

Port Kembla Hydrogen Hub

**TRAINING + SAFETY
DAY #1**

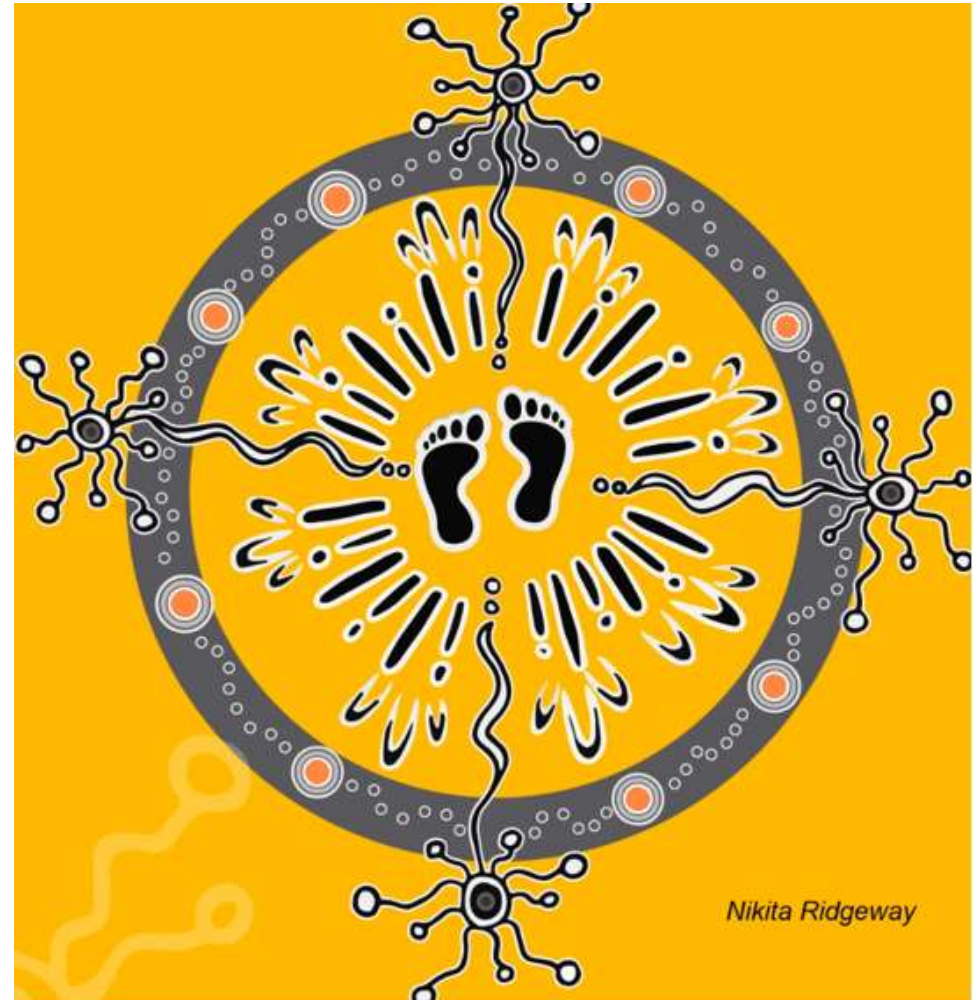
11 November 2021

Acknowledgement of Country

I acknowledge that we meet on Aboriginal lands. I acknowledge the traditional custodians of the many lands that we join this virtual meeting from.

We can use this meeting to show respect to elders, past, present and emerging through our thoughtful and collaborative approaches to our work.

I acknowledge our Aboriginal and Torres Strait Islander colleagues joining the meeting today.



Training + Safety Day #1 Program

- 11 Nov 2021

8.30am

Welcome + Intro

Nigel McKinnon
Dept of Regional NSW

8.35am

Driving for Change

Scott Nargar
Hyundai Australia

9.00am

Hydrogen Training Overview

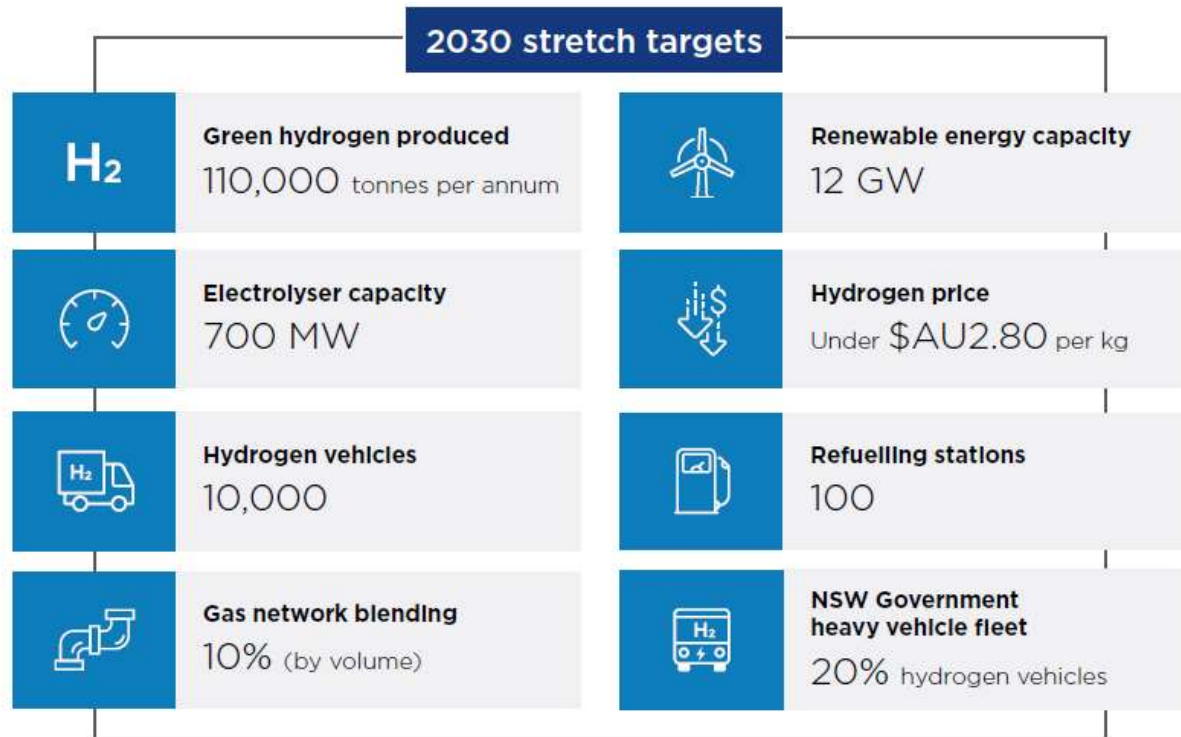
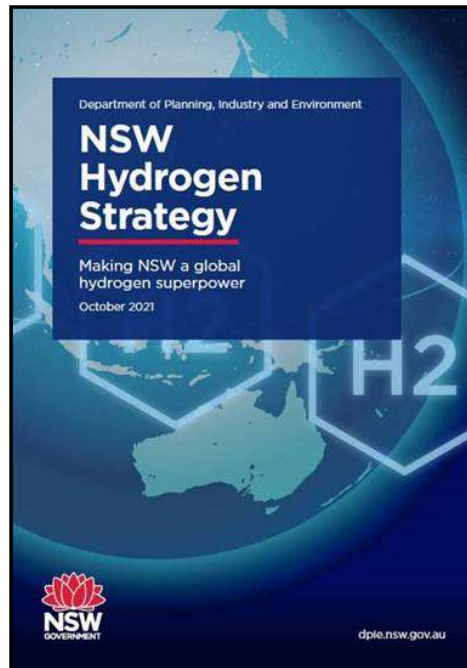
Chris Greentree
TAFE NSW

9.15pm

Q & A

NSW - global hydrogen superpower

The \$3 billion **NSW Hydrogen Strategy** builds on the principles of the **National Hydrogen Strategy** and related **NSW Government** policy initiatives and sets out clear targets for hydrogen powered vehicles including NSW Government Heavy Vehicle Fleet and enabling Hydrogen Refuelling Stations.



Why Focus On Hydrogen Transport Mobility?

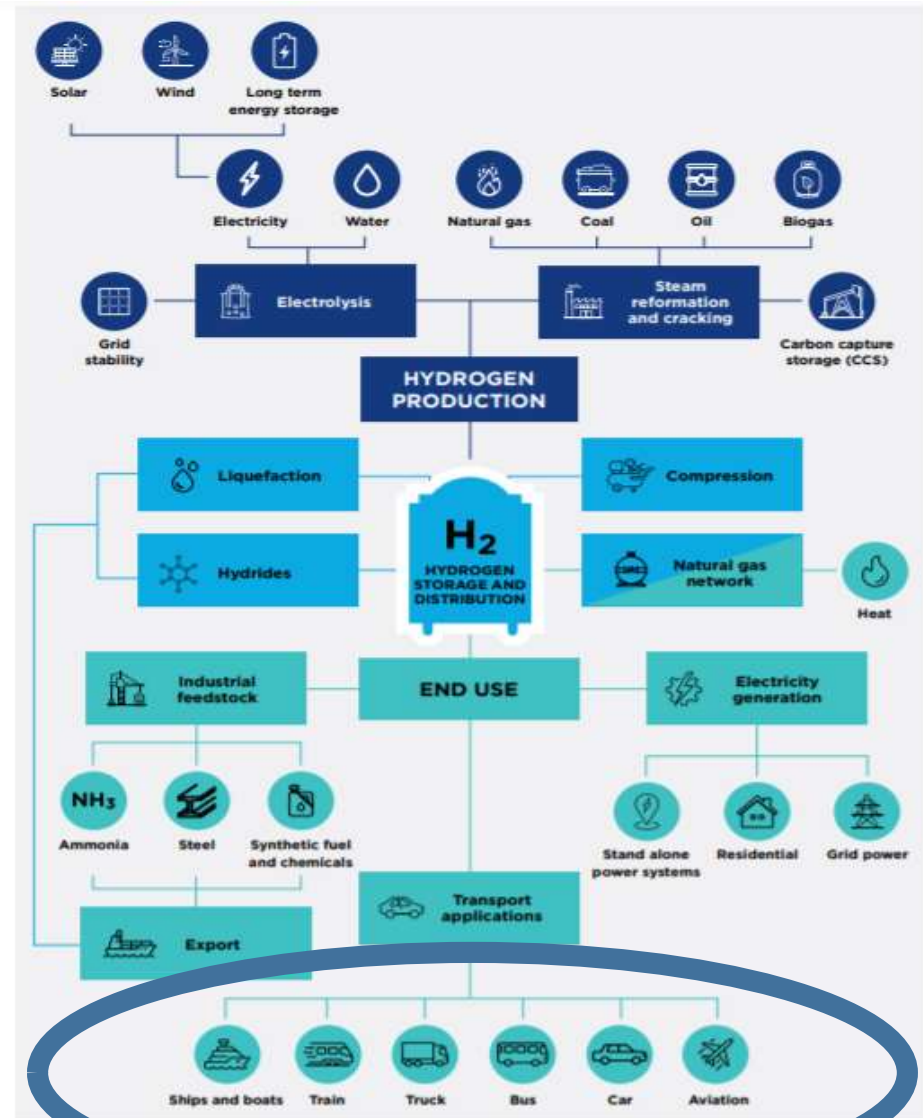
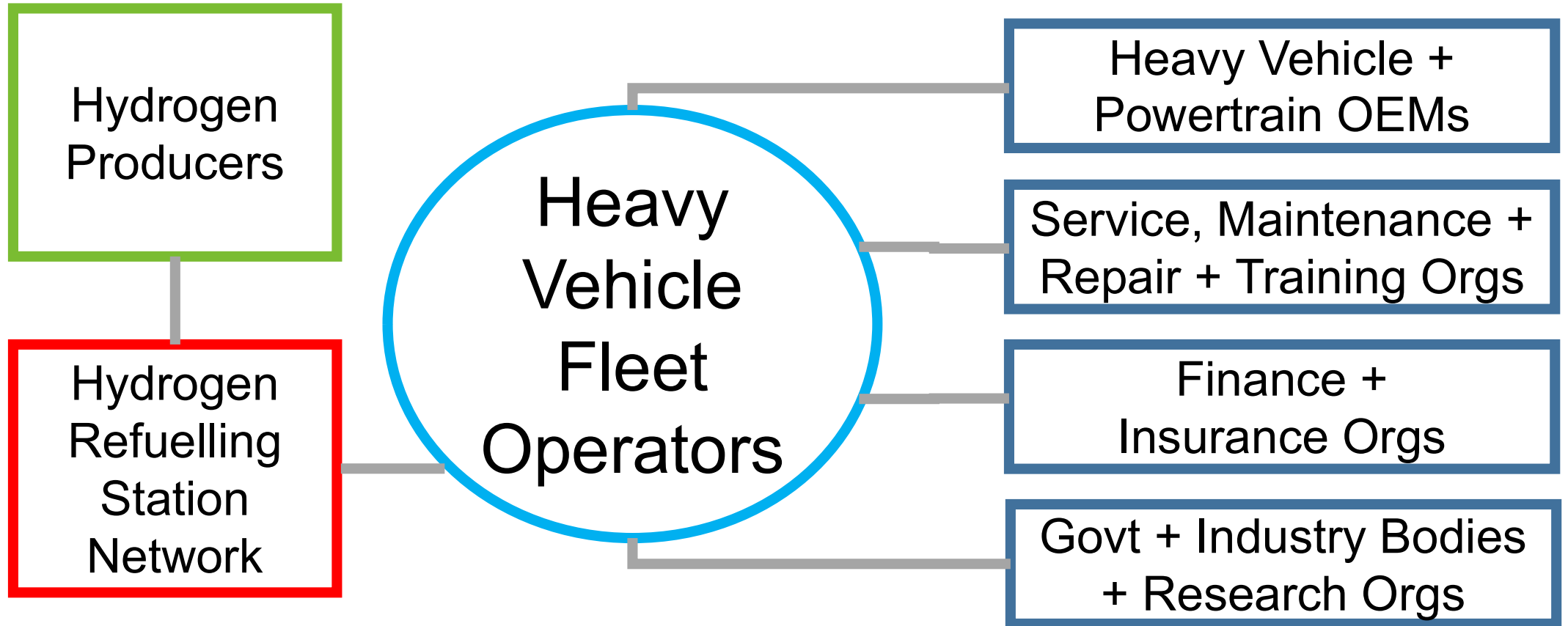


Figure 3
Hydrogen supply

Zero Emissions Heavy Vehicle Cluster





Scott Nargar

Marketing

Senior Manager of Future Mobility & Government Relations

T +61 2 8873 6072 M +61 438 201 532

Scott.Nargar@hyundai.com.au www.hyundai.com.au

Hyundai Motor Company Australia



An aerial photograph of a tropical coastline. A winding asphalt road curves along the edge of a dense, lush green forest. Several cars are visible on the road. To the left of the road, there's a small white building and a covered walkway. The forest is composed of various types of trees, including many palm trees. In the top left corner, a small portion of turquoise water is visible, meeting the shore.

HYUNDAI AUSTRALIA DRIVING FOR CHANGE

Scott Nargar

44 new
eco models

between now
and 2025
23 BEV

Driving change now **with** **innovation**

Continuous investment in
developing eco-friendly vehicles



Hybrid Electric Vehicle (HEV)



Plug-in Electric Vehicle
(PHEV)

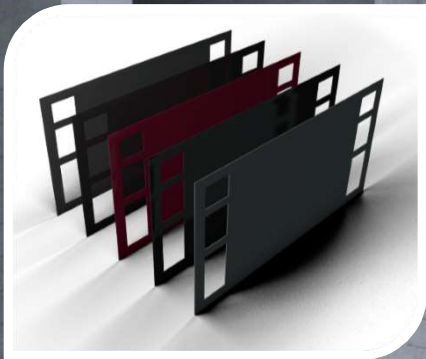


Battery Electric Vehicle (BEV)



Fuel Cell Electric Vehicle (FCEV)

IONIQ

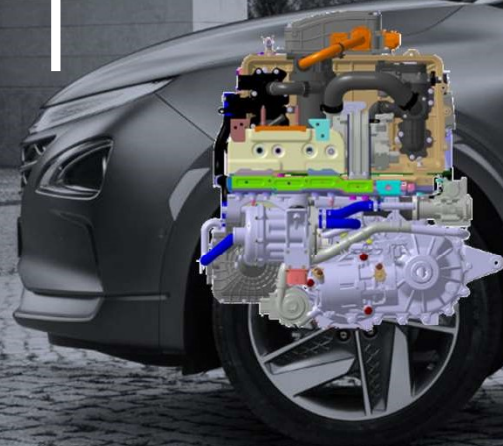


Power
120kW

Torque
395Nm

Range
666km

WLTP



ACT Govt H2 Station Project



H2 Station Learnings



Technician Learnings



Driver Training



Fire & Rescue Training



Emergency Identification



Front Windscreen



Front Door B Pillars



Engine Bay



Number Plate

NSW 1st Sept 2019

HYUNDAI

Net Zero Emission Targets

Net Zero Emission by 2045

Focus on 3 pillars

1. Clean Mobility
2. Next generation platforms
3. Green energy

Stop selling ICE in EU by 2035

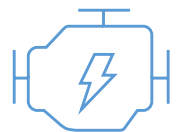


Hydrogen Vision 2040

1. Next Gen fuel cell by 2023
2. 50% lower cost
3. Reduced packaging by 30%
4. Output doubled
5. First truck maker to go 100% FCEV by 2028
6. Fuel cells in light cars, trucks, buses, trams, trailer drones, performance cars, emergency response equipment, building & power plants

Genesis to be 100% Zero Emission

1. Dual electrification program
2. All new models will be purely EV or FCEV by 2025
3. 100% zero emission brand by 2030
4. Carbon neutral by 2035



Christopher Greentree

Industry Lead, TAFE NSW

M 0437 446 923

E christopher.greentree@tafensw.edu.au

ACCELERATE YOUR ELECTRIC VEHICLE KNOW HOW. NOW.

Electric Vehicle Training Solution for the Bus Industry.



tafensw.edu.au/electric-vehicles
131 601



TAFE NSW



HYDROGEN TRAINING OVERVIEW

ZERO EMISSIONS VEHICLES -
WORKFORCE DEVELOPMENT

Chris Greentree
11th November 2021



TAFE^{NSW}

Disclaimer. Version 1.0

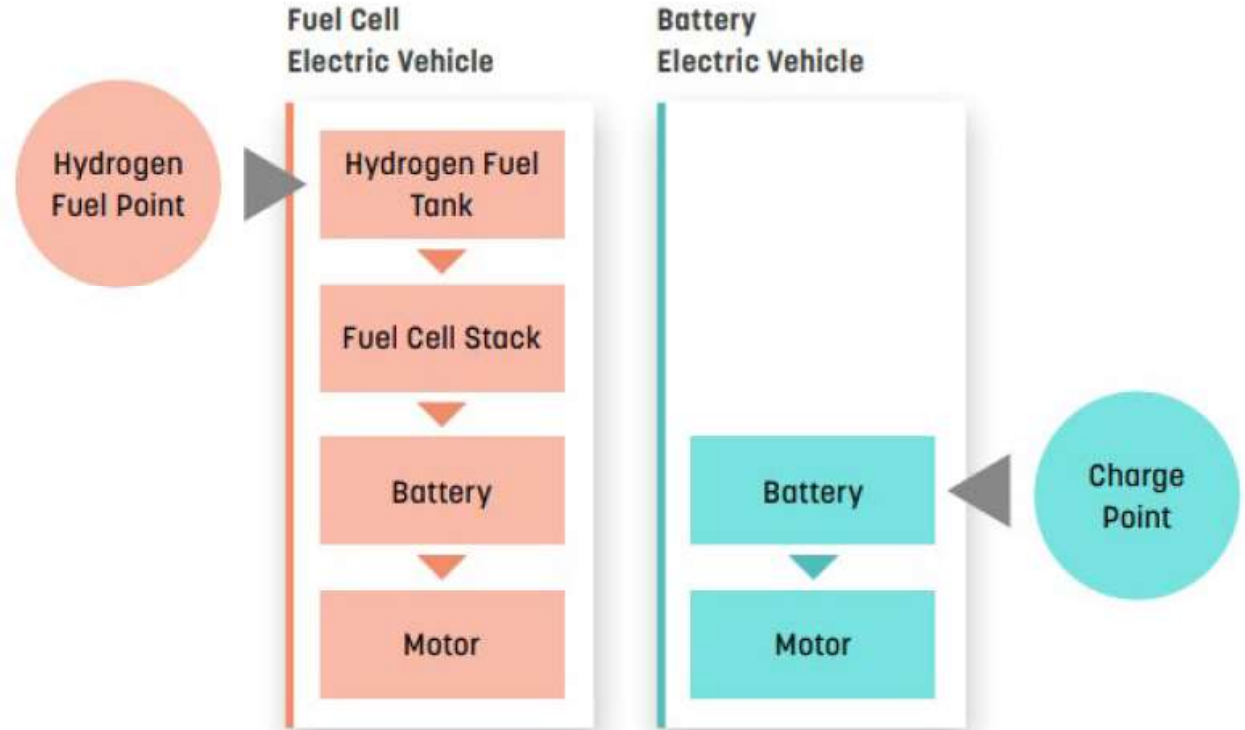
TAFE NSW ELECTRIC VEHICLE TRAINING SOLUTION

Released in October 2021, the TAFE NSW Electric Vehicle Solution will ensure that our future workforce will be ready for the transition of Electric Vehicles.

Our training products are stackable and ready for zero emission developments in light and heavy vehicles, mobile plant and equipment, and hydrogen fuel cell technology.

For more information, go to:

tafensw.edu.au/electricvehicles



TRAINING OVERVIEW

TAFE NSW will propose Nationally Recognised Training and Micro Skills Courses

Level 1

Baseline training requirement for all persons working around HFEVs

- Introduction to Fuel Cell Vehicles, Systems and Components
- **Refuelling**, transport and distribution of hydrogen
- Emergency Response & Salvage
- Opportunity for manufacturer & model familiarisation

Level 2

Nationally Recognised Skill Sets and TAFE Micro Skills for existing workers who service and HFEVs

- **Depower and Reinitialise EV**
- **Service and Maintain EV**
- **Automotive H2, Service and Repair Micro Skill**

Level 3

Master Service Technician Diagnose and Repair Level Training

- Relating to repairs to high voltage systems and components, and H2 fuel cell and supply systems
- Guided by the manufacturers

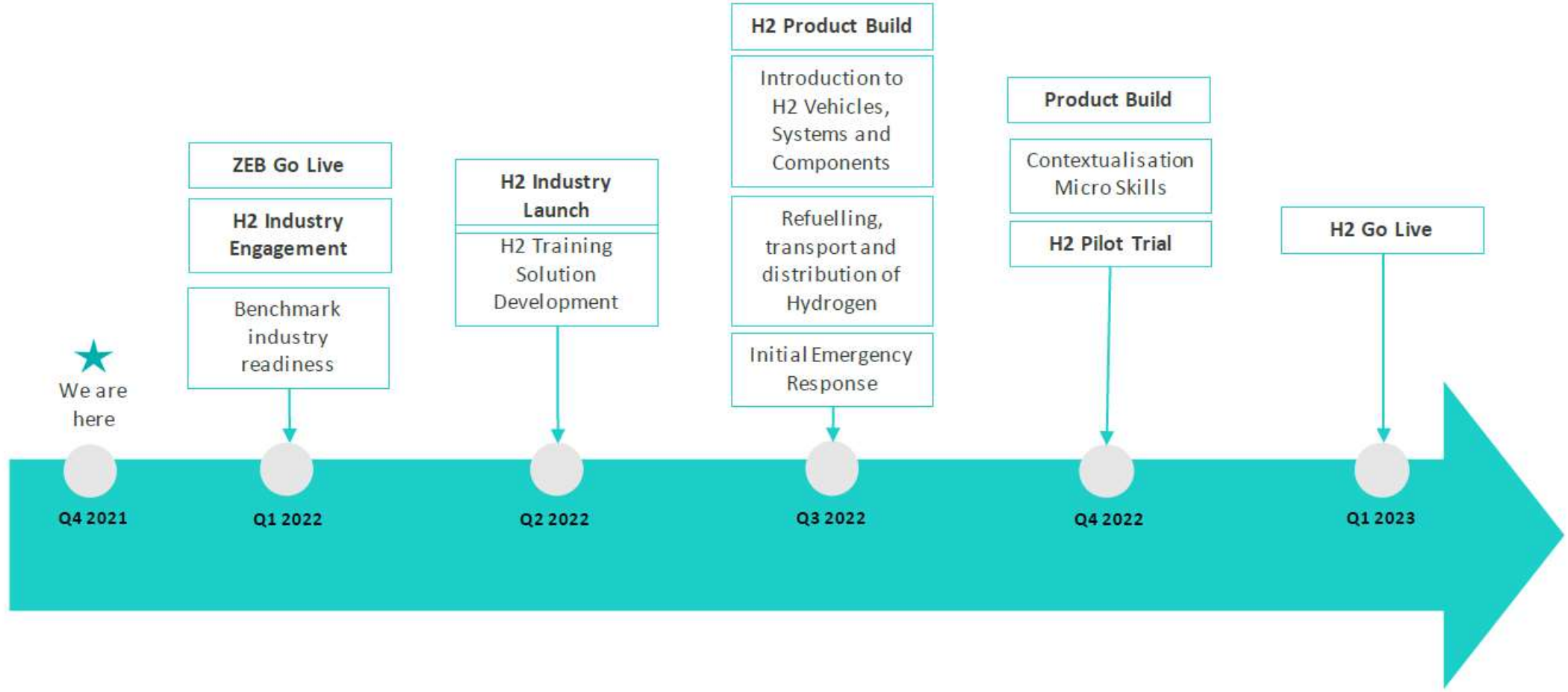
Training will be a combination of online delivery and facilitated face to face training

TAFE NSW MICRO SKILLS

TAFE NSW MICRO SKILLS WILL BLEND WITH TRADITIONAL ACCREDITED TRAINING



PROJECT TIMELINES



THANK YOU

TO FIND OUT MORE

Visit our landing page:

tafensw.edu.au/electric-vehicles

Chris Greentree

christopher.greentree1@tafensw.edu.au
0437 446 923



TAFENSW