

# BLAST FURNACE INNOVATIONS: INTEGRATING NEW INJECTIONS AND BURDENS FOR SUSTAINABLE, LOW-CARBON IRONMAKING TRANSITION

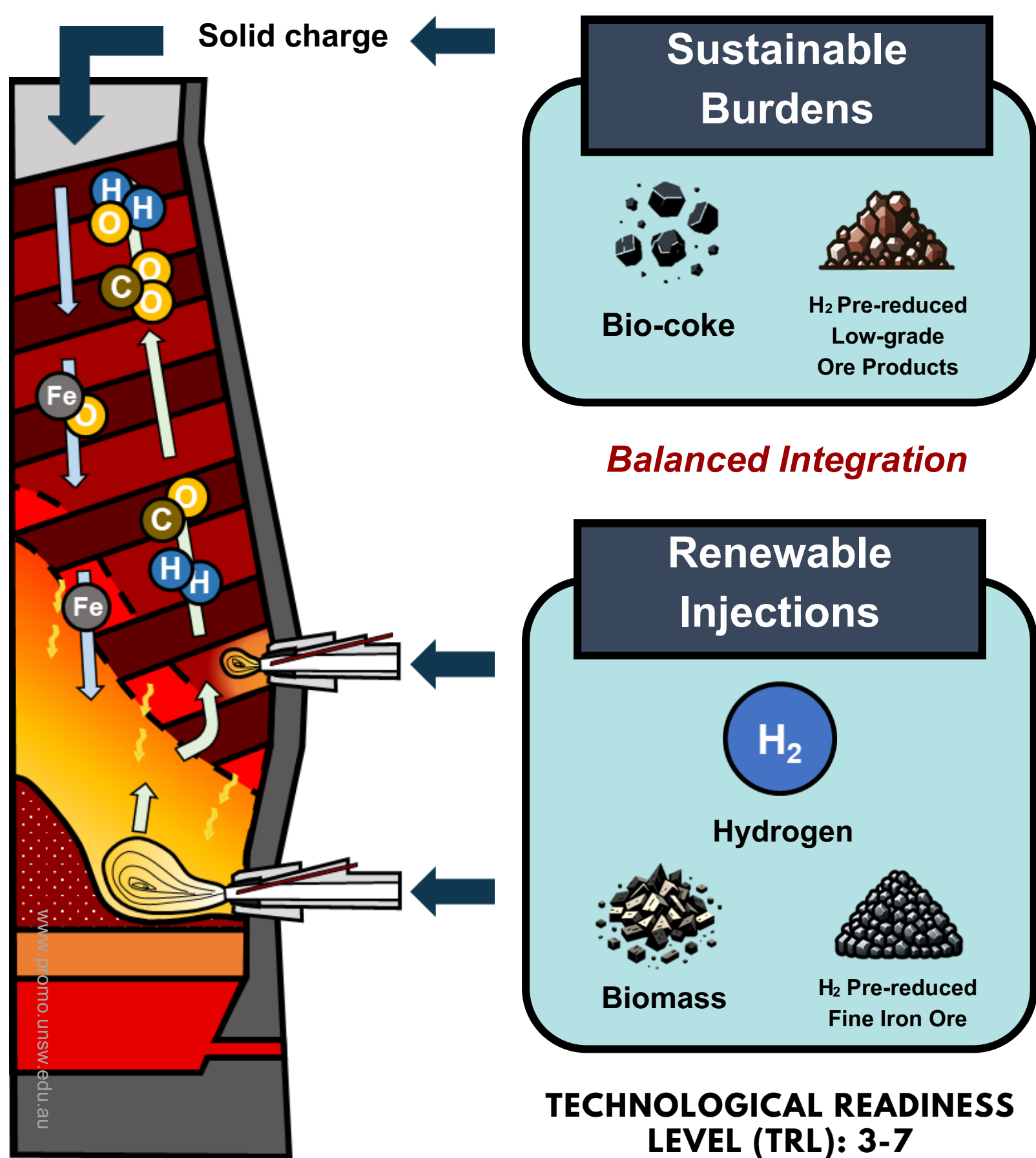
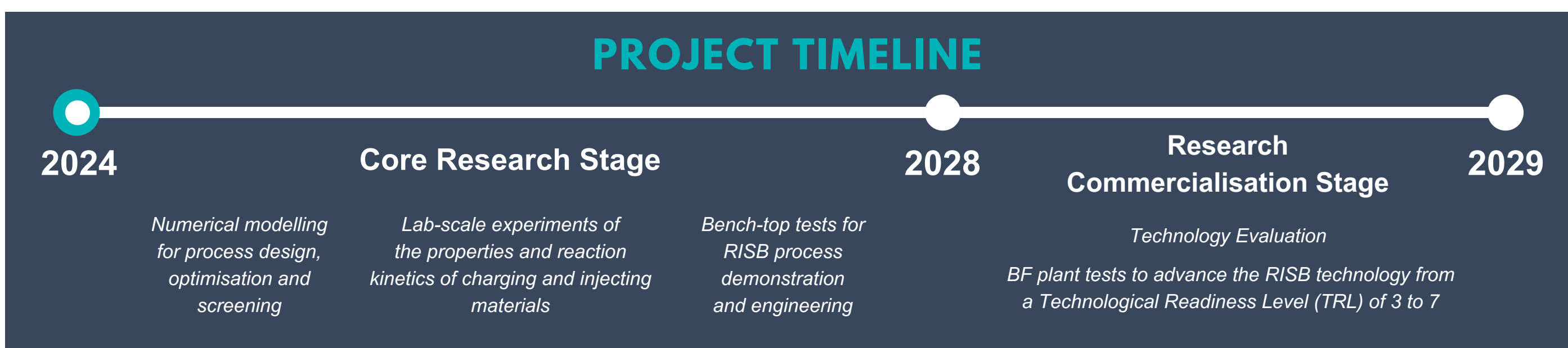
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## RENEWABLE INJECTIONS-SUSTAINABLE BURDENS (RISB) PROCESS

The majority (~70%) of global steel production is via the blast furnace – basic oxygen furnace (BF-BOF) route in the near future. In a carbon-constrained global steel market environment, low-emissions iron and steel making technologies are crucial. The Australian iron ore and steel industry faces significant challenges to decarbonise due to the fossil-derived carbon materials used for transforming iron ores to steel and the abundance of low-medium grade iron ores which are generally not suitable for processing through the conventional direct reduced iron (DRI) based electric arc furnace (EAF) route. Thus, BF operations should be invented for sustainable and low-carbon ironmaking transition.

The Shen Lab of the University of New South Wales will lead the project and develop an innovative and highly viable Renewable Injections-Sustainable Burdens (RISB) process for near-term achievable blast furnace ironmaking decarbonisation. This process has the potential to transform the processing of lower-grade iron ores through the existing BF-BOF steelmaking route into lower emissions operations in the short to medium term.

### PROJECT TIMELINE



### PROJECT OBJECTIVES

- Remove barriers with using lower-grade Australian iron ores in low emissions iron and steel production
- Understanding and optimising the integration of sustainable burden and renewable injections
- Increased research capacity in the Australian iron and steel sector and facilitating collaboration
- Improvement in technology and commercial readiness

### PROJECT COST

A\$18 million

### PROJECT PARTNERS



### CONTACT

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