



IDDs Tairāwhiti 2025

MITD-Lab
designing for a more equitable world



Waipapa
Taumata Rau
**University
of Auckland**



About IDDS Tairawhiti

IDDS Tairawhiti 2025, was a 3-week hands on summit that was held in Tolaga Bay, with community-based projects in Tolaga Bay, Ruatoria, Mahia, Te Reinga and Hicks Bay. The theme of the summit was “Resilient Indigenous Communities and sought to promote indigenous innovations and entrepreneurship. It ran from September 1st to September 20th and had participants from 8 countries.

IDDS Tairawhiti was once again hosted by the Tolaga Bay Heritage Charitable Trust (TBHCT) with support from IDIN, the Eastern Institute of Technology (EIT), MIT D-Lab, These Hands GSSE, University of Auckland, Uniservices, Hauiti Marae, Tolaga Bay Surf Life Saving Club, TAKT, Taiki E!, Rimuroa-Mangapoike Trust, Taniwha Connections, The Aunty's Kitchen and Uawa Rugby Club.



Overview



The Goal

The goal of the summit was to upskill and connect local Māori community innovators with other indigenous change-makers, innovators, designers, sector specialists, faculty and students, and to tap into a variety of indigenous knowledge systems. The summit drew on the IDDS philosophy of co-creating with others to develop solutions to improve the lives and livelihoods of people in the Tairāwhiti and Wairoa region.

About IDDS

The International Development Design Summit (IDDS) was co-founded by MacArthur Grant Genius Amy Smith and Kendra Leith of MIT, Professor Ken Pickar of CalTech and Professor Benjamin Linder and Laura Stupin of Olin College of Engineering. The first IDDS was held in 2007 at MIT D-Lab and there have been more than twenty summits in 15 different countries since then.

IDDS summits are multi-week, hands-on immersive experiences that bring together people from all walks of life to work with local participants to address community-based challenges. IDDS Tairāwhiti 2025 is the second IDDS to be held in Aotearoa (New Zealand) – the first one was held in 2024. The summit included hands-on activities, practical examples, design process exercises, sketch modelling, community engagement, Maori business canvas and a lot of co-creation and camaraderie



The Summit

- Introduction to the Design Process
- Design Challenges
- Build Its
- Information Gathering
- Problem Framing
- Field & Community Visits
- Idea Generation
- Sketch Modelling
- Field & Community Reviews
- Prototyping
- Solution Refinement
- Community Showcases
- Costing the technology
- Maori Business Canvas
- Continuity Planning



The Participants

New Zealand

Kenya

27 Participants and 8 facilitators
43% Females and 57% Males

USA

Botswana

Colombia

Bhutan

Uganda

India



The Projects



How might we design a **low-cost, human-operated tool** to support harakeke weavers in **cutting, stripping, and fibre extraction**, while **honouring traditional methods and cultural values**?



How might we design a **low-cost, portable, smokeless charcoal briquette cook stove** that meets the everyday cooking needs of Ruatoria whānau (families or households) while being efficient, safe, and easy to use?



How might we design a **low-cost, non-chemical, easy to use** that enables rural landowners, farmers, or community groups to **effectively manage and reduce blackberry infestations** in a sustainable way?



How might we design a **low-cost, human-powered karamu berry seed extractor** that is **easy to use, clean, and maintain**, enabling whānau (families or households), local growers, and micro-enterprises to efficiently process berries in Tolaga Bay?



How might we design a **low-cost, community-friendly technology** for communities or enterprises to **repurpose crushed glass waste into useful products or raw materials**, adding both **economic and environmental value**?



How might we design a low-cost, human-powered precision planter that helps small-scale growers in Māhia plant seeds accurately, quickly, and comfortably across a variety of soil types?



Project: Flax Extraction Technology



Tiffany Chan (USA), Jessie Thatcher (Uawa), Tracey Whaanga (Mahia), Karanga Te Ataahaea Marsh (Uawa), & Rogers Muduku (Uganda)



Currently, Māori weavers extract muka (flax fibre) using kutai shells, which is hard on the hands and time consuming. Weavers harvest thousands of leaves to get the fibre needed to produce their crafts, such as a korowai (cloak) or piu piu (skirt). We have created a tool that is fast, portable and easy to use reducing the laborious process. Using our tool, weavers can spend more time designing and weaving, which supports their ability to create and earn a better income. Our hope is to increase participation in arts and culture and that more Māori communities can carry on the tradition of weaving with muka.



Project: Berry Extraction Technology



Karamu is a native plant that is used for riverbank conservation along the East Coast of New Zealand. Awa Kawhe is a social enterprise that uses the Karamu seeds for making coffee and other healthy products. We are developing a technology that will efficiently and quickly extract the Karamu seeds from the berry to supply coffee shops with a healthier and environmentally friendly product, while providing local jobs, supporting small producers and enhancing riverside restoration efforts.



Fahad Raazi - India, Kenneth Griffith - Tolaga Bay, Amy Smith - U.S.A, Mere Tamanui - Tolaga Bay, Mary Morris - Tolaga Bay, Marylee Smyth - Tolaga Bay,



Project: Charcoal Stove For Households



Agaba Davis – Uganda, Tara Devi Giri – Bhutan,
Arapeta Beach – Ruatoria, Ana Trujillo – Colombia,
Ngahina Chase - Tolaga Bay



Gas and electricity for cooking can be a challenge to access for those living in off-grid areas. There was a need for a cookstove that uses briquettes that are already being produced by 'Slash For Cash'. The Ringa Wera team is introducing a portable, multipurpose cookstove to tackle the cooking challenges faced by East Coast community members staying in the off-grid areas. Our cookstove that empowers whanau while protecting the environment through the use of sustainable briquettes which are smokeless compared to firewood .
A solution for clean cooking, anywhere—at home or outdoors.



Project: Glass Products Making Technology



Glass waste has long been a burden in the East Coast - piling up in landfills, on roadsides, and backyards, threatening the environment while offering no value to the community. **BottomsUp** is transforming this challenge into an opportunity. By collecting and crushing used glass, we are turning waste into valuable products like durable pavers and tiles for maraes, homes and businesses along with reflective materials, glass (sand) bags, road mix, garden mulch and artisan crafts that fuel local enterprise. This community-led model creates green jobs for young people, new livelihoods for families and pride for households and community. What was once a hazard is a source of value - strengthening the economy while protecting the environment. **BottomsUp** hopes to make the region a showcase for Aotearoa and the world and proof that rural communities can flip waste into wealth and create a replicable model for others to follow.



Tawhai Kururangi - Potaka, **Whaia** McClutchie - Tuparoa, **Arapeta** Reedy - Wharekahika, **Wipere** McGibbon - Tuparoa, **Nicodemus** Barkard - D'kar, Botswana, **Swaraj** Priyadarshi - India and all wonderful **community** members



Project: Blackberry Bush Extracting Tools



In Tairāwhiti and Wairoa, extensive areas of land are unproductive due to invasive wild blackberry bushes. Team Paratini Tei Tei and the Te Reinga community have partnered to tackle this issue by co-creating simple, innovative, and locally made hand tools. These tools empower farmers and landowners to easily remove the thorny bushes and regenerate their whenua.



Clarah Millicent Onyango - Kenya, Pace Lewis - Te Reinga, Whitu Mikara - Wairoa, Abby Roberts - Uawa, Navarone Walker - Uawa, Thabiso Mashaba - Botswana, Azra Lewis - Te Reinga



Project: Seed Planter Tools



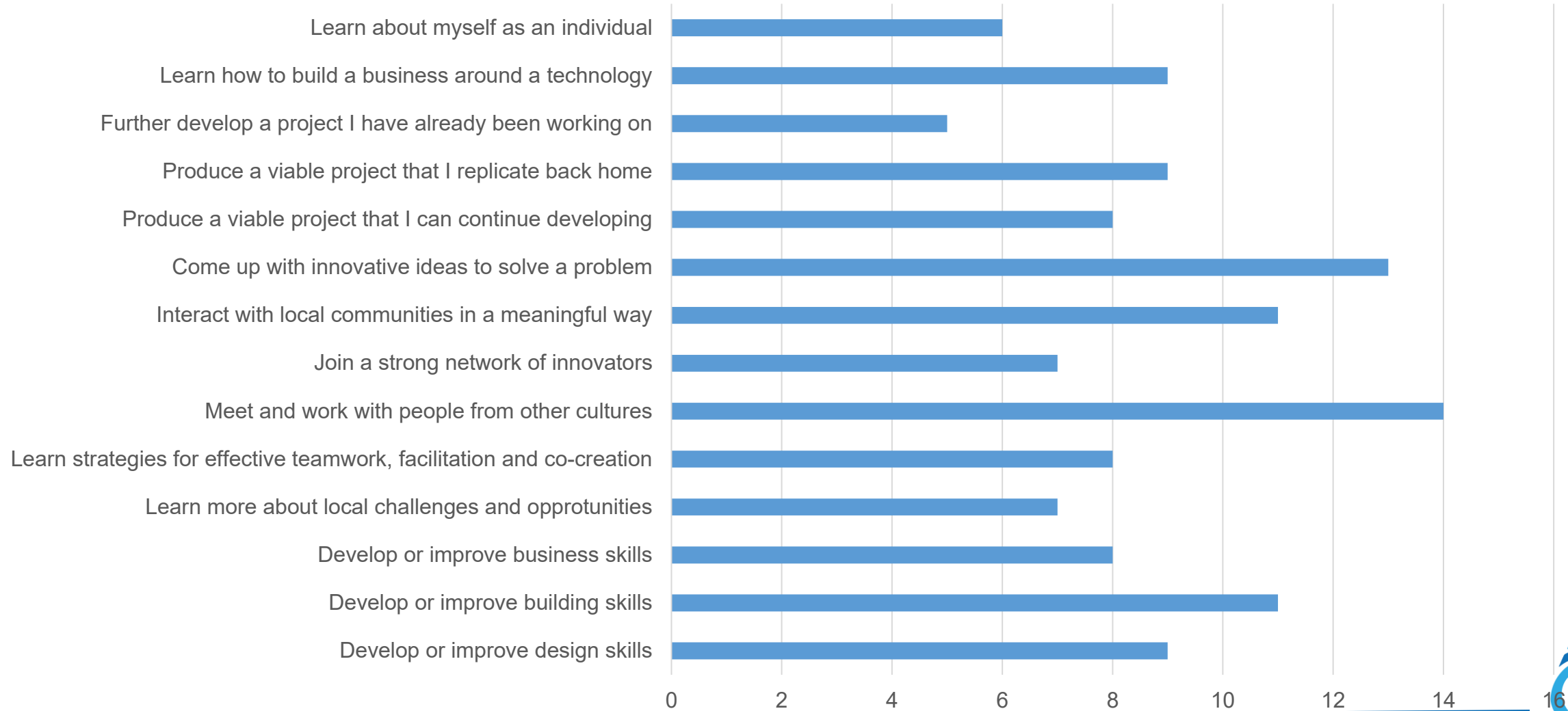
Melanie Chan - U.S.A, Penelope Whaanga - Aotearoa,
Teena Hurinui - Mahia Aotearoa, Todd Cuttance - Aotearoa,
Faith Kathoka - Kenya



In Mahia, many community members have access to land and desire to grow food guided by the maramataka, however, the physical demands of planting and soil preparation present challenges. To address this, we designed a portable, low-cost, multi-use tool that eases weeding, planting, and soil preparation, making gardening more accessible for people of all ages and abilities. Intended for use in household gardens, hillside terraces, community gardens, and gardens at Maraes or schools, the tool supports food production, encourages community gardening as a social hub, and helps reclaim and celebrate indigenous knowledge of land, environment, and cultivation—strengthening pathways toward self-sustaining communities.



Participants' Goal for the Summit



Quote

I want to learn about facilitation of co-creation. I am also very interested on how to build social businesses with communities.

~Ana, Colombia~



Quote

I am a graphic designer and want to learn more about designing beyond a screen, for communities and real meaningful applications.

~Tiffany, USA ~



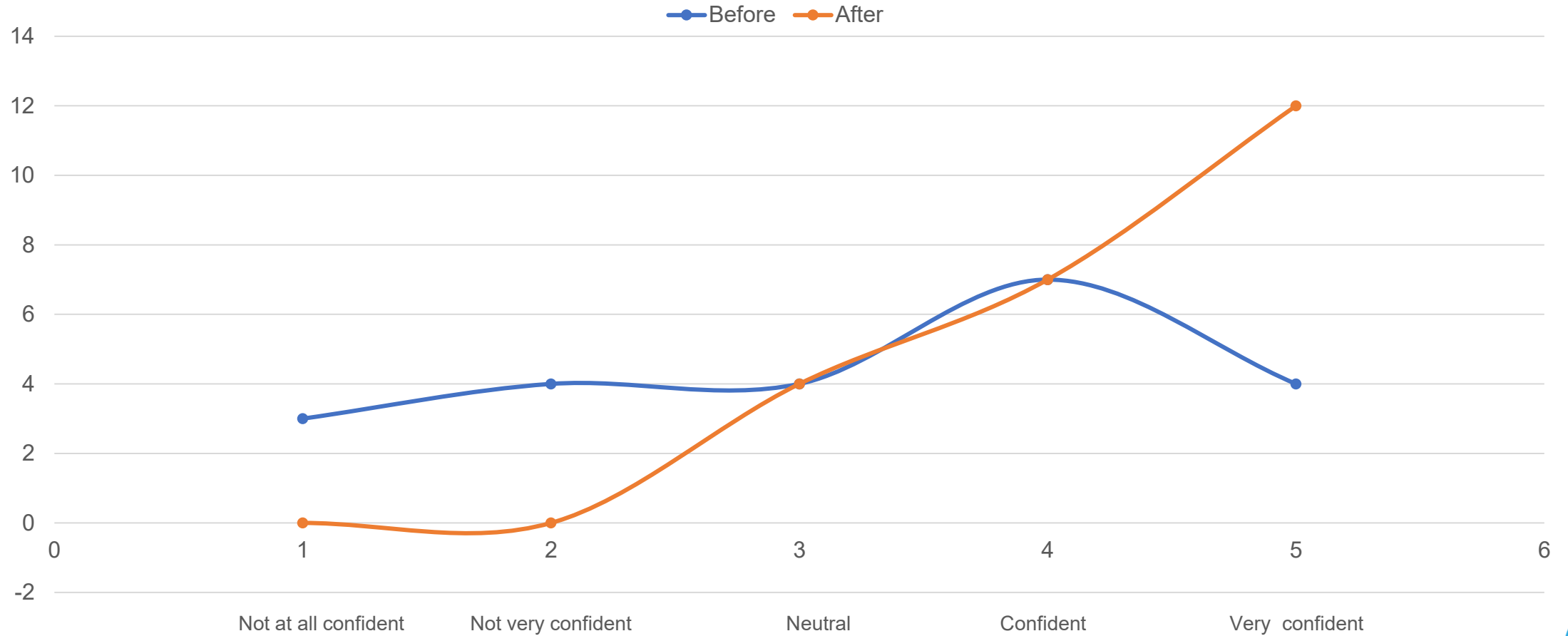
Quote

Once I'm back from this wonderful learning journey, that would help me experiment on things with better confidence, and especially utilise this learnings and skills for improvising the design process in the works project DEFY do and I'm also involving personally. Also to try build things in terms of scale and sustainability.

~Fahad, India ~

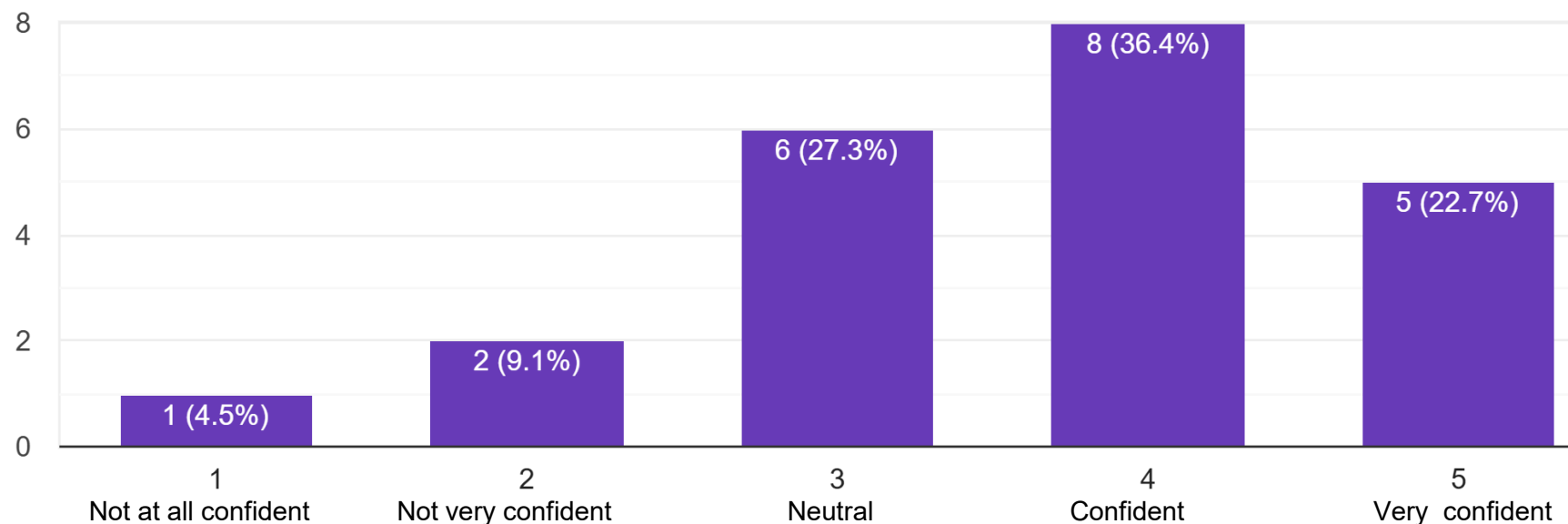


Using the design process to solve problems

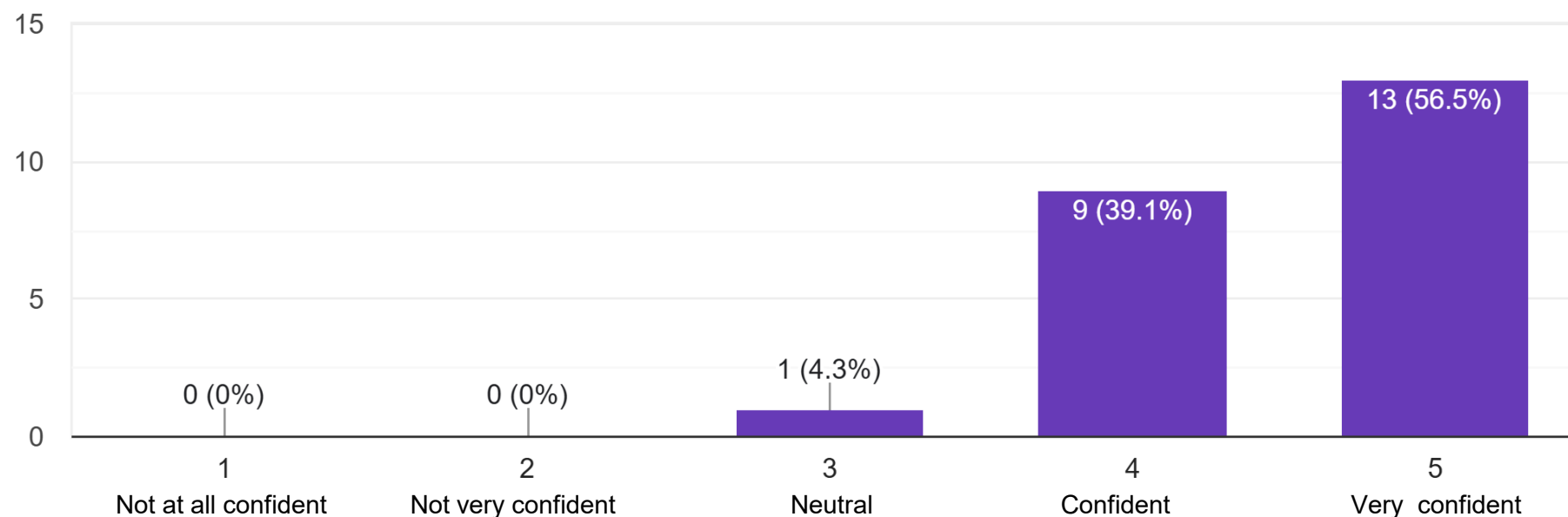


Confidence Level on Co-Creation

Before the Summit

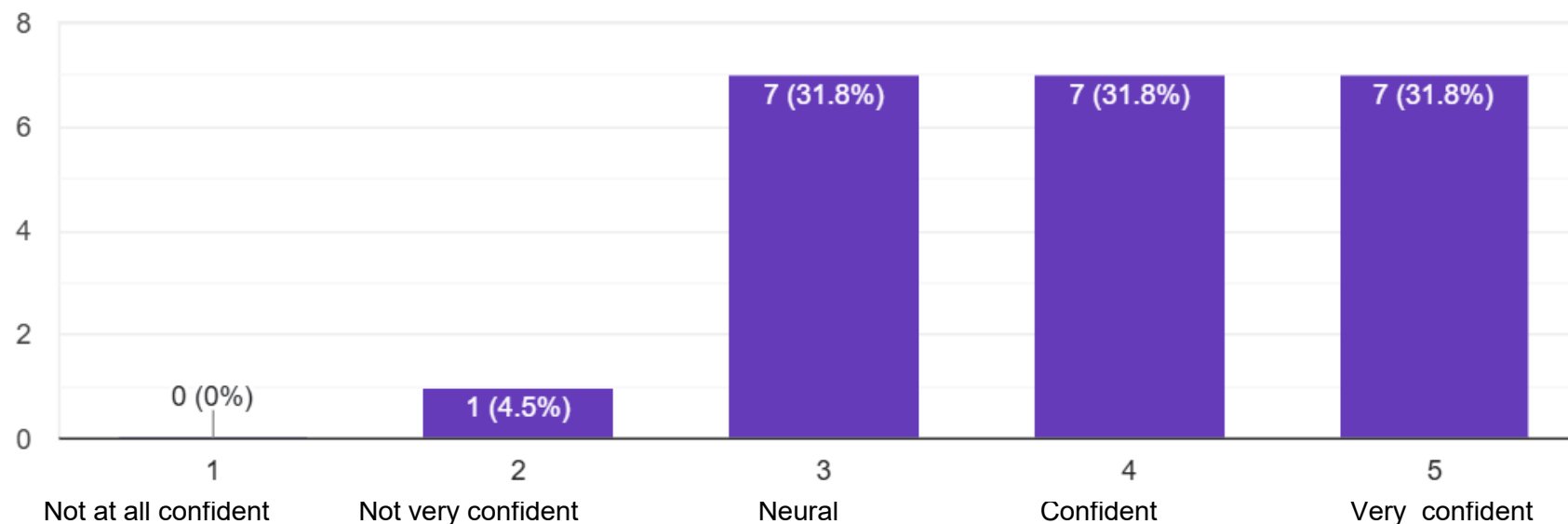


After the Summit

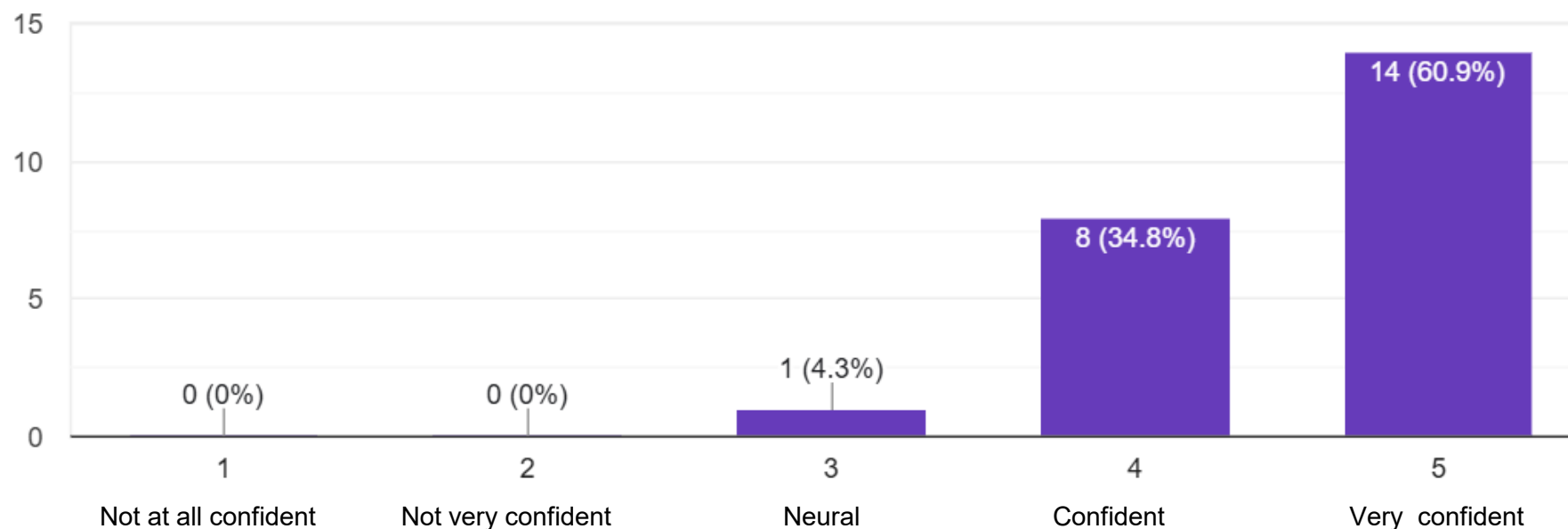


Confidence Level on working in diverse teams

Before the Summit



After the Summit



Skills Gained

I learnt a lot regarding design process and entrepreneurial skill and lot of livelihood and life skills like using simple tools and machines, team spirit and soft skills required to work on a team and designing things involving community to make it appropriate and useful.

To design and build sketch models, To design, build and iterate prototype from feedbacks, To work in a team with diversity, To ideate and strategize a business opportunity from a problem, and to do wood and metal work more confidently

I reckon being comfortable with being uncomfortable and the design circle stuff.

Sharpen up the skills I have

Problem Solving & Presentation Skills

How to weld and put in ideas into life whilst working as a team.

Major hard skills like working with several tools, important perspectives on the Maori communities, strengthened the muscle to find more commonalities among people across the planet than differences

Business skills, designing skills framing problems and finding solutions.

Resilience, dealing with differences, communication styles.

Listening skills, Creative things, problem-solving

speaking, learning, listening

Wood works metal works

I learnt new ways to plan and structure projects

Working with others towards a common goal. Team building skills, always lifting each other up. Learnt a lot about our product and where it can benefit us in the long run. Made a device from an idea to help improve a situation. Learning how business works. Learning, whilst pushing yourself out of your own comfort zones.

A lot from each project & using tools

Confidence, welding, team player

Business skills, and knowledge

Communication, Patience, Humble/Faith and too Participation and I can Weld use the Tools and make a Gardening Tool.

Welding, Team work and using an Angle grinder

Designing and working with the tools and problem solving



The Prototypes



Karamu seed extractor



Flax extraction tool



The Prototypes



Charcoal stove for households



Multiple glass products making moulds



The Prototypes



Black berry bushes extraction tools



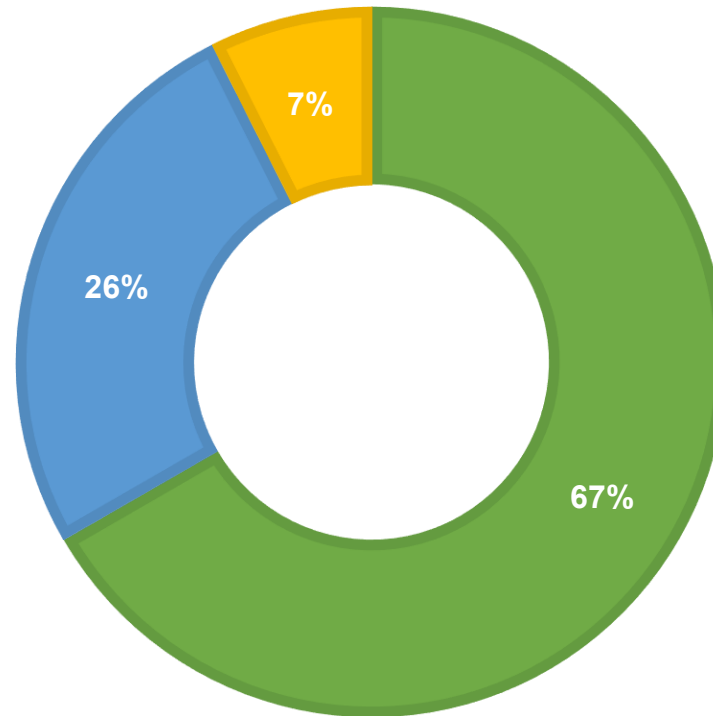
Interchangeable heads for planting tools



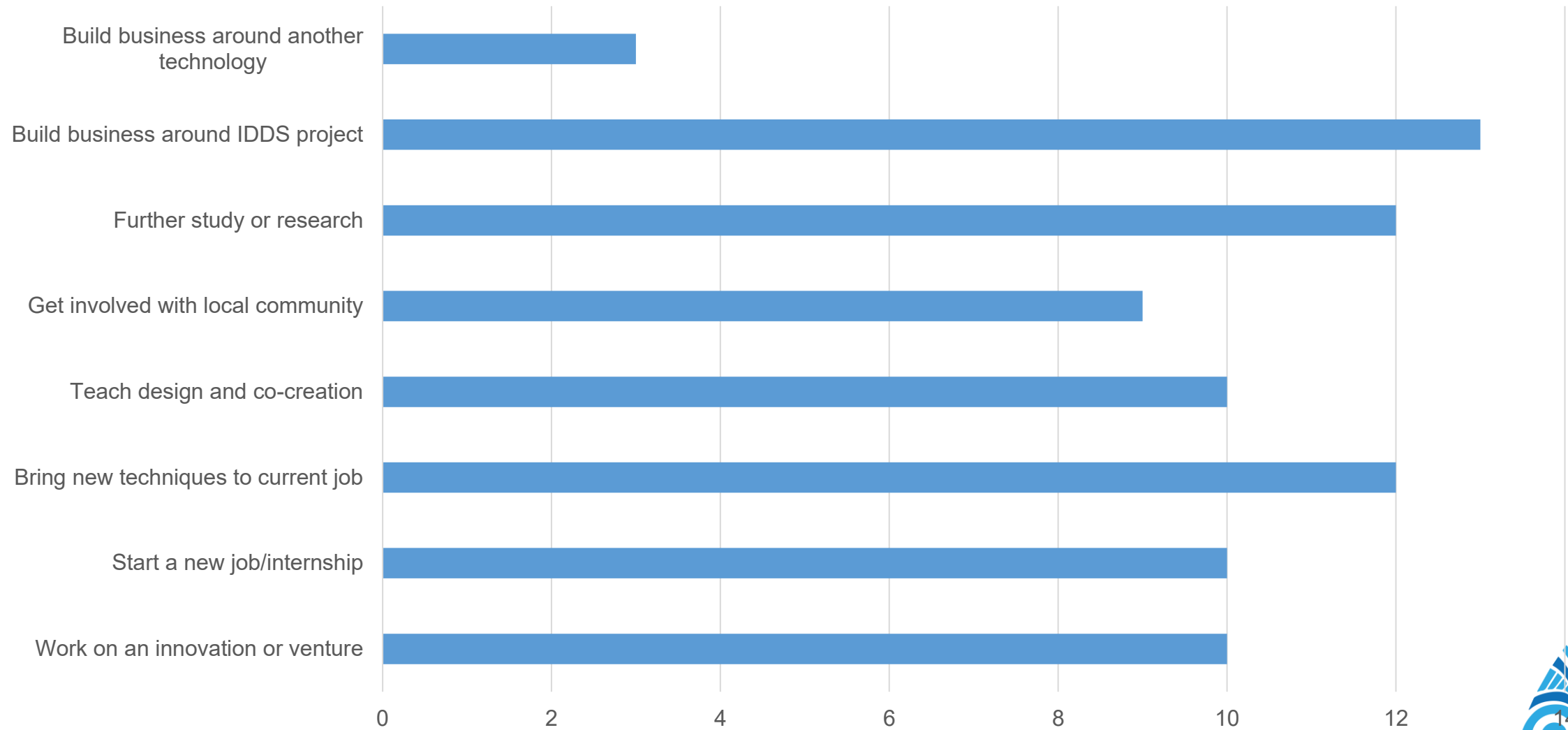
Project Continuity

INVOLVEMENT WITH THE PROJECT AFTER IDDS

■ Continue actively developing the project ■ Stay in touch but not work on it directly ■ No plans to continue with the project

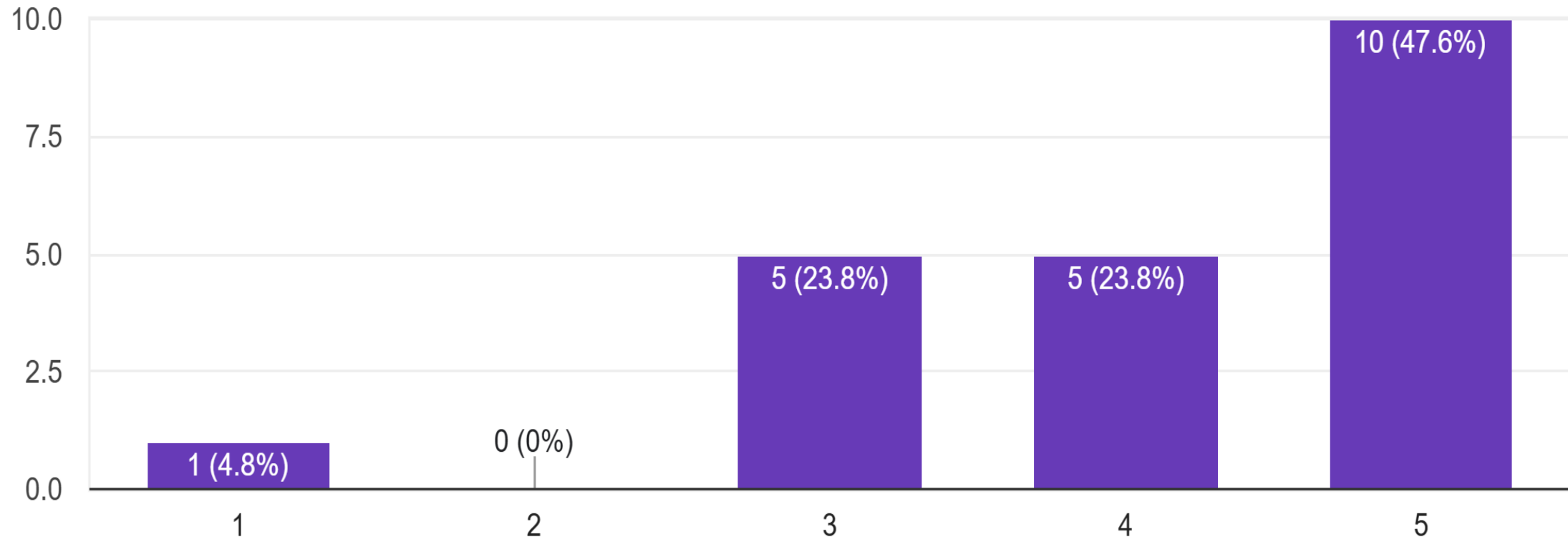


Primary Goal 12 Months After IDDS



Usefulness of the Maori Business Canvas

1. Very poor 2. Poor 3. Fair 4. Good 5. Very good



Quote

I know...that what I learnt
contributes to my future
business I've been planning
the past couple years

~Pace, New Zealand~



Quote

We were treated with nothing but graciousness and kindness. They have conducted themselves in a professional manner, and treated us all with dignity and respect. Before you knew it, we were doing things we thought we could never do. Its been a truly amazing journey, getting to work with others from around the world and from our own little slice of heaven. I think it was all perfect

~Mary, New Zealand~



Quote

That our cookstove idea flourishes and creates maybe an ongoing course with hopes of leading into creating jobs for our communities in the Tairawhiti region

~Ngahina, Aotearoa~





Quote

Really enjoyed it as a whole, positive attitudes and fellow participants...Working gardening equipment into 'Slash 4 Cash' (Same retailers, same customers)

~Todd, Mahia~



Quote

Yes! by stepping outside my range of mixing and mingling with people from round the world and Tologa Bay while working on solutions for the community thank you the IDDS organizers

~Navarone, Aotearoa~

Quote

My plan is to build a business, after I leave
IDDS with the knowledge.

~Teena, Aotearoa ~



Quote

Yeah, going through this entire process was a journey of realization that, certain things that we think are difficult can be possible when you work in a team of diverse group where each people bring different things to possible. Also, a very important perspective I'm taking away is that, working on a problem and building solution should not always be just serious, but it should be equally fun too. Also the connection with people can make magic happen.

-Fahad, India ~





Quote

I highly enjoyed being in the community and doing something to help the community. I look forward to get my two projects up and running.

~Whitu, Aotearoa~

Quote

The community and family is important to me. I would like to teach them and we create a business around our technology.

~Tracey, New Zealand~





Quote

Yes, I learned to believe in myself
that I am and have people skills

~Penelope, New Zealand~

Quote

IDDS, I can honestly say it was one of the most intense yet fulfilling experiences I've ever had. What truly stood out for our team was the welcoming environment that allowed us to explore ideas together. We may have started as strangers, but the shared purpose and our interactions as a community helped us forge meaningful connections.

~Clarah, Kenya~





Quote

I reckon everything tied in together real well from theory into practical to hands on mahi. The facilitator selection was good for our crew.

~IDDS Participant, Tairawhiti 2025 ~



Quote

Yes a lot. No work or skill is big or small ..no idea or thought are big or small ...if the ideas and skills though small have the capacity to make the impact in the community and the people

~Tara, Bhutan~

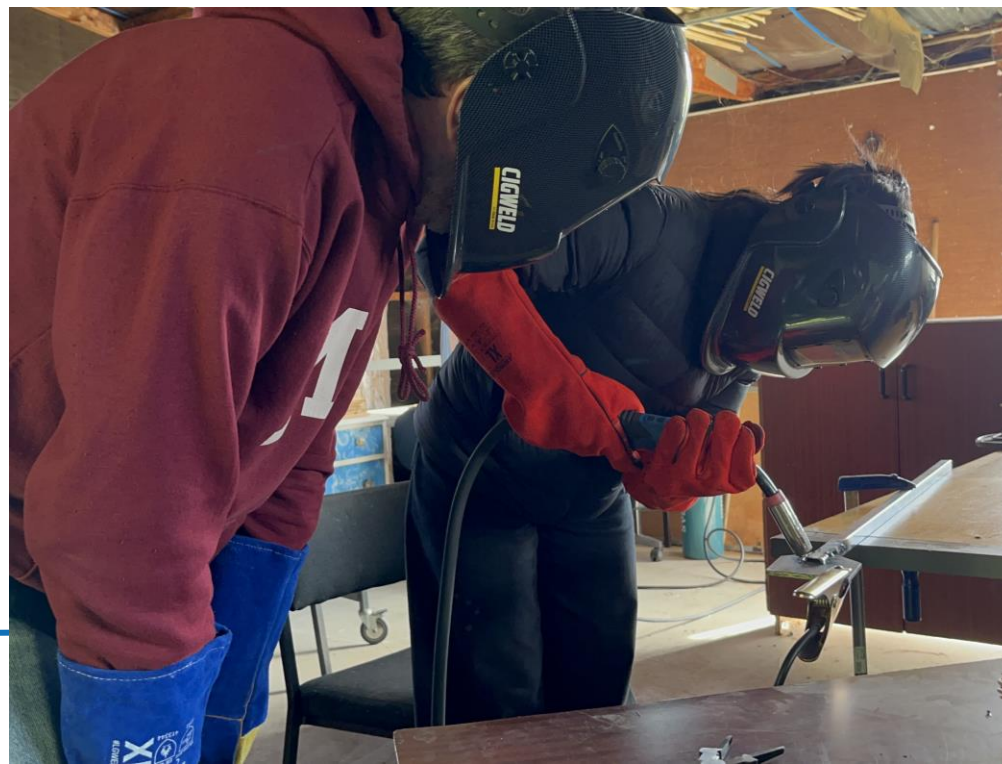


Quote

Major hard skills like working with several tools, important perspectives on the Maori communities, strengthened the muscle to find more commonalities among people across the planet than differences.

~Swaraj, India~





NGA MIHI



