

From Reporting to Real World Decarbonisation

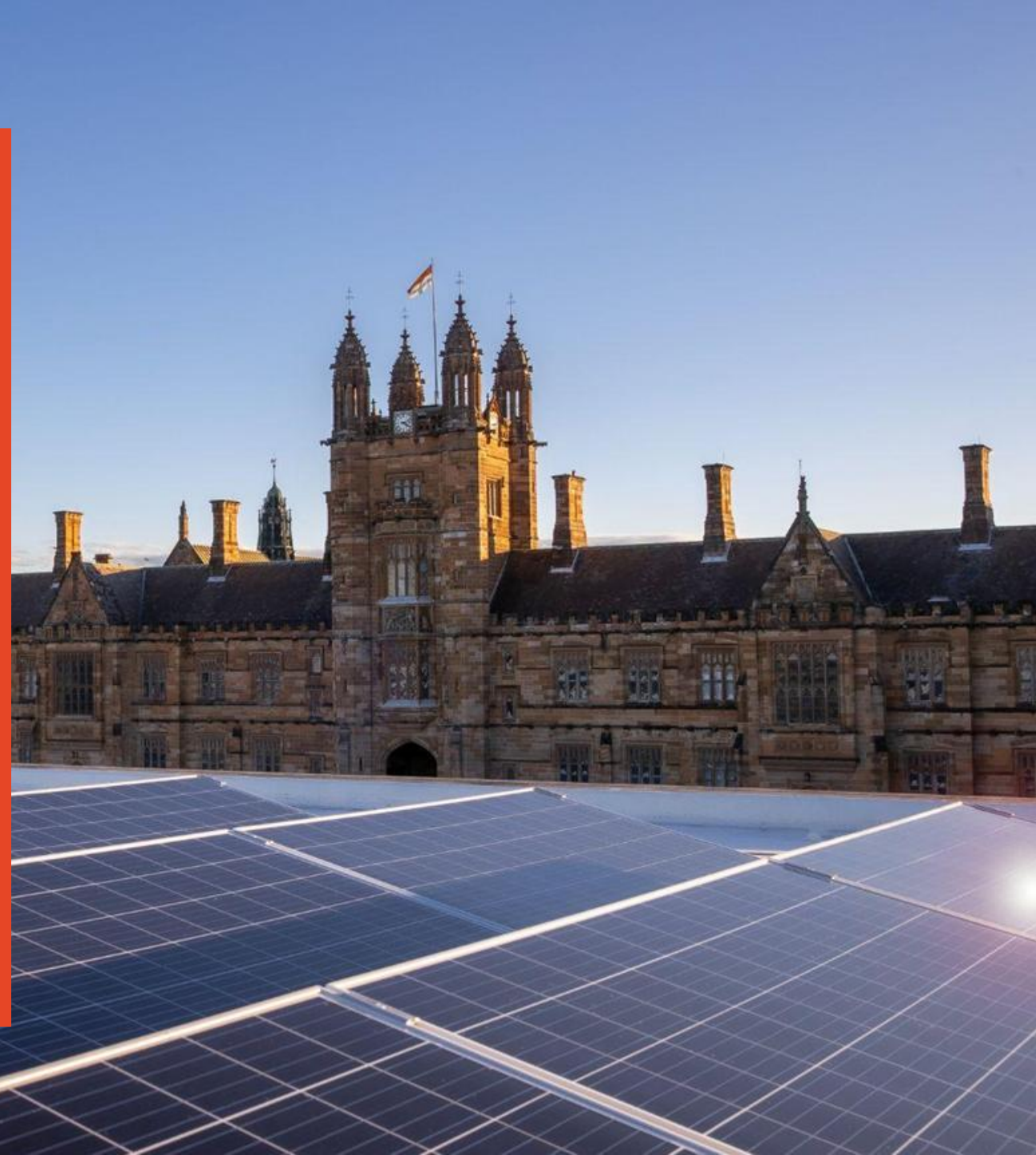
*How Research Partnerships Strengthen
Credible Net Zero Pathways*

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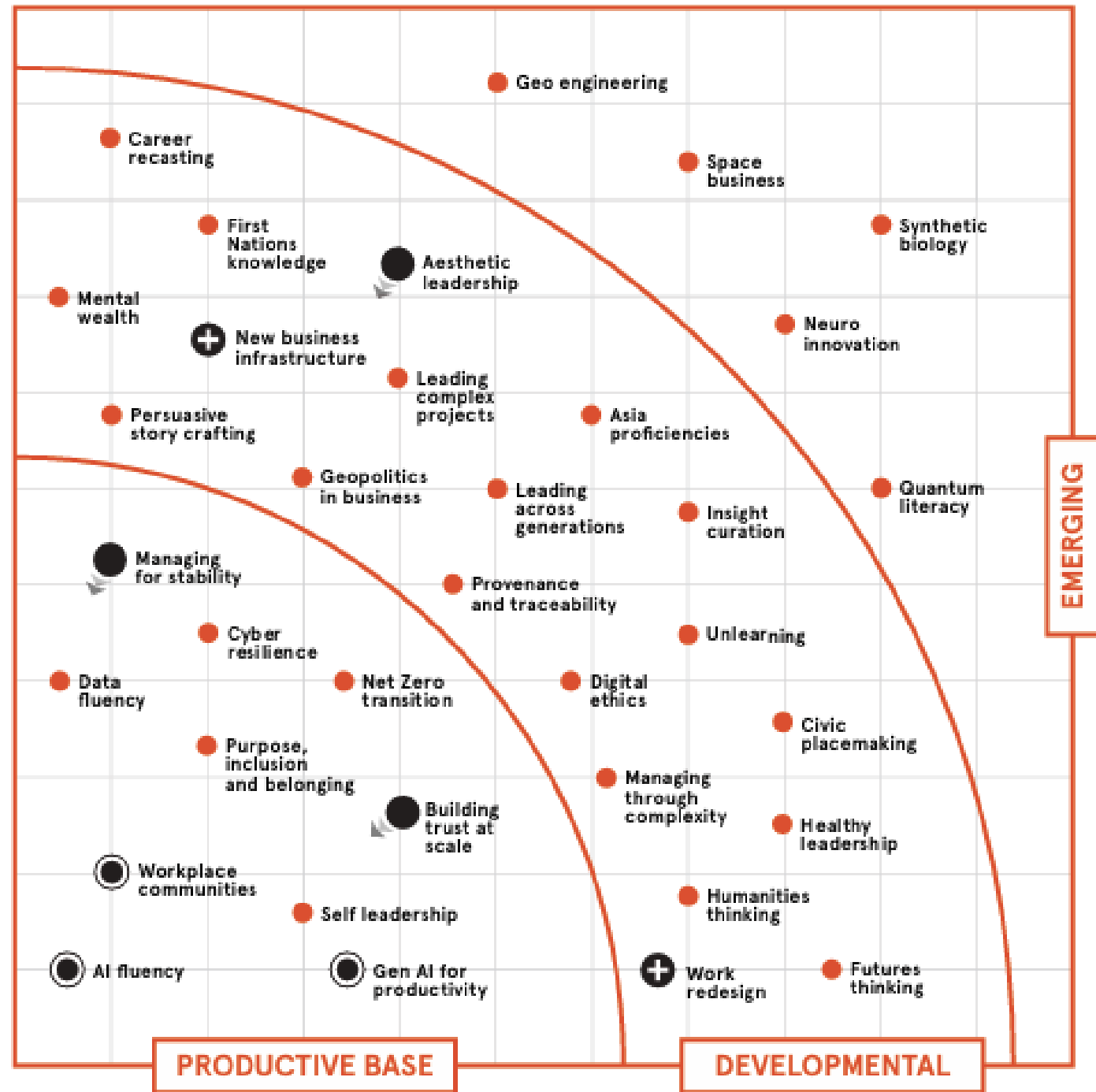


THE UNIVERSITY OF
SYDNEY



The 2026 Skills Horizon

What skills do leaders need in a decade of disorientation?



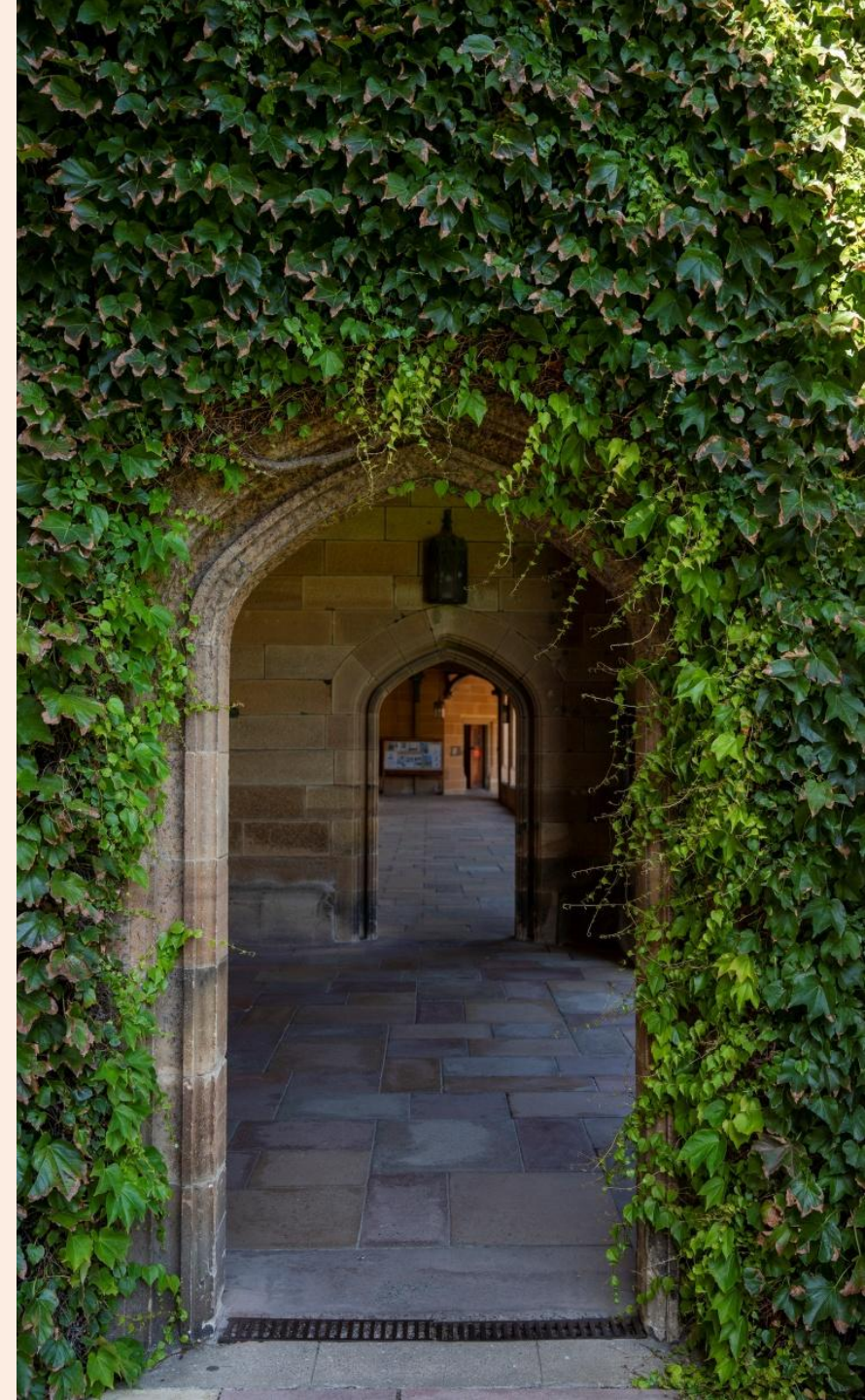
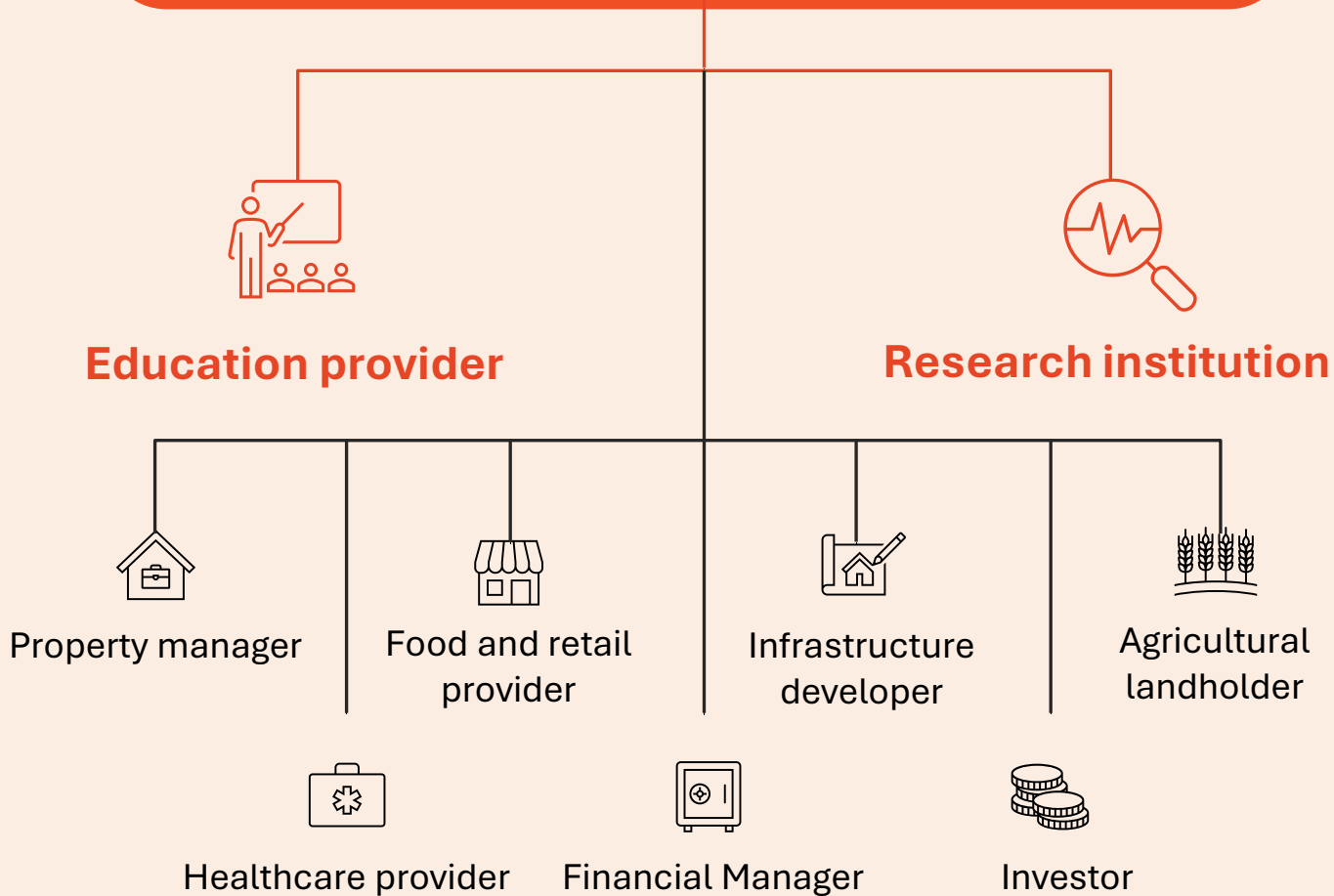


Today

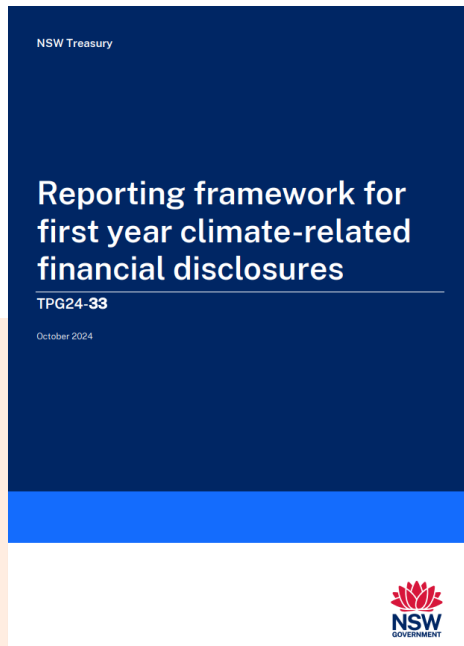
- + The University of Sydney's reporting**
- + Case studies**
- + Net Zero Institute**

The University of Sydney

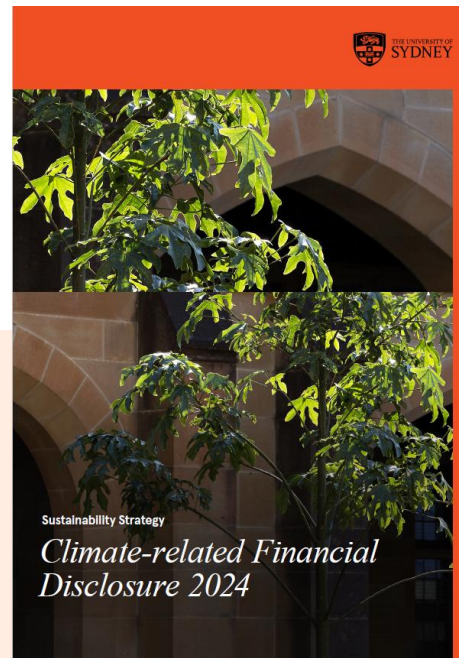
Australia's first university plays many roles



First year of mandatory compliance



Climate disclosures are mandatory for all NSW entities under TPG24-33, marking a system-wide shift toward transparent climate risk reporting.



The University released a standalone voluntary disclosure in 2024, showing leadership and building readiness.



The University subsequently reported under TPG24-33 in its 2025 Annual Report.

A photograph of a person in a field with red flowers in the foreground. The person is blurred in the background, and the foreground features a close-up of a plant with several bright red, spherical flower heads. The scene is lit with warm, golden light, suggesting late afternoon or early morning.

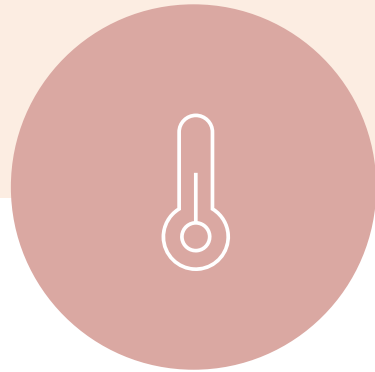
2025 Climate-related
Financial Disclosure

The University of Sydney's *physical risks*



Droughts and dry periods

Climate extremes and dry areas will worsen, increasing dust, respiratory issues, blocked air conditioners, crop failures, and agricultural costs.



Extreme heat

Rising temperatures cause more heatwaves, impacting health, productivity, energy costs, and agricultural crop quality.



Extreme rain/flooding

Extreme rain and floods increase asset damage, insurance premiums, site closures, and crop yield loss.



Bushfires

Bushfires damage assets, increase insurance premiums, reduce biodiversity, and threaten human safety and air quality.



Severe weather

Extreme winds cause asset damage, health risks, agricultural yield reduction, and operational disruptions. Storms will intensify.

Insights from disclosure – *Risks and Opportunities*



University campuses will be increasingly exposed to climate-related hazards



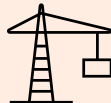
Shift in demand for climate-related research and education



Opportunities in development of technology to support climate transition



Rising expectations and reputational risk if climate commitments are weak or unmet



Policy shifts driving capital upgrades and decarbonisation of infrastructure

Climate-related Physical Risks 2024

RISK	THEME	POTENTIAL IMPACT	TIME HORIZON
Extreme rain/flooding	Acute Risks	Significant asset damage, disruption to teaching and research, increased repair costs, higher insurance premiums, reputational risk from unpreparedness.	Short to Long
Severe weather (extreme wind, cyclones)	Acute Risks	Structural damage to facilities, power outages impacting critical research, operational shutdowns, staff and student safety hazards.	Short to Long
Bushfires	Acute Risks	Threat to campus infrastructure, air quality deterioration impacting health, biodiversity loss, campus closures, increased recovery costs.	Short to Long
Rising temperatures/extreme heat	Chronic Risks	Increased cooling costs, infrastructure strain, reduced outdoor learning capability, higher risk of heat-related illnesses among staff and students.	Medium to Long
Droughts and dry periods	Chronic Risks	Rising operational expenses due to increased water demand, compromised agricultural research, landscape degradation, higher insurance costs.	Short to Long

Legend: Acute Weather Events, Chronic Weather Events, Policy & Legal, Market, Technology, Reputation

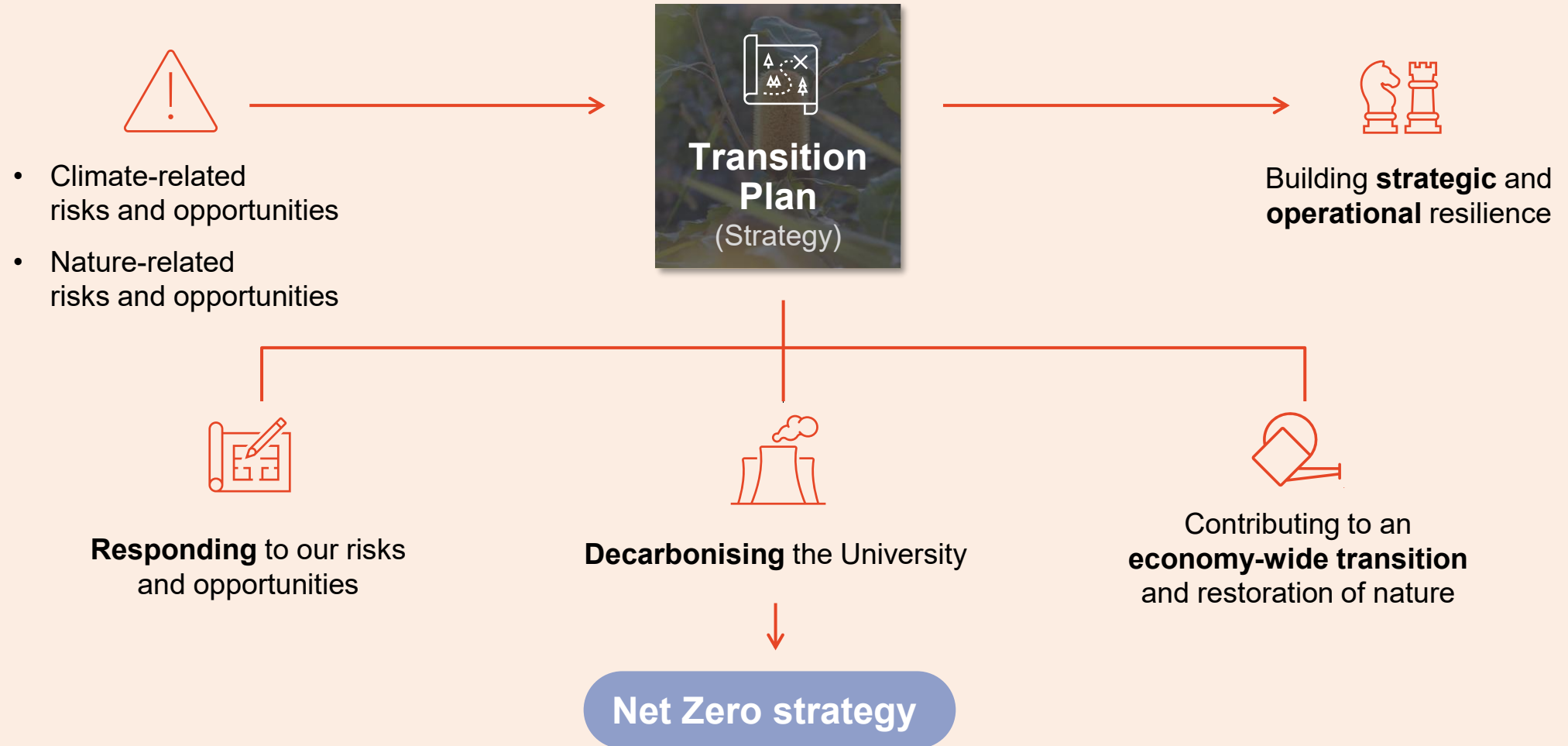
Climate-related Transition Risks 2024

RISK / OPPORTUNITY	THEME	POTENTIAL IMPACT	TIME HORIZON
Market demand for sustainable education & research (opportunity)	Market	Growing student demand for sustainability-focused programs, increased competition for research funding, reputational gains as a leader in climate-aligned education and innovation.	Medium to Long
Regulatory & compliance costs (risk)	Policy & Legal	Rising compliance costs due to evolving carbon pricing, mandatory renewable energy adoption, and stricter reporting standards, increased administrative burden requiring additional workforce and resources.	Short to Medium
Decarbonisation & emissions reduction requirements (risk)	Policy & Legal	Evolving policy and legal requirements may require significant capital investment, including potential electrification of assets. This may increase procurement costs, complicate supplier engagement, and create reputational risk if emissions reduction targets are not met.	Medium to Long
Climate resilience regulations (risk)	Policy & Legal	Rising costs for retrofitting existing buildings, increased insurance premiums, mandatory resilience planning for high-risk areas, potential devaluation of assets due to climate vulnerability.	Medium to Long
Litigation & legal liabilities (risk)	Policy & Legal	Increased risk of lawsuits due to inadequate climate action, potential financial penalties, regulatory disruptions, and reputational harm from inaction or greenwashing claims.	Short to Medium
Financial exposure from carbon-intensive investments (risk)	Market	Capital risk due to stranded assets, reputational scrutiny from donors and investors, funding restrictions from financial institutions prioritising ESG compliance.	Medium to Long
Circular economy & supply chain transformation (opportunity)	Market	Cost-saving potential through resource efficiency, reduction in operational waste, enhanced supply chain resilience, reputational benefits for sustainability leadership.	Short to Medium
Advancements in low-carbon & climate technologies (opportunity)	Technology	Increased R&D and operational efficiency gains through automation, AI-driven sustainability solutions, emissions and water consumption reductions leading to cost savings.	Medium
Stakeholder expectations & institutional reputation (risk and opportunity)	Reputation	Increased scrutiny from students, staff, investors, and funding bodies; reputational damage if commitments are weak or unfulfilled; talent attraction and retention dependent on strong climate credentials.	Medium
Collaboration & industry leadership in just transition	Reputation	Strengthened industry and government partnerships, leadership opportunities in shaping climate policies, increased research funding, reputational gains for proactive climate leadership.	Medium

Legend: Acute Weather Events, Chronic Weather Events, Policy & Legal, Market, Technology, Reputation

Leveraging compliance for strategy:

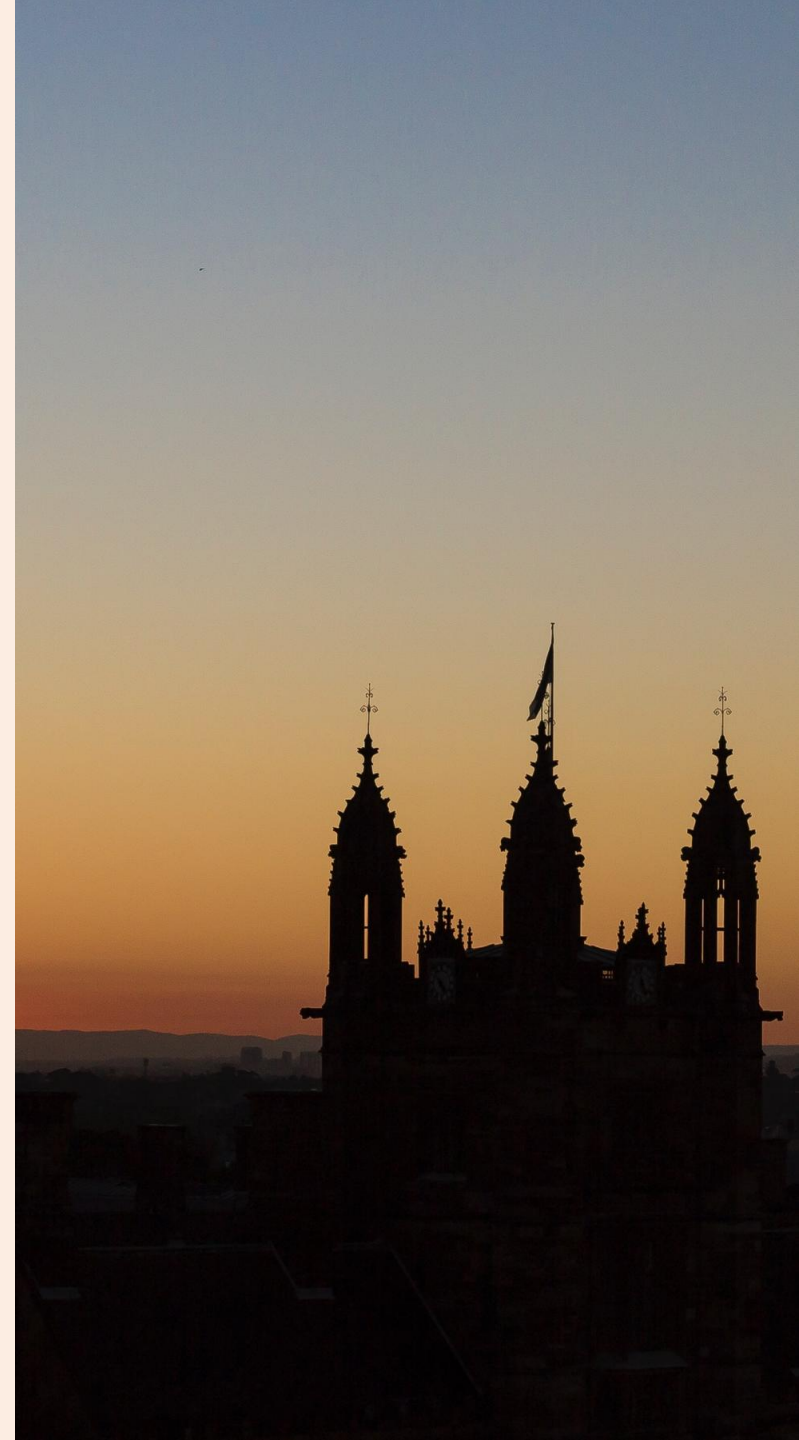
Making Reporting a Strategic Engine



Pillar 1 of the Sustainability Strategy:

Capacity building, and elevating climate governance in executive forums

- Built climate capability across the University through a 2-day climate literacy course linked to our resilience strategy.
- Developed purpose-built climate governance training to support our Executive and Senate.
- Delivered tailored sessions grounded in the University's real risks and opportunities—shifting leaders from compliance thinking to strategic decision-making, and strengthening alignment across sustainability, finance, risk, strategy and operations.





Net Zero

In this self-paced sprint, learn how to account, report and act on your business' carbon emissions and make the transition to net zero.



Net Zero

Receive a University of Sydney digital badge.



Dr Gordon Weiss
Decarbonisation expert



Prof Deanna D'Alessandro
Director, Net Zero Institute

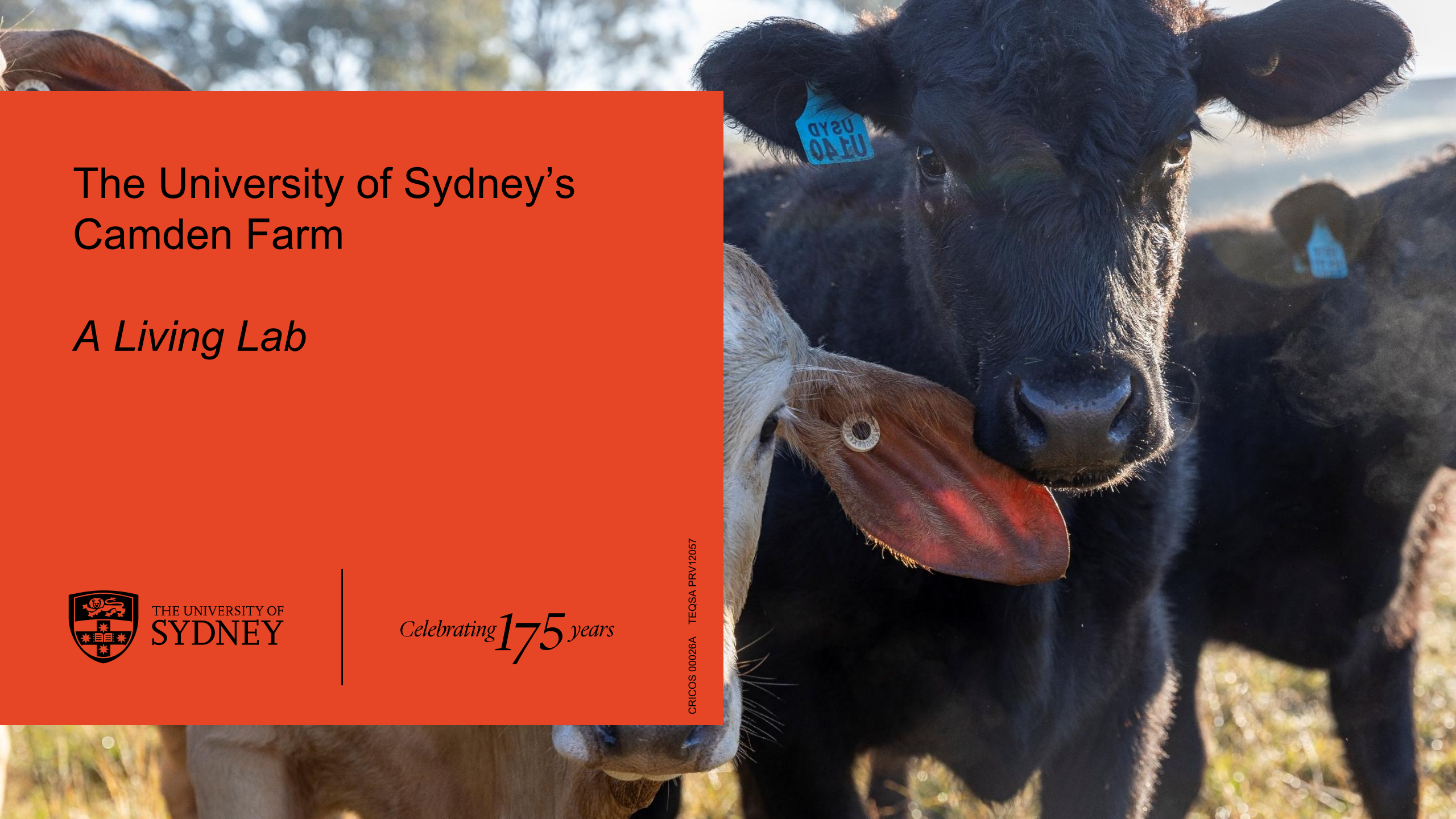
The University of Sydney's Camden Farm

A Living Lab



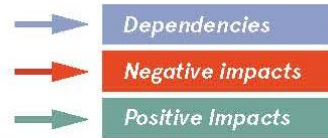
Celebrating 175 years

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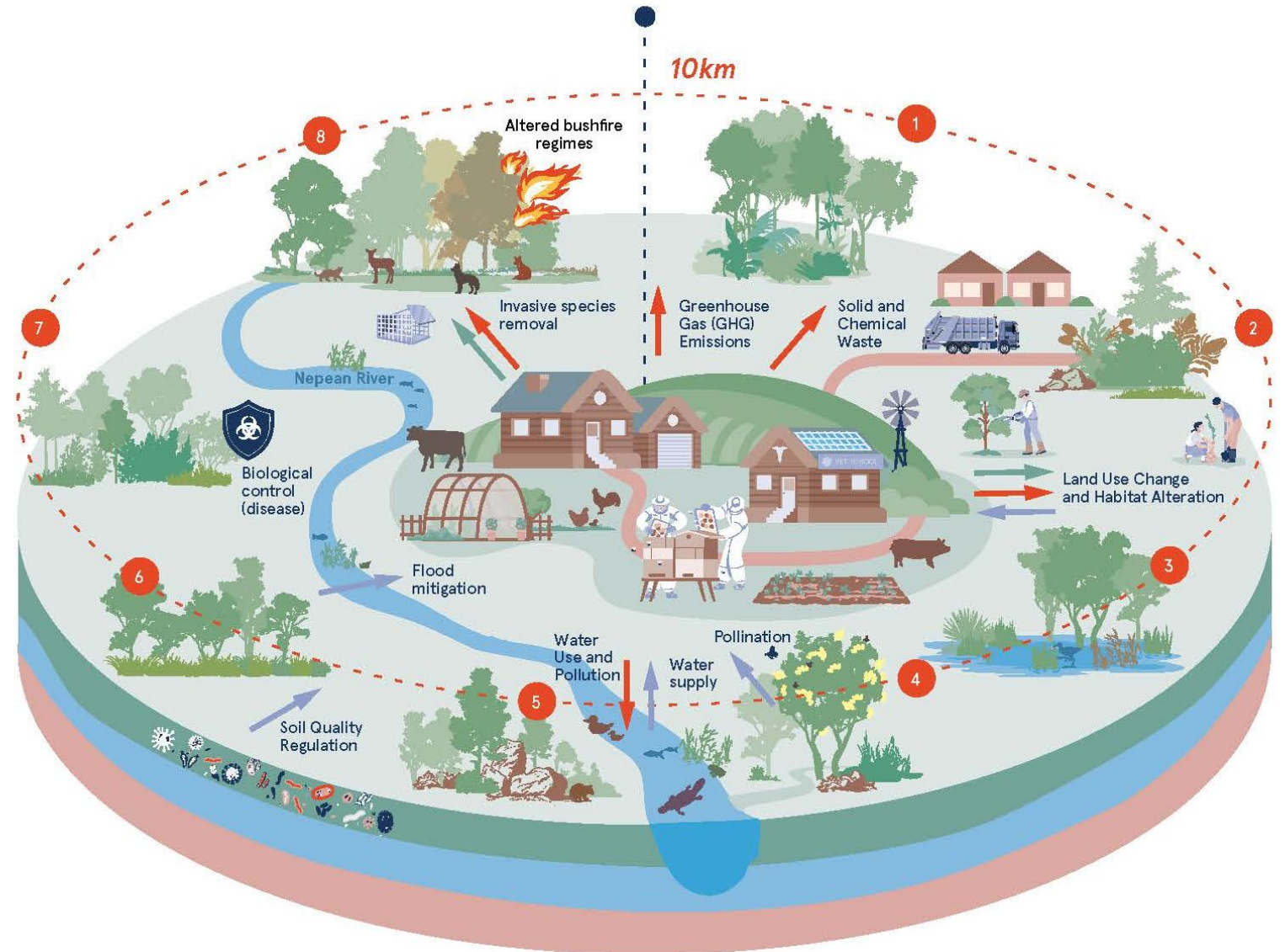


Case Study

Visualising our impacts and dependencies at Camden Farm (using a LEAP assessment)



Our university *depends on nature* to deliver its core activities. These activities can generate *negative impacts* that degrade ecosystems and biodiversity, or *positive impacts* that help restore and enhance natural systems.



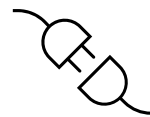
This project responds to three key sustainability priorities



University Scope 1 emissions integrity by defining and measuring currently unquantified agricultural emissions



Nature risk management through action on material LEAP assessment risks



Living Lab activation by connecting research expertise with operational sustainability priorities



Living Lab on a page

1. **Quantified nutrient loads** in dairy effluent dam water
2. Estimated **wastewater-related emissions** (GHG Protocol-aligned)
3. **Determined potential emissions reduction impact** of introducing solid waste separator
4. **Assessed improvements** to water quality and compliance outcomes
5. Produced **replicable methodology** for wastewater emissions reporting



Looking forward



Industry collaboration with
ALBON to improve water
circularity on farm



Embedding in education
through Masters of Sustainability
capstone projects



State of Nature Metrics: The
U21 Nature Positive Coalition



Net Zero Institute

Accelerating Australia's path to Net Zero
through innovative partnerships,
backed by world-class research

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THE UNIVERSITY OF
SYDNEY



Net Zero *Institute*

FOUR MULTIDISCIPLINARY THEMES

Demand Reduction

PILLARS

- Electrification
- Transport
- Green Computing
- Critical Minerals and Materials

Zero emissions energy and industry

PILLARS

- Renewables and Energy Storage
- Powerfuels
- CO₂ Conversion and Utilisation

Hard to Abate Sectors

PILLARS

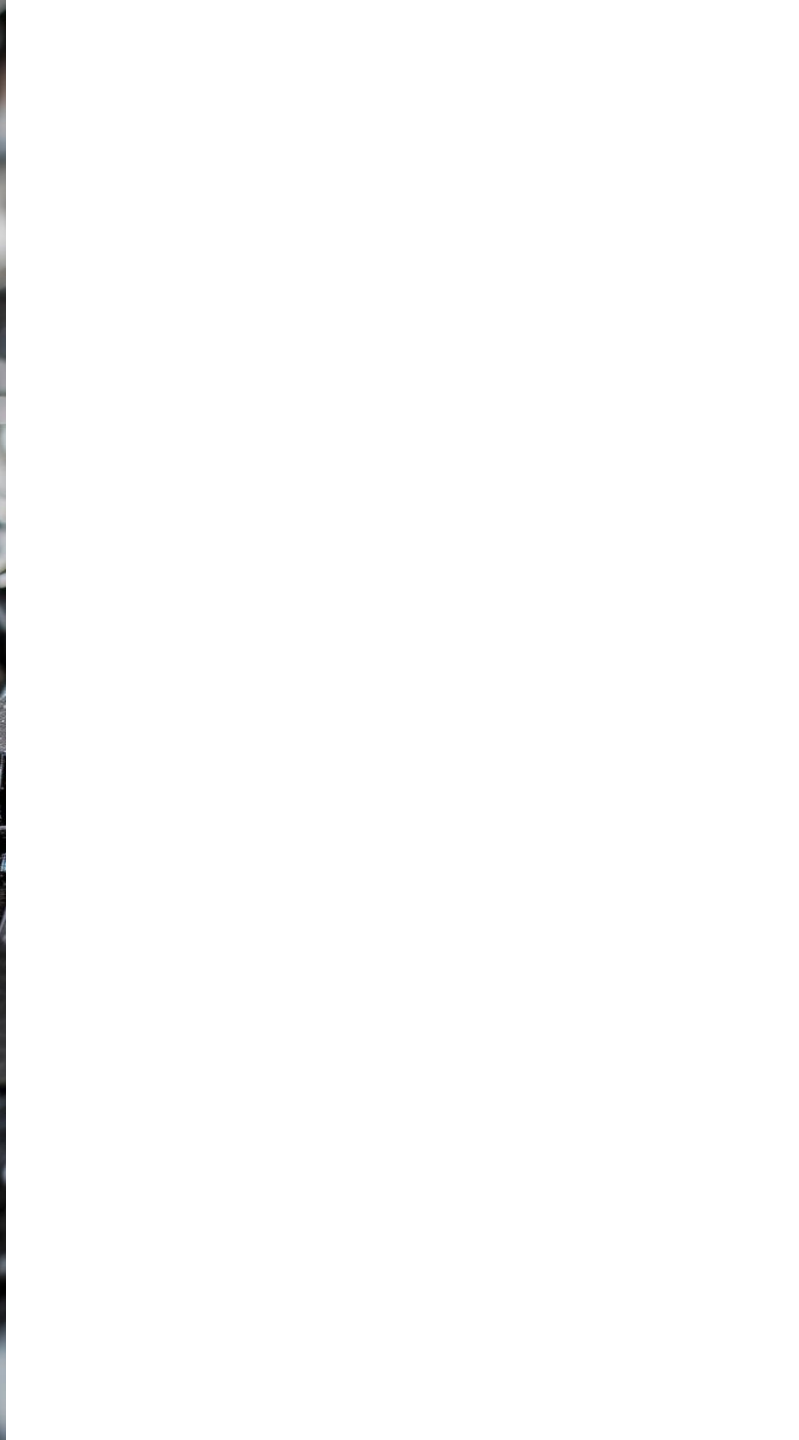
- Net Zero Agriculture
- Direct Air Capture (DAC)

Climate Change Risk

PILLARS

- Project Risk and Reliance
- Water Security
- Decarbonising Healthcare systems







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Takeaways



- 1.** Living Labs integrate sustainability across operations, research and education
- 2.** Strategic value grounded in science
- 3.** Credible transition plans that are fit-for-purpose for the University
- 4.** University RD&D accelerates capability, innovation and applied research
- 5.** Our door is open

Sydney Executive Plus

Moana Amona
Dr Pat Norman

With thanks

Sustainability Portfolio

Gillian Graham-Crowe
Kat Carrick
Sarah Horn

Camden Living Lab Project

Sarah Horn
Project support, planning and management,
field support

Dr Aisha Farqui
Net Zero Institute Water Pillar co-lead

Keegan Barnes
Field support

James Bell
Project support

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Field support

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