLOYMENT TRENDS

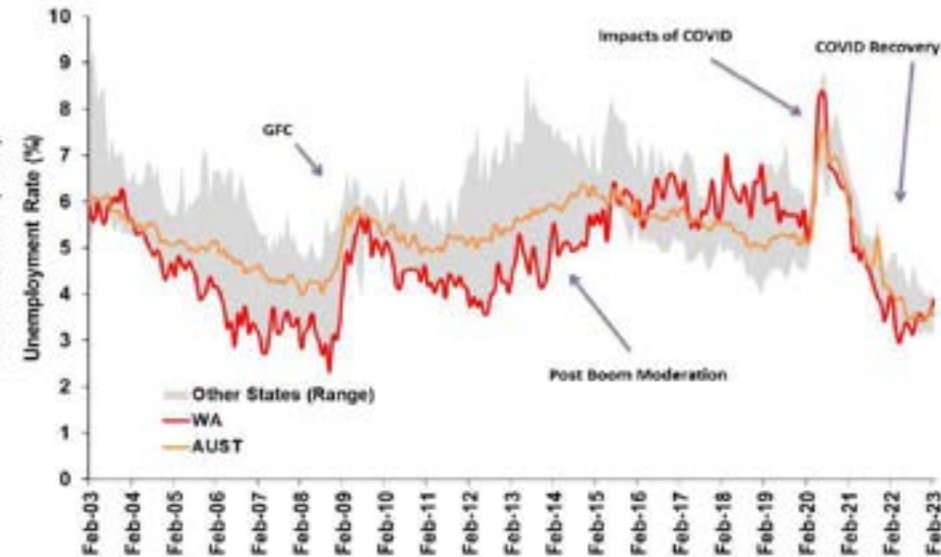
## Labour Market Update – State Conditions

- The State's labour market remains healthy but is showing signs of moderating. Employment growth has slowed since mid-2022 and unemployment remains historically low, but has edged higher over the past 6 months.
- Labour market conditions remain tight.

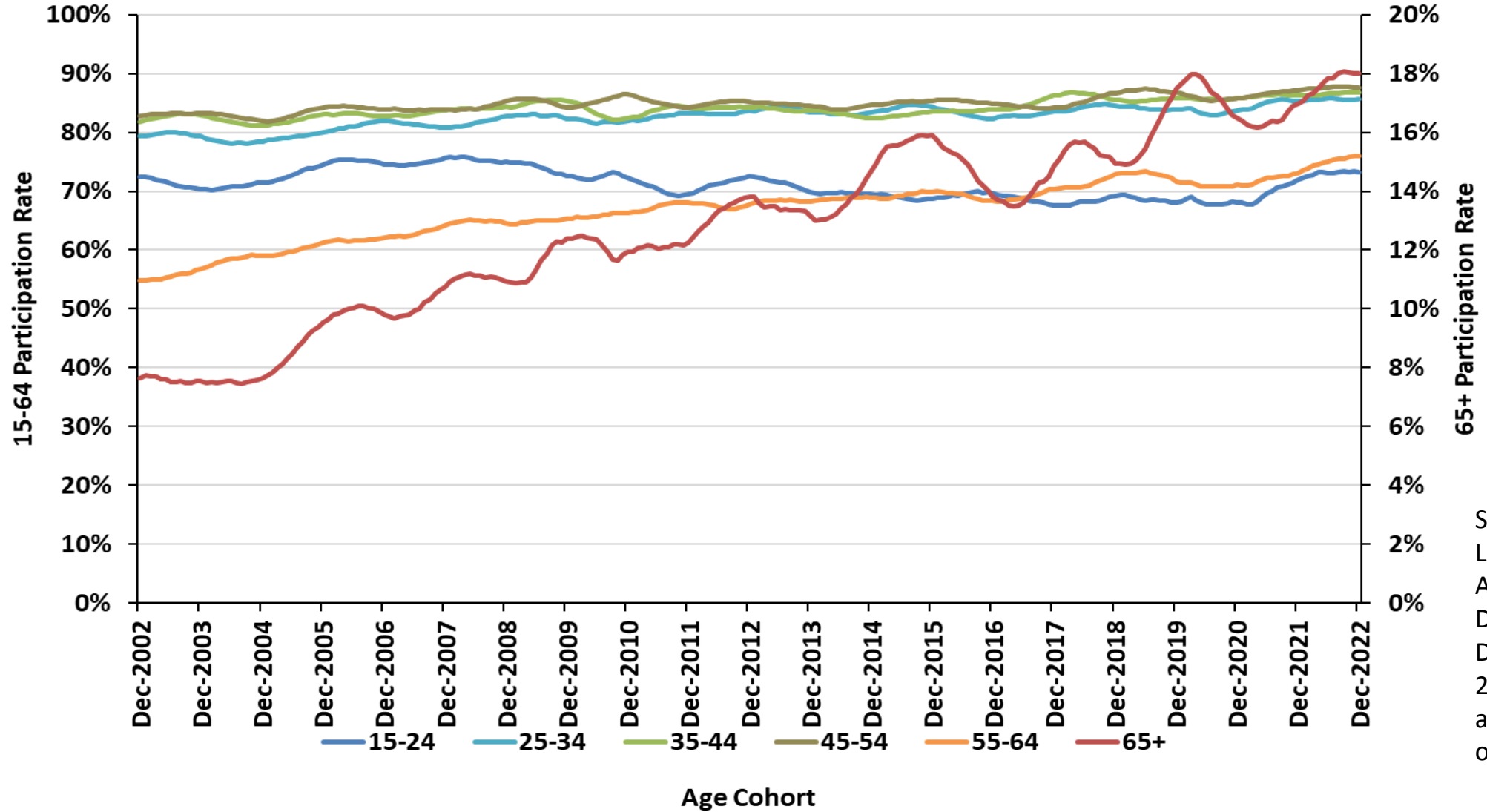
Employment Levels – Seasonally Adjusted



Unemployment Rates – Seasonally Adjusted



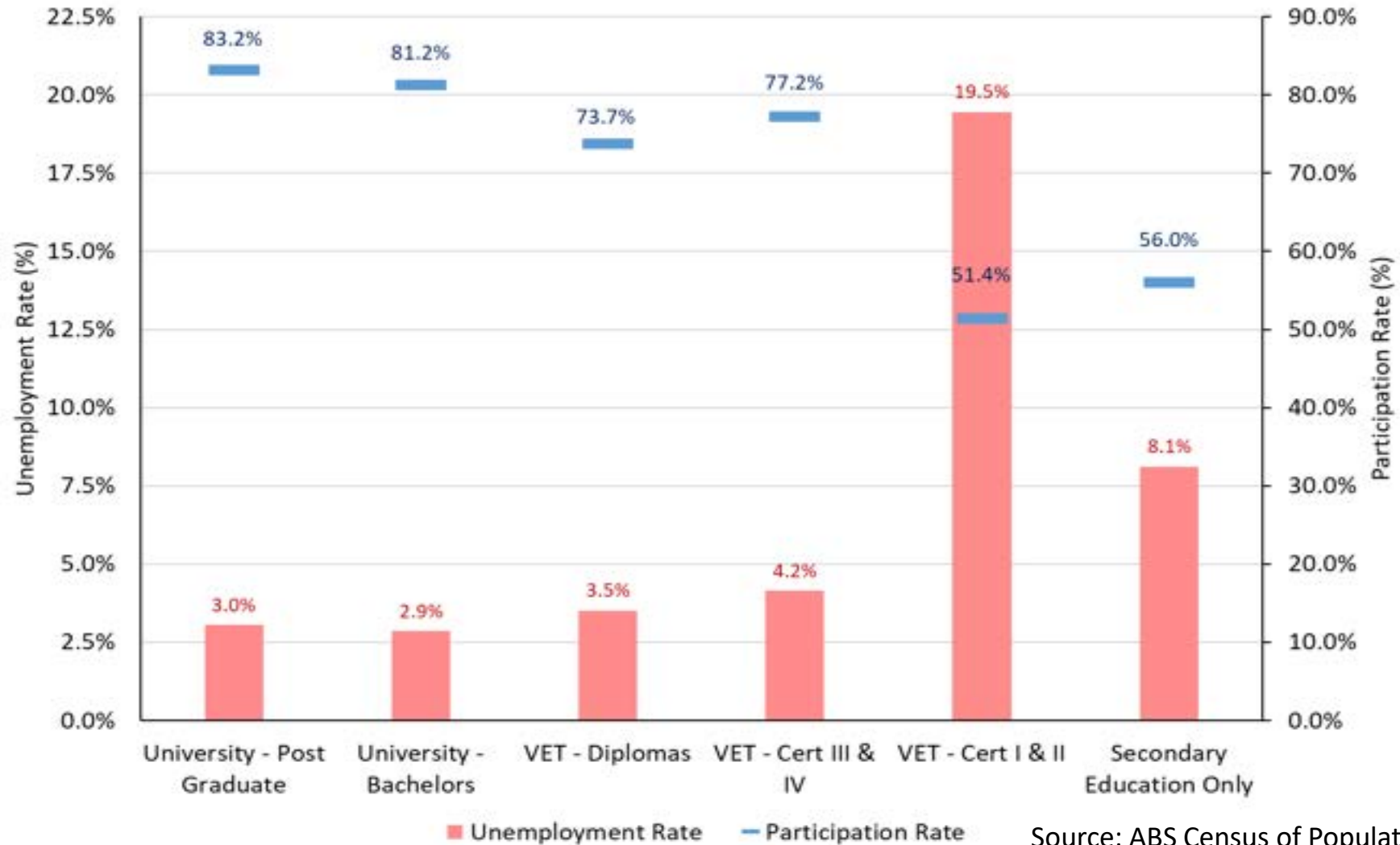
## Participation Rates by age cohort in Western Australia



Source: ABS  
Labour Force,  
Australia  
Detailed  
December  
2022, 12 month  
average of  
original data.

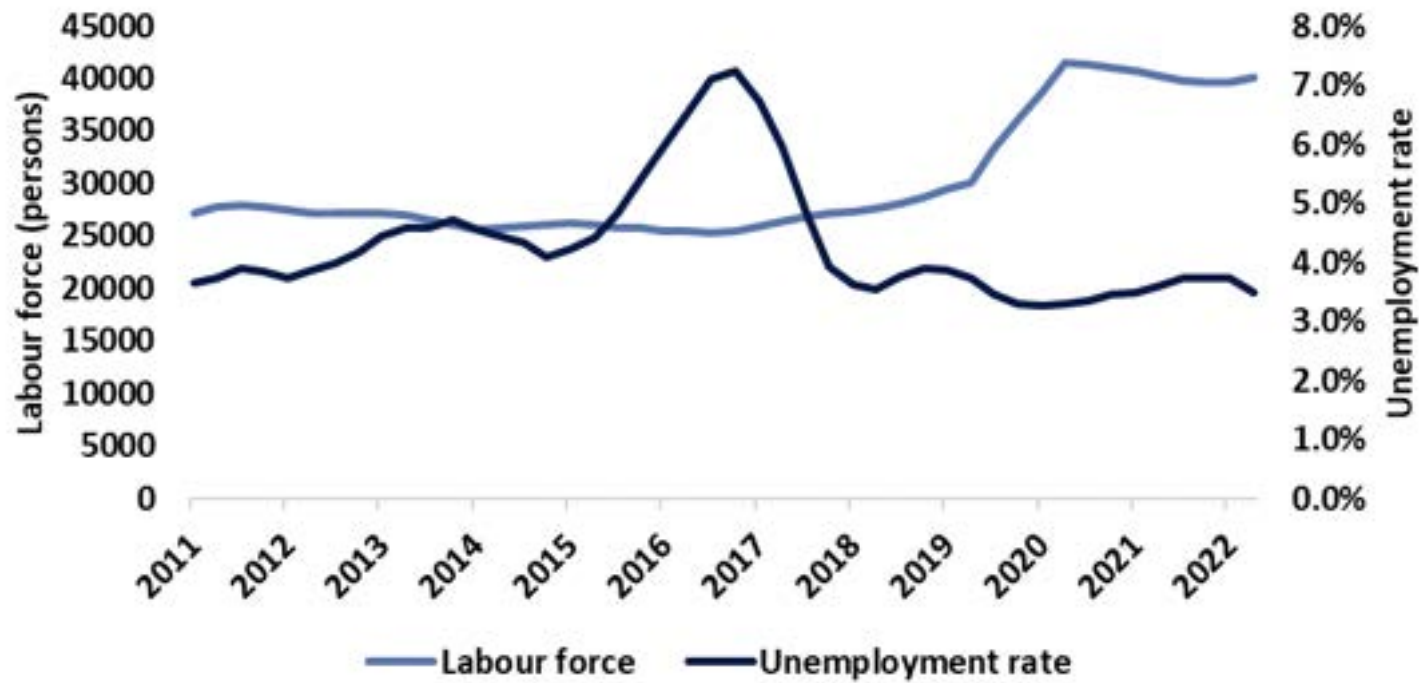


## Unemployment/Participation Rate by Qualification Level

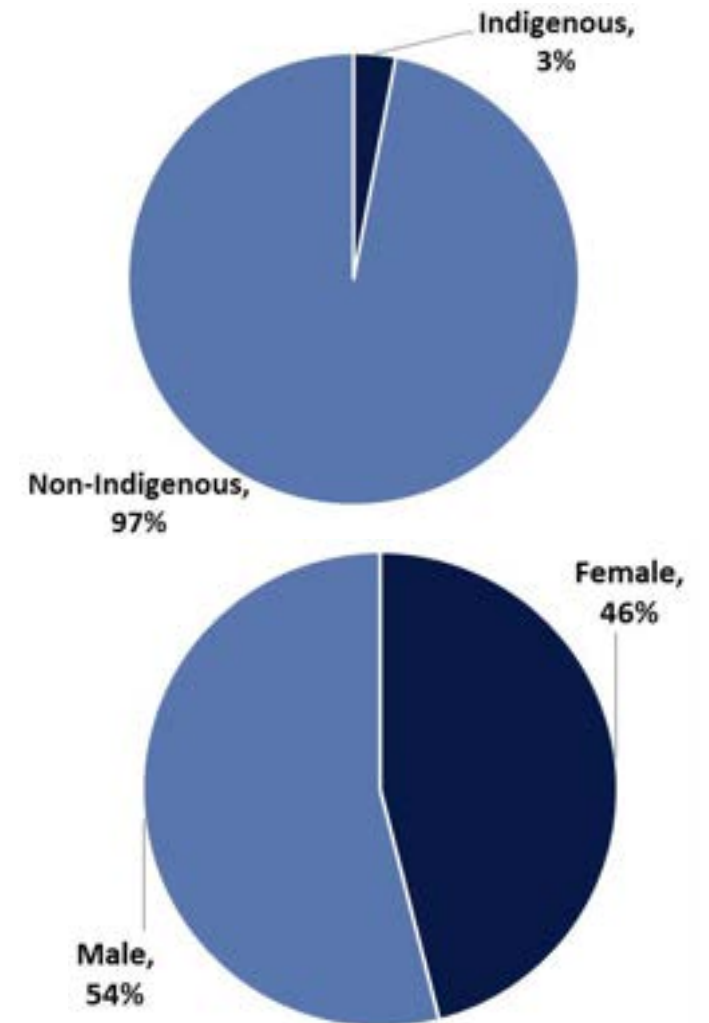


Source: ABS Census of Population and Housing, 2021

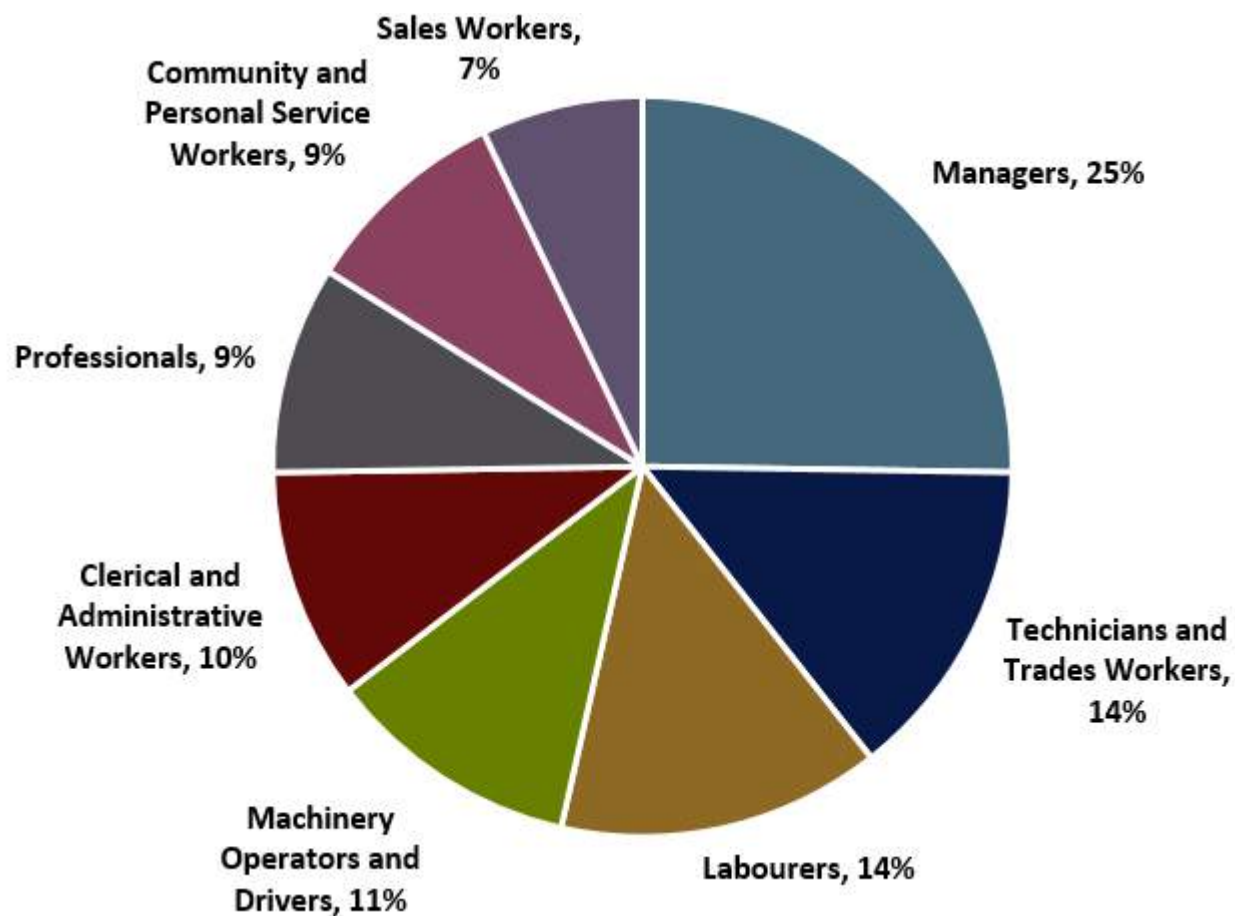
## Labour market indicators – Wheatbelt region



Source: ABS Census of Population and Housing, 2021



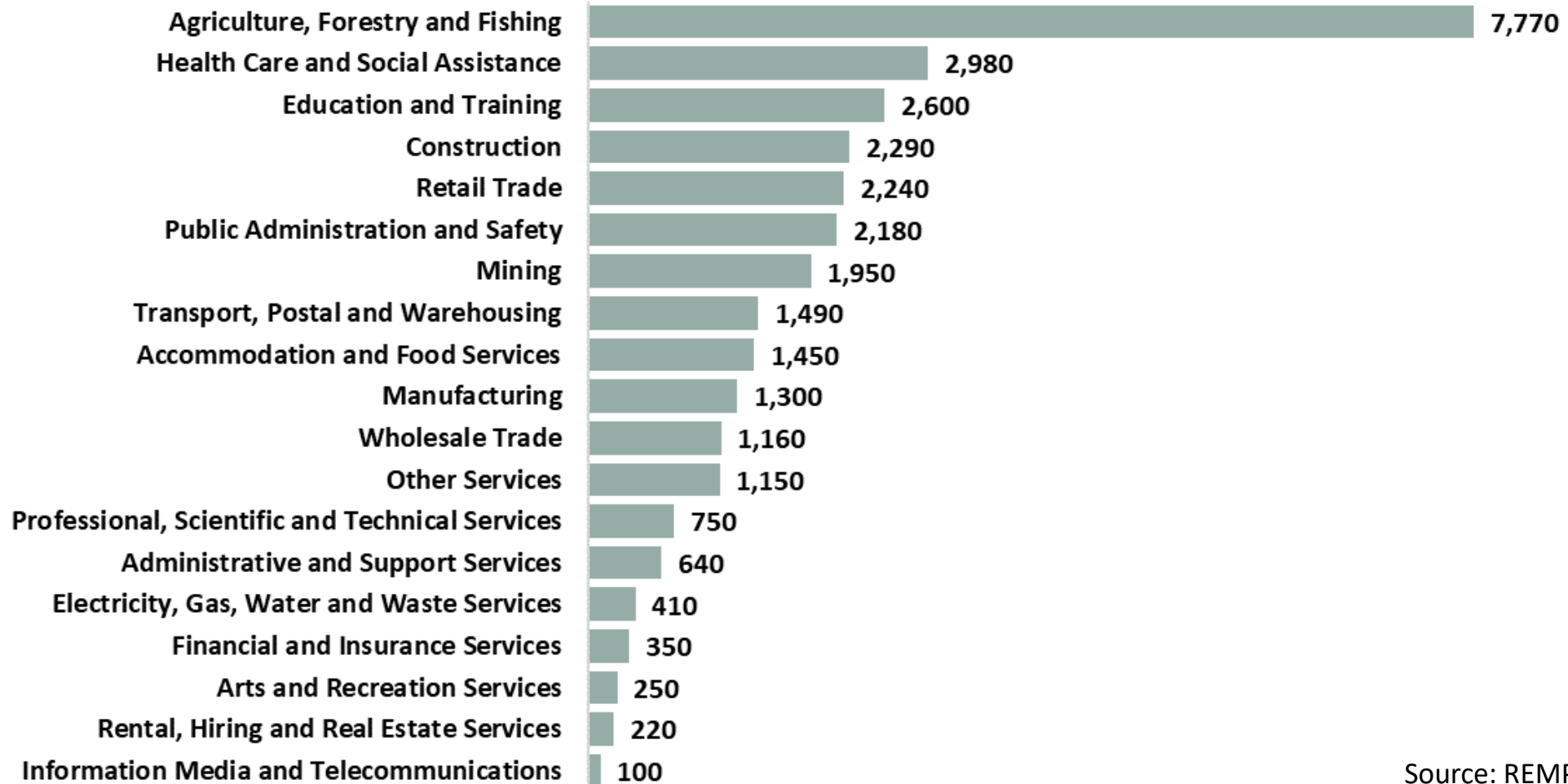
## Key occupations in the Wheatbelt (ABS 2021 Census)



Occupation unit group	Persons
Mixed production farmers	2290
Broadacre crop growers	1220
Sales assistants (general)	910
Livestock farmers	900
Truck drivers	870
General clerks	710
Metal fitters and machinists	630
Drillers, miners and shot firers	570
Commercial cleaners	520
Education aides	460



## Estimated Employment by industry in the Wheatbelt



Source: REMPLAN 2023

# **Northam-Wheatbelt Regional Coordinating Committee (NWRCC)**

## **Background**

- Regional Coordinating Committees were established following the Regional Skills Summits held in late 2021 to oversee implementation of the Regional Action Plans.
- Members of the NWRCC: Central Regional TAFE, Wheatbelt Development Commission, Wheatbelt Business Network, Department of Training and Workforce Development (DTWD), Department of Education, Shire of Northam and Regional Development Australia
- Regional Coordinating Committees are an important vehicle for identifying skills in demand and driving training and workforce development solutions across regional WA.



## Northam-Wheatbelt RCC – 2022 Achievements

### Career development

- Expansion of work-readiness programs for young people
- Rollout of Year 9 career taster program
- ‘Try a Trade’ for school students in Moora, Merredin and Northam

### Flexible delivery

- Job-ready programs and skill sets for new entrants in agriculture, broadacre, livestock, digital agronomy, seed collection and operating and maintaining chainsaws
- Central Regional TAFE adopted new modes of delivery for regional and remote learners

### Jobseekers

- Job ready programs in Early Childhood Education and Care, Driller’s Offsiders, Future Chef, Ageing and Disability, Bricklaying, Civil Construction
- Collaboration with Workforce Australia to link training and support services to jobseekers in the region



## Northam-Wheatbelt RCC – 2023 Priorities

### Career development

- Expand access to educational pathways, career development and other employment and training support services for young people in the Wheatbelt

### Partnerships

- Increase engagement between TAFE and industry to address the current and emerging training and workforce development needs of businesses in the Wheatbelt

### Jobseekers

- Provide underrepresented jobseekers and those underemployed with greater access to vocational education and training services, and employment opportunities.

# WA Jobs, Education and Training (WAJET) Survey

- DTWD conducts the WAJET Survey annually between January and March
- Statewide consultations with the RCCs, industry peak bodies, industry training councils, unions, government agencies, businesses, chambers of commerce and industry
- Informs DTWD's planning outputs:
  - State Priority Occupation List
  - Migration
  - Workforce Projects
  - Regional Planning
  - Training infrastructure and markets



# WAJET Survey Focus Areas for 2023

## Industry Focus

1. Factors affecting the supply and demand for skilled labour in Western Australia.
2. Education and training strategies that industry uses or may consider using to address industry needs.
3. Workforce strategies (i.e. migration or other non-training related strategies) that industry uses or may consider using to address their needs
4. Regional specific issues and opportunities impacting on the skills and workforce development in industry

## Occupation Focus

1. Supply and demand for the occupation over next 5 years.
2. Regional skills and workforce development needs.
3. Education and training qualifications including preferred pathways/qualifications.
4. Training issues such as quality or availability of delivery.
5. Foundation skills.
6. Migration.
7. Emerging issues and opportunities.

# Strategies for growing a skilled workforce in Western Australia

## Training strategies

- Apprenticeships and traineeships
- Career information
- Career taster programs for mature aged students
- Diversity programs for under-represented groups
- Ex-offender (lived experience)
- Industry collaboration & partnerships
- Mentoring and coaching
- Post-school pathways
- Preceptor model – particularly for clinical placements
- Robust and flexible RPL processes
- Skill sets for upskilling or reskilling
- VET delivered to secondary school students
- Volunteer programs
- Year 9 Career Taster Program

## Workforce strategies

- Bursaries
- Community Resource Centres – to access community and untapped potential in regional WA
- Graduate placement or internship programs
- Leadership programs
- Migration
- Promotion campaigns
- Recruitment bonuses (bring a friend)
- Remote workforces (don't need to be in WA)
- Retirees or semi-retired
- School engagement programs (future recruits)
- Targeted recruitment campaigns
- Work-life considerations (particularly FIFO swings)
- Young people

# Workforce

## Targeted sector-specific diversification opportunities



## Cross-sector enablers to accelerate growth



Clear actions, implementing opportunity-specific roadmaps, targeted evaluation

# Major Workforce Projects – Western Australia 2023

- Future State-Accelerating Diversity WA, with nine sector specific diversification opportunities
- Hydrogen – implications for LNG, ESI and Electrotechnology
- Renewable Energy/Net Zero and low emission operations/Electrification of Mines, solar farms, wind
- Defence industries – Air, Land, Sea, ICT & Cyber, Space
- The AUKUS initiatives
- Agriculture and Primary Industries
- Regional Coordinating Committees, identifying the skills needs of the regions
- Global Advanced Industry Hub
- Hospitality and Tourism
- Early Education and Care
- Future Battery and Critical Minerals Value Chain
- Health and Social Care Workforce Strategy (10 year plan – Department of Health, Mental Health)
- Industry 4.0 (new technology)
- Construction including new construction methods
- METRONET projects
- Iron Ore Rail Car Manufacturing

# Focus on Training and Workforce Development Levers

<b>New entrants</b> (Training is significant lever)	<b>Underutilised or latent capacity, existing workers</b> (Training is significant lever)	<b>Workforce Planning</b>	<b>Permanent interstate migration</b> (Advocacy/research only Limited influence)	<b>Overseas workers (Skilled Migration)</b> (C'wlth powers Limited influence)
<ul style="list-style-type: none"> <li>• New qualifications or curriculum</li> <li>• Jobseeker pre-employment programs (Job Ready programs, pre-screening, employability, LLN, STEM skills)</li> <li>• School students (VET delivered in secondary school)</li> <li>• Employment-based training (apprenticeships &amp; traineeships)</li> <li>• Students in institutional settings (TAFE, RTOs, GTOs)</li> <li>• Industry partnerships and consultation are critical</li> <li>• University partnerships (articulation, R&amp;D)</li> </ul>	<ul style="list-style-type: none"> <li>• Existing workers that need to upskill/reskill (Skill sets, Upskill/shortened apprenticeship, RPL/Skills assessment)</li> <li>• Displaced workers impacted by industry or regulatory changes (transition programs)</li> <li>• Leadership programs</li> <li>• Onshore migrants</li> <li>• Graduate programs (Internships, partnerships, R&amp;D)</li> <li>• People not in the labour force (Parents returning to work, People with disability, Long-term unemployed support programs, Ex-offenders)</li> </ul>	<ul style="list-style-type: none"> <li>• Movement of temporary workforces               <ul style="list-style-type: none"> <li>• Temporary DIDO</li> <li>• Temporary FIFO (WA)</li> <li>• Temporary FIFO (Interstate)</li> <li>• Temporary FIFO (International)</li> <li>• TSS – Short term migration</li> </ul> </li> <li>• WA must look for opportunities to transfer skills to local workforce</li> </ul>	<ul style="list-style-type: none"> <li>• Investment and attraction strategies to bring interstate businesses and industries to WA (JTSI)</li> <li>• Invest &amp; attract tertiary institutions to WA to develop new training markets</li> <li>• Longer term development of WA industry skills by importing skills in demand from eastern states</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent migration programs to attract workers from overseas (State has limited influence)</li> <li>• State Nominated Migration Program (DTWD) – General and Graduate stream occupation lists</li> <li>• Global Talent (JTSI)</li> <li>• Business Innovation and Investment Program (SBDC)</li> <li>• Investment and attraction strategies to bring international businesses and industries to WA (JTSI/SBDC)</li> </ul>



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## Property Outlook for the Wheatbelt

Stuart Nahajski, General  
Manager, Development WA





# *Property Outlook: Wheatbelt*

**Stuart Nahajski**  
General Manager  
Industrial Lands Authority  
DevelopmentWA

May 2023





# Acknowledgement of Country

DevelopmentWA acknowledges the Traditional Custodians throughout Western Australia and their continuing connection to land, water and culture. We pay our respects to all members of Aboriginal communities and cultures throughout the state, to the communities we work with, and to the Elders past and present.

Djeran, autumn

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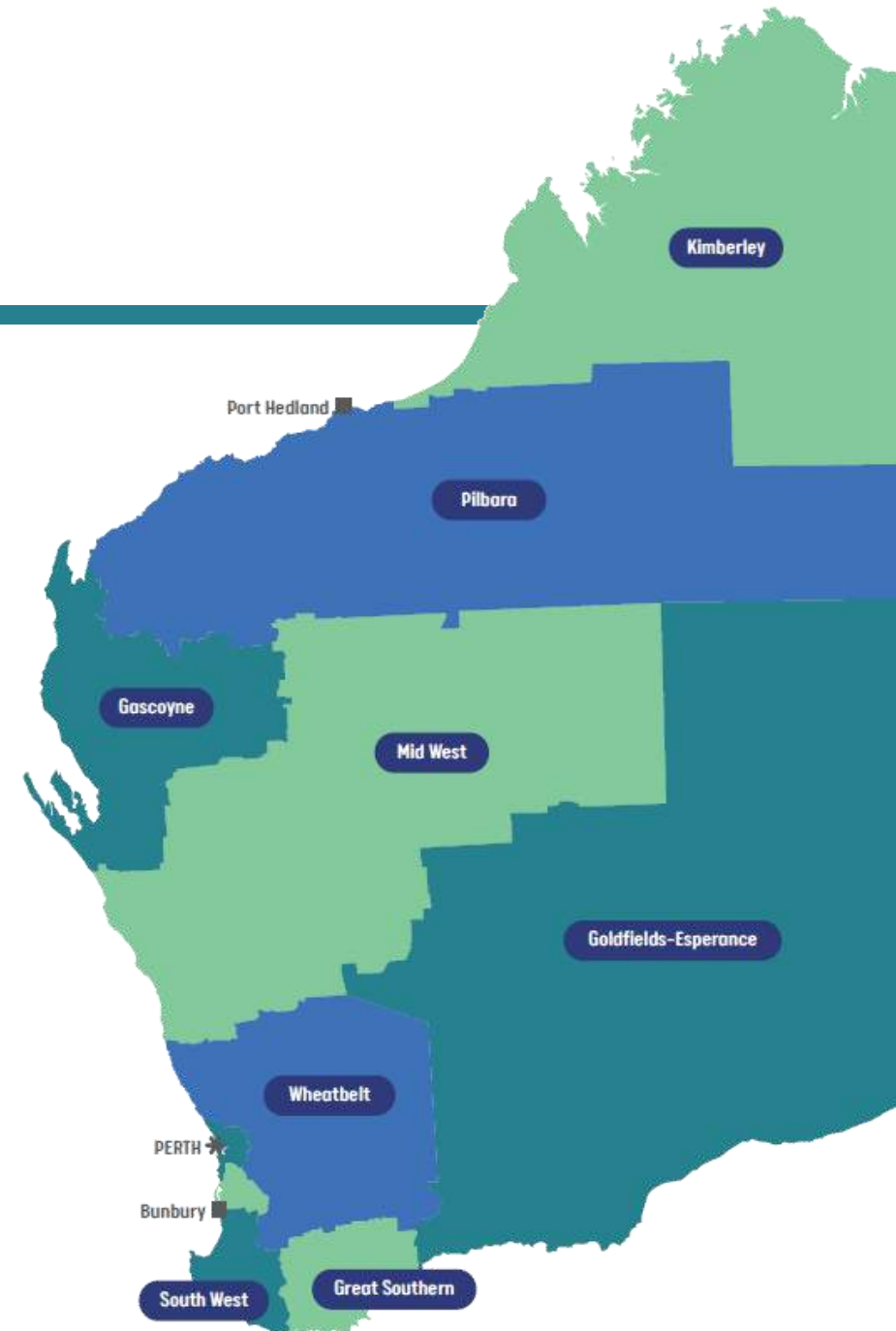
# About DevelopmentWA

## Shaping our State's Future

DevelopmentWA is the WA Government's central land and development agency.

We are responsible for delivering major residential, commercial, industrial and revitalisation projects across Western Australia.

We collaborate with industry, government, Traditional Owners and local communities to create great places for people to live, work, visit and do business.



# Our work

## Prosperous industry



general industrial lots available across the state, **with 115 created in 2021-22**



**39ha** of general industrial land sold across the state to a range of industries, predicted to deliver **463** jobs during built from construction and **1,301** jobs ongoing

## Highly capable and innovative organisation



**2,250** residential dwelling unit equivalents created in the metropolitan area from **new land** releases



**292.5ha** under DevelopmentWA planning in **METRONET precincts**



**170** development applications approved in 2021-22 with a total value of **\$2.47B**

# DevelopmentWA in the regions

## SUPPORTING REGIONAL LIFESTYLES: INSIGHTS

**\$225.2m**

expected to be invested in built form on lots sold



Dwelling Unit Equivalents in regional areas  
from 2021-22 land releases



affordable lots in  
regional WA\*



**686**

jobs expected as a result  
of built form construction  
on lots sold

Supporting  
**\$56B**  
resource CapEx

Land for up to  
**578** dwellings in  
past **5** years

\*Based on Department of Communities' affordability price points.



# Regional Housing: The Big Picture



# The Big Picture: Regional Housing

## Current median price:

### Buy

\*Regional Australia: \$623,011

Northam: \$280,000

Jurien Bay: \$495,000

Hyden: \$200,000

*Perth: \$545,000*

### Rent

Northam: \$300 p/w

Jurien Bay: \$440 p/w

Hyden: None Listed

*Perth: \$550 p/w*

Source: REIWA

Source: CoreLogic\*



# The Big Picture: Drivers and Demand



**01** – Mining / Oil & Gas

**02** – Farming

**03** – Tourism

**04** – Green energy

**05** – Defence

**06** – Flexible working

# The Big Picture: Challenges



Cost



Labour



Builder  
Availability



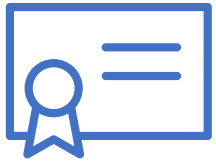
Infrastructure



Bushfire  
Management  
Planning



# National Housing Accord



Launched by Federal Government  
October 25, 2022



Designed to align efforts of government,  
institutional investors and construction  
sector to tackle the nation's housing  
problem



Ambition to build 1M new well-located  
homes over 5 years from 2024





# WA Government Initiatives

## Western Australia



Stimulating  
construction sector



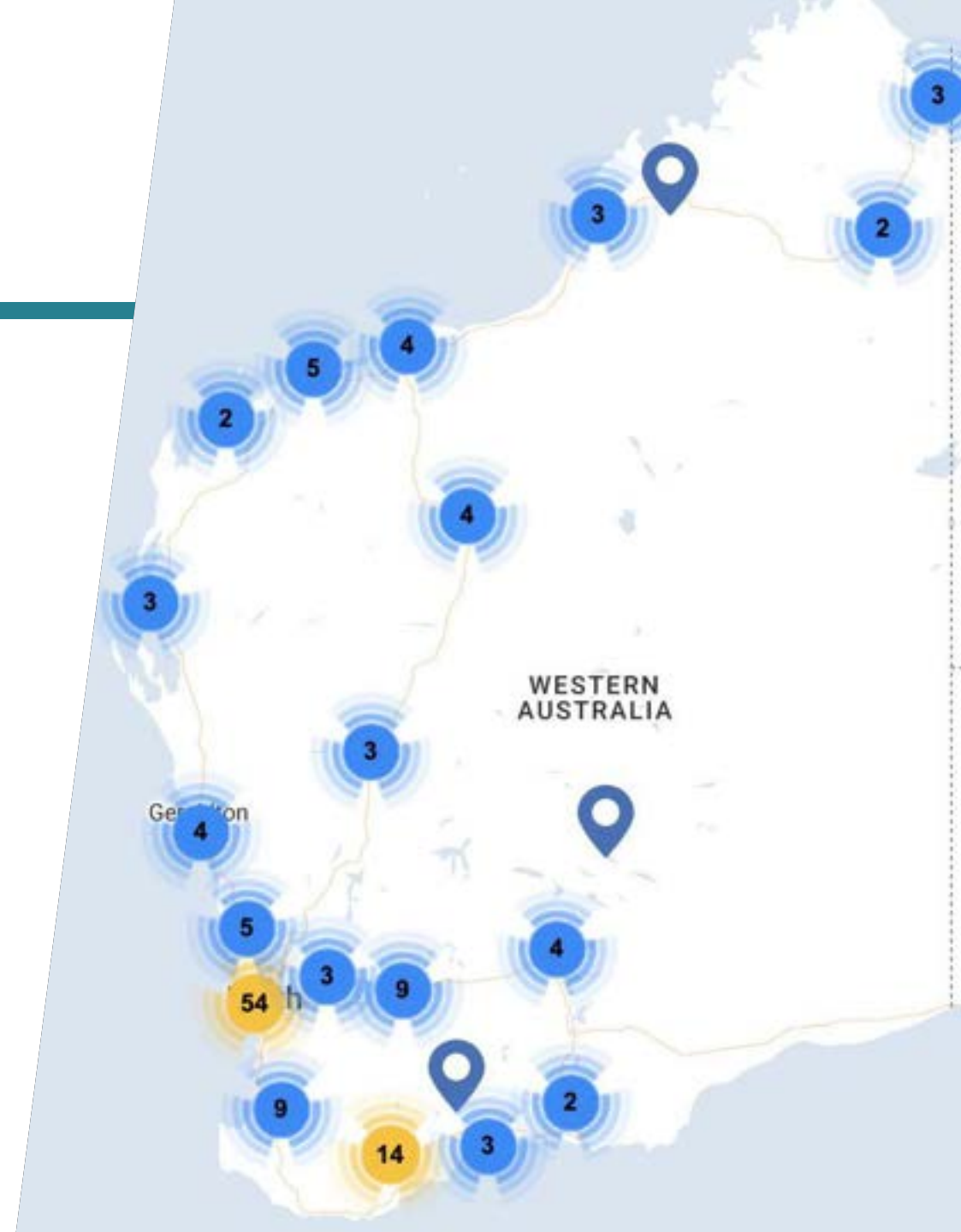
Local content




**3300**  
new social housing  
dwellings




**\$40M**  
to regional areas  
to deliver worker  
accommodation





# Underpinning Economic Growth of the Wheatbelt



## LAND SALES (2004 – current)

RESIDENTIAL:	318
LIA/COMMERCIAL:	120
GENERAL INDUSTRIAL:	21

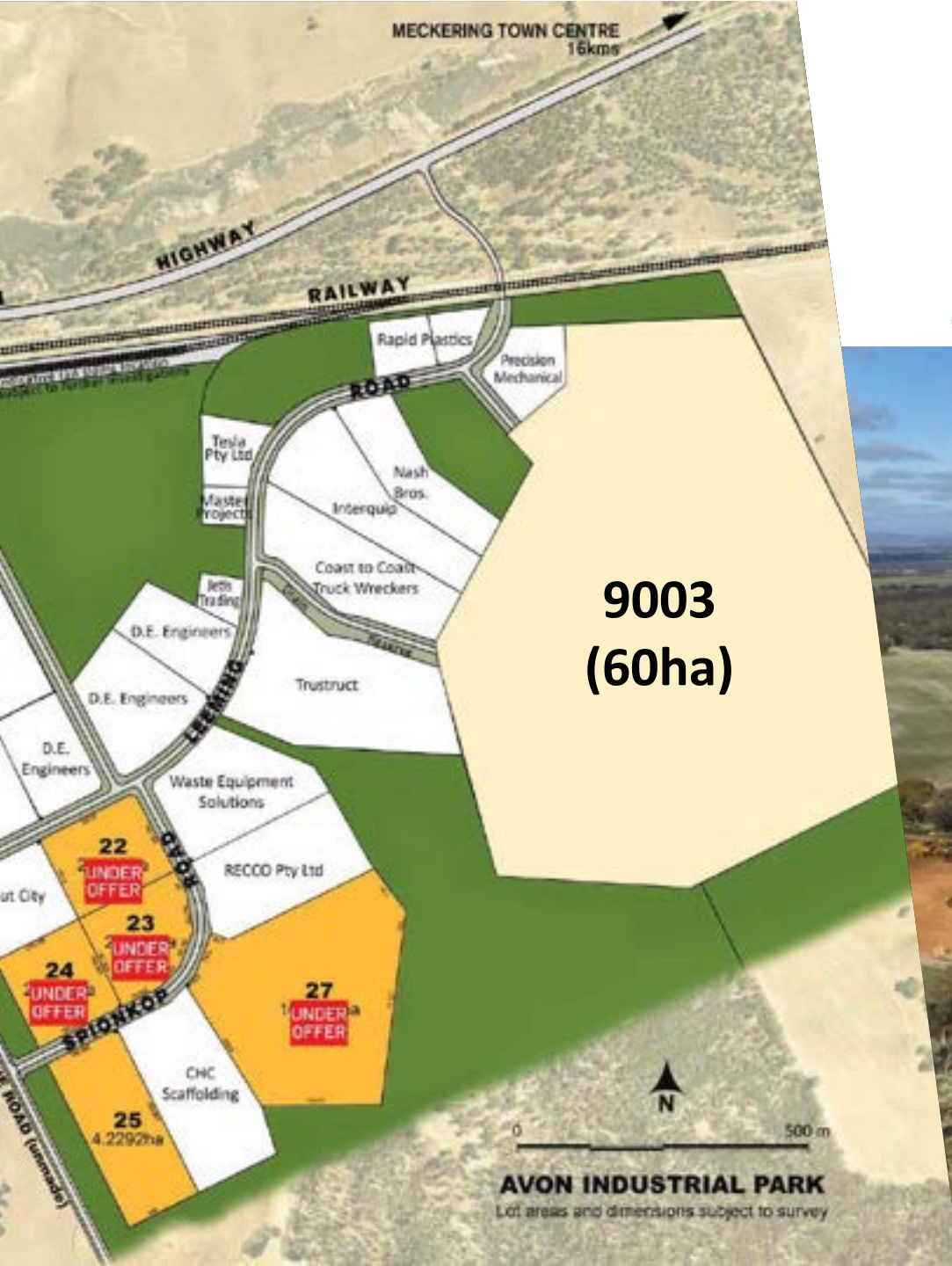
# Avon Industrial Park



# Avon Industrial Park: Updates



# Avon Industrial Park: On The Horizon



# Avon Industrial Park: Common User Rail Spur?



# Regional Development Assistance Program (RDAP)



About ▾

Projects ▾

Planning & Approvals ▾

News ▾

Our Work ▾

**2023–24 RDAP APPLICATIONS:**

**DEVELOPMENTWA.COM.AU**

**SHAPING THE  
FUTURE OF  
WESTERN**



# Local Procurement







THANK YOU



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## What is on the Horizon

Ashley Herbert, Farm  
Management Consultant,  
Agrarian Management



# What's on the horizon

## CBH Wheatbelt Future's Forum

Muresk (May 2023)

Ashley Herbert

Farm management consultant



## DEMOGRAPHIC

 **5,725**

NUMBER OF AGRICULTURAL HOLDINGS (ABS BY SHIRE)

 **4,200**

NUMBER OF GRAIN GROWERS

**24%** OF GROWERS PRODUCE 58%–75% OF THE CROP

 **3,649**

NUMBER OF SHEEP PRODUCERS

**29%** OF PRODUCERS HAVE 62% OF SHEEP NUMBERS

 **2,419**

NUMBER OF CATTLE PRODUCERS

**15%** OF PRODUCERS HAVE 65% OF THE CATTLE NUMBERS

## GEOGRAPHIC



SHEEP

**11,968,000 HEAD**

93.8% OF STATE FLOCK



CATTLE

**722,000 HEAD**

36.9% OF THE STATE HERD



NATIVE VEG

**7.6 M HA**



CLEARED AREA CROPPED

**7.0–8.0 M HA**



CLEARED

**17.5 M HA**



PASTURE / FALLOW

**9.5–10.5 M HA**

REGION   
**25.1 M HA**



CATTLE

**722,000 HEAD**

36.9% OF THE STATE HERD

**THE WHEATBELT**

# Average wheatbelt farm business

- Annual Turnover                    \$2.5 - \$3.0M
- Asset value                            \$12 – \$18M
- Plant & equipment                \$2.0 – \$3.0M

Sophisticated business with two distinct components

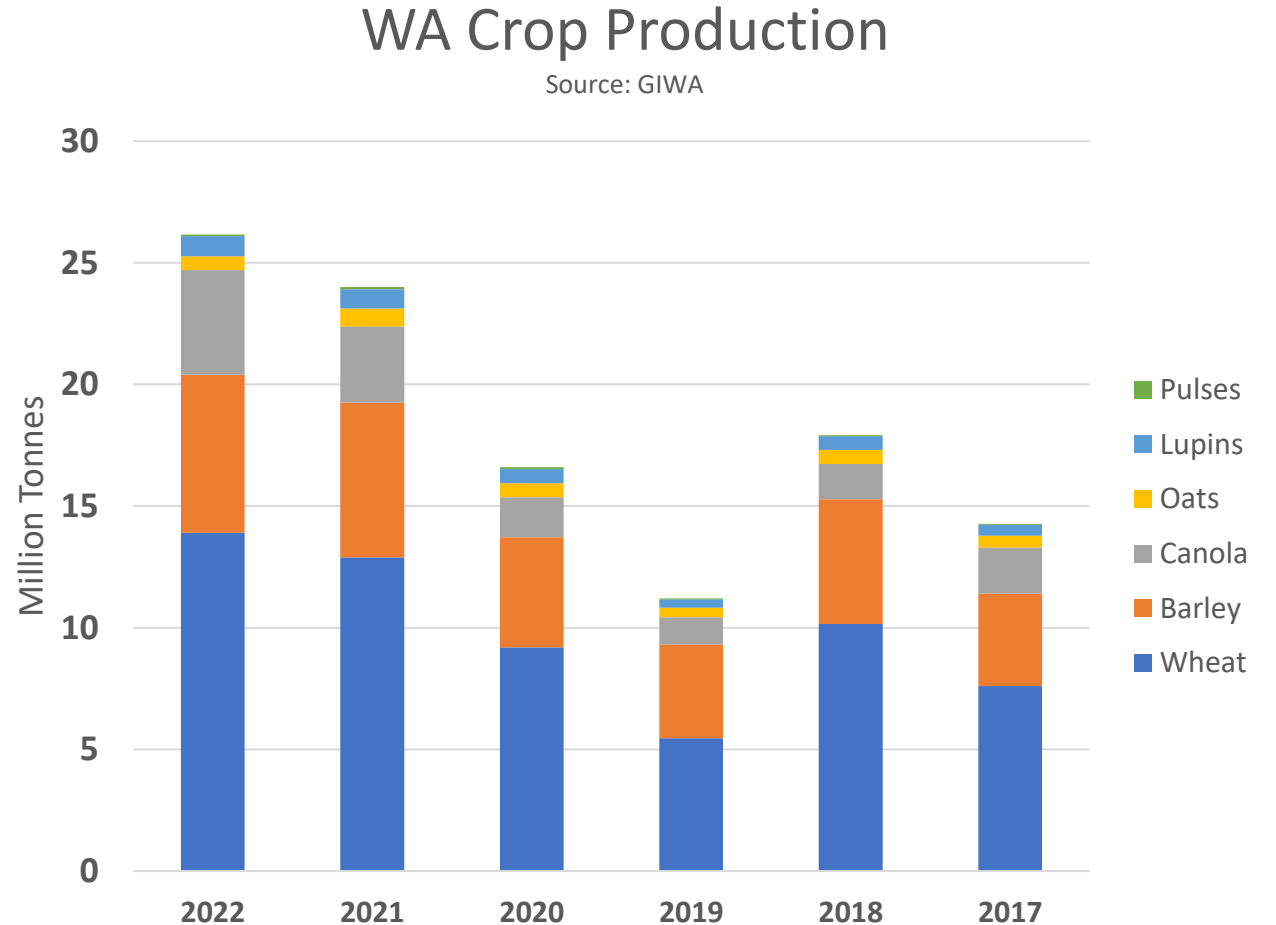
Farm Operation & Farm Business

# Advisory services

Operating	Business
Farm consultant	Accountant
Agronomist	Farm consultant
Grain marketing adviser	Lawyer
Nutrition adviser	Finance broker/ adviser
Fertiliser purchasing adviser	Investment adviser
HR adviser	
Livestock agent	
Wool Broker	
Insurance broker	

# Current situation

- 2 – 3 years excellent returns
- ↓ Long term debt
- ↑ Asset and equity values
- Sound financial position



# 2023 Outlook

## 2023 Budgets

- Cash flow            +ve            *Carry over grain sales*
- Profit & Loss        Neutral        *High costs, average production & prices*

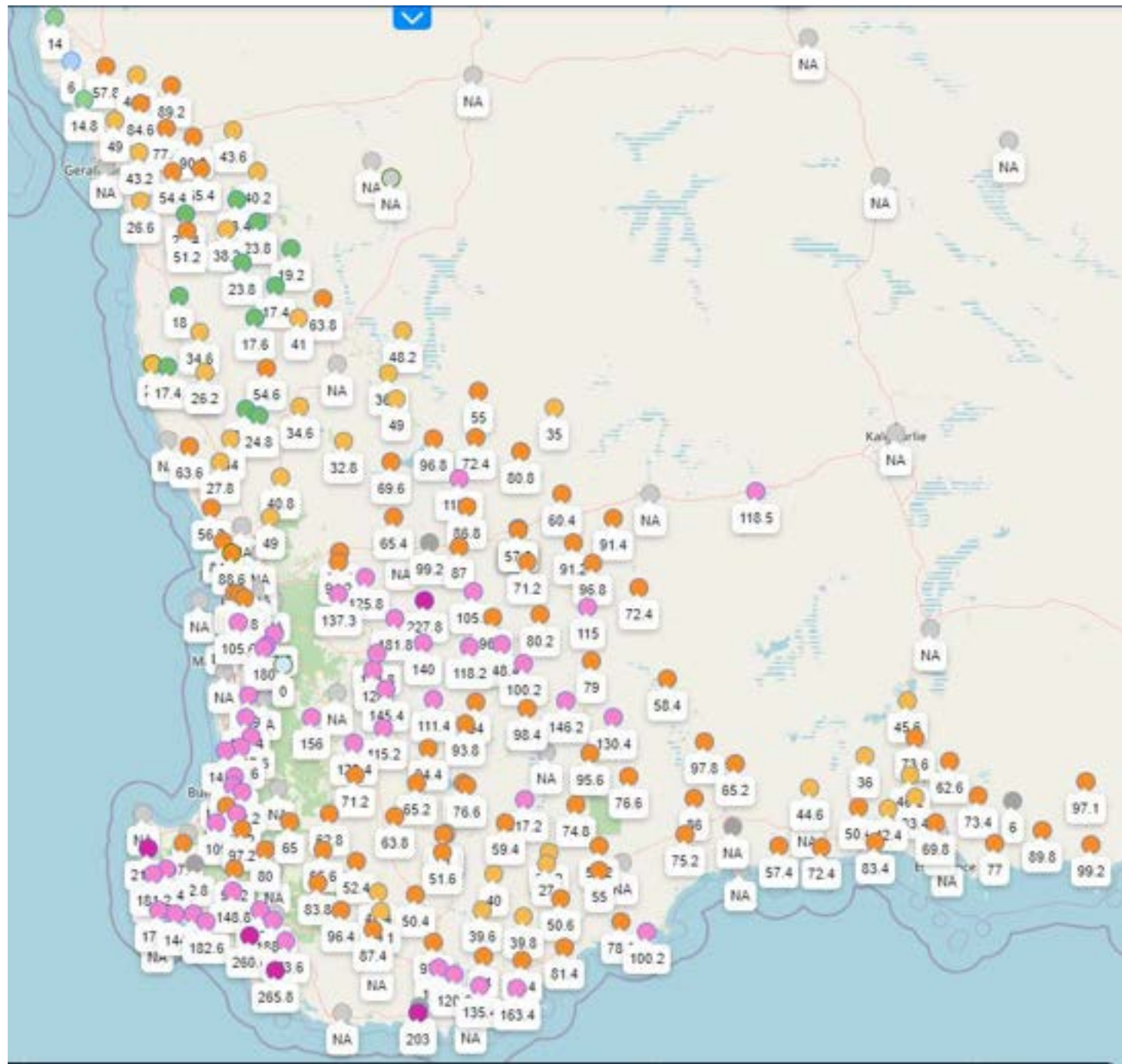
- Generally sound starting financial position
- High input costs locked in
- Grain prices trending down            *+ve global production news*
- Sheep prices suppressed                *processor backlog*
- Wool prices holding                        *sensitive to global economic performance*



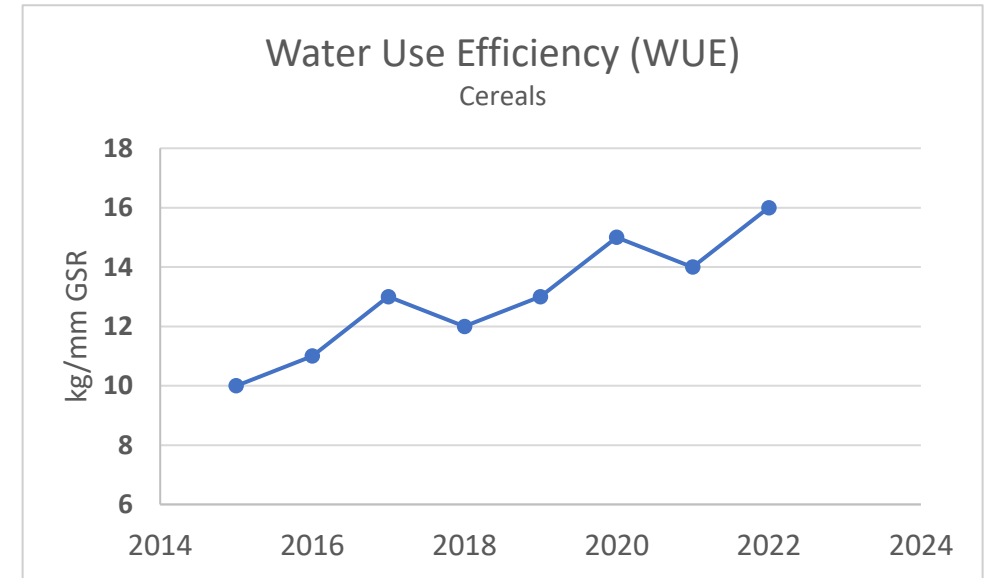
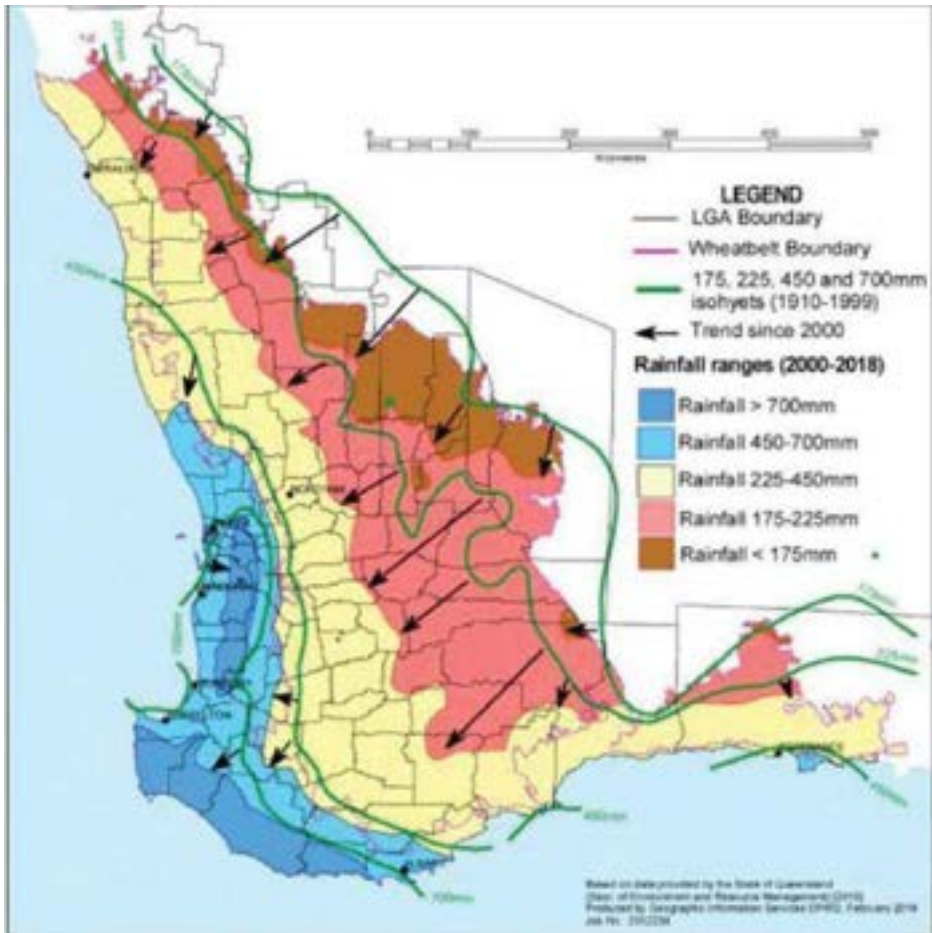
# Feb – Apr Rainfall

## DPIRD Weather Stations

<https://weather.agric.wa.gov.au/map>



# Resilient production systems



Strategies adopted to ↑ WUE

Lime

Out of season soil moisture conservation

Early sowing

Deep ripping



Thank you

Ashley Herbert

0427 007 396

[ashley@agrarian.com.au](mailto:ashley@agrarian.com.au)



**WHEATBELT  
FUTURES FORUM  
3<sup>RD</sup> MAY 2023**

## **Advancing Green Hydrogen Projects in Australia and Internationally**

Stephen Guald, Managing  
Director & CEO, Infinite Green  
Energy





# Australia's Leading Renewable Hydrogen Projects Northam (MEGHP1) and Arrowsmith in Western Australia

Born in Western Australia's sun and wind-rich lands,  
Infinite Green is delivering the green energy reality locally.



[www.igeh2.com](http://www.igeh2.com)

Fuelling Our Future



# Early Production System

IGE's Early Production System and associated hydrogen eco-system elements bring hydrogen to the local market in late 2024 - leveraging existing Solar Farm asset with existing PPA in place

## Hydrogen Production

- 11MW Solar PV in place – owned by IGE
- Expansion of a further 7.7MW of Solar and 12 MW of Wind
- Abundance of water available on site
- Target initial production capacity of ~4 t/day
- Samsung secured as a key project equity partner

## Project Key Element – Hydrogen Demand

- IGE is focused on helping to facilitate the vehicle demand for the Early Production System
- This will be IGE's first-step in supporting the realisation of the hydrogen economy in WA

## Project Key Element – Hydrogen Refuelling Stations (HRS)

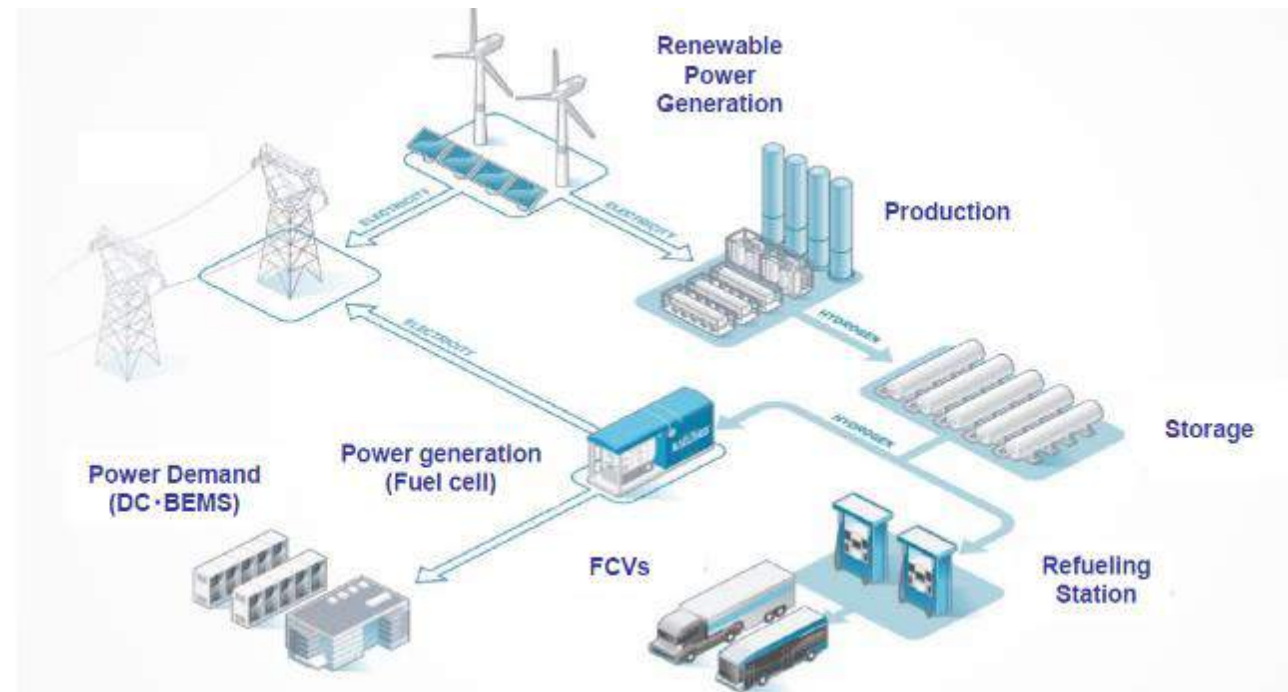
- Land identified with long-term lease agreement negotiations underway
- Targeting mobile storage capacity of ~5,000kg of hydrogen
- Targeting initial production in Late-2024 & full production late 2025



# Early Production System Key Facts

## Proposed metrics

Land	~160 Ha of land less than 90km from Perth CBD
Product	Green Hydrogen initial capacity of 4 t/day to domestic market
Energy source	11MW Pre-existing Solar PV, connection to SWIS. Working with Western Power for transmission upgrade
H2 Generation technology	PEM / Alkaline Electrolysers
Market	Transportation (trucks, buses & passenger vehicles)
Offtake Agreement	In negotiations on back-to-base solutions MOUs in place Confirmed revenue income from September 2022 from existing solar farm
Avoided CO2e emissions	~22,312 t/annum (compared to Natural Gas)
Asset life	Indefinite, with component changeout
Facility Design	Commercially available and proven technology



# Hydrogen Demand

Targeting initial production in early 2024 for back-to-base logistics operators. Over 40 hydrogen fuel cell electric trucks committed to Western Australia.

Company	HRS location	Number/type of FCEV	Est. Daily hydrogen consumption (kg)
IGE	Northam	2 FCEV Trucks (Hydrogen Distribution)	130
Truck Company 1	Northam	6 FCEV Garbage Trucks	300
Truck Company 2	Perth Airport/ Hazelmere Bunbury	2 FCEV Trucks	130
		4 FCEV Trucks	260
Truck Company 3	Perth Airport/Hazelmere	5 FCEV Trucks	325
Truck Company 4	Perth Airport/Hazelmere	10 FCEV Concrete Agitators	300
Truck Company 5	Perth Airport/Hazelmere	2 FCEV Trucks	130
Truck Company 6	Bunbury	4 FCEV Coaches	100
Truck Company 7	Perth Airport/Hazelmere	6 FCEV Garbage Trucks	300
<b>Total Commitments</b>			<b>1,975 kg/day</b>
<b>Retail Sales</b>			
Refuel Australia	Northam	Retail sales	1,000
Hydrogen West	Perth Airport	Retail sales	1,000
<b>Total</b>			<b>3,975 kg/day</b>





# Evoke Construction Northam

**IGE Commitment to use local Northam Construction firms for the supply of Plant Buildings for the Project.**





# Northam Construction

(October 2023)



# Hydrogen Refuelling Station



HFCEV



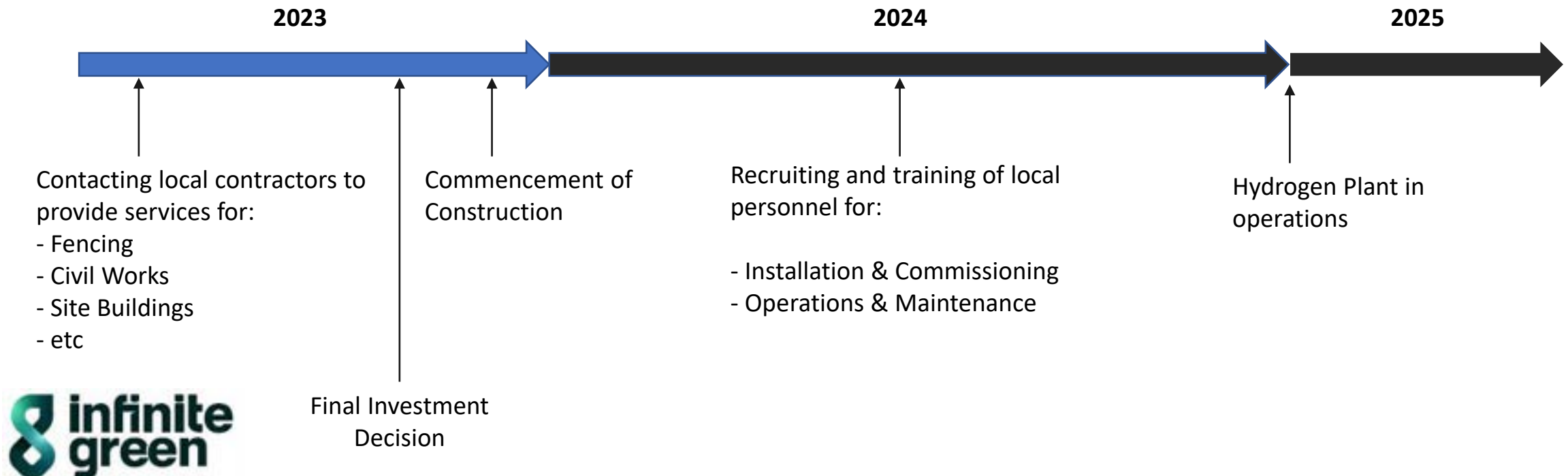
ICE & H2

# Infinite Green Commitment



We believe in early engagement with relevant authorities to ensure full compliance.

We also believe in giving back to the local community where we operate.



# Hydrogen Applications - Mobility

Hydrogen is being used to fuel a wider range of vehicles with many now moving into scaled production.









# Hydrogen vehicle availability

IGE is working closely with OEMs to secure fit for purpose vehicles to support FID and project commissioning

\* 2024 - GH2 vehicles to support MegHP1

\* 2026 - LH2 vehicles to support Arrowsmith

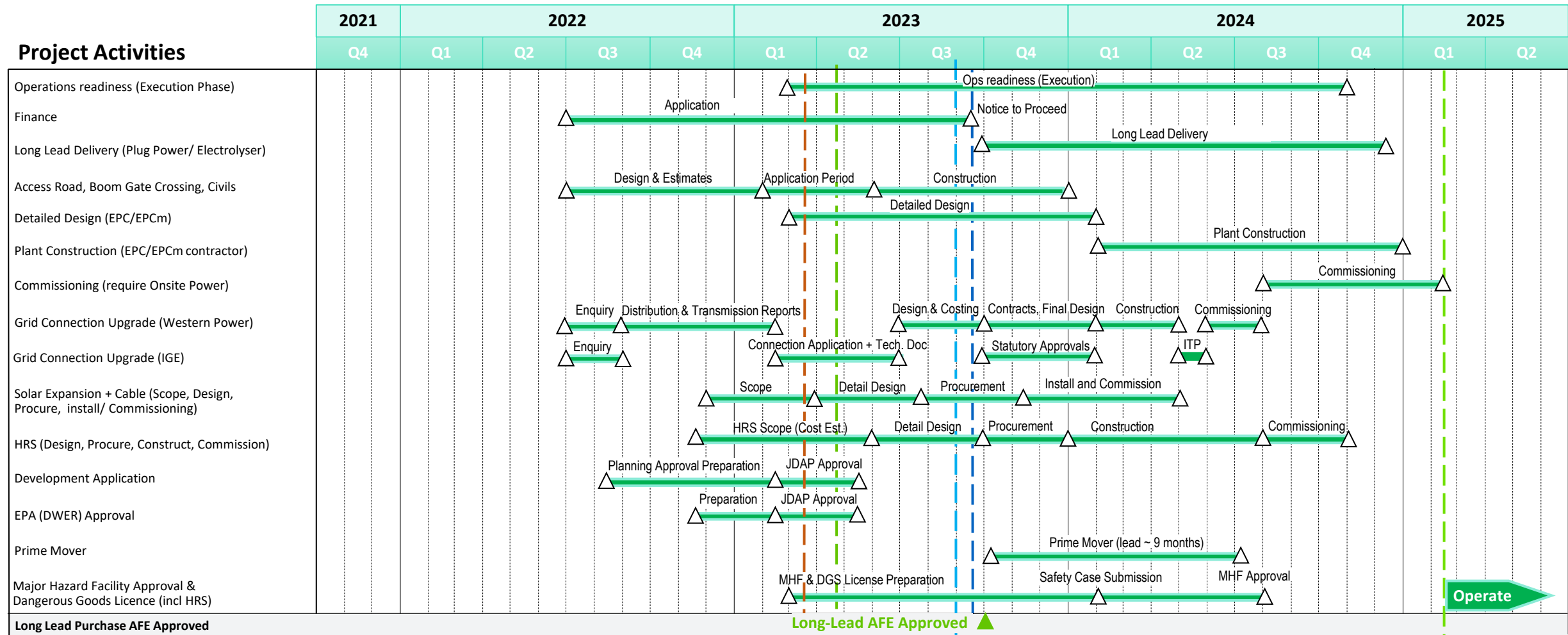
Vehicle Class	Vehicles ready for project commissioning
	<p><b>Gaseous hydrogen prime movers capable of loaded single trailer towing</b></p> <ol style="list-style-type: none"> <li>1. Foton 49T Gh2 Prime Mover. 120 &amp; 240 KW fuel cell format. Delivery 7 months from order date</li> <li>2. Hyundai Class 8 XCIENT 6x4 180 kw fuel cell on schedule for 2025.</li> <li>3. Iveco/Nikola Tre FCEV E-axle prime mover targeting 2025 (700 bar). Order for 10 trucks placed by Australian customer</li> </ol>
	<ol style="list-style-type: none"> <li>1. Fotonbus 44+1 Gh2 coach. Delivery 9 months from order</li> <li>2. ARCC City bus. Available 12 months from order. Expensive due to aluminium frame</li> <li>3. Yutong range of bus and coaches used in China, US, Japan, Germany, Switzerland and Malaysia. Awaiting RHD format</li> </ol>
	<ol style="list-style-type: none"> <li>1. Hyundai Nexa, available (on lease) 3 months from order</li> <li>2. Toyota Mirai available (on lease) 5 months from order</li> <li>3. H2X Warrego 400 units due for release 2024 as trial only. Based on Ford Ranger chassis</li> </ol>
	<ol style="list-style-type: none"> <li>1. Hyzon RHD and ADR compliant being developed for WA customers. 2024 available</li> <li>2. Yutong in use in China for past 5 years. Developing RHD primary drive format with dual steer</li> <li>3. H2X RHD and ADR compliant being developed for WA customers for 2024. Longer range side lift format</li> </ol>
	<ol style="list-style-type: none"> <li>1. Hyzon RHD and ADR compliant available if chassis supplied by customer. Available 2024</li> <li>2. H2X RHD and ADR compliant being developed for WA customers for 2024. Longer range. 6.5 cubic metre payload</li> <li>3. Hyundai Class 8 XCIENT 6x4 180 kw fuel cell on schedule for 2025. BGC ready to order 4 units for H2 Perth project</li> <li>4. Yutong in use in China for past 6 years. Developing RHD format. Working with 2 Australian customers</li> </ol>
	<p><b>Liquid hydrogen high horsepower prime movers capable of double and triple trailer towing</b></p> <ol style="list-style-type: none"> <li>1. Mercedes Daimler targeting trial units in Australia 2025 with Australian market release is 2026/27</li> <li>2. Volvo (&gt;70T) forecast for Australian market release is 2027</li> <li>3. Hyzon RHD and ADR compliant being developed for WA customers. 140T vehicle trial underway with Sun Metals Zinc in Townsville</li> </ol>



# Northam H2 Plant– FID to Operate (Distribution Option)

MEG HP1 Schedule– Indicative

Note: Schedules are indicative only and subject to change



Building Doc Submission

Project FID  
Notice to Proceed

Ready for Start Up

Operate



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P: +61 499 699 153

IGE Investment Relations Officer  
e: [investors@igeh2.com](mailto:investors@igeh2.com)  
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# WHEATBELT FUTURES FORUM

3<sup>RD</sup> MAY, 2023

*Proudly brought to you by:*



WHEATBELT BUSINESS NETWORK  
Connecting Business. Growing the Wheatbelt.



**NORTHAM**  
**CHAMBER**  
OF COMMERCE



**WHEATBELT  
FUTURES FORUM  
3<sup>RD</sup> MAY 2023**

**Empowering Men and  
Communities – Our Health  
and Wellbeing**

Tom Hayes, Community  
Educator, Regional Mens Health





THE  
**REGIONAL  
MEN'S HEALTH**  
INITIATIVE



**WORKING WITH WARRIORS®**

# Working with Warriors



## What we do

- **Warrior Education Sessions**  
Where we talk about blokes physical, mental and social/spiritual wellbeing.
- **Fast Track Pit Stop**  
An Interactive health and wellbeing awareness and listening tool that is themed around the servicing of a vehicle. (Chassis, Oil Pressure & Shockies)
- **Advocacy**  
We support positive change concerning men's wellbeing and health by:
  - promoting the *motto...before it gets too much... Talk to a Mate!!*®
  - providing short term personal resilience/referral pathway;
  - provide critical links to other services;
  - building community capacity through networking & partnering
  - continue to pioneer men's holistic health and wellbeing at every opportunity.



We get around!



A man wearing a hat and a dark shirt is walking in a dry, dusty field. He is carrying a black and white dog on his shoulder. In the background, a large herd of cattle is visible, kicking up dust. The scene is set in a rural, arid environment with sparse trees.

# EMPOWERING MEN & COMMUNITIES OUR HEALTH & WELLBEING

*Our Prime Responsibility is to address the needs of our most precious resource*  
***PEOPLE***

# “Positive Change” Elements of Program

***We are not Doctors or Psychologists!***

***Some critical factors of engagement with men:***

- Go to where the blokes are.
- Adopt a frank approach – **language!**
- Competence
- Thoughtful use of humour
- Empathy/connection
- Prompt resolution of issues/follow up.



**X Roads Brekky**



# Determinants of Regional, Rural and Remote Men's Health & Wellbeing

- ▶ Tendency to define personal worth by business success
- ▶ Uncertainty surrounding climate variability
- ▶ Financial pressure
- ▶ Social isolation
- ▶ Relationship breakdown
- ▶ Stoicism with which rural men approach hardship
- ▶ Difficulty in accessing support services
- ▶ Loss of community members through location to urban centres (younger men)

**Bullaring**



# PRE HARVEST BREAKFAST

**Bulyee**



**Bilbarin**



**Gorge Rock**

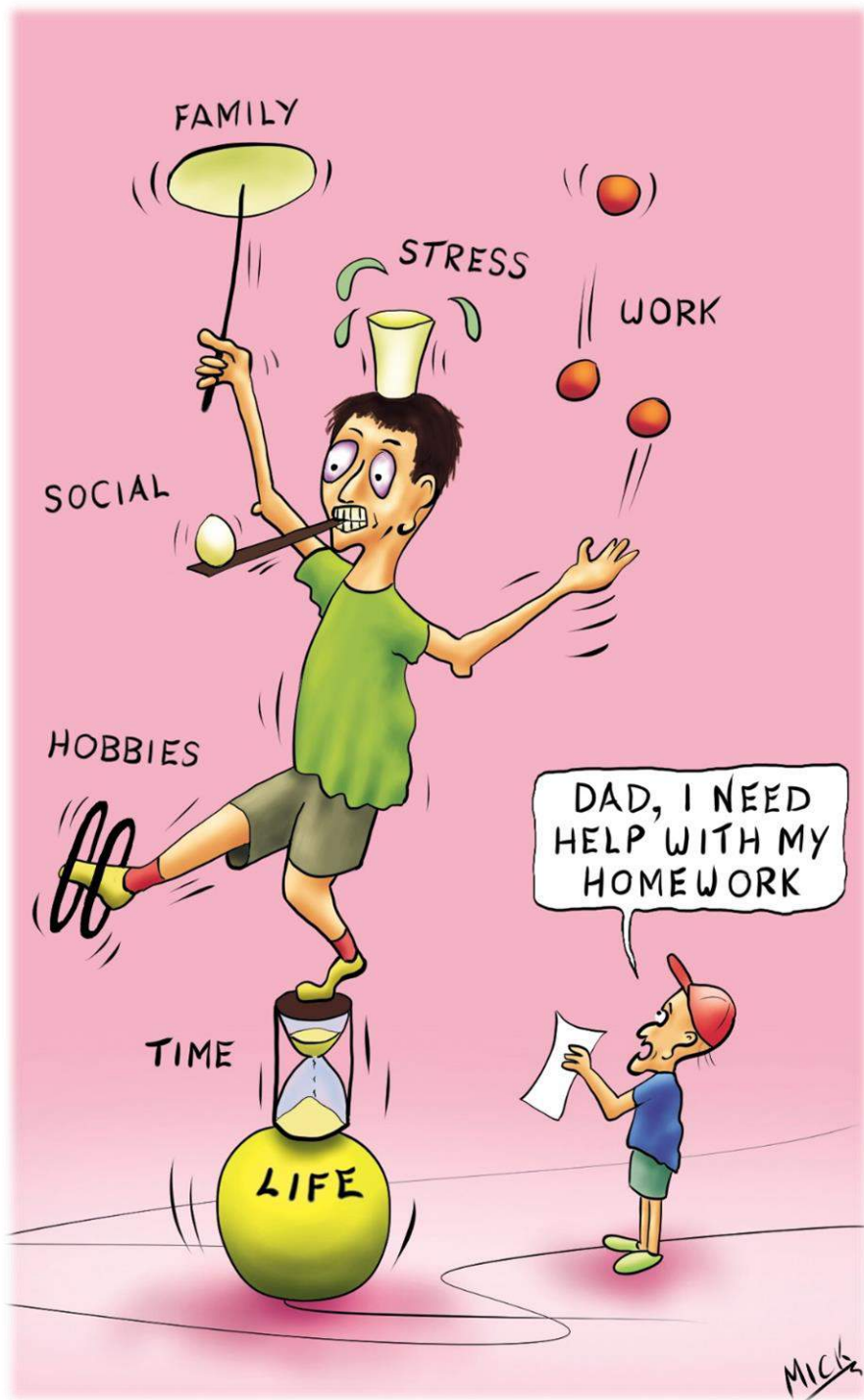


# “Positive Change”

## RMHI Model – What Works

### *Key factors in embedding our wellbeing and health messages*

- Availability
- Responsiveness
- Flexibility
- Effective communication and style
- Team



**WHAT DOES IT MEAN  
TO HAVE GOOD  
MENTAL HEALTH?**

# Situational Distress

- Through the paradigm of “Situational Distress” we use language describing our mental health and wellbeing that resonates with blokes and community, that gives us permission when confronted with challenging times to deal with the issues in our own way.
- The adoption of this language is fostering change through men and communities taking personal responsibility.  
(aligning with National & State Mental Health policies)

# Our Mental Health and Wellbeing Gauge™



# Mental Health In Rural Communities

- Isolation is the enemy of good mental health and wellbeing.
- Tyranny of distance!
- Access to appropriately staffed mental health services.
  - Employment Assistance Programs (EAP)
- Statistics – all on the wrong side of the ledger for regional, rural and remote.

# Why we focus on Community









**“Primary Care”** ordinary people looking after their mates



# Working with Warriors



-  Apple Podcasts →
-  Google Podcasts →
-  Spotify →
-  Stitcher →
-  iHeartRadio →
-  Deezer →

*...before it all gets too much...*  
**Talk to a Mate!!<sup>®</sup>**  
*or Talk it Over*  
**1300 789 978** mensline australia  
 THE REGIONAL MEN'S HEALTH INITIATIVE

 Follow @rmhi\_4blokes

 [regionalmenshealth.com.au](http://regionalmenshealth.com.au)



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## Digitally Transforming Regional Communities

Naomi Evans, Head of Regional  
Community Affairs (WA), nbn  
Local; and

Kristen Coggan, Community and  
Engagement Officer, Regional  
Tech Hub





# Digitally Transforming Regional Australia

Naomi Evans, Head of nbn local WA

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# Regional Snapshot – Wheatbelt



**84,678**

Premises ready for service



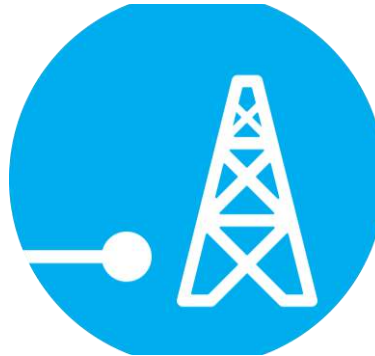
**38,826 or 46%**

Premises currently connected to nbn



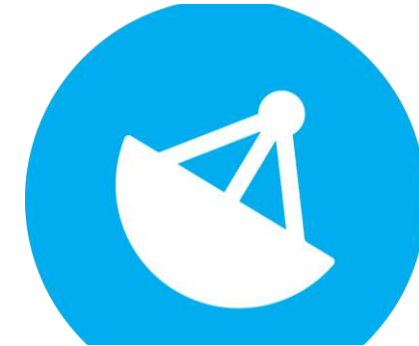
**24,426 or 63%**

Connected premises - fixed line



**9,146 or 24%**

Connected premises - fixed wireless



**5,254 or 13%**

Connected premises - satellite



# Upgrades for current and future demand

- Major work across the network includes extended footprint, higher speeds capability.

16 February 2023

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# All day unmetered data usage, higher speed plan trial

This presentation is indicative only. To the extent of any inconsistency between this presentation and the Test Agreement for the trial, the Test Agreement for the trial will prevail.

16 February 2023

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Thank you



**Regional  
Tech Hub**



**National  
Farmers  
Federation**



**Australian Government**

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**Department of Infrastructure,  
Transport, Regional Development,  
Communications and the Arts**



# Get Connected, Stay Connected

The Regional Tech Hub offers **independent, free** connectivity advice and support for regional, rural & remote Australians. We help **individuals, communities, organisations** and **small businesses**.

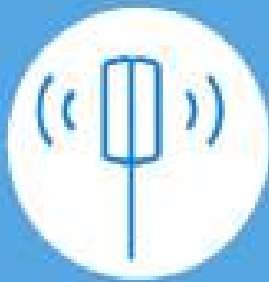




# Regional Internet Technology Types



nbn  
FIXED  
LINE



nbn  
FIXED  
WIRELESS



nbn  
SATELLITE  
Sky  
Muster



WISP  
non-nbn  
FIXED  
WIRELESS



Starlink  
SATELLITE



ADSL,  
non-nbn  
FIBRE &  
CABLE

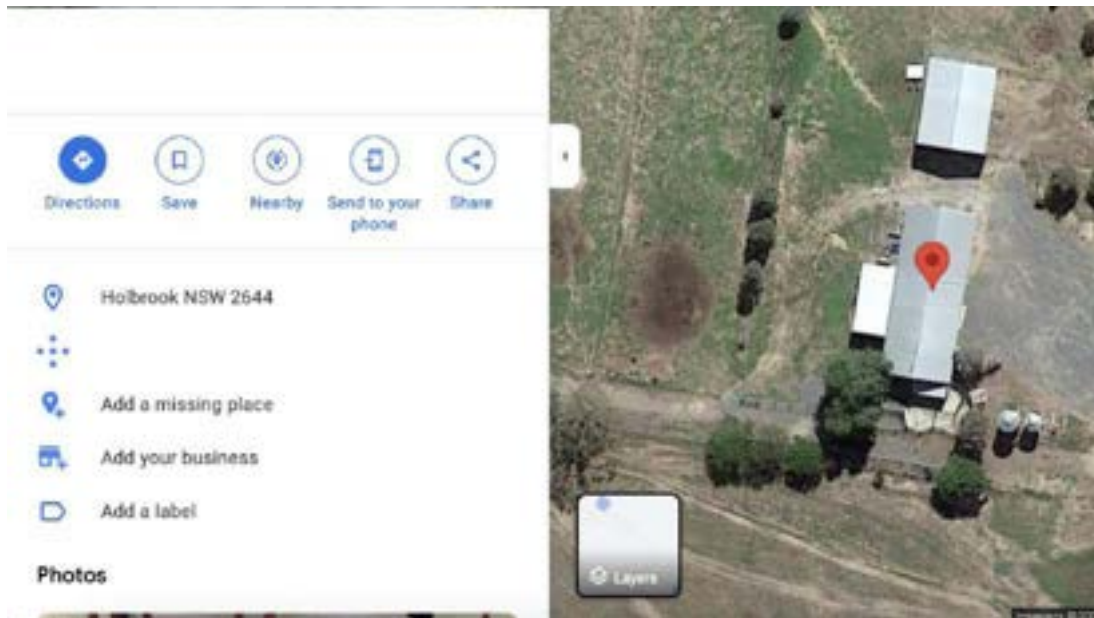


MOBILE  
BROADBAND



# How do we help?

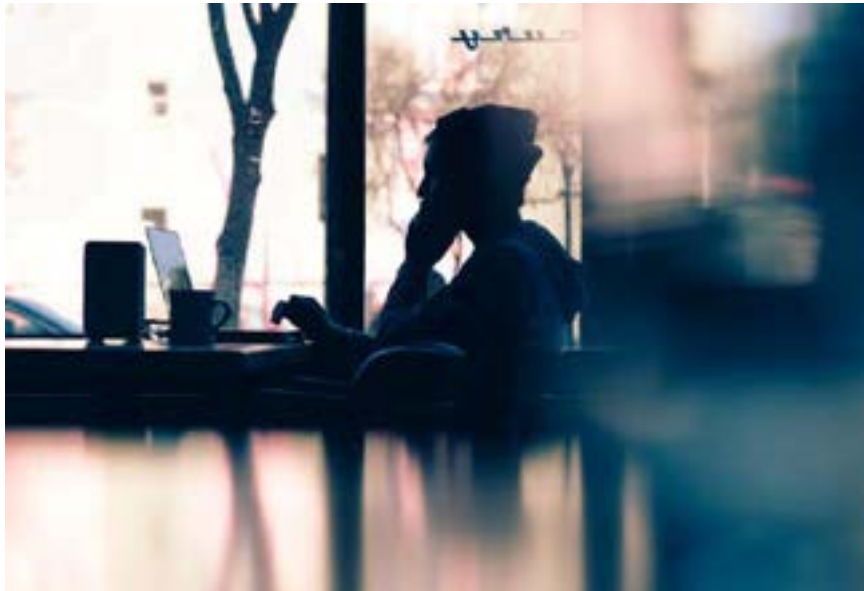
- By finding the best technologies that are available locally via a connectivity report – whether it be for voice or internet.
- Our regionally-based team is available to help explain all your options and how to access them.



# Our Connectivity Resource Hub

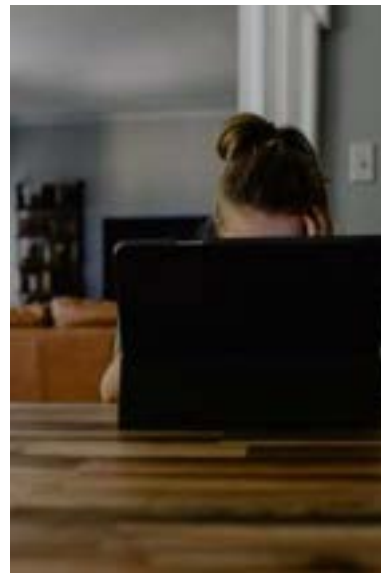
Information and resources to get you connected and stay connected.

[www.regionaltechhub.org.au](http://www.regionaltechhub.org.au)



# Here to help with your Retail Service Provider

- We can help resolve problems with your phone or internet provider and work with you to rectify any connection issues.
- Help make sense of what is going on and give you confidence and the language to use.
- We can walk you through any trouble shooting processes.
- Our completely free and independent service is here to help find you a solution!



# Barriers to better connectivity

1. Misinformation & Disinformation
2. Affordability
3. Terminology – “Tech Speak”
4. Lack of support
5. Lack of Transparent & easy to understand Information & Equipment
6. Scammers and the fear of being scammed
7. Consumer Fatigue



# Typical feedback we receive

- *“Phenomenal service, very professional and knowledgeable. It would have taken me months to out the information they provided me”* - [Anna, Vic](#)
- *“They listened to me”* – [Martin, NSW](#)
- *“Thanks so much for the comprehensive and extremely helpful advice regarding our options for our future planning. I have known about the service for some time and when I was ready to make contact, I was confident that I would receive great information, but the information I received from Murray exceeded my expectations. I would recommend the Regional Tech Hub to anyone who needs clear and reliable advice “*- [Wendy, QLD](#)
- *“Information was given that was easy to understand”* – [Karen, WA](#)



# Understanding the differences in terminology



## Connectivity Literacy

all of the skills and knowledge needed by a consumer to get connected and stay connected, to both voice and broadband services. Connectivity literacy has no demographic barriers



## Digital Literacy

skills required to live, learn and work in a society where information, resources and services are online or in a digital format



## Digital Inclusion

everyone should be able to make full use of digital technologies and the benefits they bring





# In summary

1. The Regional Tech Hub is a **FREE** and **INDEPENDENT** service that is available to all individuals, community groups, organisations, businesses and councils.
2. We can assist with –
  - ✓ Identifying all connectivity options at any site in Australia, taking topography and vegetation in to account.
  - ✓ Discuss what you use your connections for and evaluate the most suitable plans for your needs and budget.
  - ✓ Help troubleshoot problems you may be experiencing with your connections
  - ✓ Assist with the escalation of reported incidents of degraded or non working services with RSP's.
  - ✓ Help individuals and organisations gain improved connectivity literacy for themselves, communities and work force.



# How to get in touch



Visit [www.regionaltechhub.org.au](http://www.regionaltechhub.org.au) and fill out one of our forms to get started



Book a time to speak 1:1 with our team (via link on website)



Send us an email - [helpdesk@regionaltechhub.org.au](mailto:helpdesk@regionaltechhub.org.au)



Call us on 1300 081 029



Regional Tech Hub Community Discussion Board







**Regional  
Tech Hub**



**National  
Farmers  
Federation**



**Australian Government**

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**Department of Infrastructure,  
Transport, Regional Development,  
Communications and the Arts**



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## **Cybersecurity. Why is it Everyone's Business to Protect my Business**

Dr Ian Martinus,  
Commercialisation & IP, Cyber  
Security Cooperative Research  
Centre



# Why it is everyone's business to protect my business

Dr. Ian Martinus  
Commercialisation & IP

CBH Wheatbelt Futures Forum  
May 3, 2023

# Business Risks & Costs of Cyber Attacks in WA

**Business Risks and Costs of Cyber Attacks to Small Business in Western Australia**

- 7000 \$** COST FOR EACH CYBER ATTACK
- 4.7 MILLION \$** SAVINGS FROM CYBER PROTECTION
- 150 MILLION \$** COST TO WA ECONOMY ANNUALLY FROM CYBER ATTACKS
- 12 %** OF SMALL BUSINESS EXPERIENCE A CYBER EVENT

**Just in the first year cyber savings could buy:**

-   
**Busselton Saw Mill**  
producing furniture for national and international buyers (Walk-in Walk-out) with significant inventory and machinery
-   
**Software for Horizon Power**  
to control 'Access and Identity Management' for all staff and contractors for 5 years across WA
-   
**62 Rooms 5-Star Freehold Motel**  
in Halls Creek & Freehold Apartment Complex in Carnarvon

 **AustCyber**  
Australia's Cyber Security Growth Network

 **Western Australia Innovation Hub**

**110  
BILLION \$**

**SOUTH  
AUSTRALIAN  
GROSS STATE  
PRODUCT (GSP)**

**TARGET  
CYBER  
MARKETS**

DEFENCE, SPACE  
INDUSTRY, SUPPLY  
CHAIN CAPABILITY  
AND RESILIENCE

**0.071% OF GSP OR \$731M**

**2021 IMPLIED CYBER CRIME COSTS  
IN SOUTH AUSTRALIA**

A targeted initial 4 year  
investment in 2021 of  
\$3.655M will deliver:

Net Economic  
Savings in  
2023/24  
**\$4.4M**

**Payback**  
within Second  
year of programs  
(FY 2023)

**4 x Return**  
on Investment  
(cumulative multiple)  
in late 2024/25

Implied Total Cyber  
Crime Costs (\$M)  
**slowing  
by 0.15%**  
in 2022/23 due to  
investment



# CRC Research Themes 2023 and why you should care

## OUR RESEARCH THEMES



**Resilient systems**



**Security and configuration management of IoT systems**



**Development of next generation authentication technologies**



**Predict, detect, respond to and investigate cyber threats**



**Privacy preserving data sharing in a connected world**



**Platform and architecture for cyber security as a service**

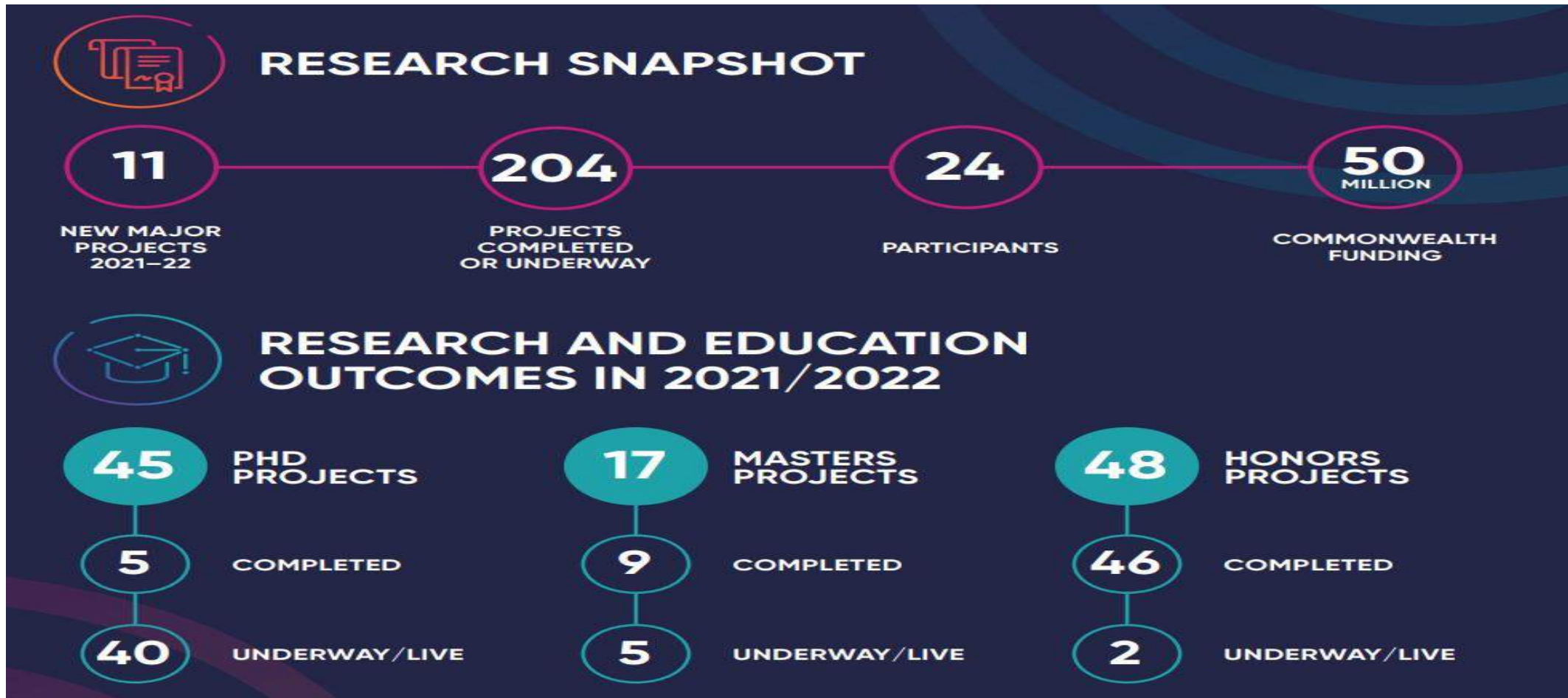


**Security automation and orchestration**



**Law and policy**

# Real World Application. Finding the gold nuggets in the research



# Achieving Critical Mass



**Critical infrastructure**



**Critical technology**



**Small-to-medium enterprise  
(SME) cyber uplift**

- CSCRC projects must **complete by September 2024**
- Demonstrate clear pathways to impact and utilisation identified TRL 4-7 & investment readiness
- Q: How to assign the IP to Australian companies and researchers

**1. Cyber-Buddy – gamification for SMEs (Duolingo for cyber)**

**2. SOCRATES - Software Security with a focus on Critical Technologies – building Quantum & AI-resilient supply chain software vulnerability**

**3. ACDC – Augmenting Cyber Defence Capability (red/white/blue team) June 12<sup>th</sup> ECU**

**4. Australia's Data: Emerging Privacy Preservation Techniques (AD:EPT)**

# CRC Partner Network



# MITRE ATT@CK MATRIX

## ATT&CK Matrix for Enterprise

layout: side ▾ show sub-techniques hide sub-techniques

Reconnaissance 10 techniques	Resource Development 8 techniques	Initial Access 9 techniques	Execution 14 techniques	Persistence 19 techniques	Privilege Escalation 13 techniques	Defense Evasion 42 techniques	Credential Access 17 techniques	Discovery 31 techniques	Lateral Movement 9 techniques	Collection 17 techniques
Active Scanning (3)	Acquire Access	Drive-by Compromise	Cloud Administration Command	Account Manipulation (5)	Abuse Elevation Control Mechanism (4)	Abuse Elevation Control Mechanism (4)	Adversary-in-the-Middle (2)	Account Discovery (4)	Exploitation of Remote Services	Adversary-in-the-Middle (3)
Gather Victim Host Information (4)	Acquire Infrastructure (8)	Exploit Public-Facing Application	Command and Scripting Interpreter (8)	BITS Jobs	Access Token Manipulation (5)	Access Token Manipulation (5)	Brute Force (4)	Application Window Discovery	Internal Spearphishing	Archive Collected Data (3)
Gather Victim Identity Information (3)	Compromise Accounts (3)	External Remote Services	Container Administration Command	Boot or Logon Autostart Execution (14)	Boot or Logon Autostart Execution (14)	BITS Jobs	Credentials from Password Stores (3)	Browser Information Discovery	Lateral Tool Transfer	Audio Capture
Gather Victim Network Information (4)	Compromise Infrastructure (7)	Hardware Additions	Deploy Container	Boot or Logon Initialization Scripts (3)	Boot or Logon Initialization Scripts (3)	Build Image on Host	Exploitation for Credential Access	Cloud Infrastructure Discovery	Remote Service Session Hijacking (2)	Automated Collection
Gather Victim Org Information (4)	Develop Capabilities (4)	Phishing (3)	Exploitation for Client Execution	Browser Extensions	Browser Extensions	Debugger Evasion	Forced Authentication	Cloud Service Dashboard	Remote Services (7)	Browser Session Hijacking
Phishing for Information (3)	Establish Accounts (3)	Replication Through Removable Media	Inter-Process Communication (3)	Compromise Client Software Binary	Compromise Client Software Binary	Deobfuscate/Decode Files or Information	Forge Web Credentials (2)	Cloud Service Discovery	Replication Through Removable Media	Clipboard Data
Search Closed Sources (2)	Obtain Capabilities (8)	Supply Chain Compromise (3)	Native API	Create Account (3)	Create Account (3)	Deploy Container	Input Capture (4)	Cloud Storage Object Discovery	Software Deployment Tools	Data from Cloud Storage
Search Open Technical Databases (5)	Stage Capabilities (4)	Trusted Relationship	Scheduled Task/Job (5)	Create or Modify System Process (4)	Create or Modify System Process (4)	Direct Volume Access	Modify Authentication Process (8)	Container and Resource Discovery	Taint Shared Content	Data from Configuration Repository (2)
Search Open Websites/Domains (3)		Valid Accounts (4)	Serverless Execution	Event Triggered Execution (14)	Event Triggered Execution (14)	Domain Policy Modification (2)	Multi-Factor Authentication Interception	Debugger Evasion	Use Alternate Authentication Material (4)	Data from Information Repositories (3)
Search Victim-Owned Websites			Shared Modules	External Remote Services	External Remote Services	Execution Guardrails (7)	Multi-Factor Authentication	Device Driver Discovery		Data from Local System
			Software Deployment Tools			Exploitation for Defense Evasion		Domain Trust Discovery		Data from
						File and Directory Permissions Modification (2)		File and Directory Discovery		
						Hide Artifacts (10)				

# Report Cyber & the unlikely event your money will be recovered



Australian Government  
Australian Signals Directorate

ACSC

Australian  
Cyber Security  
Centre

ReportCyber

If there is an immediate threat to life or risk of harm please call 000

← Back

## Business cyber issue

### Before you report:

You are reporting as a business. It will take you approximately 10 minutes to complete.

Please make sure you have the following details ready before you start:

- The Australian Business Number (ABN)
- Details of what happened, including dates and any financial transactions made
- Whether the victim is willing to make a formal statement

If you have lost money, please be aware that it is extremely unlikely that money will be recovered. So it is important to contact your bank immediately – or any other institution that you used to transfer money such as PayPal, Western Union, Facebook, Gumtree etc.

# “Have You Been Hacked”– Local ES2 Example

The screenshot displays the ES2 website's 'CYBER INCIDENT RESPONSE SERVICES' page. The top navigation bar includes the ES2 logo with the tagline 'occurring in the first place', and menu items for 'Company', 'Capabilities', 'News', and 'Library', along with a 'CONTACT' button. A phone icon and the number '1800 372 732' are visible in the top right. The main content area features a list of services: '24/7 Incident Response', 'Readiness Review', 'Post-incident Report (PIR)', and 'Post-incident Remediation'. A prominent blue call-to-action box asks 'Have You Been Hacked? Call: 1800 372 732'. Below this is a 'DOWNLOAD FULL OFFERINGS' button. The lower section, titled 'How We Measure Up', presents three key performance indicators: 18 Prepaid Cyber Incident Response Services, 132 Cyber Incident Responses, and 74% Office365 Related Cyber Incident Response.

CYBER INCIDENT RESPONSE 24/7 : 1800 372 732

ES<sup>2</sup> occurring in the first place

Company ▾ Capabilities ▾ News ▾ Library **CONTACT**

**CYBER INCIDENT RESPONSE SERVICES**

- 24/7 Incident Response
- Readiness Review
- Post-incident Report (PIR)
- Post-incident Remediation

**Have You Been Hacked?  
Call: 1800 372 732**

**DOWNLOAD FULL OFFERINGS**

**How We Measure Up**

<b>18</b>	<b>132</b>	<b>74%</b>
Prepaid Cyber Incident Response Services	Cyber Incident Responses	Office365 Related Cyber Incident Response





**Cyber.gov.au**  
**scamwatch.gov.au**



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## Exploring for New Opportunities in the Wheatbelt

Warren Pearce, CEO,  
Association of Mining and  
Exploration Companies (AMEC)



# EXPLORING FOR NEW OPPORTUNITIES IN THE WHEATBELT

May 2023

Association of Mining and Exploration Companies



# The Future

WA's Wheatbelt could become one of the world's most important regions for critical minerals – which are required for new clean energy technologies and decarbonisation.

# About AMEC

## Association of Mining and Exploration Companies

The Association of Mining and Exploration Companies (AMEC) is a national peak industry body representing over 500 mining and mineral exploration companies across Australia.

Our members are mineral explorers, emerging miners, producers, and a wide range of businesses working in and for the industry.

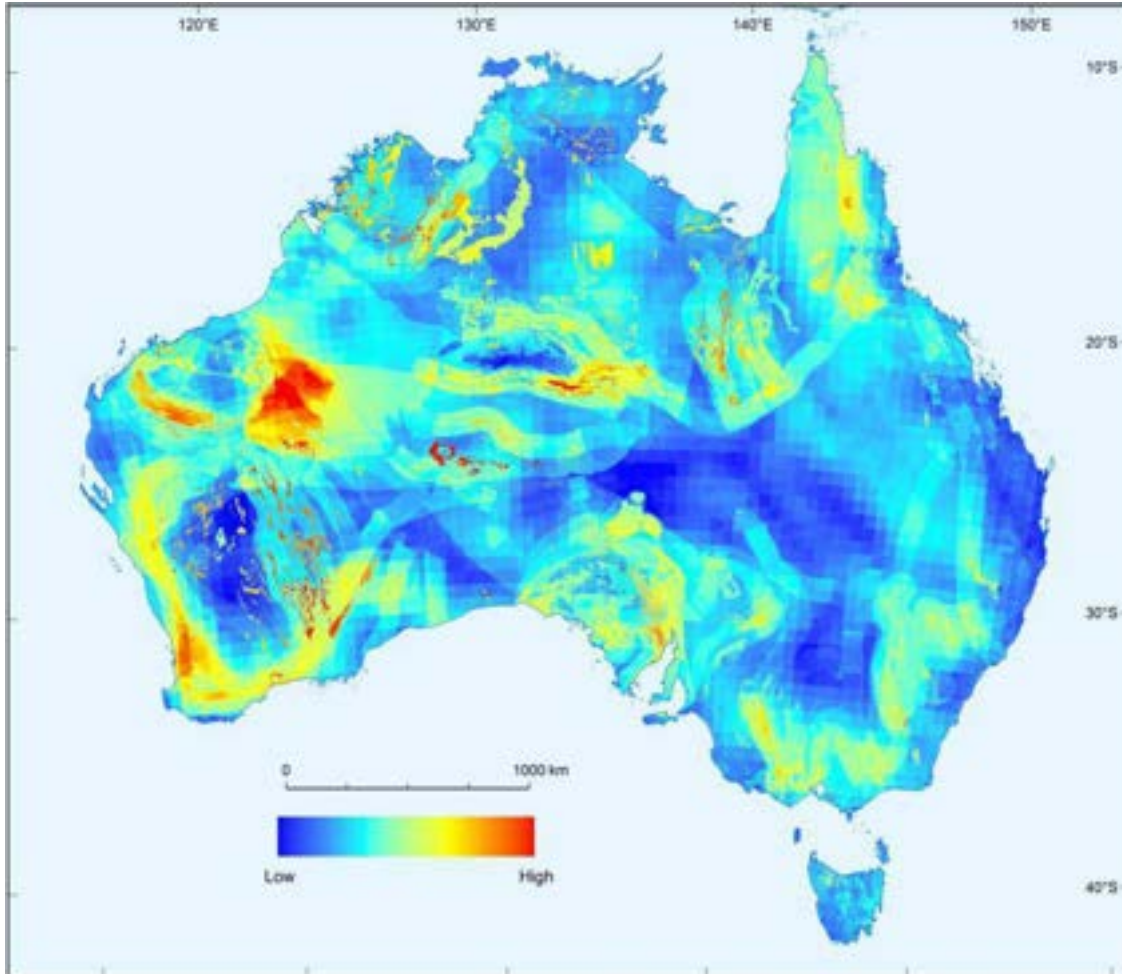
### Key advocacy objectives:

- Increasing mineral exploration and project development
- Reducing the cost of doing business and streamlining approvals
- Building community support



# Exploring for the Future

## Creating renewed interest in WA's Wheatbelt



Map showing the potential of tholeiitic intrusion-hosted Ni-Cu-PGE sulfide deposits in Australia.

In 2016, the Commonwealth Government made a \$100M investment to Geoscience Australia's Exploring for the Future (EFTF) Program.

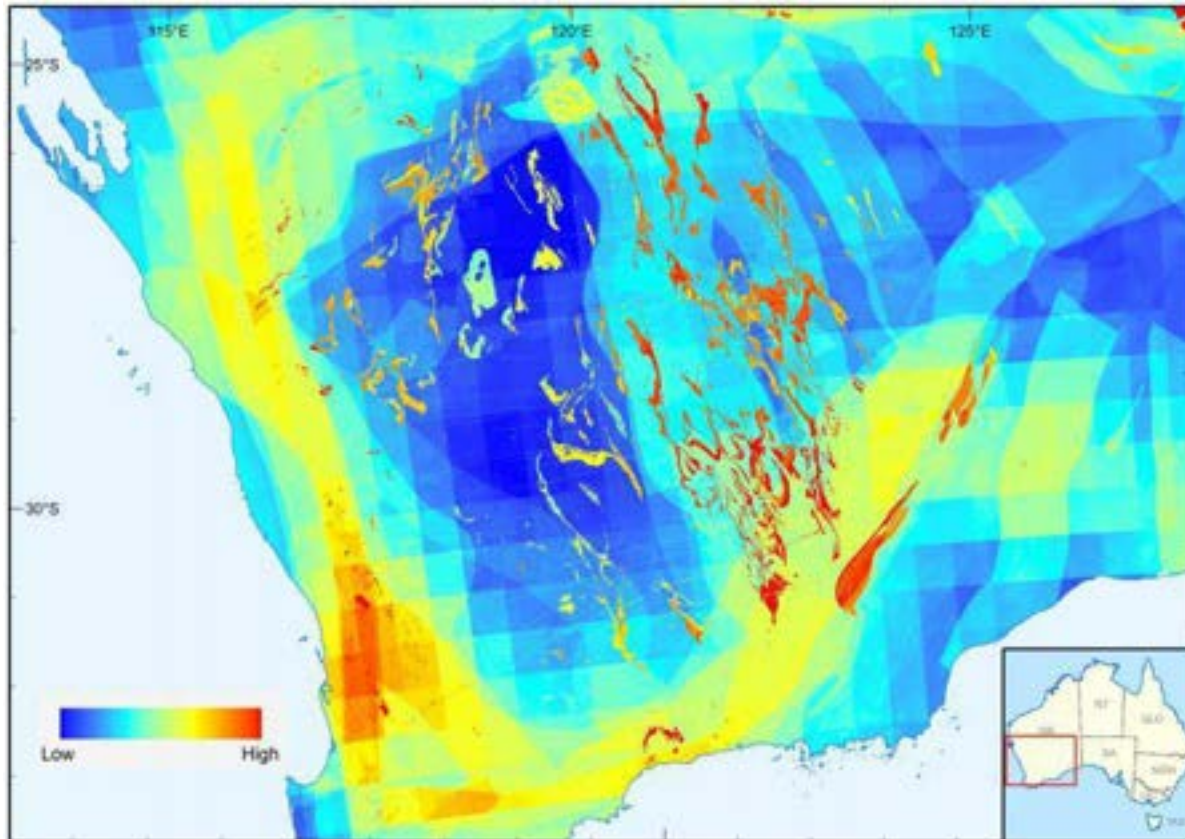
Aiming to drive investment into the resource and agricultural sectors by providing pre-competitive data about potential mineral, energy and groundwater resources

Under EFTF, Geoscience Australia published a nickel copper-PGE prospectivity map in 2016.

Map identifies regions of intrusion-hosted Ni-Cu-PGE potential

# Exploring for the Future – WA's Wheatbelt

## Julimar Project – the Gonneville Discovery



*Variations in modelled potential for tholeiitic intrusion-hosted Ni-Cu-PGE sulfide mineralization in the Yilgarn Craton in Western Australia.*

Following release of the Ni-Cu-PGE prospectivity map, showing significant mineralisation in the Wheatbelt, Chalice Mining (then Chalice Gold) focused exploration efforts in the Julimar area.

Chalice's exploration at the Julimar site led to the discovery of high-grade platinum group elements -copper-nickel deposit (the Gonneville Discovery) in March 2020.

The Gonneville discovery generated significant increased interest in the mineral potential across the Wheatbelt.

# Chalice Mining – Julimar Project

## Julimar Project – the Gonneville Discovery



Chalice discovered the Gonneville deposit in the very first drill hole at the project in March 2020, intersecting shallow high-grade PGE-nickel -copper-cobalt-gold sulphide mineralisation.

As of March 2023, the discovery has a total of 560Mt Mineral Resource estimate.

The processing flowsheet is under development, targeting production of a Cu-PGE-Au concentrate and a battery-grade Ni-Co MHP.

Gonneville is located on private farmland at the southern end of the interpreted >30km long Julimar Complex.

The significant Gonneville discovery has defined the new West Yilgarn Ni -Cu-PGE Province, an almost entirely unexplored mineral province which is interpreted to extend for ~1,200km along the western margin of the Yilgarn Craton.





# Growing Interest

## AMEC Members exploring in the Wheatbelt

Andromeda Metals	<a href="http://andromet.com.au">andromet.com.au</a>	DevEx Resources	<a href="http://devexresources.com.au">devexresources.com.au</a>	OD6 Metals	<a href="http://od6metals.com.au">od6metals.com.au</a>
Ausgold	<a href="http://ausgoldlimited.com">ausgoldlimited.com</a>	Dundas Minerals	<a href="http://dundasminerals.com">dundasminerals.com</a>	Pursuit Minerals	<a href="http://pursuitminerals.com.au">pursuitminerals.com.au</a>
AusQuest	<a href="http://ausquest.com.au">ausquest.com.au</a>	Emu NL	<a href="http://emunl.com.au">emunl.com.au</a>	Sipa Resources	<a href="http://sipa.com.au">sipa.com.au</a>
Australian Vanadium	<a href="http://australianvanadium.com.au">australianvanadium.com.au</a>	Enegex	<a href="http://enegex.com">enegex.com</a>	Strategic Energy Resources	<a href="http://strategicenergy.com.au">strategicenergy.com.au</a>
Bulletin Resources	<a href="http://bulletinresources.com">bulletinresources.com</a>	Impact Minerals	<a href="http://impactminerals.com.au">impactminerals.com.au</a>	Tambourah Metals	<a href="http://tambourahmetals.com.au">tambourahmetals.com.au</a>
Burley Minerals	<a href="http://burleyminerals.com.au">burleyminerals.com.au</a>	Latin Resources	<a href="http://latinresources.com.au">latinresources.com.au</a>	Todd River Resources	<a href="http://trrltd.com.au">trrltd.com.au</a>
Caravel Minerals	<a href="http://caravelminerals.com.au">caravelminerals.com.au</a>	Medallion Metals	<a href="http://medallionmetals.com.au">medallionmetals.com.au</a>	Venture Minerals	<a href="http://ventureminerals.com.au">ventureminerals.com.au</a>
Caspin Resources	<a href="http://caspin.com.au">caspin.com.au</a>	Meeka Metals	<a href="http://meekametals.com.au">meekametals.com.au</a>		
Chalice Mining	<a href="http://chalicemining.com">chalicemining.com</a>	Moho Resources	<a href="http://mohoresources.com.au">mohoresources.com.au</a>		
Charger Metals	<a href="http://chargermetals.com.au">chargermetals.com.au</a>	Nickel Search	<a href="http://nickelsearch.com">nickelsearch.com</a>		



# What minerals are we exploring for?

Critical Minerals – Nickel, Copper, PGEs, Gold, Rare Earths and other minerals



The Wheatbelt is predicted to produce up to 65% of WA's renewable energy.

The manufacturing of renewable energy technologies is supported by the raw materials extracted in WA.

This includes Nickel, Copper, PGEs, Rare Earths and Gold.

A series of recent discoveries of Nickel, Copper and Platinum Group Elements (PGE) in the Wheatbelt has positioned the region to play an important role in the clean energy transition.

The International Energy Agency predicts major growth in demand for Nickel for use in electrolyzers, and Copper and PGE for use in fuel cell electric vehicles.

# The Mine Cycle

## The long journey from exploration to mining



### Exploration

4-5 Years

Exploration is the process of collecting geographical information to identify mineral deposits and their economic viability. There are a range of activities that may be undertaken as part of an exploration program.

### Discovery

1-2 Years

Even when there has been a discovery explorers will likely undertake further activities to build their confidence in the deposit. This may include collecting more drill data and resource modelling.

### Feasibility

3-5 Years

Once explorers are confident with their discovery, they will need to conduct feasibility studies and apply for further permits to progress to mining. This stage usually involves conducting assessments of risk, safety, and environmental impacts, as well as further studies to assess the economic viability of the deposit.

### Development

~ 3 Years

The development stage of the mineral exploration cycle typically involves financing, engineering, further project permitting and construction. This is usually the most capital-intensive stage of the mine cycle, due to the costs of construction.

### Mine

Mining occurs only after all the other stages of the cycle. The average mine life ranges from 5-15 years. It is estimated that only 1 in 135 discoveries will reach the stage of a producing mine, and even if there is a discovery it is an average of 13 years until mining will begin.

# Why do companies contribute?



Mining and exploration companies value good relationships with the communities they work in. Many of these companies are WA based and / or run by Western Australian leaders who love where they live and work and want their communities to benefit from their success. They want to make a difference.

It is also important that companies are responsible corporate citizens.

- Community Expectations and Social Licence
- Investor Expectations – ESG – Environment, Social and Governance
- Government Expectations

Without a reputation as a responsible corporate citizen and good support from the community, advancing a new development of project can become extremely difficult.

# Where will companies contribute?

## Focus on the Footprint

Companies will usually look to contribute in places and areas where they intersect with the community, often described as the company footprint.

- Local towns and communities
  - near their projects
  - where their residential workers live
  - where they source products and services
- Traditional owners / remote communities
- Broader region / regional centres
- Source Communities
  - where their FIFO / DIDO workers live
- Major Cities, where they have Head Quarters / Offices



# Industry Challenges in the Wheatbelt

## Major growth pressures occurring

- Land access is a constant challenge for exploration companies. Wheatbelt is unique in Western Australia due to the large portions of Freehold land.
- Access to labour, competing with other industries in the same talent pool. All industries under pressure.
- Significant wage inflation is already taking place, in our industry and many others, as we compete for employees. (157,000 employees – Average Wage \$140K)
- Attracting people to the region or to work FIFO/DIDO. These people need somewhere to live – putting further pressure of regions and towns.



# Working together

## Next steps...

Mineral exploration companies will be more prominent in the Wheatbelt than in the past with a drive for finding critical minerals.

Our member companies value and rely on good working relationships with landowners, local governments and the surrounding local communities.

Today's mineral exploration projects have the potential to turn into mining projects creating new employment and economic opportunities in the region.

And could become a critical region helping our Australia and the World to decarbonise.





# Thank you



## Contact Details

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E: [warren.pearce@amec.org.au](mailto:warren.pearce@amec.org.au)

Nicolas Parry  
Policy Adviser  
Ph: 9320 5150  
E: [nicolas.parry@amec.org.au](mailto:nicolas.parry@amec.org.au)



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## **Australia's Free Trade Agreements and how they can Help Your Business**

Sally Dawkins, Director, Western  
Australia State Office,  
Department of Foreign Affairs  
and Trade





Australian Government

Department of Foreign Affairs and Trade

# Australia's Free Trade Agreements

## Opportunities for Regional Australia

Sally Dawkins – Director, WA State Office,  
Department of Foreign Affairs and Trade

Wheatbelt Futures Forum – 3 May

DFAT.GOV.AU

# Outline



**India** – Economic Cooperation and Trade Agreement (ECTA) – In Force

**India** – Comprehensive Economic Cooperation Agreement (CECA) – Under Negotiation

**United Kingdom** – Free Trade Agreement (A-UKFTA) - Signed

**European Union** – Free Trade Agreement (A-EUFTA) – Under Negotiation

**Indo-Pacific Economic Framework (IPEF)** – Under Negotiation

FTA Portal for Australian business

# India – Economic Cooperation and Trade Agreement (ECTA) – In Force

- Over **85 per cent** of Australian goods exports by value to India became **tariff free** on 29 December 2022. This will rise to **90 per cent** after five years
- High tariffs have been eliminated or substantially reduced on key minerals (incl manganese and alumina) and agricultural products
- Horticulture contributed \$4.2 billion to Australia's total agricultural export income in 2021. High tariffs on key commodities hampered Australia's market access to India.

## Selected tariff outcomes

- Immediate tariff elimination on sheep meat, wool, hides and skins, barley, oats, fresh rock lobster.
- Immediate tariff elimination on LNG, coal, critical minerals, alumina, manganese, copper, zirconium, titanium dioxide, certain critical minerals and metals.
- phased elimination of tariffs over 6 years on avocados, certain peas and beans, onions, leeks, asparagus, cherries, berries, macadamias, cashews in-shell, shelled pistachios and hazelnuts.
- reduction of tariffs over 6 years for apricots, garlic and strawberries.
- immediate 50% tariff reduction within an annual quota of 150,000 tonnes for lentils, of 34,000 tonnes for almonds, of 13,700 tonnes for oranges and mandarins, and of 3,700 tonnes for pears.

# India – Comprehensive Economic Cooperation Agreement (CECA) – Under Negotiation

- The Government is now working to build on ECTA with an ambitious CECA.
- Australian negotiators met Indian counterparts in New Delhi on 20-24 February and will meet again in coming weeks.
- CECA negotiations will cover goods and services market access and issues not in ECTA such as digital trade and government procurement.
- We are also exploring new areas of cooperation and promoting investment in CECA or parallel agreements



*Prime Ministers Albanese and Modi announced their intention for the soonest possible conclusion of the ambitious Comprehensive Economic Cooperation Agreement at the Australia-India Annual Leaders' Summit on 10 March 2023.*

# United Kingdom – Free Trade Agreement (A-UKFTA) - Signed

- Signed on 17 December 2021 and passed Australian Parliament on 22 November 2022.
- From the day the A-UKFTA enters into force, over **99 per cent** of Australian goods exports by value to the UK will enter **without tariffs**
- Enhanced mobility pathways for workers and young people who wish to work in the UK, while making it easier for Australian service companies and professionals to do business there

## Tariff outcomes

- immediate elimination of tariffs on most fruits and vegetables, including tariffs on almonds, macadamias, and other nuts; avocados, cherries (except sour cherries); dried fruits, citrus fruits, carrots, and table grapes
- elimination of tariffs on other key interests over 3 years, including tariffs on apricots, nectarines, peaches, strawberries, asparagus, beans, tomatoes, apples (except cider apples) and pears (except perry pears).
- elimination of tariffs over 7 years for the remaining products.

# European Union – Free Trade Agreement (A-EUFTA) – Under Negotiation

## Key benefits sought

- High-income market of almost 450 million people with a GDP of around \$23 trillion it is Australia's third largest two-way trading partner
  - Australia and the EU launched negotiations on 18 June 2018
  - The A-EUFTA will provide exporters with new commercially meaningful goods market access, including for our agricultural products, resources and critical minerals
- Significantly improved market access for Australian exports
  - Guaranteed access for Australian services providers
  - A more predictable and seamless business environment
  - Rules to support the digital economy and innovation
  - Reduced costs and red tape, particularly for SME's
  - Greater consumer choice



# Indo-Pacific Economic Framework – (IPEF)

## – Under Negotiation

- On 9 September 2022, Australia joined 13 other IPEF members from across the Indo-Pacific region to launch negotiations
- IPEF brings together some of the largest and most dynamic regional economies, accounting for around 40 per cent of global GDP and including eight of Australia's top ten merchandise trading partners
- IPEF will seek to complement and build on existing regional architecture and support the global rules-based trading system

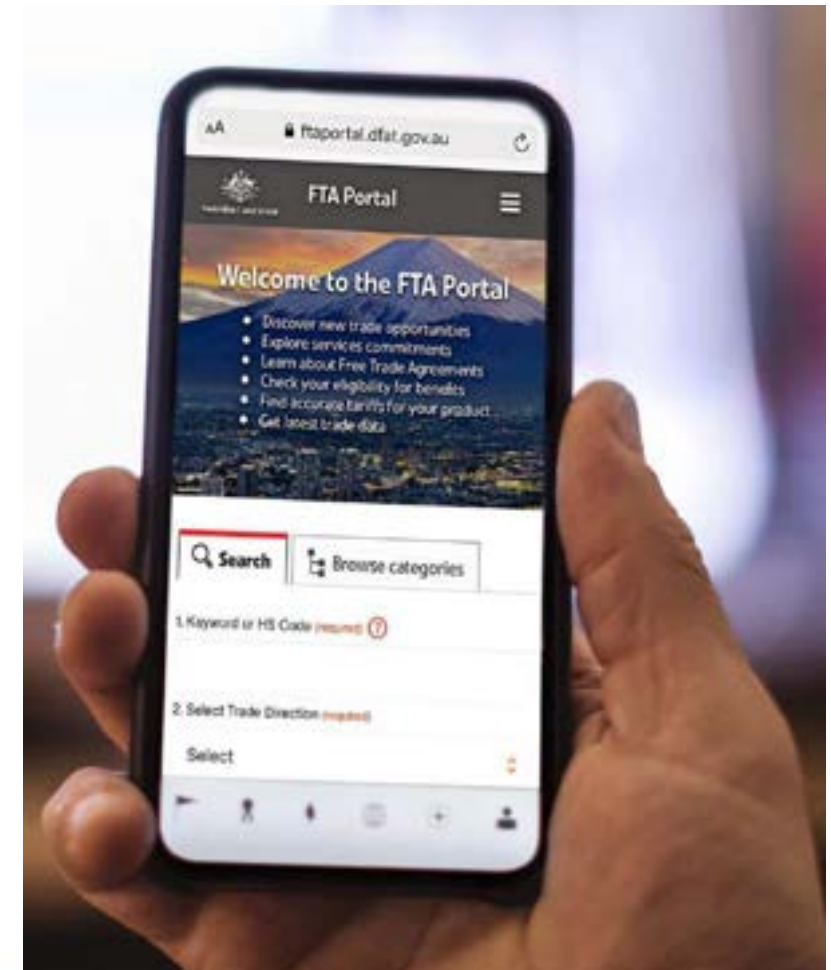
### Four pillars

- Trade, including digital trade
- Supply chains
- Clean energy, decarbonisation and infrastructure
- Tax and anti-corruption

# The FTA Portal

FTAPortal.dfat.gov.au

- DFAT's online tool to help traders get the maximum benefit from Free Trade Agreements
- Automatically scans hundreds of thousands of pages of source material to show the relevant tariff and market access commitments that apply to your product
- Compare tariff rates from multiple FTAs for any HS code across all Australia's FTA partner countries
- Provides information on rules of origin and documentary requirements





**Australian Government**

**Department of Foreign Affairs and Trade**

**DFAT.GOV.AU**



# WHEATBELT FUTURES FORUM

3<sup>RD</sup> MAY, 2023

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**CHAMBER**  
OF COMMERCE



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## Update on Opportunities in the Wheatbelt

Jessica Shaw MLA,  
Parliamentary Secretary to the  
Deputy Premier and Minister for  
State Development, Jobs and  
Trade, Hydrogen Industry,  
Tourism and Science





# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## Update on Economic Outlook for the Region

Sam Collins, Senior Economist,  
CCIWA





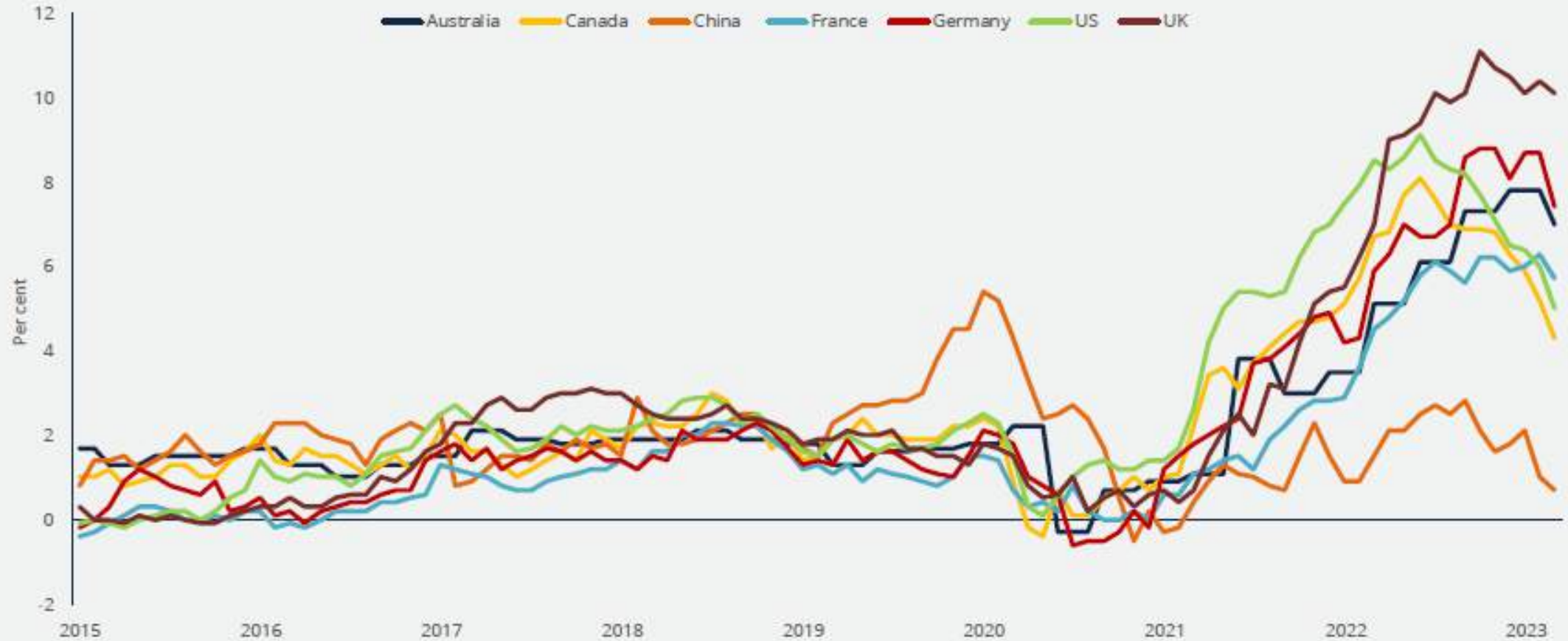
May 2023

# The Economic Landscape

Sam Collins – Senior Economist

# Inflation goes bang

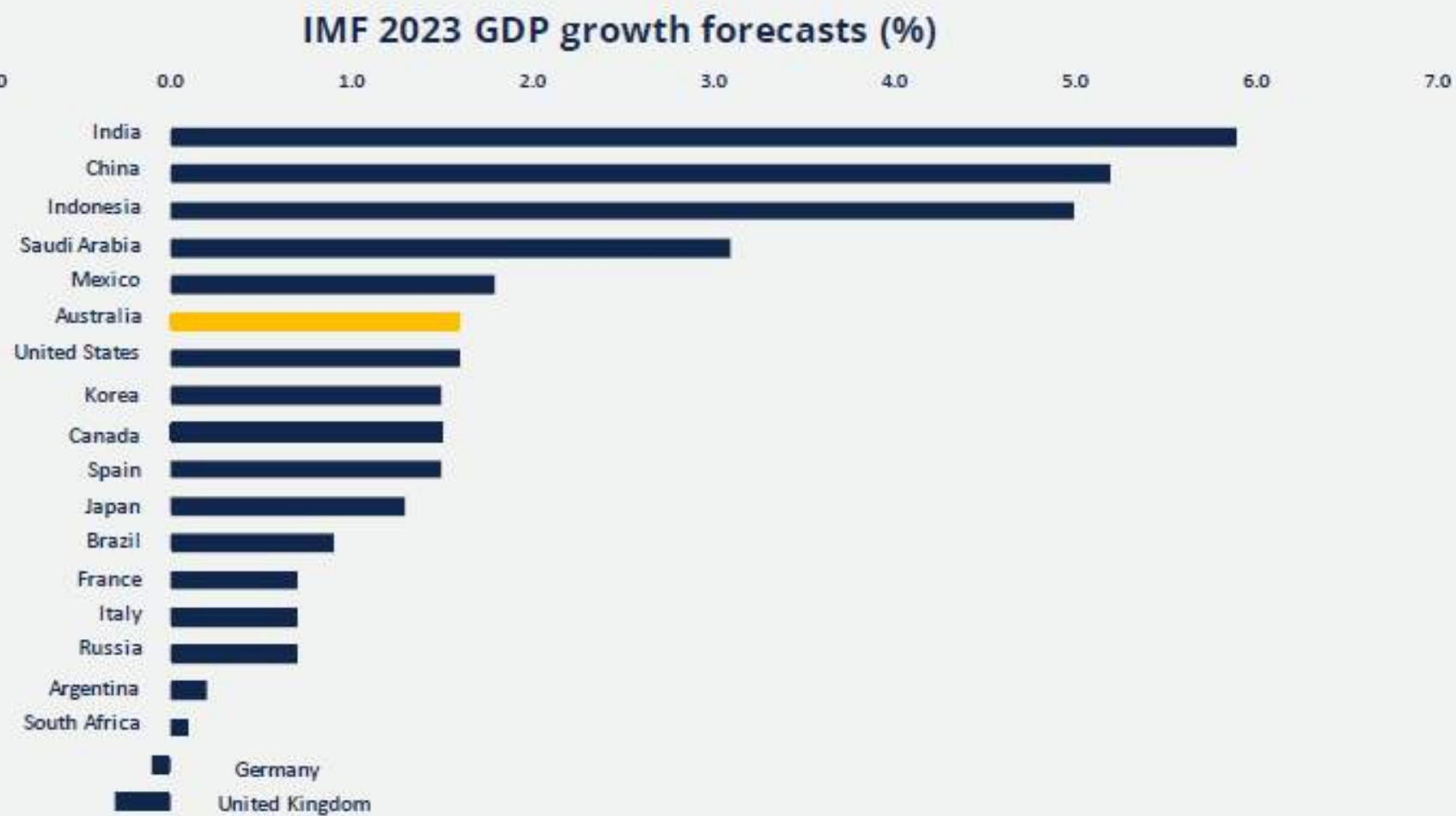
Global Inflation Rates  
Year on Year



Source: CCIWA, Refinitiv



# World growth rates



Source: CCIWA, IMF

# A sharp contraction and strong recovery

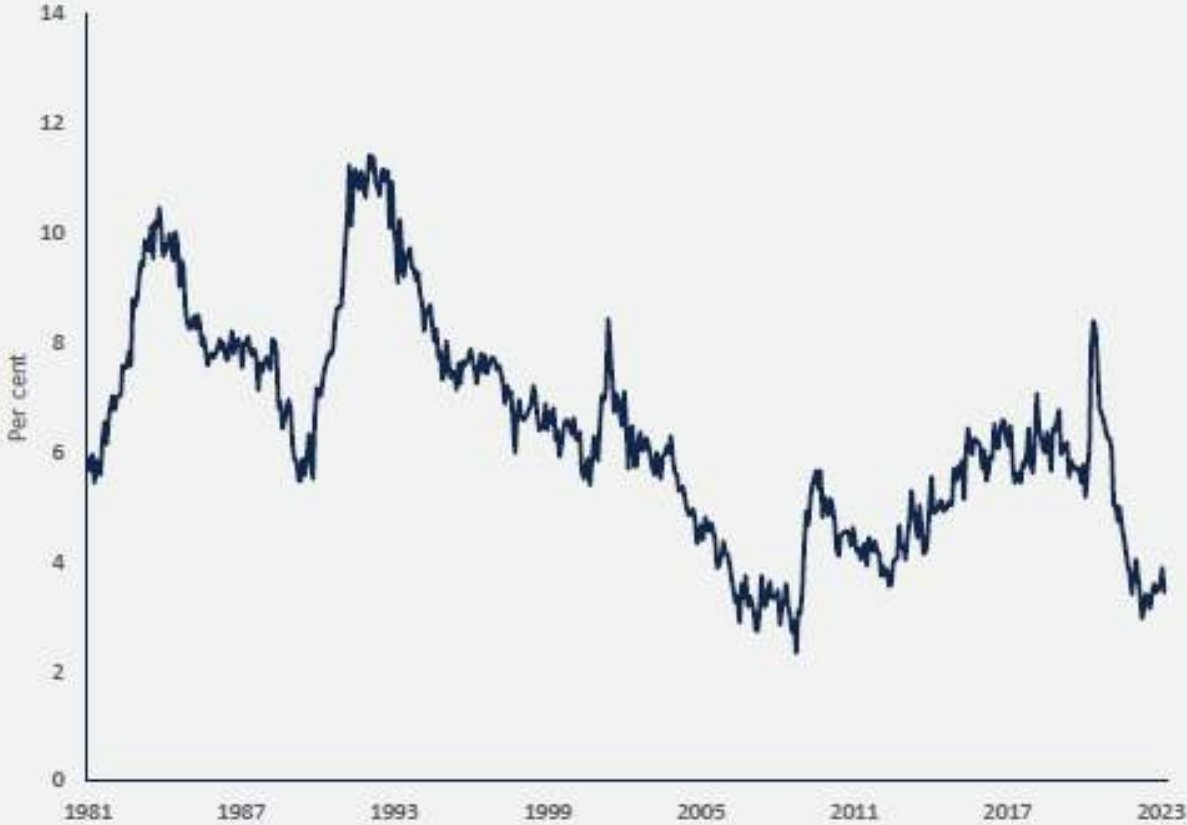
## Size of WA's Domestic Economy



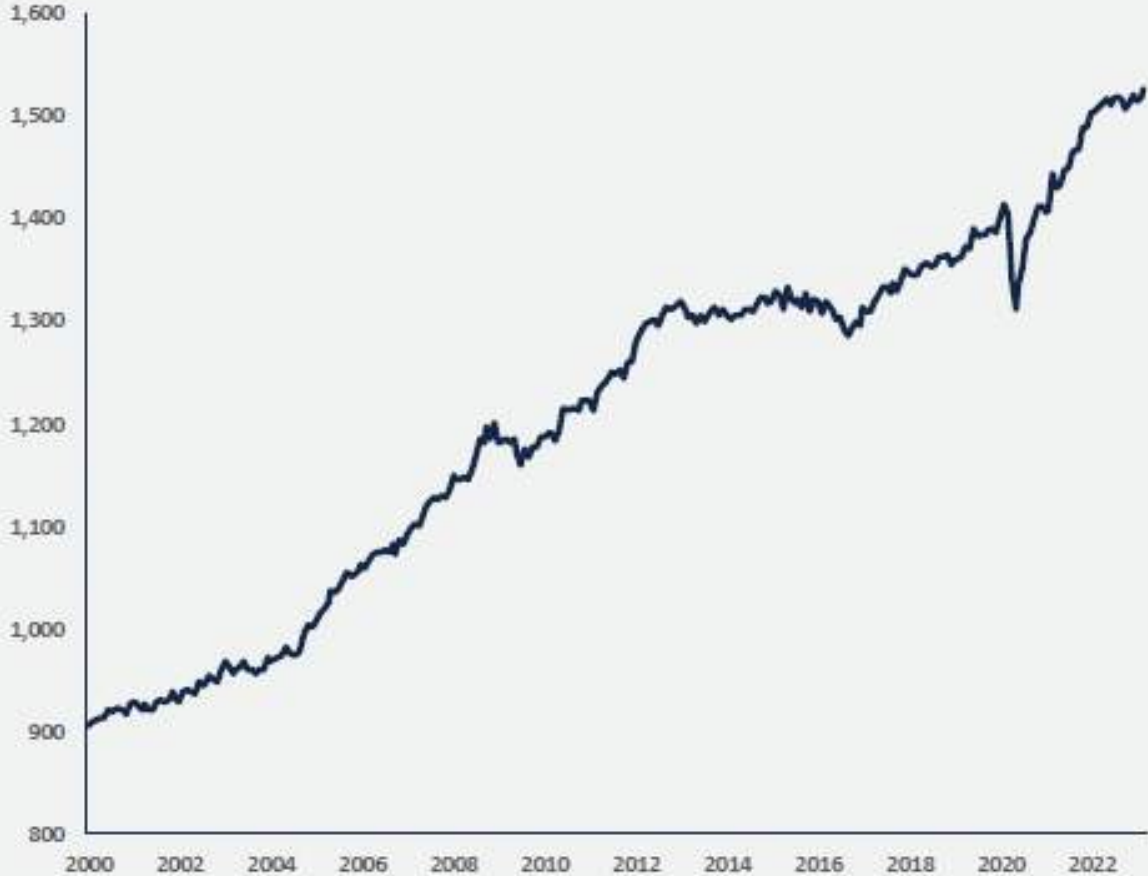
Source: CCIWA, ABS

# Labour market still tight

## WA Unemployment Rate



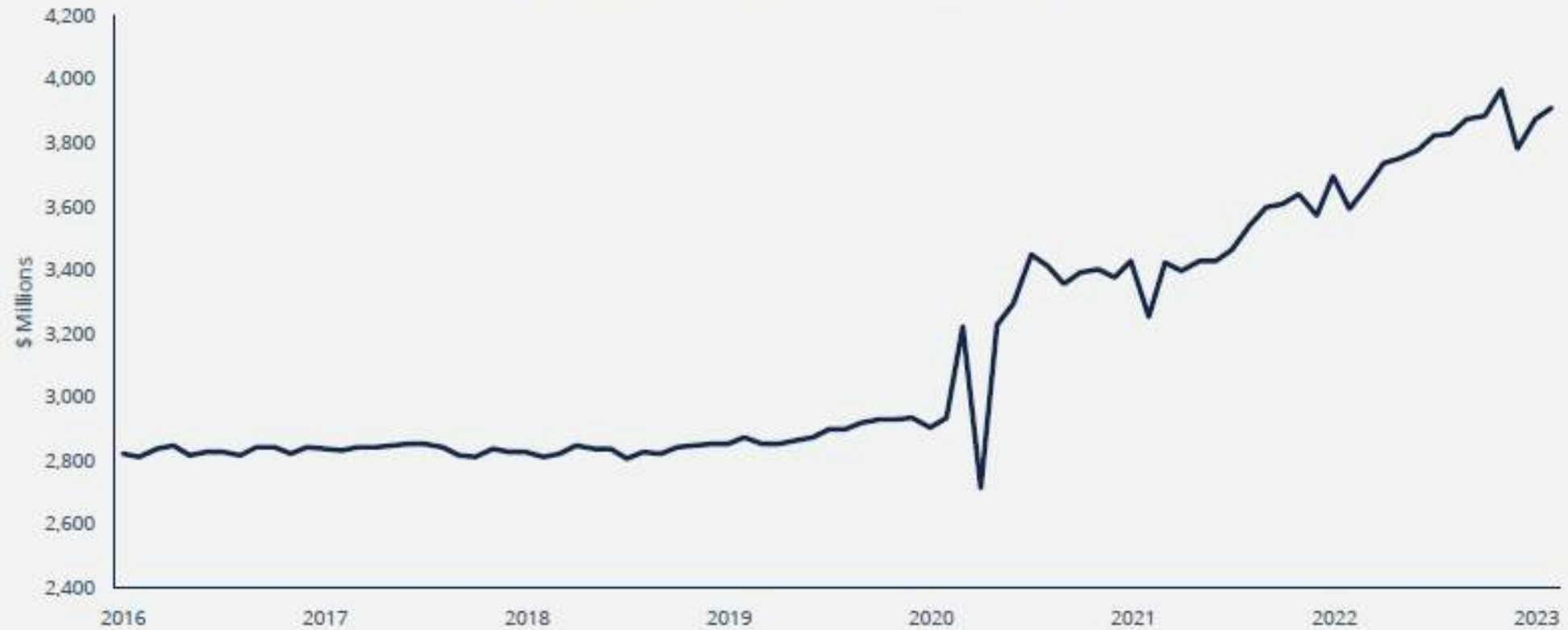
## WA Number Employed



Source: CCIWA, ABS

# Strong consumer spending

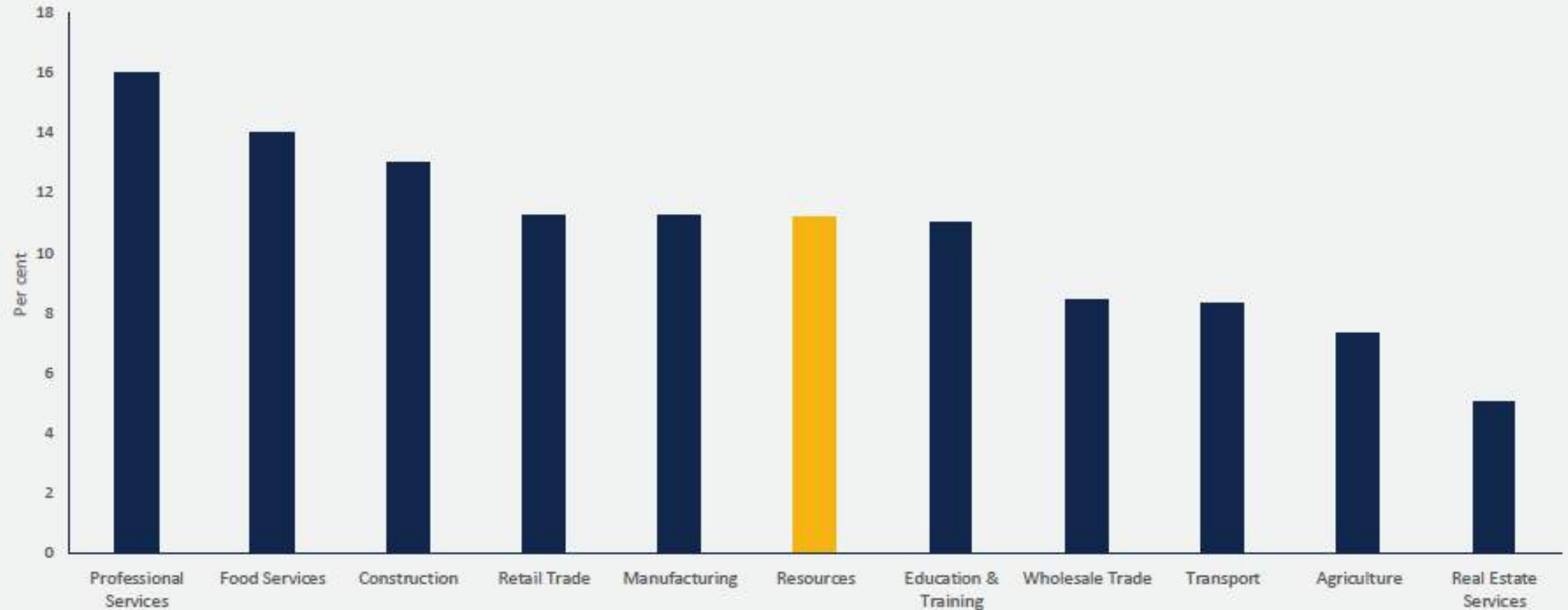
**WA Retail Trade**  
Current Prices, Seasonally Adjusted



Source: CCIWA, ABS

# Average wage increase across sectors

## Increase to base wages



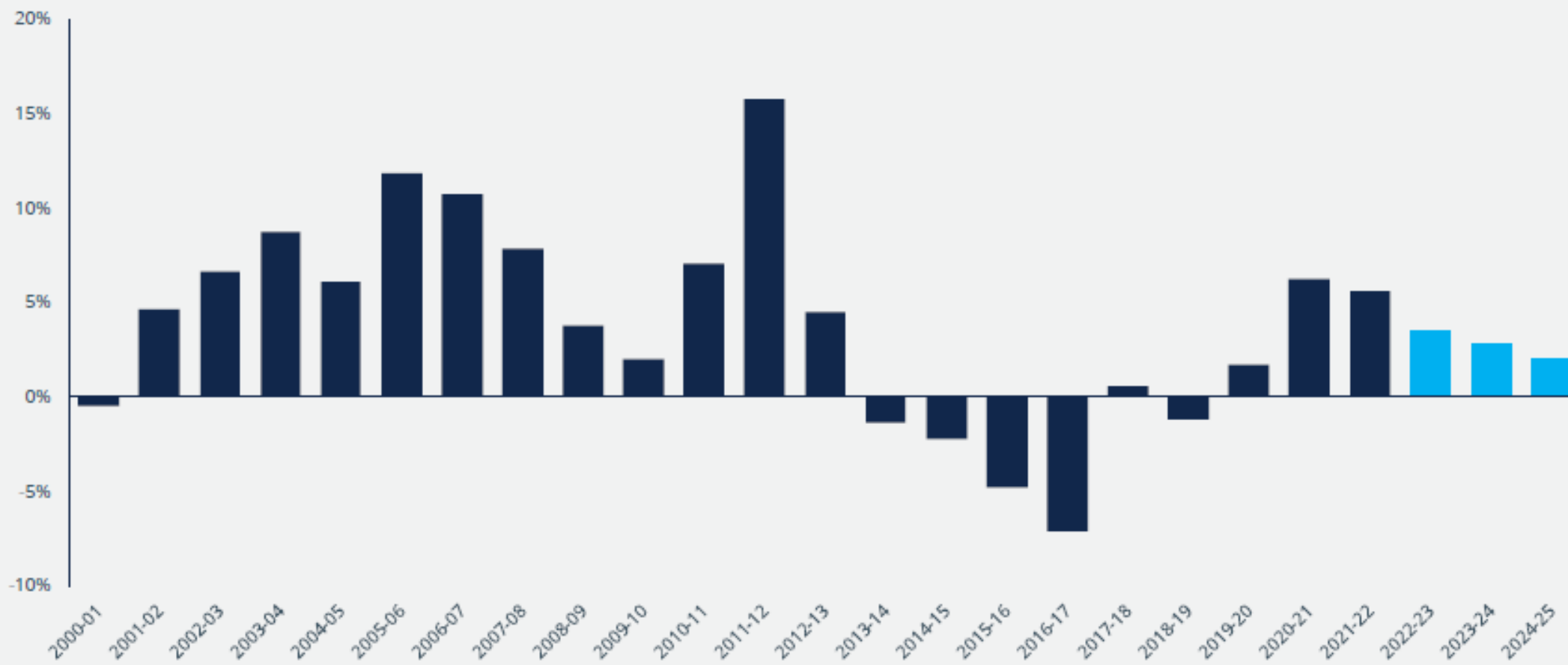
# Profit margins eviscerated

## Business Confidence Sub-Indices



# Outlook for domestic growth

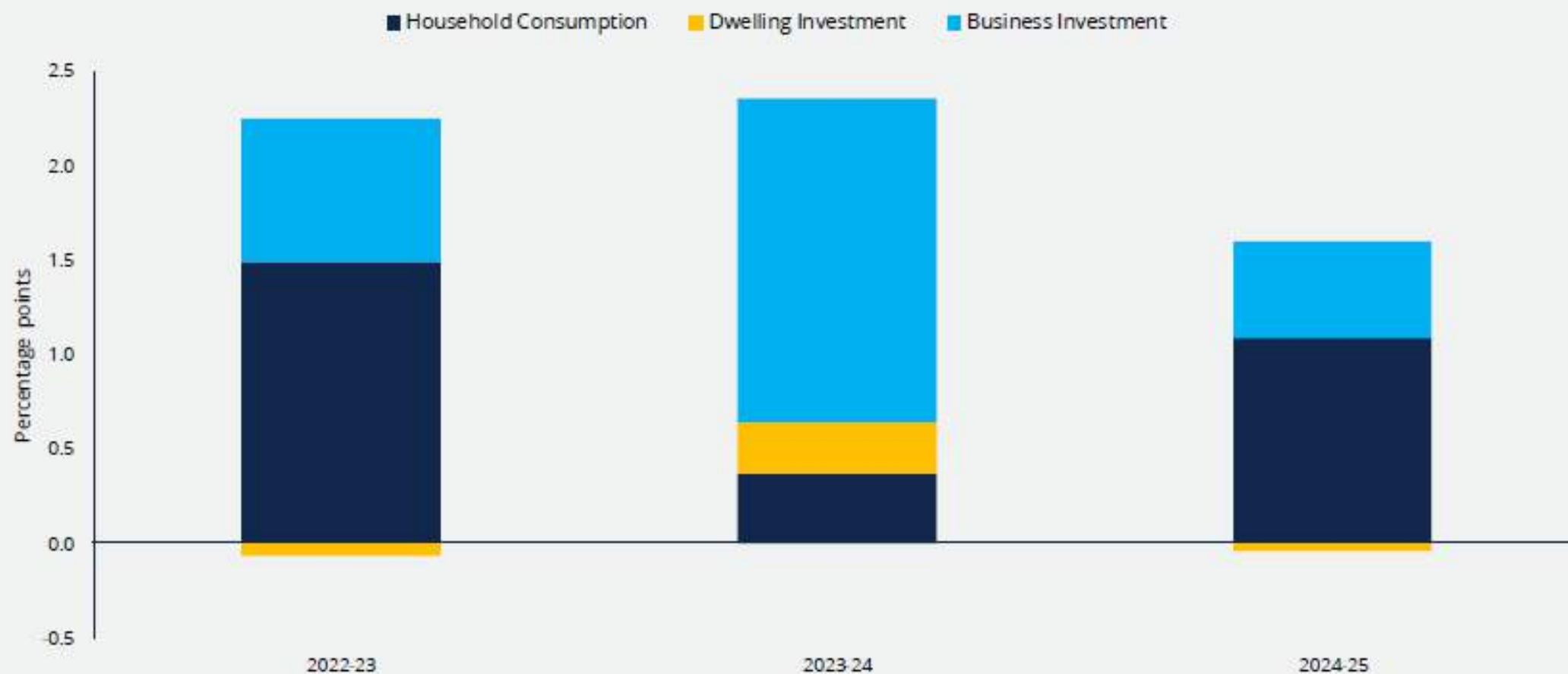
## Annual Growth (%), State Final Demand



Source: CCIWA, ABS

# Breaking growth down

## Contribution to Growth in State Final Demand

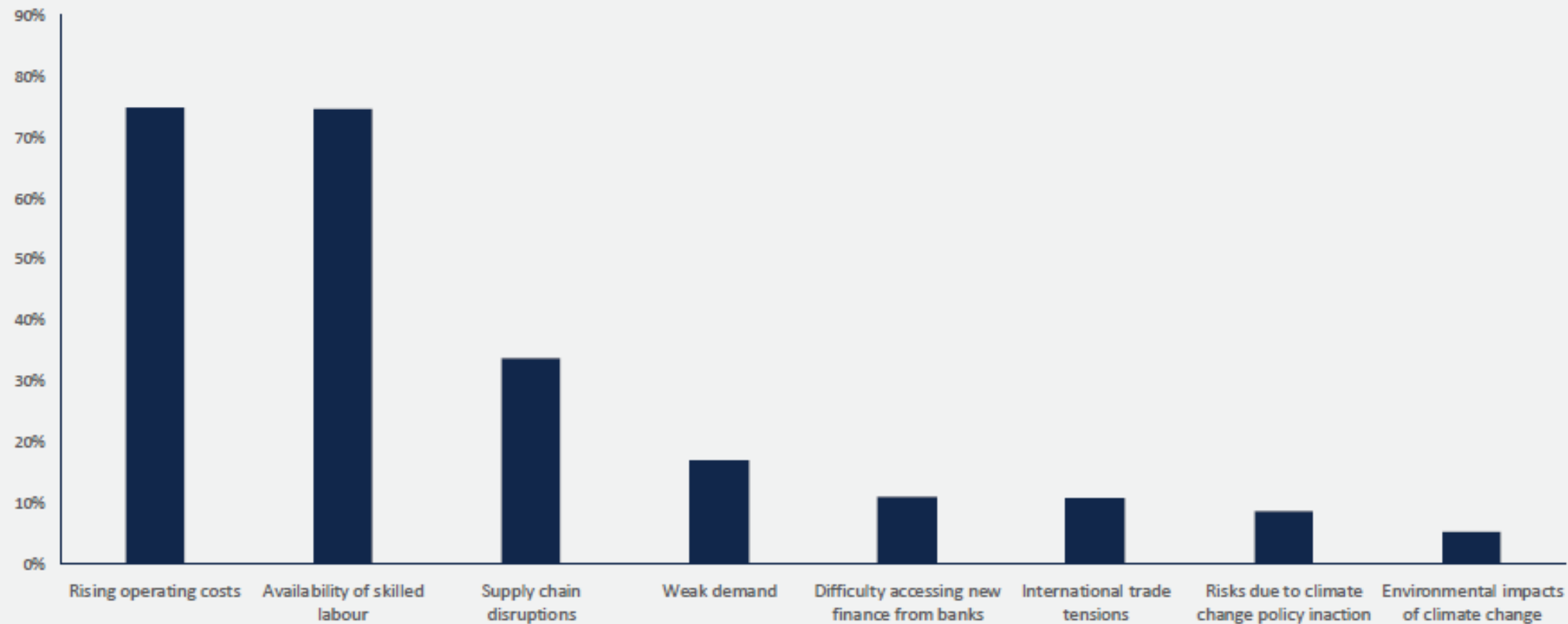




# Labour shortages remain a key challenge along with costs

## Barriers to Growth - Next 12 Months

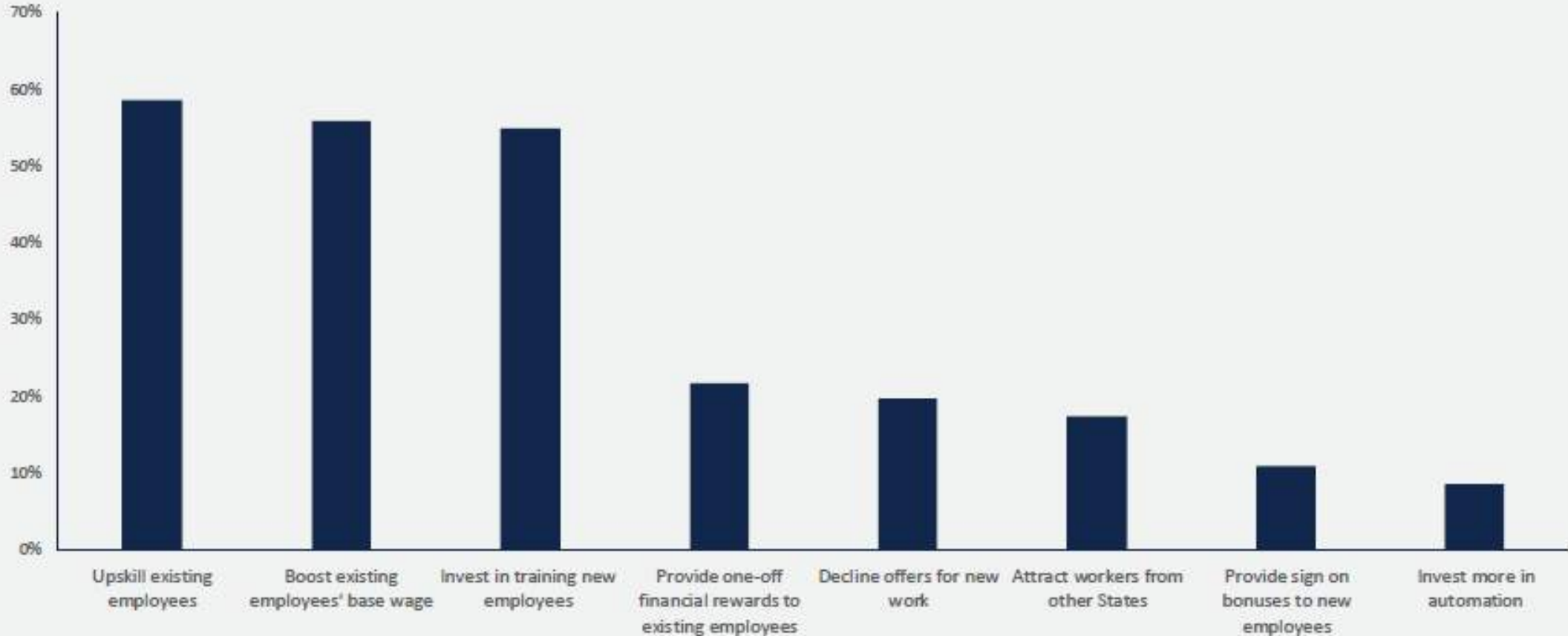
Proportion that responded 'yes'



# How businesses are responding

## How is your business responding to skills shortages?

Proportion that responded 'yes'





# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## PANEL ONE – Q&A SESSION

- Hon Darren West MLC
- Ms Jessica Shaw MLA
- Hon Steve Martin MLC
- David Eaton PSM
- Hon Mia Davies MLA
- Hon Melissa Price MP
- Sam Collins Senior Economist  
CCIWA
- Susan Hall CEO WDC



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

## PANEL TWO – Q&A SESSION

- **Steve Lanyi**  
Assistant Director of Cyber and Infrastructure Security Outreach in WA, Department of Home Affairs
- **Rhian Richards**  
Regional Commissioner for Australian Securities and Investments Commission (ASIC)
- **Daniel Moss**  
Defence Industry Advisor, Office of Defence Industry Support (ODIS)
- **Shaun Burress**  
Business, Industry and Outreach Officer for the Department of Home Affairs
- **Sharni Foulkes (Panel MC)**  
Regional Manager of AusIndustry, the Department of Science Innovation and Resources



# WHEATBELT FUTURES FORUM 3<sup>RD</sup> MAY 2023

Thank you to our sponsors for making this event possible.



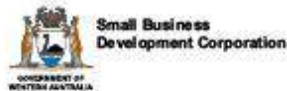
## Platinum



Community Bank  
Mukinbudin · Goomalling  
Toodyay · Gingin · York



## Gold



## Silver





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3<sup>RD</sup> MAY, 2023

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