

# UNOVA Knowledge Hub

For Enterprise Innovation, Technology & Operations

UNLEASH INNOVATION

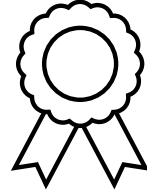
# About UNSW

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## No. 1

In Australia for research  
quality and impact

Excellence in Research for Australia and  
Engagement & Impact 2018 outcomes



Top 20 university  
worldwide

Ranked 19th globally  
QS World University Rankings, 2024.

**6** Faculties

**45** Schools

**125** Centres & Institutes



#1 Business School  
in Australia

AFR BOSS Best Business  
Schools list 2022, 2023, 2024

## Vision

*“We apply our strengths in education, research and engagement to be at the forefront of solving society’s most pressing global challenges and improving life on Earth.”*

# About UNOVA

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## Vision

To be a catalyst for transformative innovation and inclusive progress by uniting education, research, and enterprise to address the most pressing societal and organisational challenges.

## Mission

Promote lifelong learning, strategic advisory, and consulting; connecting research, education, and enterprise to drive inclusive innovation and societal impact.

# Areas of expertise

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As a translational and multidisciplinary knowledge hub, we help our partners imagine the future, develop proof-of-concepts, UI/UX and improve their operations.



**Operations Management** - We use rigorous analytical techniques, AI, and machine learning to study and improve operations and supply chain performance



**Digital Services** - We use scientific precision and our innovation instinct to help organizations unlock the potential of the synergy between AI and Fintech.



**Smart Cities** - We use an ecosystem view that underpins our development and evaluation of technology to manage and build smart city infrastructure.

# Partner with UNOVA

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Join us to access lifelong learning, strategic advisory, and consulting.

- We achieve our mission by partnering, collaborating and engaging with public and private entities.
- We are a not-for-profit entity, with all revenue generated used to further our mission.

# Our focus areas

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## **Lifelong Learning & Talent**

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Our training and talent use the latest research to help individuals and workplaces make the most of new technologies.

## **Advisory Support**

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Our expert advice and practical support help organisations solve challenges, drive innovation, and achieve their goals.

## **Consulting Engagements**

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We help organisations improve business processes, supply chains, and digital integration by delivering and supporting practical, research-backed solutions that lift efficiency and cut costs.

# Our focus areas

## Lifelong Learning & Talent

Our training and talent use the latest research to help individuals and workplaces make the most of new technologies.

### **Packaged Training Programs** ★

We offer research-backed training, combining practical experience to boost organisational skills and competencies.

### **Bespoke Training**

We co-create training solutions tailored to your specific needs, ensuring targeted, impactful outcomes.

### **Upskilling**

Our experiential programs build advanced skills for current roles and prepare teams for future challenges.

### **Industry sponsored Scholarships**

Partner with us to support research and access emerging talent, aligning student projects with your goals.

## Advisory Support

Our expert advice and practical support help organisations solve challenges, drive innovation, and achieve their goals.

### **Expertise Sharing**

We apply our knowledge in smart cities, AI, and supply chains to provide targeted, practical advice.

### **Research Insights & Trends**

We deliver insights on AI, Web3, and emerging tech to keep you ahead of industry changes.

### **Collaborations & Partnerships**

We partner with your business to maximise technology value and optimise infrastructure use.

## Consulting Engagements

We help organisations improve business processes, supply chains, and digital integration by delivering and supporting practical, research-backed solutions that lift efficiency and cut costs.

### **Governance, Cost Controls & Optimisation** ★

We analyse data to cut costs, improve decisions, and boost performance, ensuring better governance and measurable results.

### **Ideation & Initiative Shaping** ★

Our workshops turn ideas into actionable initiatives, supporting innovation and digital readiness for scalable transformation.

### **Commissioned Research**

We investigate challenges in tech adoption, operations, and process improvement, delivering research-backed insights for innovation and strategic decisions.

### **Project Delivery**

We support innovation projects with research-backed methods, reducing risk and ensuring successful digital and operational outcomes.

# Advisory Support

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## Research Insights & Trends

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### Project: Translating research into business value

We translate complex research into actionable insights that support strategic decision-making. Leveraging deep expertise across technology, AI, digital transformation, fintech, and operations management, we help organisations interpret emerging trends and navigate industry change.

Our integrated approach, grounded in commercial understanding and analytical depth, enables us to generate insights that are both credible and practically relevant. Our insights are generally compiled in practitioner ready articles published by UNSW's magazines like BusinessThink





# Advisory Support

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## Research Insights & Trends

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Project: Translating research into business value

Some of our BusinessThink articles:

- **Digital Retail, Operations, and Supply Chains**
  - [How social influences and pride drive consumer recycling](#)
  - [How to build a retail website that keeps on selling](#)
- **Digital Services and Fintech**
  - [Could decentralised identities stop cybersecurity breaches?](#)
  - [How AI can help solve the pressing problems of banking and finance](#)
- **Smart Cities and Innovation**
  - [App-solutely addicted: is your screen time impacting your health?](#)
  - [Getting paid: How blockchain removes settlement risk for wheat farmers](#)



# Advisory Support

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## Collaborations & Partnerships

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### Project: Blockchain-Driven Ecosystems

Enterprise blockchain can enhance business coherence, security, and efficiency. However, integrating blockchain with legacy systems and governance structures poses challenges.

UNOVA explored how blockchain technologies can establish standards for public-private partnerships and improve mobility, trust, interoperability, and workflows. This project was conducted for the Blockchain Association of Singapore and the Monetary Authority of Singapore.

#### Deliverable

UNOVA applied a structured, evidence-based approach to analyse how enterprise blockchain is being used across Southeast Asia. By mapping real-world applications, we identified where blockchain delivers the most value improving mobility, building trust, and streamlining workflows.



# Consulting Engagements

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## Governance, Cost Controls & Optimisation

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### Project: Technical Debt Calculator - Evaluating Digital Infrastructure

A major Australian telecommunications company faced increasing inefficiencies due to outdated legacy systems. The challenge was to assess whether investing in modern digital infrastructure, like Software-Defined Networking (SDN), would outweigh the opportunity cost of maintaining the current setup.

UNOVA used advanced modelling (network theoretic complexity analysis) to assess the hidden cost of outdated systems, known as technical debt. Based on the assessment, we crafted a decision-support tool that helps organisations weigh the benefits of modernisation against the risks of maintaining the status quo.

#### Deliverable

A web-based Technical Debt Calculator that quantified investment trade-offs, guiding the company towards strategic digital transformation decisions.



# Consulting Engagements

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## Governance, Cost Controls & Optimisation

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### Project: Pricing optimization through a bid calculator

A major Australian relocation company needed to improve its bidding strategy for jobs on a digital platform. The challenge was to optimise pricing while predicting bid success.

UNOVA used a hybrid analytics framework combining machine learning with behavioral segmentation to develop a data-driven pricing model. The model helped predict bid success, optimise pricing, and support data-informed bidding strategies.

#### Deliverable

A Bid Calculator that guided profitable and competitive bids by assessing win probabilities and optimising margins.



# Consulting Engagements

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## Governance, Cost Controls & Optimisation

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### Project: Human Resource Digital Twin - Modelling Leadership Trajectories

A leading Australian energy company needed data-driven strategies to fast-track leadership development. The challenge was to model career trajectories and predict leadership potential.

UNOVA used advanced data integration combining performance trends, organisational context, and learning pathways to build a predictive model for career progression and leadership readiness. By applying machine learning and HR insights, the model supports strategic talent development and succession planning.

#### Deliverable

Predictive insights that guide targeted HR investments and support succession planning, optimising leadership pipelines for future growth.



# Consulting Engagements

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## Governance, Cost Controls & Optimisation

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### Project: Asset Renewal Planning - Infrastructure Health Monitoring

As part of a broader Infrastructure Health Monitoring (IHM) initiative, a Sydney-based client engaged UNOVA to explore new methods for tracking rail system deterioration.

UNOVA applied advanced analytics combining time-series data analysis with anomaly detection to evaluate the feasibility of using train-mounted sensors to monitor overhead wire wear, a key indicator of rail system health. Integrating engineering expertise with AI and machine learning, the project supported predictive maintenance and long-term infrastructure renewal planning.

#### Deliverable

Predictive analytics based on sensor data to optimise maintenance schedules, reduce risk, and guide long-term investment in critical infrastructure upgrades.





# Consulting Engagements

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## Ideation & initiative shaping

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### Project: Supply Chain Mapping - Health-Driven Dietary Transition

To support the shift towards healthier dietary alternatives, The George Institute engaged UNOVA to assess Australia's readiness to adopt potassium-enriched salt (KCl) as a substitute for sodium chloride (NaCl).

UNOVA applied a multi-layered supply chain analytics framework, using business research methods and industrial process insight to analyse sodium usage and the feasibility of substitution across the food supply chain.

#### Deliverable

A comprehensive map of sodium use and substitution pathways, identifying structural barriers and investment opportunities to inform public policy, health strategies, and industry transition planning.



# Consulting Engagements

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## Ideation & initiative shaping

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### Project: Virtual Power Plant (VPP) Design - Identifying Emerging Market Opportunities

UNOVA partnered with UNSW Engineering to develop large-scale energy storage devices for buildings, designed to integrate with solar panels and HVAC systems for real-time grid interaction, supporting virtual power plant (VPP) development.

We facilitated a sector-informed design-thinking workshop, combining user-centred methods with deep knowledge of the energy market to identify user needs and system requirements, shaping the solution and uncovering new market opportunities in the VPP space.

#### Deliverable

A user-informed product design tailored to building aggregators, enabling smarter energy storage, improved grid interaction, and more efficient participation in virtual power plant systems.





# Consulting Engagements

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## Ideation & initiative shaping

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### Project: Ultra-High-Efficiency Micro HVAC System

UNOVA collaborated with a multi-disciplinary UNSW team to design an ultra-efficient micro-HVAC system projected to reduce building energy costs by 40%.

To ensure a user-centred solution, UNOVA facilitated a design-thinking workshop informed by domain expertise and operational experience, with a focus on UI/UX requirements and system functionality.

#### Deliverable

A human-centred interface design and a demand-side management feature that uses real-time weather and market data to optimise heating and cooling through forecast-driven decision-making.



# Lifelong Learning & Talent

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## Packaged training programs

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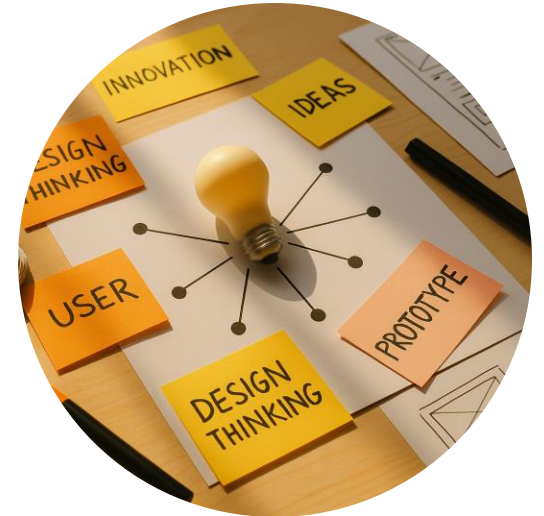
### Course: Design Thinking Fundamentals – Foundations for Human-Centred Innovation

This 1-day interactive workshop introduces the core principles, tools, and language of Design Thinking.

Designed for organisations, UNOVA applied its interdisciplinary innovation expertise combining design thinking with operational, technological, and behavioural insights. Participants were equipped with practical skills in human-centred design for team and business application.

#### Outcome

Participants receive a hands-on toolkit—including Design Thinking, Empathy Mapping, Value Proposition Canvas, and Customer Journey Mapping—and develop a plan to cultivate a culture of innovation within their organisation.



# Lifelong Learning & Talent

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## Packaged training programs

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### Course: Adaptive Capabilities – Practical Leadership for Evolving Workplaces

This workshop develops adaptive capabilities for emerging **leaders through simulations and team-based problem-solving. Leveraging UNOVA's integration of behavioural insight and operational expertise**, it builds core skills in communication, collaboration, continuous improvement, and innovation.

Participants learn to address workplace challenges, build strong teams, and pitch improvement ideas to senior leadership—linking learning to real career progression.

#### Outcome

Participants leave with tools for stakeholder engagement, process improvement, and innovation pitching, ready to lead teams and take on greater responsibility.



# Lifelong Learning & Talent

# Course: Building Fundamental Understanding of Enterprise Systems



# Get in touch!

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