ENERGY ACADEMY

A case for collectively addressing capability development

September 2023

EECA TE TARI TIAKI PŪNGAO ENERGY EFFICIENCY & CONSERVATION AUTHORITY

Orion

Northpower

Te Pūkenga

THINGS ARE CHANGING

The effects of **exponential change and global challenges** impact us every day.

These challenges also bring tremendous opportunities for the energy sector - a sector that underpins New Zealand's ability to be productive as we face decarbonisation.

We need a **capable workforce** that is able to adapt, and keep adapting. We want to our people thrive in the future.

We believe that the challenges facing us can only be solved by **working together**. This will require new **forms of leadership and the courage** to do things we don't yet know how to do

The work of the Energy Academy exists to serve the electricity industry and wider energy sector, not just the Orion Group.

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INDUSTRY CONTEXT

The pace of global change requires a new approach to developing our people for the future of work.

INFRASTRUCTURE

Pressure on energy sector to enable electrification meaning an increased demand for skilled workers

There is over $10b of ES capital improvements and new large-scale projects are already planned for the next decade.

**** Re-Energise***

CURRENT WORKFORCE

25% of our workforce retire in the next 5-10 years* and we will need over 7,000 to replace them.

EEA's Industry training report 2020

60% of our workforce will need retraining by 2030*

The 2023 World Economic Forum's Future of Jobs report

FUTURE DIVERSITY

Māori workforce has grown by 50 percent in five years and will continue to grow.*

Business and Economic Research Ltd

Generation Z are brining new skills into the workforce we don't yet recognise.

15-20% of our population are neurodivergent and are being overlooked*

NZ Tech 2020

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SHARED CHALLENGES

Tertiary pathways are often not relevant and the framework doesn't recognise our internal training programmes

Our training pathways are all bespoke to each company.

We compete for talent in ways that perpetuate the problem.

The energy sector is not as visible as other sectors.

Workers have little visibility of career opportunities and progression.

SHARED IMPACTS

Skills portability is limited which limits efficiency opportunities

Latent capacity of industry is untapped and lost.

We drive up our costs and no additional capability is generated.

Unreliable pipeline.

We lose workers to more attractive industries, or they don't grow to their potential.

TRADITIONAL RESPONSES	ISSUES
More apprenticeships	Insufficient supervision, slow development
Attend careers fairs	Little visibility of career progression
Rely on immigration	Tap can turn off + we are relying on other nations to fill our gap
Contractor Market Manipulation	Limited access to contracting services could destabilise overall EDB sector and may trigger market reform

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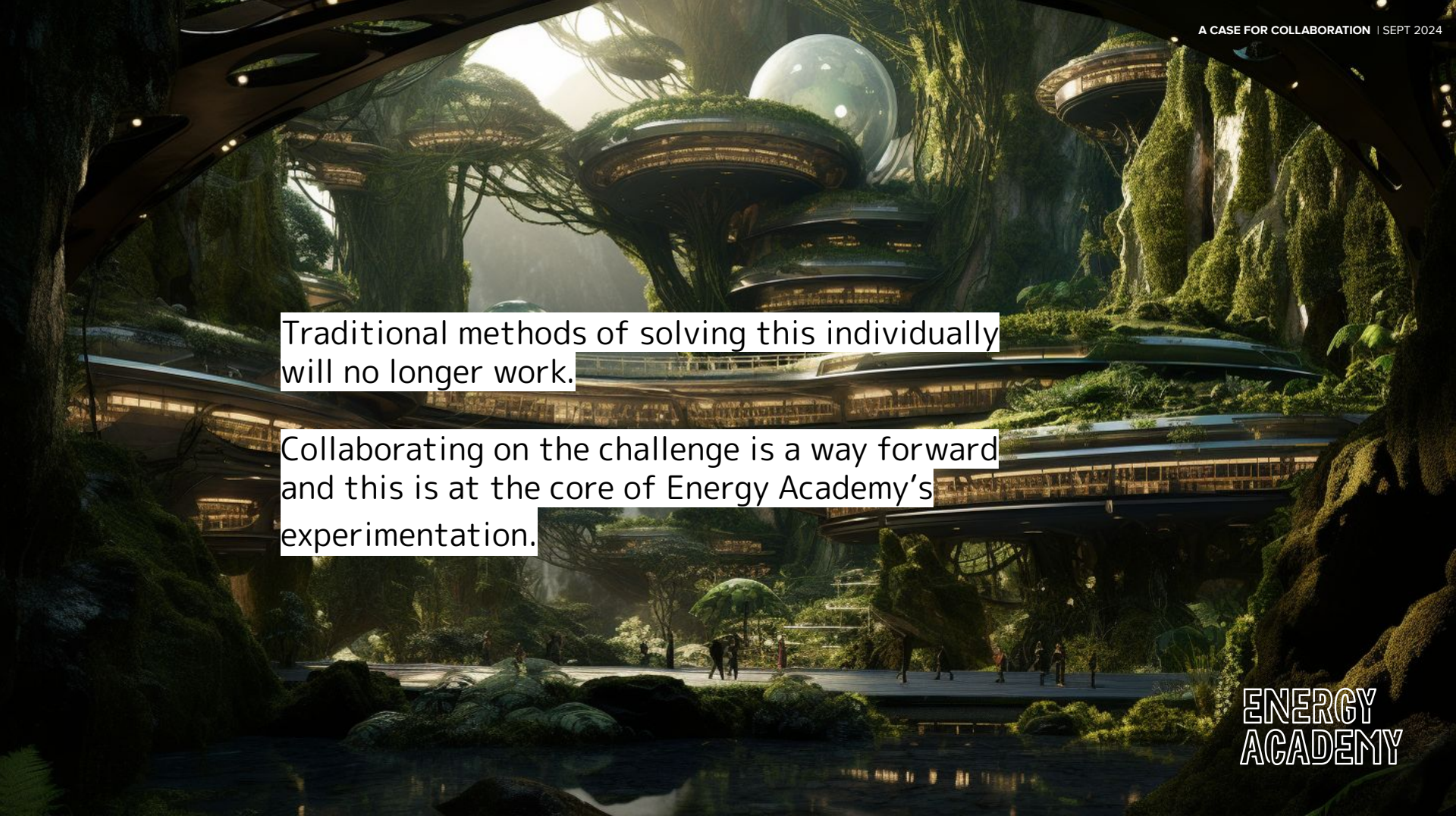

Traditional methods of solving this individually will no longer work.

Collaborating on the challenge is a way forward and this is at the core of Energy Academy's experimentation.

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OUR APPROACH

COMMUNITIES OF PRACTICE

Our projects rely on inputs from a diverse range of perspectives.

OPEN SOURCE RESOURCES

All projects, regardless of who funds, are made open source for the rest of the community.

MENTORSHIP

We nurture a culture of continuous learning and improvement.

TECHNOLOGY

Everything we do experiments with new technology to enhance the worker experience and improve industry productivity.

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OPPORTUNITY - WORK TOGETHER

1. BUILD CAPABILITY IN NEW WAYS

Increase productivity by using a shared skills framework with industry endorsed learning pathways.

2. ATTRACT MORE WORKERS

Raise the profile of the sector through a collective approach to attraction and visibility of career opportunities.

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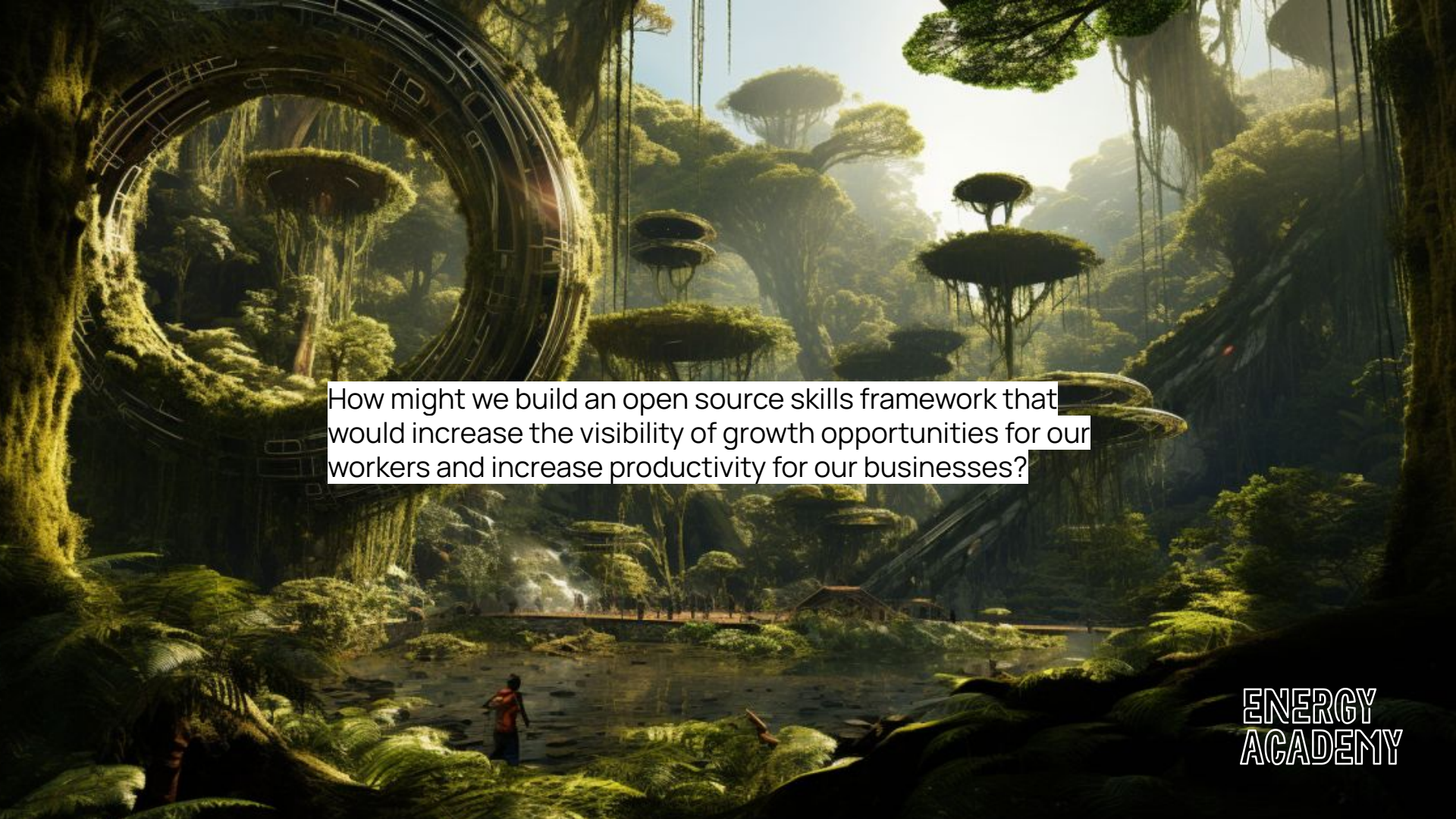
How might we build an open source skills framework that would increase the visibility of growth opportunities for our workers and increase productivity for our businesses?
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OUR LATEST EXPERIMENTS

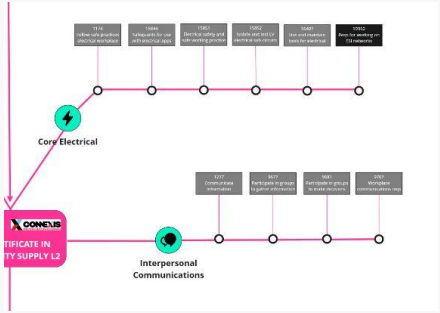
Te Haerenga is an immersive digital gaming experience that enables rangatahi to embark on ‘quests’ to learn about Aoteroa’s energy systems.

ATTRACTION

GLOBAL ENERGY QUEST

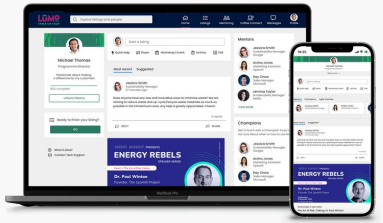
A 9 week immersive collaborative programme designed to challenge energy workers to be inclusive of diverse perspectives in their projects.

MENTORSHIP & COLLABORATION



Shared skills pathways, give visibility of career progression and enhance skills portability across the sector.

SKILLS PORTABILITY



Strengthening the network of our **community** of energy workers

COMMUNITY BUILDING

OUR PAST EXPERIMENTS

Waihanga Ara Rau engaged Energy Academy to collaboratively explore an adaptable workforce where employees can transfer across roles and industries through a standardised map of transferable skills that become the core foundation of competency recognised by all.

COMPETENCY MAPPING

The **EdCreds** continuous learning fund has the potential to better align the strategic ambitions of government, sectors and organisations, creating more relevant pathways for learners and employees

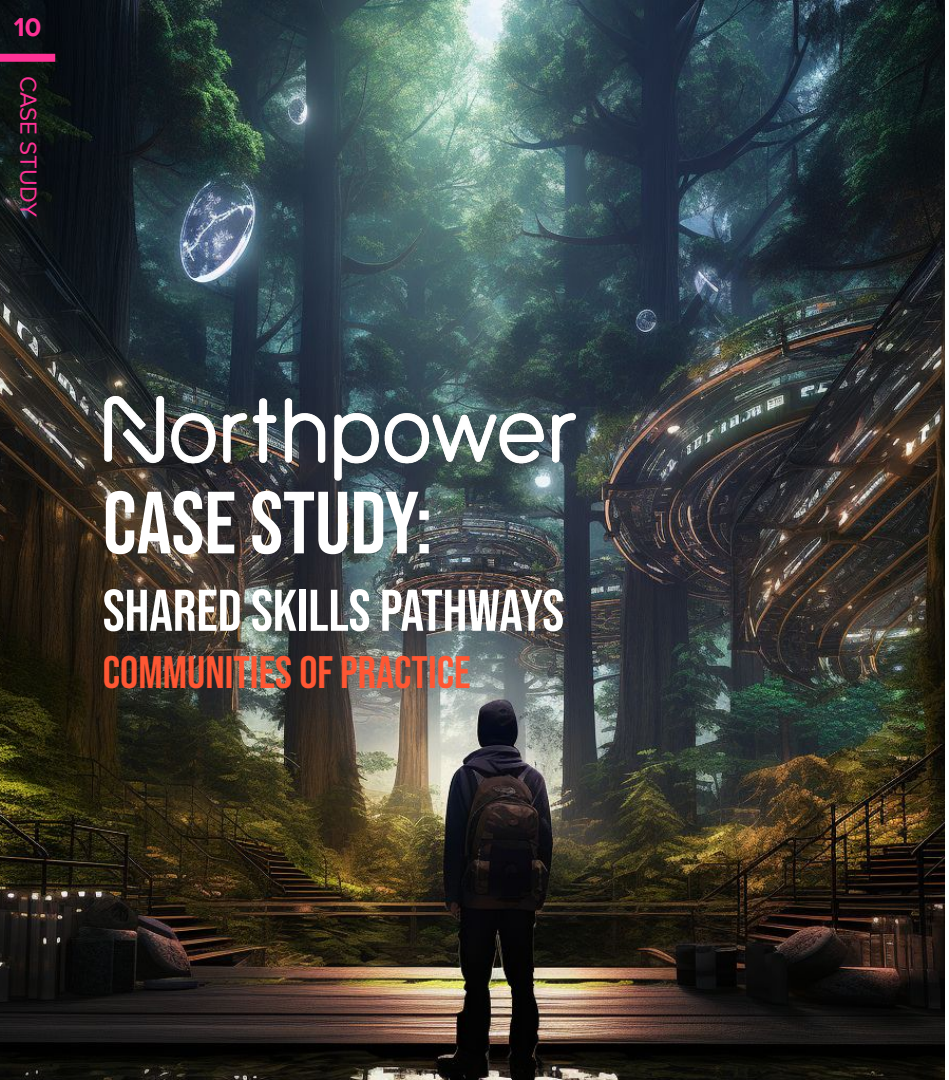
FUTURE OF FUNDING

LUMO is the platform to illuminate energy's influence on humanity and cultivate a movement towards a positive energy future for Aotearoa.

LUMO PODCAST

PowerUp was an initial conversation about change, leadership, and collaboration - led by the industry, for the industry.

CONSULTATION



Northpower CASE STUDY:

SHARED SKILLS PATHWAYS

COMMUNITIES OF PRACTICE

THE CHALLENGE:

- Northpower identified a need for an annual addition of 100 workers over a span exceeding a decade to meet asset management demands
- There is little visibility internally & externally in the ecosystem of career pathway and progression
- When workers move across the contractor network their training is unrecognised resulting in reduced productivity to re-train

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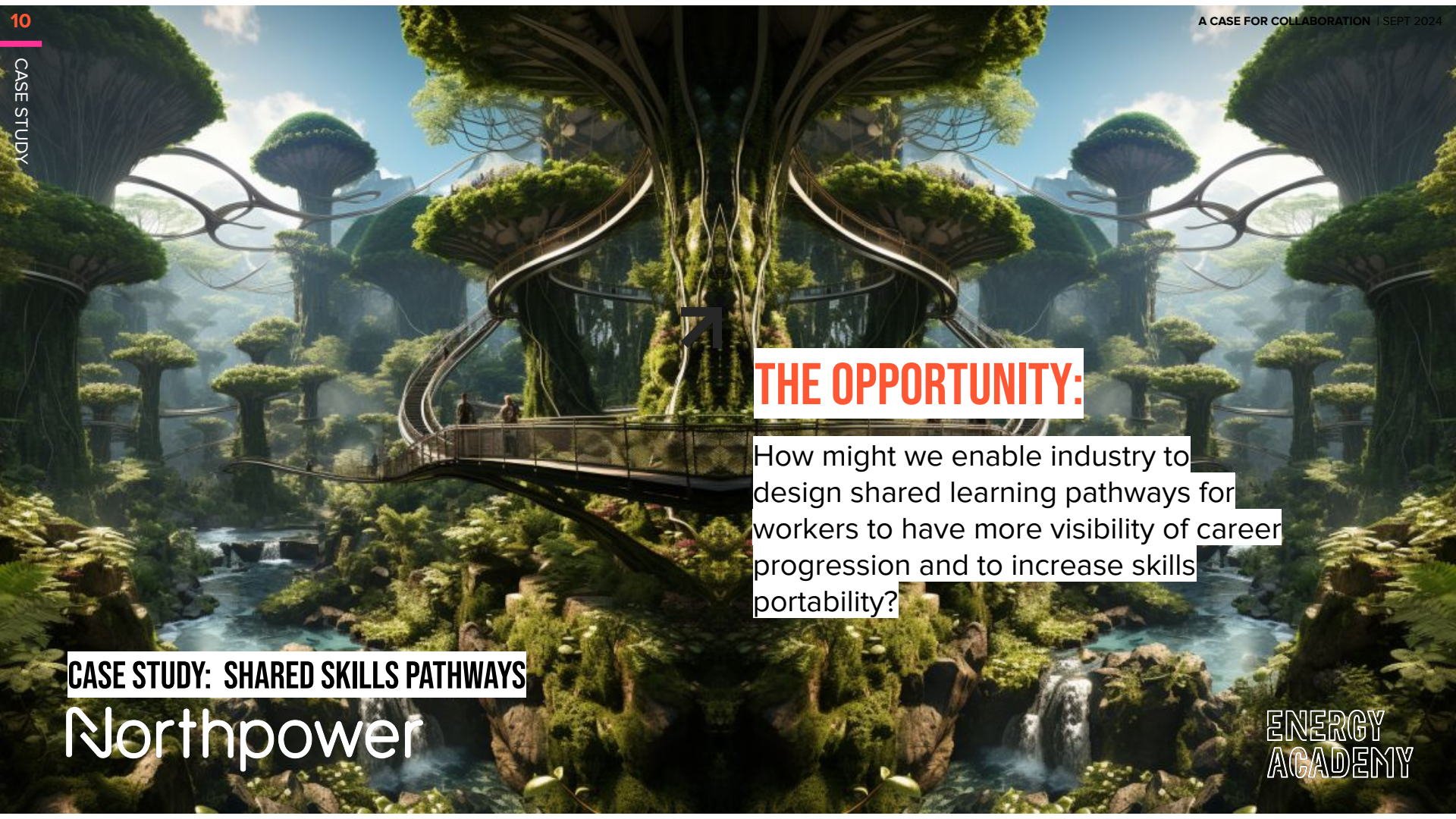

THE OPPORTUNITY:

How might we enable industry to design shared learning pathways for workers to have more visibility of career progression and to increase skills portability?

CASE STUDY: SHARED SKILLS PATHWAYS

Northpower

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THE EXPERIMENT

Rather than tertiary designing qualifications, we experimented with industry designing accredited learning pathways utilsing gaming methodologies.

This involved experimenting with tertiary provider to enable us to unbundle their programmes into revised, smaller products for a new market.

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Te Pūkenga

We use feedback systems for multiple stakeholders within an ecosystem to provide transparent commentary.

Industry - for subject matter expertise and feedback loops

Tertiary system - to navigate accreditation frameworks

Government - for future workforce planning trends

Tertiary Provider - to enable us to experiment with unbundling existing qualifications into learning pathways that worked for industry

Energy Academy - to build the shared skills architecture (maps) & capture feedback.

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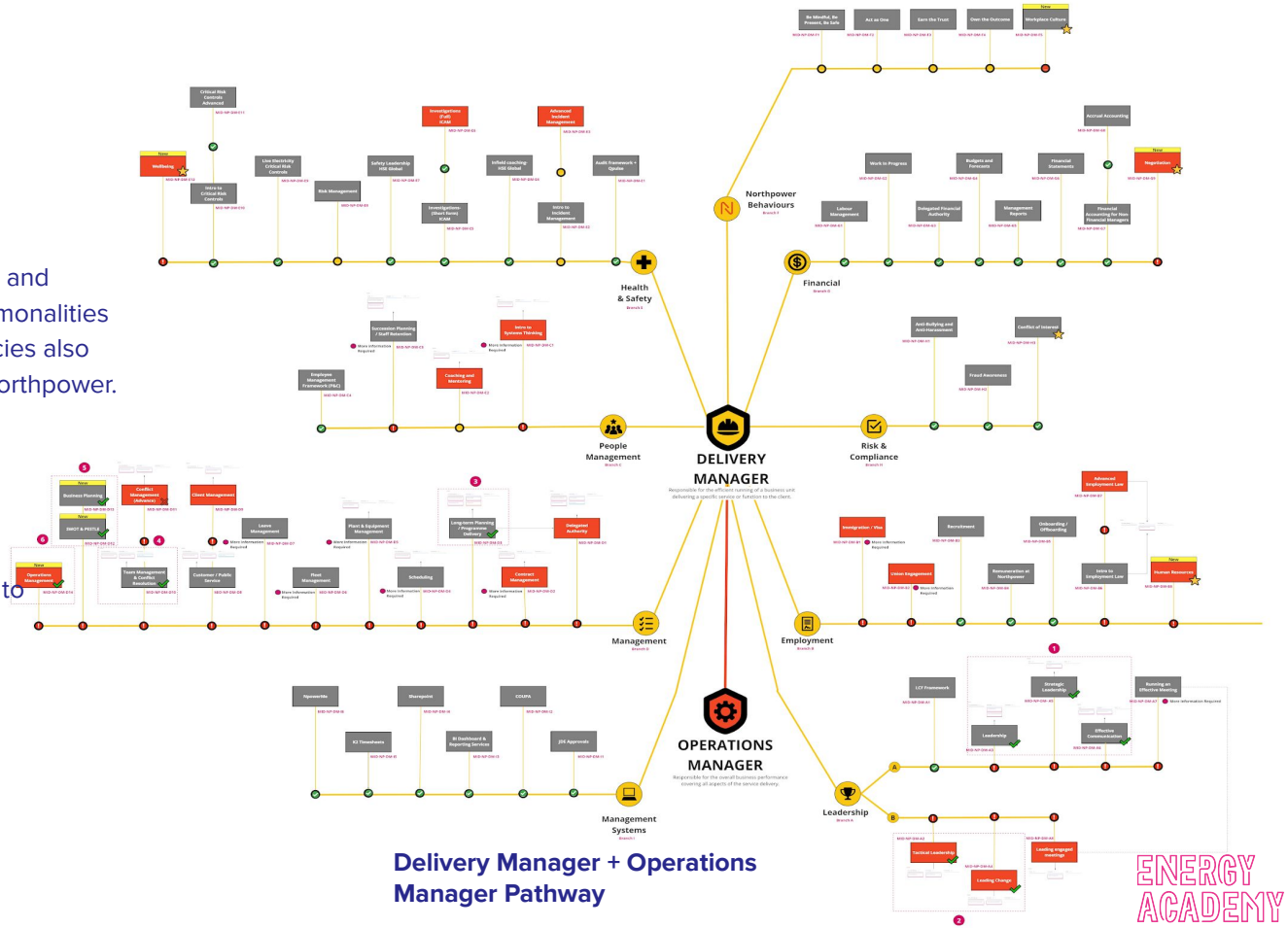
STAGE 1 DEFINE COMPETENCIES

We identified 69 competencies (grey and orange boxes) & highlighted the commonalities between two roles. These competencies also relate to a dozen other roles within Northpower.

STAGE 2 MAP VISIBLE PATHWAY

Mapping in this way enables workers to visualise learning pathways and the opportunities they may unlock.



Delivery Manager + Operations Manager Pathway

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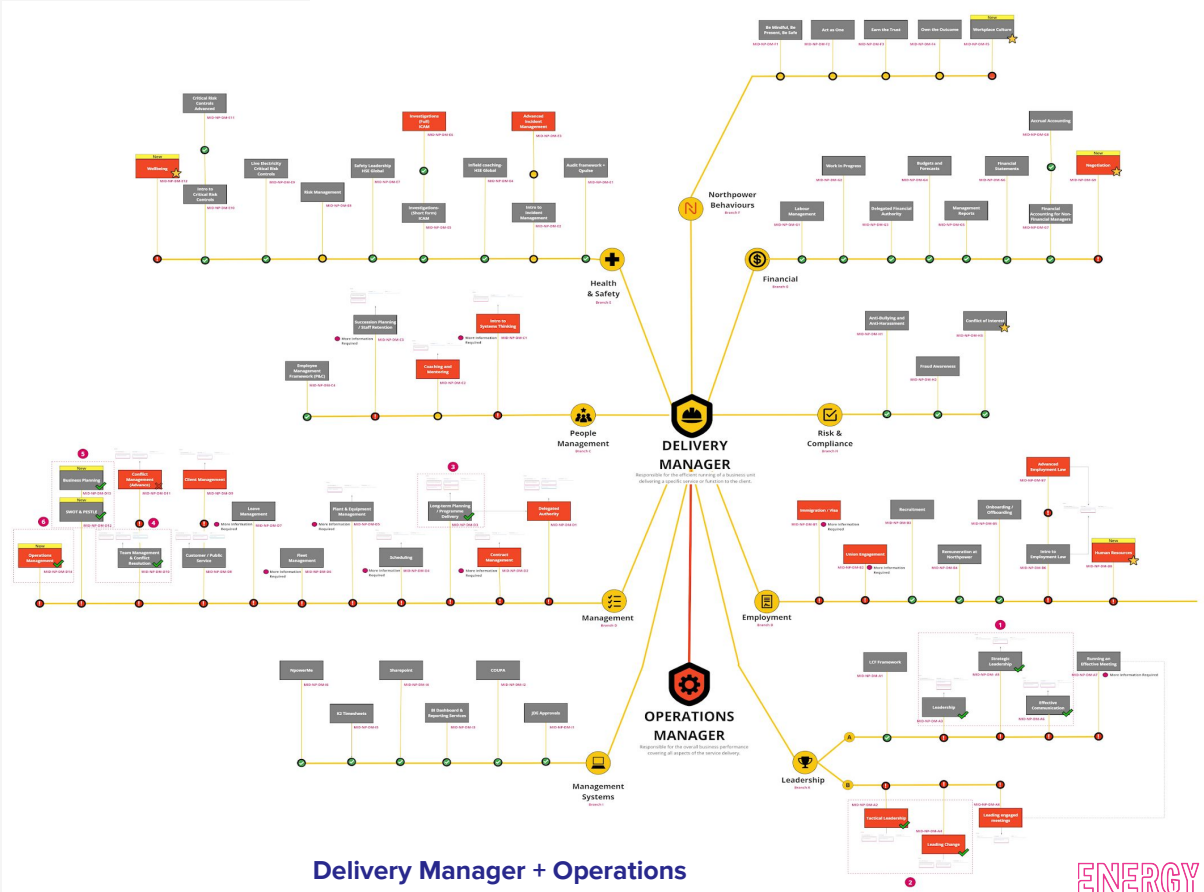
STAGE 3: GAP ANALYSIS

Northpower wanted to explore the latent potential in their own learning and development materials.

We Identified the gaps in available training (red dots).

It was in the gaps we then pursued content externally.



Delivery Manager + Operations Manager Pathway

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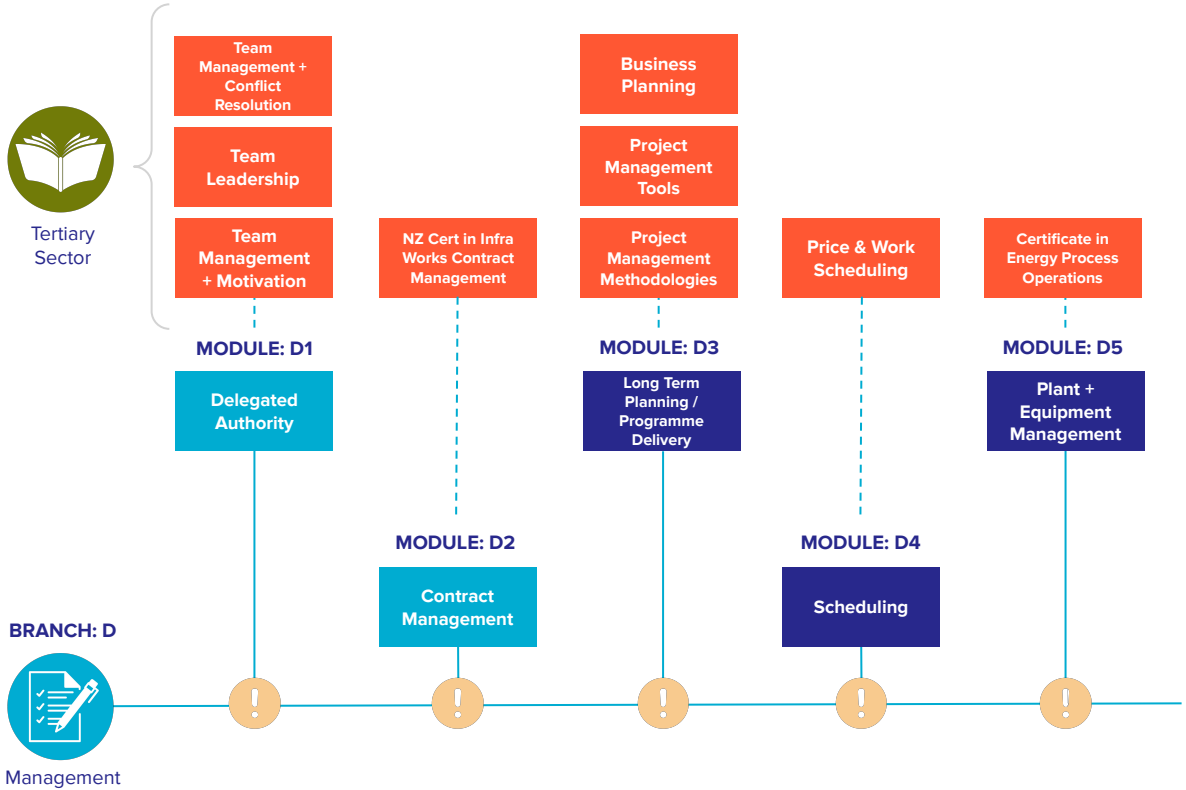
STAGE 4: EXISTING PROGRAMMES

We identified programmes within Te Pūkenga to unbundle and re-sequence to suit Northpowers pathways.

We also identified learning material within Northpower.

Course Mapping Example



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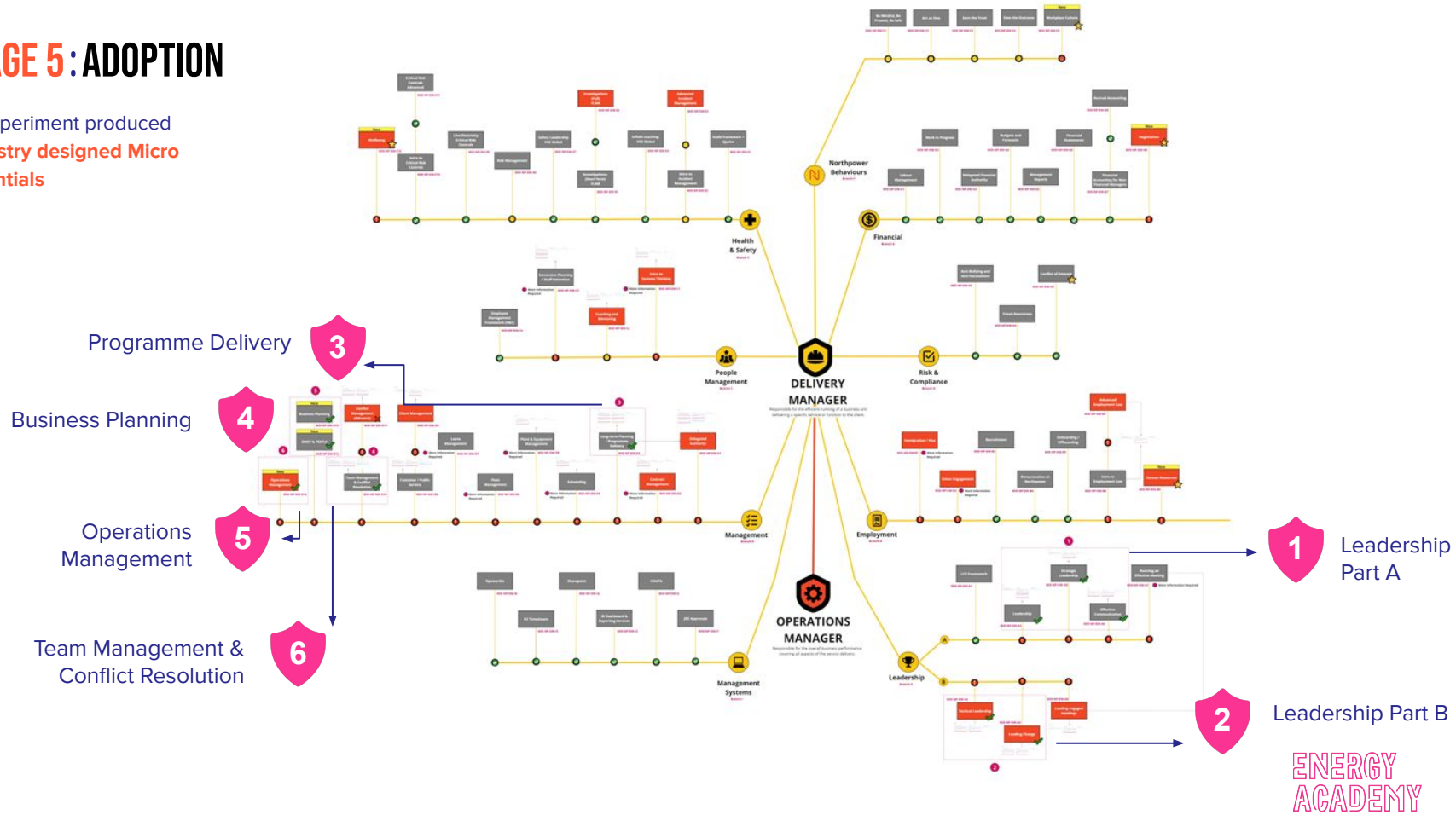
STAGE 5 : ADOPTION

The experiment produced
6 industry designed Micro Credentials



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CASE STUDY: SHARED SKILLS PATHWAYS

WHAT WE LEARNT

1. The Tertiary system is willing to experiment.
2. Communities of practice can accelerate our work.
3. The right facilitation can enable meaningful collaboration at pace.
4. Gaming methodologies can increase skills portability for workers.

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PROJECT POTENTIAL

- One consistent industry endorsed method for skills mapping
- Accelerated way to endorse and share existing training material
- Enhanced skills portability for workers across sites, networks and businesses
- Workers to have visibility of career development pathways
- A market-place for learning content

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SHARED OUTCOMES

Increase the talent pool

INDUSTRY RESILIENCE

Open access transfer of valuable institutional and industry-specific knowledge could help ti withstand fluctuations in demand, unexpected challenges, and workforce shortages.

INCREASED PRODUCTIVITY

Our industry could avoid the duplication of workforce attraction and training efforts by pooling resources when needed and reducing operating expenses.

MOBILISED WORKFORCE

Skills portability may assist workers to adapt more readily to changing technology and regulatory environments.

Adoption of industry-wide standards will deliver productivity gains.

REPUTATION

Collectively we attract more by building an industry reputation for fostering career development and offering diverse opportunities.

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CASE STUDY

Mentorship & Communities of practice

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Orion Northpower

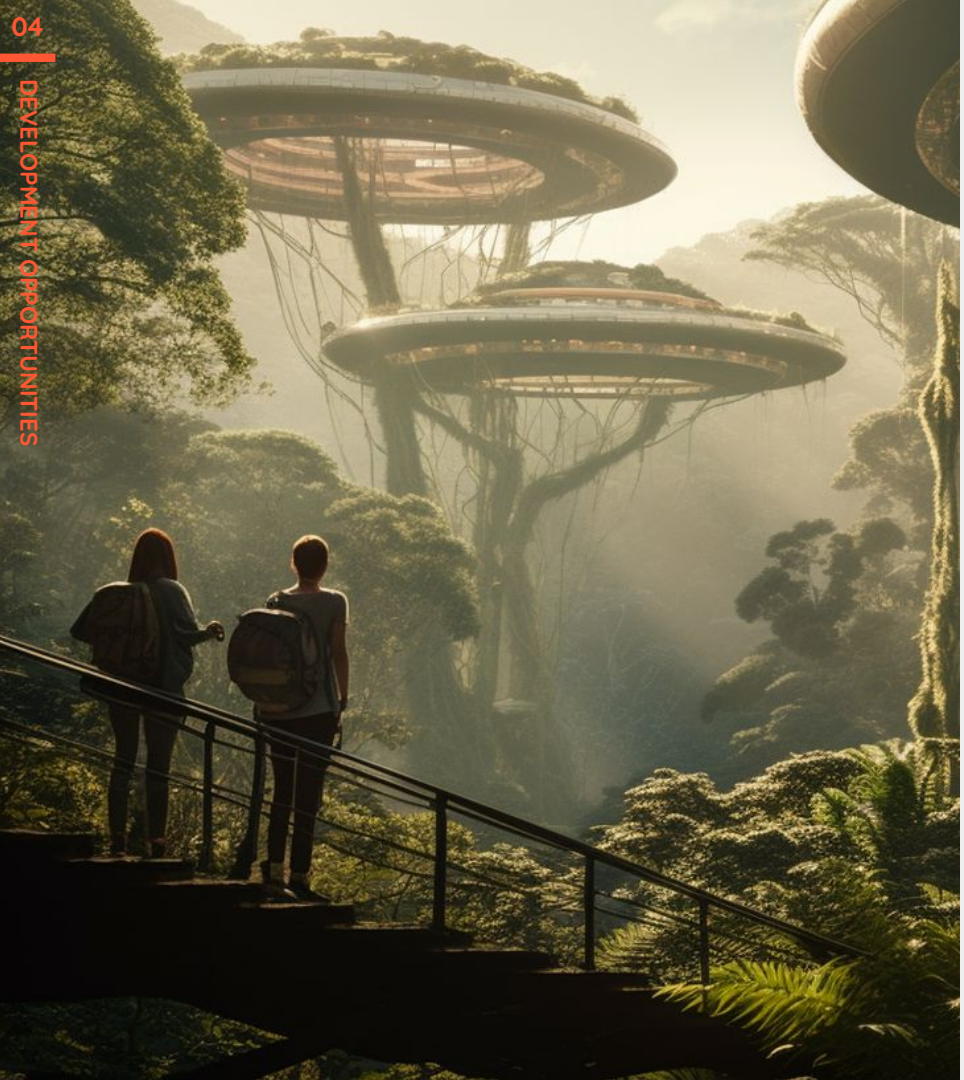
CASE STUDY:
GLOBAL ENERGY QUEST

THE CHALLENGE:

The path to decarbonisationn requires a collective effort and we need to instill innovation and transformation as skills to hone not just ideas of values to uphold.

THE OPPORTUNITY

To bring the sector together to collaborate on decarbonisation projects through mentorship, guidance and the integration of indigenous systems thinking.



PROFESSIONAL DEVELOPMENT

Participants unlock a number of transferable personal and professional skills including:

Project Management

Creating project plans, assessing risk + monitoring progression.

Cultural Growth

Broaden your cultural understanding of both Mātauranga Māori and First Nation Knowledge Systems through lectures from top experts.

Collaborative Thinking

Learning from and with peers in both a remote and in-person environment..

Public Speaking

Presenting + educating industry professionals through an in-depth pitch.

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QUEST OVERVIEW

What is the Global Energy Quest?

A collaborative programme designed to provide development opportunities for people at all stages of their professional journey to develop their innovation capability.

It's a nine-week programme, where participants will connect, research and form visionary ideas.

Guided by **mentors**, teams of three collaborate on a challenge and pitch their ideas.

CONNECT

- Establish team
- Meet Energy Academy support team
- Course induction
- Set personal + professional goals

LEARN

- Delegate roles within your team + self-reflect
- Research the challenge + conduct interviews
- Attend lectures from subject experts
- Choose mentor

UNLEARN

- Explore different solutions
- Refine focus into an actionable problem statement

RELEARN

- Evaluate the impact
- Summarise the challenge + solution
- Create + deliver pitch

STRUCTURE + ROLES

The course structure (left) will be covered over 9-weeks.

Each participant will have the opportunity to collaboratively explore, contribute and learn.

Within each team there will be three key role focus points:

Delivery: coordination of time, team + workflow, agile learning, identifying opportunities

Consensus: data contextualisation, problem solving, evidence + research

Storytelling: creativity, innovation, imagination, audience connection, effective communication, human-centred thinking

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WINNERS FROM GEQ 2023

From 35 teams and 31 countries

‘POWERPLAYS’

Challenge Statement: **“**How might we empower industry participants to effectively communicate with one another to collectively manage peak demand on the network?”

Solution: Powerplays - a platform which encourages electricity prosumers to adjust their electricity consumption during periods of peak demand through targeted touchpoints.

Team Members: Sophie Burgess (NZ), Justene Urry (NZ), Birendra Grewal (NZ), Andy Hislop (NZ)

Team Mentor: Keith Scoles - Orion NZ Ltd (NZ)

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PARTICIPANT FEEDBACK

“Fantastic platform for us to collaborate and communicate all over the world.”

“It expanded my thinking about the industry and developed my group project skills.”

“Along the way, you will learn valuable skills that equip you in your professional journey and help make a positive impact in the world.”

“An amazing collaborative platform that helped me get started on my sustainability projects with an enriching experience”

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2024 CHALLENGE

"How might Mātauranga Māori and other First Nations knowledge systems navigate our journey towards decarbonisation?"

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FACILITATOR: JANELLE RIKI-WAAKA

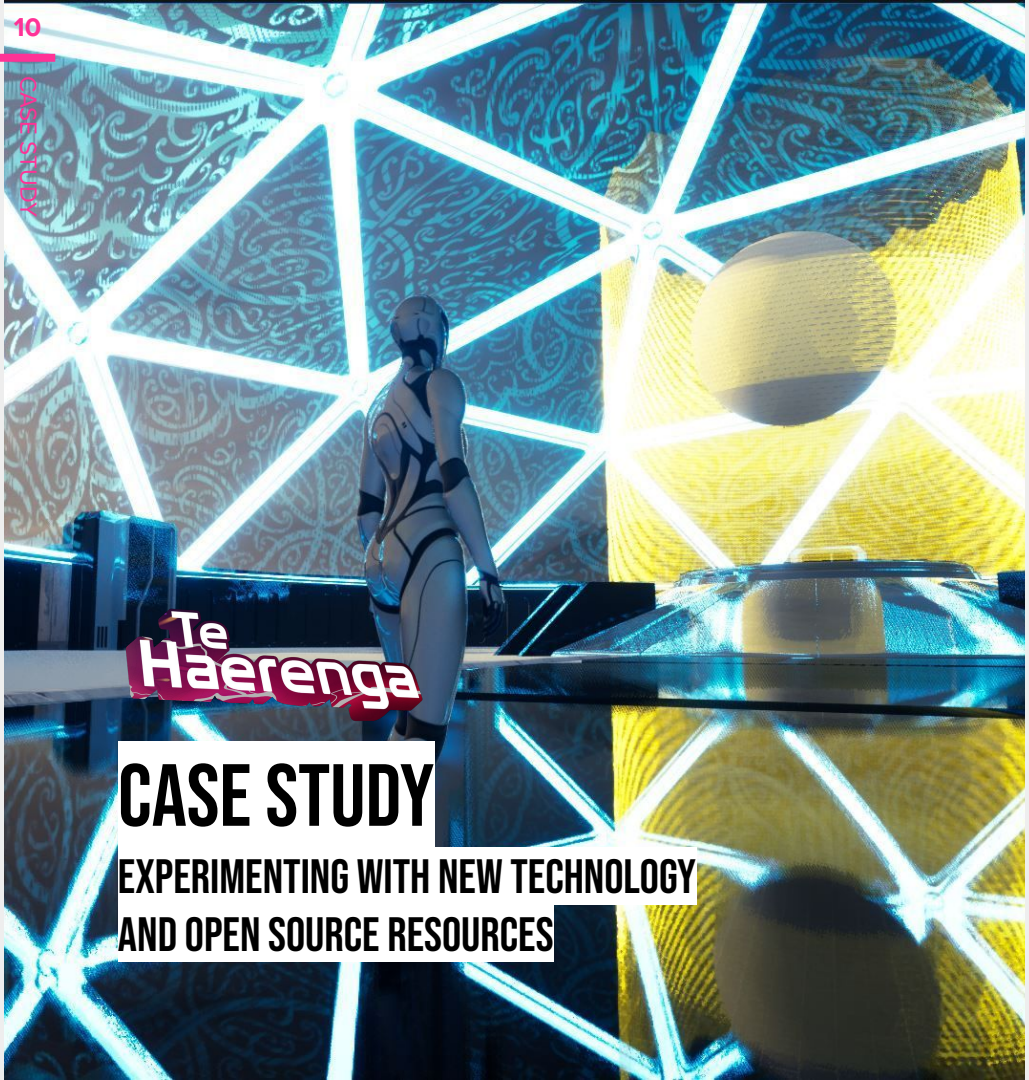
Kaiwhakahaere (Director)

Janelle is a highly experienced leader and consultant specialising in the development of cultural competencies, Te Tiriti o Waitangi education and digital technologies.

With more than 20 years experience, Janelle has become highly regarded in these fields and is often sought after to support the professional learning journeys of educational contexts, corporate organisations and government entities.

We are very excited to have Janelle facilitating our 2024 Global Energy Quest.

Iwi Affiliations: Tainui Awhiro, Ngāti Hauiti



THE CHALLENGE:

Rangatahi Māori have a limited understanding of the electricity sector in general, and little to no understanding of the range of career pathways.

Ngā mahi a Māui - Re-Energise research
Waihanga Ara Rau commissioned

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THE OPPORTUNITY:

How might we engage rangatahi to learn about Aotearoa's energy systems through gaming?

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THE EXPERIMENT

Te Haerenga is an immersive digital gaming experience that enables rangatahi to embark on ‘quests’ to learn about Aoteroa’s energy systems.

Gamers learn from Atua to re-build energy sources for their communities in sustainable ways.

Te Haerenga

THE OUTCOME

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Gamers learn from Atua to re-build energy sources for their communities in sustainable ways.

Te Haerenga

IN SUMMARY

Increase the talent pool

SHARED CHALLENGES

Our sector is facing workforce challenges and the future is bringing with it new complexities.

OPPORTUNITY

There is an opportunity to work together to:

Build capability in new ways and,

Collectively attract the new workforce.

OUR EXPERIMENTS

Building skills architecture that is open source.

Attracting the new workforce using technology and gaming.

Providing collaborative mentorship opportunities.

Nurturing a community of workers.

THE APPROACH

Collaborative communities of practice.

Mentorship.

Experimenting with new technology.

Open source projects.

Engaging future workforce young.

OUTCOMES

Increase industry resilience

Increase productivity

Mobilise the workforce

Enhance industry reputation

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