

WOMEN'S ENTREPRENEURSHIP IN DIGITALLY DELIVERED SERVICES-ORIENTED START-UPS: CASE STUDIES OF SUCCESS IN APEC

Prepared for the APEC GOS-PPWE project

**“Enhancing Women's Economic Empowerment
in APEC through Greater Participation in High
Skill Digitally Delivered Services”**

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

This study, carried out for the APEC Group on Services (GOS) and the APEC Policy Partnership for Women and the Economy (PPWE), demonstrates that closing the gender gap in digitally delivered services (DDS)—the fastest-growing segment of APEC’s trade and employment—is both an economic and strategic necessity. Women remain under-represented in high-skill, digitally intensive sectors such as ICT, financial, and professional services, and continue to face systemic barriers, including unequal access to STEM education, limited digital and managerial skills, along with persistent biases in finance, workplace culture, and AI development. The underutilisation of women in these economic roles costs APEC economies an estimated USD 17 trillion in lost output, while full gender equality remains decades away. Yet, evidence from fifteen women-led start-ups across eleven economies confirms that when women gain equal access to technology, capital, and supportive ecosystems, they build globally competitive and socially impactful enterprises.

To realise this untapped potential, APEC economies should act on eight fronts: (1) bridge the digital and skills divide through gender-responsive training; (2) expand women’s participation in STEM; (3) tackle cultural and workplace barriers; (4) improve access to finance through inclusive and blended models; (5) streamline digital-trade regulation and embed gender-responsive provisions that address women’s specific needs in trade agreements; (6) promote women’s career advancement and leadership; (7) ensure inclusive, bias-free AI development; and (8) strengthen ecosystem and institutional support for women-led innovation. Cross-cutting priorities include improving sex-disaggregated data, advancing digital policies that promote gender equality across APEC’s agendas, and deepening cooperation to monitor progress under the La Serena Roadmap. The overarching message is clear: digitalisation can be a powerful equaliser—if women are enabled to participate fully as professionals, innovators, and entrepreneurs.

Main Messages and Recommendations

This in-depth three-part study examined quantitative evidence, private-sector perspectives, and firm-level case studies to understand how digitalisation—and especially trade in **digitally delivered services (DDS)**—is reshaping women’s economic participation across APEC economies. Together, the findings underscore both the **scale of the opportunity** and the **depth of the remaining barriers** to women’s full participation and leadership in high-skill, digitally-intensive services sectors.

Main Messages

1. **The gender gap continues to constrain APEC’s economic potential.**
Persistent disparities in women’s economic participation, leadership, and pay

represent unrealised output estimated at USD 17 trillion. At the current pace, full parity will not be achieved for more than eight decades. Bridging this gap is not only a social imperative but an economic necessity for the APEC region.

2. **Digitally delivered services are the fastest-growing engine of APEC trade and employment.**

DDS exports have more than tripled since 2005 and now account for over 40 per cent of total commercial-services trade. The most dynamic subsectors—**ICT, financial, and professional services**—are also those requiring the highest skill levels. Strategies for inclusive growth must target women's access to, and advancement within, these sectors. However, the lack of existing and comparable sex-disaggregated statistics at both the economy and regional levels in APEC creates a challenge to both fully understand the current gender disparities in these areas and to track evolution of women's participation in DDS sectors over time.

3. **Women remain under-represented in digitally intensive, high-value activities.**

Women occupy fewer management and professional roles in high-skill services and are less likely to found or lead firms in digital or AI-linked sectors. Fewer than one-third of STEM graduates in APEC are women, and women account for only about 22 per cent of AI professionals globally.

4. **Women-led digital and AI start-ups are proving that they can succeed in these high-skilled services sectors and that inclusive innovation works well.**

Case studies of 15 women-led start-ups across 11 APEC economies show that women entrepreneurs are building globally oriented, socially motivated, and technologically advanced firms. Their success, however, is heavily dependent on access to finance, networks, accelerators, and enabling regulation. When such support is present, women-founded firms match or outperform male-led peers in revenue growth, inclusion outcomes, and export diversification.

5. **Barriers to women's success and participation in high-skill, digitally delivered services are structural and mutually reinforcing.** Evidence from the research identifies seven main interlocking barriers that limit women's participation and advancement:

- **Skills mismatch and digital divide** – unequal access to training, infrastructure, and reskilling opportunities.
- **STEM education gap** – insufficient pipeline of women with STEM and digital-tech qualifications.

- **Cultural and attitudinal barriers** – social stereotypes based on gender, unpaid-care burdens, and bias in workplace norms.
- **Finance barriers** – limited access to venture, angel, or institutional capital for women-led firms.
- **Regulatory barriers to digital trade** – complex compliance requirements, weak interoperability, and limited women-responsive provisions in trade agreements.
- **Barriers to career advancement and leadership** – glass-ceiling effects and lack of mentorship.
- **Bias in AI design and deployment** – algorithmic discrimination and male-dominated innovation ecosystems.

Recommendations

The following recommendations propose targeted policy measures APEC economies can adopt to address each barrier identified in the study. They align with the *La Serena Roadmap for Women and Inclusive Growth* and the *APEC Internet and Digital Economy Roadmap*.

1. Bridging the Skills Mismatch and Digital Divide

- Integrate **gender-specific targets** in domestic digital-skills and workforce-reskilling strategies.
- Establish **public–private training partnerships** offering subsidised online and in-person digital-literacy and cybersecurity programmes for women, particularly in MSMEs and rural areas.
- Link eligibility for innovation or export grants to evidence of **inclusive workforce development** and equal training access.

2. Expanding Women’s Participation in STEM and Advanced Technical Education

- Create **scholarships, apprenticeships, and internships** for women in AI, data science, software engineering, and related fields.
- Embed **gender-responsive STEM curricula** in early and secondary education to counter pipeline attrition.
- Develop **APEC-wide indicators** tracking women’s participation in STEM, R&D, and advanced digital training.

3. Tackling Cultural and Attitudinal Barriers

- Introduce or strengthen **family-friendly labour-market policies**—paid parental leave, flexible work arrangements, and affordable childcare—to mitigate the child-penalty effect.
- Launch **public awareness campaigns** and professional-network initiatives promoting women in technology and entrepreneurship.
- Require **non-discrimination audits** and equal-opportunity policies in firms participating in government-supported digital-economy programmes.

4. Expanding Access to Finance for Women-Led Digital Firms

- Develop **gender-responsive blended-finance instruments** (grant → convertible loan → equity) specifically designed to help women-founded firms scale sustainably.
- Support the creation of **women-focused venture-capital and angel-investment networks**, with tax incentives for funds that prioritize gender-diverse portfolios.
- Encourage use of **inclusive fintech solutions**—for example, alternative credit-scoring methods using non-traditional data—to widen women’s access to financial services.
- Provide **long-term financing** for inclusive innovation hubs, incubators, and accelerators rather than for short-term projects.

5. Reducing Regulatory Barriers to Digital Trade

- Promote **mutual recognition of digital credentials and e-signatures** across APEC to simplify cross-border operations for SMEs.
- Harmonise **data-governance frameworks** to balance consumer protection with easier compliance for MSMEs.
- Establish **regulatory sandboxes and innovation testbeds** with reserved participation quotas or dedicated windows for women-led firms.
- Embed **gender-responsive language** and monitoring provisions in trade agreements and Digital Economy Partnership Arrangements (DEPAs).

6. Enabling Career Advancement and Leadership

- Require firms benefitting from public support to **report sex-disaggregated data on composition** at managerial and board levels.
- Support **structured mentorship and sponsorship programmes** linking senior women in digital services with emerging professionals.

- Introduce **regional recognition mechanisms** for women leaders and innovators in high-skill digitally delivered services.

7. Ensuring Gender-Inclusive AI Development and Application

- Conduct **gender equality impact assessments** of domestic AI strategies and major public-sector AI procurements.
- Fund **balanced research teams** and inclusive-AI incubators promoting diverse datasets and ethical-AI design.
- Adopt **APEC-wide guidelines** aligned with OECD and UNESCO principles to mitigate algorithmic bias and ensure transparency.

8. Strengthening Data Collection and Institutional Support at the Regional Level

- Mainstream **women-responsive indicators** into APEC's work on MSMEs, services competitiveness, and digital-trade policy.
- Facilitate **cross-economy peer learning** and exchanges of good practice.
- Strengthen **collection of sex-disaggregated data on employment, wages, trade in services, access to finance, and participation in AI and start-ups**, so as to create comparable standards of measurement for these sex-disaggregated statistics along with the ability to monitor progress under the *La Serena Roadmap*, and link to global initiatives at the WTO, OECD, and UN.
- Advance **joint capacity-building initiatives at the regional level** in the areas above that need progress.

WOMEN'S ENTREPRENEURSHIP IN DIGITALLY DELIVERED SERVICES-ORIENTED START-UPS: CASE STUDIES OF SUCCESS IN APEC

Introduction

This report complements the two prior components of the study on *Enhancing Women's Economic Empowerment in APEC through Greater Participation in High Skill Digitally Delivered Services* carried out for the APEC Group on Services and the APEC Policy Partnership for Women and the Economy (PPWE) in 2024 and 2025.¹ The research report titled “Analysis of the Participation of Women in High Skilled, Digitally Delivered Services in APEC and Current Challenges” analyzes the status of women’s participation in the most dynamic and fastest growing digital services sectors of APEC economies and explores why women are not reaching gender parity in economic opportunity and participation in these sectors. Report on “Private Sector Perspectives on the Participation of Women in High Skill, Digitally Delivered Service Sectors” presents a private sector perspective on the issues that may be holding women back in realizing this objective, both in acceding to high skill employment in digital service activities and in advancing to more senior levels along their career path.

This component of the study narrows in more specifically on the experience of women-led firms in digitally delivered and AI-linked sectors. Its objective is to explore the unique pathways, challenges, enablers, and outcomes for women-led start-ups in these key service sectors in APEC economies, given the importance of the digital economy and of AI development and application as part of the delivery of these digitally delivered, high-skill services.

In particular, women-led start-ups in high-skill service sectors are increasingly engaging with digital tools to build scalable, innovative, and responsive business models. While not all are developing AI applications themselves, many are integrating off-the-shelf AI tools and other digital enablers into their operations, products, or service delivery strategies.

Highlighting these experiences will allow for a better understanding of how the barriers and challenges set out and analysed in other components of the study have been addressed by women entrepreneurs who have been able to succeed as producers and often as exporters in the regional and international market. This understanding also contributes to the relevance and applicability of the recommendations that are put forward to APEC economies as part of this

¹ Three documents were prepared under the project “Enhancing Women’s Economic Empowerment in APEC through Greater Participation in High Skill Digitally Delivered Services”, carried out for the APEC GOS and the PPWE in 2024 and 2025, and supported by the Department of Foreign Affairs and Trade of Australia. The report “Analysis of the Participation of Women in High Skilled, Digitally Delivered Services in APEC and Current Challenges” was endorsed by the APEC Group of Services (GOS) as a component of the project. Another two reports (“Private Sector Perspectives on the Participation of Women in High Skill, Digitally Delivered Service Sectors”, and “Women’s Entrepreneurship in Digitally Delivered Services-Oriented Start-ups: Case Studies of Success in APEC”) have been issued under the names of the authors (Dr. Mia Mikic and Dr. Sherry Stephenson) and are available on the RMIT’s Australian APEC Study Center (<https://www.apec.org.au/women-and-trade-in-services>)

project to facilitate progress towards achievement of greater equality of economic opportunity and enhanced women's empowerment in line with the objectives of the *La Serena Roadmap*.

Section I. Methodology and case selection

This report focuses on women entrepreneurs in digitally delivered or AI-linked service sectors. As explained earlier in the other components of the study,² these sectors are those which are growing most rapidly, require high levels of skill and innovation, and increasingly serve as engines of economic transformation in the APEC region. These services are not only among the most dynamic in terms of trade and employment but also offer some of the highest wages and most scalable business models. They offer a greater opportunity to women to enhance their economic advancement and empowerment in a more sustainable and rapidly growing context over time.

The methodology consists of a set of 15 case studies on women-led start-ups from 11 APEC economies, selected to reflect broad geographic and sectoral representation:

- North Asia (China, Chinese Taipei, Japan)
- Southeast Asia (Indonesia, Singapore, the Philippines, Thailand)
- Pacific (Australia, New Zealand)
- Latin America (Chile, Peru)

Profiles of these companies are contained in Appendix 1. Each case study is informed by structured interviews guided by a common questionnaire (Appendix 2), which covers founder motivation and background, business model and digital enablers, financing and support networks, gendered perceptions and constraints, as well as market orientation and measurable outcomes.

A cross-case thematic synthesis compares the experiences of these women start-up entrepreneurs to identify common enablers, recurring challenges, and critical inflection points. These findings provide evidence for actionable policy recommendations and offer insights for further research on how to foster a more inclusive and dynamic digital entrepreneurship ecosystem in APEC.

Section II. Digital and AI tools as enablers in service-oriented start-ups in APEC

Digital tools and AI are proving especially valuable for services-oriented start-ups by lowering entry costs, expanding market access, and improving service quality. For women entrepreneurs, they may also help navigate constraints related to time, mobility, and access to traditional networks.

Common applications include:

² See details in the previous footnote.

- *Customer-facing automation*: AI chatbots, voice assistants, and customer relations management tools streamline client engagement and scale communication.
- *Process efficiency*: Cloud computing, Enterprise Resource Planning systems, and AI-driven analytics help small teams manage inventory, logistics, and workflows.
- *Personalization and predictive capabilities*: In sectors like edtech and fintech, algorithms tailor offerings based on user behaviour and data analysis.
- *New content creation and services*: Generative AI and digital design tools are lowering production costs in marketing, media, and creative sectors.
- *Remote service provision*: Platforms and apps allow for the delivery of services across borders without the need for physical presence.

Access to these tools—often offered as “software-as-a-service” (SaaS)—means that even micro-enterprises can adopt sophisticated technologies without in-house development capacity.

Despite the democratizing potential of digital tools, women remain underrepresented in digital entrepreneurship, especially in AI-intensive ventures. A recent OECD study examining start-ups acknowledges that women-led start-ups are underrepresented compared to men in global start-up ecosystems with a persistent gender gap in entrepreneurship and the need for targeted support.³ This is attributed to several factors, including difficulties in obtaining financing; lack of networks; regulatory challenges; skills and training inadequacies; cultural and societal norms; balancing professional with domestic responsibilities; and limited government support.

Research by the APEC Policy Support Unit on women-led start-ups reinforced these more general conclusions in the Asia Pacific context, indicating that fewer than 10% of startups in APEC economies are founded or co-founded by women. And this gap or underrepresentation is especially evident in technology-driven sectors, where the share of women founders is very low.⁴ The five major barriers highlighted in the APEC PSU study that contribute to this entrepreneurial gap dovetail those in the OECD study, namely: inadequate access to finance; limited mentorship and networks; low representation in STEM; societal perceptions and mindsets; and legal and institutional barriers present in some APEC economies.

Particularly striking is the fact that

- Women account for just 22 per cent of AI professionals globally and even less in technical leadership roles.
- In the startup ecosystem, less than 3 per cent of global venture capital goes to all-women founding teams, and only a fraction of that is directed to AI or deep-tech firms.

³ OECD, *Start-up Asia: Chasing the Innovation Frontier*, 2025,

https://www.oecd.org/content/dam/oecd/en/publications/reports/2025/05/start-up-asia_b5817d26/a9b71040-en.pdf

⁴ APEC Policy Support Unit, *Empowering Tomorrow: APEC Women Entrepreneurs in Start-Ups*, January 2025,

https://www.apec.org/docs/default-source/publications/2025/2/225_psu-apec-women-in-startups.pdf?sfvrsn=76412711_1

The study notes that while the APEC region has experienced rapid growth in start-ups, women founded or co-founded startups remain a small fraction of the total created each year.

- Even among digital start-ups, women often operate in sectors considered low-tech or low-growth, reinforcing gendered segmentation in entrepreneurship.

These disparities are not due to lack of ambition or potential. Research shows that women-led start-ups are more likely to target underserved populations, apply inclusive design principles, and exhibit higher capital efficiency. In fact, the APEC PSU study states that women-led startups often *outperform* men-led counterparts in revenue growth and export diversification.⁵ Nonetheless, systemic biases in financing, digital skill development, platform visibility, and access to innovation ecosystems persist, particularly in emerging APEC economies.

The services sectors most relevant to this study—financial services, professional and business services, ICT, logistics, and creative content—are all undergoing rapid AI-driven transformation. However, a similar story is true for other sectors as well.

- In **fintech**, AI enables real-time credit scoring, fraud detection, and personalised financial products.
- In **edtech**, adaptive learning engines and AI tutors personalize learning journeys based on learner behaviour.
- In **health** and **logistics**, start-ups are deploying AI for diagnostics, routing optimization, and supply chain visibility.
- In **creative sectors**, generative AI tools support content generation, translation, and targeted digital marketing.

Several APEC economies, including Canada, Chile, New Zealand, the Republic of Korea, and Singapore, have introduced domestic AI strategies or startup frameworks that explicitly aim to foster entrepreneurship and innovation. However, very few of these explicitly adopt gender-responsive innovation policy tools or track women's participation in AI and digital startup ecosystems.

Section III. Case studies of women-led startup firms: Overview of findings

The in-depth interviews conducted with fifteen women-led digital and AI-focused firms across eleven APEC economies provide rich insights into entrepreneurial journeys shaped by technology, innovation ecosystems, and gendered contexts. The Interviews were carried out along the five interlinked dimensions below (see more details on this in Appendix 2):

A. Firm Profiles and Market Orientation

⁵ Specifically, the PSU study cites an impressive statistic, namely that women-led startups in the APEC region generate about 10 per cent more cumulative revenue over five years and provide higher returns per dollar invested, with 78 cents in revenue per dollar versus 31 cents for male-led ventures. Ibid.

Women-led start-ups in digitally delivered services are typically small, agile, and global from inception. Most have fewer than 15 employees yet export services to multiple APEC markets. Their strength lies in rapid scalability enabled by cloud-based tools and digital networks rather than physical expansion. Many operate across borders virtually—delivering logistics optimization (TOPLOGIS), digital credentials (Accredify), or inclusive fintech solutions (xcube.co).

B. Founders' Background and Motivation

Interviewees commonly cited three motivational strands: (i) personal experience of exclusion from mainstream opportunities; (ii) desire to solve a social or economic problem; and (iii) passion for technology and innovation. Most founders possess tertiary degrees—many in STEM or business—but fewer have formal AI training. Instead, they upskilled through accelerators or online certifications.

C. Digital Enablers and AI Integration

Digital platforms—especially SaaS, APIs, and cloud services—were essential to all firms studied. AI adoption patterns vary: some firms integrate AI as a core product (MACSO, Theodora, Neurofrog), while others deploy AI for efficiency and content generation (Techsauce, ANGO Ventures). Access to accelerators and digital skills programs was often decisive for early survival and credibility.

D. Financing and Ecosystem Support

Access to finance remains the most persistent barrier. Fourteen of fifteen founders relied on self-funding, grants, or women-focused investor circles in early stages. Commercial bank loans were rare due to limited collateral and gender bias. Government grants and public-private accelerators filled critical gaps (e.g., Queensland co-investment, NIA Thailand).

E. Gender-Specific Experiences and Inclusion Policies

Interview evidence reaffirms that gendered barriers remain systemic. Women founders often face credibility questions, exclusion from male-dominated networks, and unequal investor treatment. Yet, their firms are also pioneers in creating inclusive workplaces. (See also Box 1).

Box 1. Gendered Barriers and Inclusion Strategies in Women-Led Digital Start-ups

Access and credibility bias in financing: Many women founders reported being challenged to prove their competence or questioned about family commitments during fundraising rounds. Examples include *Beyond the Clinic* and *MACSO*. *xcube.co* and *TOPLOGIS* whose founders described the necessity to develop alternative investor circles and blended-finance routes to bypass systemic barriers.

Invisible exclusion from social capital and networks. Informal networks remain gatekeepers for funding and partnerships. Late-night meetings, golf outings, and male-dominated tech events exclude

many women entrepreneurs. Firms like **Noburo** and **Mindset Global** responded by establishing peer-based professional networks.

Symbolic versus substantive support: Numerous founders criticised token “women-in-tech” initiatives that provide visibility but no financing. **Beyond the Clinic** and **QBO Innovation** stressed that measurable funding and follow-up mechanisms are what distinguish impactful interventions.

Inclusive workplaces as innovation enablers: Inclusive firms display higher retention, creativity, and resilience. Companies like **QBO**, **Techsauce**, and **TOPLOGIS** show that flexible arrangements and equitable promotion policies strengthen productivity.

Emerging shifts: A new generation of women entrepreneurs in the APEC region is redefining “success” to include impact metrics, AI ethics, and social value.

Section IV. Comparative summary: Patterns emerging from the case studies

The four comparative tables collectively illustrate how women-led firms in APEC harness digitalization and artificial intelligence to expand markets, pursue social impact, and overcome financing and credibility barriers.

The four comparative tables present a synthesis of evidence on the fifteen women-led firms operating across eleven economies in the APEC region. The tables were developed from information obtained in interviews with these firms and cross-checked through desk research. The tables translate diverse qualitative insights into a structured analytical framework.

Each table captures a distinct dimension of women’s digital entrepreneurship:

- **Table 1** profiles company characteristics and market reach, illustrating the structural diversity of the sample;
- **Table 2** examines motivations, revealing how profit and purpose often intersect in women-led service ventures;
- **Table 3** maps common challenges faced by these start-up firms to access finance, gain credibility, and obtain institutional support;
- **Table 4** explores the depth and breadth of AI and digital integration across the 15 firms and diverse sectors.

Taken together, the tables trace a consistent pattern: **digitalization and AI adoption are not peripheral but central to how women entrepreneurs build competitive advantage, social impact, and resilience.** They also demonstrate that inclusive innovation depends very much as well on access to finance and networks.

1. Companies' profiles and market reach

Method Note

Information for Table 1 was drawn from company interviews and verified against public data (company websites, LinkedIn, accelerator listings, press coverage). “**Years in operation**” were calculated as 2025 minus the founding year. “**Employment**” numbers include both full-time and contract staff; where only ranges were given, figures were rounded to the nearest five. “**Percentage of women**” covers total staff unless founders specified management ratios. “**Exports**” capture both cross-border sales of digital products and the international client base served remotely.

Table 1: Company Profiles and Market Reach

Company	Founded (Year)	Years in Operation	Employees (approx.)	Women Employees (%)	Export to Foreign Markets
Accredify (Singapore)	2018	7	≈30	n/a	Yes – APAC; UAE
ANGO Ventures (Indonesia)	2016	9	n/a (network of 85–87 investors)	Focus on women-led firms	Yes – Regional (ASEAN, EU, India, Japan)
Bespoke Inc. (Japan)	2015	10	≈49	55%	Yes – Europe & North America (services export)
Beyond the Clinic (Australia)	2021	4	12 (4 full time plus 8 contractors)	n/a	Yes – Australia & New Zealand; global partner
Laboratoria (Peru)	2014	11	≈40	n/a	Yes – Cross-border digital delivery across LATAM
MACSO (New Zealand)	2021	4	8	n/a	Yes – 11 overseas markets
Mindset Global Partner (Chile)	2020	5	n/a	n/a	Yes – LATAM-wide programs

Neurofrog (New Zealand)	2020	5	n/a	Female-majority	Planned ASEAN expansion
Noburo Platform (Thailand)	2018	7	20	Balanced mix; 70% female users	Potential regional expansion
QBO Innovation (Philippines)	2016	9	12	≈75%	≈5% of supported start-ups internationalize
Qiliang Digits (China)	2020	5	n/a	n/a	Yes – EU/NA/SEA/LATAM
Techsauce (Thailand)	2015	10	≈70	60–65%	Yes – Summit exports; events in VN & ID
Theodora (Chile)	2022	3	7	n/a	Yes – Multinational clients
TOPLOGIS (Chinese Taipei)	2004	21	≈50	≈70% (80% of managers)	Yes – Clients in US/CN/SG/JP (≈20%)
xcube.co (Singapore)	2023	2	10 core plus contractors	More women than men	Yes – SEA & GCC

Analysis

1. The 15 firms form a representative, although heterogeneous, slice of women-led and women-inclusive digital entrepreneurship across APEC. Size and maturity vary sharply between the firms—from early-stage ventures of fewer than 10 employees to established regional platforms exceeding 70 staff. Most firms, however, average around 6 to 10 employees. Roughly two-thirds have already accessed foreign markets and operate in fully digitalized service-exporting modes, illustrating the important point that even small start-ups can internationalize through digital delivery.
2. Sectoral diversity is striking. The sectors of health-tech, fintech, digital education, logistics, and AI consulting dominate, but each one demonstrates how women entrepreneurs leverage digital tools to reach global markets from small domestic bases. The overall profile confirms that digitalization has become both the entry point and equalizer for women-led firms in services.

2. Founders' motivation and mission orientation

Method Note

Motivations were classified into three non-exclusive categories based on self-descriptions and company missions as explained by the founders (see Table 2):

- **Social enterprise:** combines market activity with explicit social or environmental goals.
- **Non-profit:** registered or operating as a non-profit or trust entity.
- **Profit-making:** commercial venture with market-rate returns as its main goal. Hybrid cases (e.g., profit-making firms with impact missions) were ticked in multiple columns. Qualitative notes capture the specific balance between financial and social objectives.

Table 2: Motivation and Mission Orientation

Company	Social Enterprise	Non-profit	Profit-making	Notes
Accredify (Singapore)			✓	Mission-driven trust infra; VC-backed
ANGO Ventures (Indonesia)	✓		✓	Women-focused investment fund; profit + impact hybrid
Bespoke Inc. (Japan)	✓		✓	Social mission (crisis info; migrant worker training) with commercial model
Beyond the Clinic (Australia)	✓		✓	Health impact + commercial growth
Laboratoria (Peru)	✓	✓		Non-profit, impact-first; diversified revenue
MACSO (New Zealand)			✓	Deep tech venture; sustainability mission
Mindset Global Partner (Chile)	✓		✓ (B-type)	B-type company; inclusion & ethical AI
Neurofrog (New Zealand)	✓		✓	Science-driven parenting; commercial with mission
Noburo Platform (Thailand)	✓		✓	Hybrid social enterprise/startup

QBO Innovation (Philippines)	✓	✓		Public–private innovation hub (grant-funded)
Qiliang Digits (China)			✓	Profitable; cross-border SaaS/services
Techsauce (Thailand)			✓	Ecosystem enabler; profitable
Theodora (Chile)	✓		✓ (pre-profit)	Bias reduction tech; grant/clients funded
TOPLOGIS (Chinese Taipei)			✓	Logistics SaaS; profitable since 2014
xcube.co (Singapore)	✓ (DEFY inclusive finance)		✓	Venture studio; bootstrapped

Analysis

1. Across the sample, **profit and purpose coexist rather than being in conflict**. Roughly half the firms are structured as profit-making businesses but pursue clear inclusion or sustainability aims; one-third identify explicitly as social enterprises; and a smaller subset (Laboratoria, QBO) operate formally as non-profits, with only a couple of firms operating for profit only. For many firms, profit is viewed as the means to scale impact rather than its opposite.
2. A strong **mission orientation** cuts across categories. Founders commonly cite similar areas of difficulty they have experienced—financial exclusion, gender bias, lack of digital skills, or misinformation—as catalysts for innovation.

This **hybrid** motivation pattern is consistent with the new generation of “impact tech” entrepreneurship in APEC: ventures seek both market viability and measurable contribution to social or gender goals. The evidence also shows that women founders frequently embed inclusion values in business models from inception and define these as part of the firm’s core mission rather than include such values retroactively to satisfy investors or CSR expectations.

3. Challenges and enablers

Method Note

Each challenge category was coded “✓” only when directly mentioned by the interviewee. Sub-categories follow a standardized interpretation (see Table 3):

- Seed capital = difficulty obtaining early-stage or angel investment.
- Commercial loans = bank or institutional credit barriers.
- Government grants = applications to public funding or co-investment programs.
- Private–public accelerator = participation in incubators, PPPs, or regulatory sandboxes.
- Discrimination = gender, age, or network bias affecting funding or market access.
- Convincing on novel idea = scepticism toward innovation, sector unfamiliarity, or need for proof-of-concept.

Table 3: Challenges and Enablers

Company	Access to Seed Capital	Access to Commercial Loans	Access to Government Grants	Private–Public Accelerator	Discrimination (gender/systemic)	Issues with Convincing on Novel Idea
Accredify (Singapore)	✓ (investors chase trends)		✓ (overseas expansion grants)		— (leader reports no gender bias)	✓ (market pivot/education)
ANGO Ventures (Indonesia)	✓ (initial capital own + women investors)			✓ (investor networks, community ecosystem)	✓ (credibility as woman fund manager; systemic bias)	✓ (convincing SMEs to digitalize reporting)
Bespoke Inc. (Japan)	✓ (woman founder in JP capital market)				✓ (gender/capital barriers in JP)	✓ (trust/adoption; multilingual nuance)
Beyond the Clinic (Australia)	✓ (sold home; angels)		✓ (Queensland co-investment)		✓ (bias in fundraising; client meetings)	✓ (healthcare validation)
Laboratoria (Peru)						✓ (corporate inclusion practices, recognition)
MACSO (New Zealand)	✓ (bias during fundraising)			✓ (deep tech incubator)	✓ (gender/age bias in AgTech)	✓ (new sensory AI in agriculture)
Mindset Global Partner (Chile)	✓ (self-financed; access to finance programs)			✓ (regional networks, challenges)	✓ (gender biases; unpaid care burdens regionally)	✓ (market positioning beyond 'for women')

Neurofrog (New Zealand)	✓ (underinvestment; conservative risk)		✓ (Callaghan R&D grant)	✓ (accelerators: NewChip, HealthTech Activator)	✓ (systemic undervaluation of care/parenting tech)	✓ (AI-native parenting; education of investors)
Noburo Platform (Thailand)	✓ (scaling vs resources)		✓ (NIA, DEPA, SET support)	✓ (DTAC, NIA, DEPA, SET)	✓ (exclusion from male networks)	✓ (behaviour-change model credibility)
QBO Innovation (Philippines)	✓ (nonprofit capacity underfunded)		✓ (donor-funded programs)	✓ (PPP hub)		✓ (ecosystem maturity; tracking outcomes)
Qiliang Digits (China)						✓ (educating investors on 'tech' vs 'services')
Techsauce (Thailand)			✓ (grants alongside VC)	✓ (accelerators/hackathons)	— (reports respectful treatment)	✓ (AI use acceptance; IP/copyright caution)
Theodora (Chile)	✓ (self-financed; grants/prizes)		✓ (public grants/prizes)	✓ (competitions/incubators)	✓ (structural gender bias; legal sector resistance)	✓ (pivot from legal to broader sectors)
TOPLOGIS (Chinese Taipei)	✓ (rejections from banks)	✓ (bank financing rejections)		✓ (investor networks; later stage)	✓ (gender bias from investors)	✓ (cloud logistics before mainstream)
xcube.co (Singapore)	✓ (bootstrapped; fundraising barriers)			✓ (regulatory sandbox PPP)	✓ (male-dominated networking; panel bias)	✓ (alt risk scoring; inclusion tech)

Analysis

1. **Financing hurdles dominate.** Fourteen of fifteen firms faced obstacles securing seed capital; many relied on self-funding or women-only investor circles. Access to commercial loans was rare, while targeted **government grants and PPP accelerators** (e.g., Queensland Investment, DEPA Thailand, Callaghan Innovation NZ) played outsized roles in the early survival of several firms.
2. **Gender bias persists but is context-specific.** Roughly two-thirds of the women founders reported explicit or implicit discrimination—from investors questioning competence to exclusion from male-dominated networks. A small minority (Accredify, Techsauce) encountered little bias, reflecting supportive ecosystems in more mature digital markets.
3. A recurring theme is the **credibility gap for novel ideas**: deep-tech or social-impact start-ups often had to prove both technical feasibility and commercial logic to sceptical funders. Accelerators and public-private incubators mitigated these barriers by providing validation and networks.
4. Overall, the pattern underscores that **finance and recognition**, not technology capability, remain the main constraints for women-led start-up digital firms. Where institutional support exists, success rates rise sharply. This suggests high latent potential for such firms, and an area where the impact of government and other accelerators could be very significant.

4. Patterns of AI and digital adoption

Method Note

Table 4 classifies the 15 profiled companies according to how deeply artificial intelligence (AI) and other digital technologies are embedded in their business models and delivery systems. The classification developed draws on detailed interview responses, company documents, and desk research on each firm's technology stack and market orientation.

The "**coding principles**" adopted to classify entries are the following:

- **AI Intensity** distinguishes between three levels of integration:
 - *Core* – AI constitutes the firm's main product or differentiating capability (e.g., MACSO, TOPLOGIS, Theodora).
 - *Partial* – AI supports internal processes or customer engagement but is not central to the product (e.g., Techsauce, QBO, and Noburo as Partial/Core hybrid).
 - *Limited / Not stated or emphasized* – AI use mentioned only peripherally.

Although the coding framework allowed for "core," "partial," and "limited" levels of AI or technology use, none of the 15 profiled firms were classified as "limited." All

firms operate in digitally delivered environments where at least partial AI or advanced technology integration is present.

- **Digital Delivery Model** records how products and services reach clients: Virtual, Hybrid, or Physical + Digital.
- **Digital Technologies Used** lists the key platforms, infrastructure, or software categories identified by respondents.
- **AI Applications Used** describes the specific AI functions (e.g., risk scoring, bias detection, conversational agents).

Data treatment

Where companies cited proprietary or branded tools, the functions were described generically (e.g., “AI risk scoring” rather than a trademarked algorithm). References to the use of Cloud, API, and analytics references are consolidated under “digital technologies.” Each entry was validated through at least one public source (website, press release, or investor brief).

Limitations

AI adoption levels are self-reported and may vary in technical depth. The distinction between “core” and “partial” integration is qualitative, based on interview evidence rather than formal R&D metrics. Some smaller firms did not disclose full technical architectures for confidentiality reasons.

Interpretation

Table 4 provides a comparative snapshot of AI depth and digital breadth across the sample. It reveals that AI integration is nearly universal among women-led and women-inclusive firms in digital services, but the nature of its use—product-embedded versus operational—varies by sector, maturity, and financing environment.

Table 4: Patterns of AI and Digital Adoption

Company	AI Intensity	Digital Delivery Model	Digital Technologies Used	AI Applications Used
Accredify (Singapore)	Core – AI integrated with blockchain credentialing	SaaS / cloud platform	Blockchain, cloud services, verification APIs	Automated credential verification, doc authentication
ANGO Ventures (Indonesia)	Partial – AI tools for investment ops	Virtual network platform	Cloud-based data systems; HR platforms	AI for proposal screening; HR analytics; content drafting

Bespoke Inc. (Japan)	Core – Conversational AI (NLP)	Fully digital / B2B service export	Chatbots, multilingual NLP, analytics dashboards	Real-time customer engagement; multilingual training data
Beyond the Clinic (Australia)	Core – AI in product	Fully virtual	Low-code platform, API integration, telehealth tools	Vision-based vitals detection; workflow automation; transcription
Laboratoria (Peru)	Partial – AI for operations /training	Fully online (LMS- based education)	Proprietary ed-tech platform, CRM, analytics	Admissions scoring; learner tracking; AI basics training
MACSO (New Zealand)	Core – Edge AI & Tiny ML	Hybrid (devices + SaaS)	IoT sensors, edge computing devices	On-device audio for disease detection; environmental AI
Mindset Global Partner (Chile)	Core – AI products & leadership	Virtual consulting & training	SaaS tools; collaboration platforms	ALIPA (SME trade); Inspira (AI Leadership); Ethical AI diagnostic
Neurofrog (New Zealand)	Core – AI-native service	Fully digital app + cloud architecture	AWS cloud, MongoDB, micro-services	Conversational assistant; AI orchestration; synthetic media
Noburo Platform (Thailand)	Partial/Core – AI in finance education	Hybrid (offline + app)	Mobile app; gamified learning systems	AI-driven debt planning; behaviour scoring
QBO Innovation (Philippines)	Partial – AI for operations	Fully digital ecosystem hub	Video conferencing platforms, CRM, Slack	GenAI (ChatGPT/Gemini) for admin, content support
Qiliang Digits (China)	Core – AI application innovator	SaaS / global platform	Cross-border SaaS; cloud integration	Market monitoring; automated decision support; ad optimization
Techsauce (Thailand)	Partial/Core – AI for content/events	Hybrid (events + media)	Event management platform; LMS; Google Cloud	AI translation; video storyboarding; content generation
Theodora (Chile)	Core – Patented AI technology	Fully digital SaaS	Social listening tools; data collection app	Bias detection in text/image/video; reputational risk analysis

TOPLOGIS (Chinese Taipei)	Core – AI in supply chain	SaaS / cloud logistics	Cloud integration platform; data exchange API	Automated customs docs (~95%); predictive analytics
xcube.co (Singapore)	Core – AI for fintech innovation	Digital consulting + PPP platforms	Blockchain; APIs; data analytics stack	AI risk scoring; behavioural analysis; real-time KYC

Analysis

Fifteen women-led enterprises across eleven APEC economies demonstrate the rapid diffusion of artificial intelligence (AI) and digital technologies into service-sector entrepreneurship. Their experiences reveal four main patterns.

1. AI roles diversify by business function. Roughly two-thirds of the sample of 15 firms are AI-core firms—those whose products depend directly on machine learning, natural-language processing, or computer-vision technologies (e.g. MACSO, Neurofrog, TOPLOGIS, Theodora). Others are AI-enabled, using generative or analytic tools to enhance operations (e.g. Techsauce, QBO Innovation, ANGO Ventures). Even social enterprises now employ AI in fundraising, HR, and evaluation functions, showing that AI’s utility is no longer confined to technology companies.

2. Digital delivery is universal; AI intensity varies. All firms operate on cloud or SaaS architectures. About half deliver entirely online, while others combine digital and face-to-face channels (hybrid learning, health services, or events). Some have moved from face-to-face delivery to primarily or entirely online delivery at present, increasing their use of digital and AI technology to do so. AI intensity correlates loosely with age: younger firms (post-2020) tend to be AI-native, whereas older digital platforms integrate AI incrementally to remain competitive.

3. Gender inclusion and AI complement each other. Women founders frequently position AI as a tool to correct bias—through fair-credit scoring, inclusive hiring algorithms, or bias-detection in media and law. (Example: Theodora; other?). Yet many still face gendered barriers in finance and credibility, forcing them to bootstrap or rely on peer networks. Firms such as TOPLOGIS and QBO show that internal gender parity combined with digital flexibility can yield strong retention and innovation outcomes.

4. Sectoral convergence and policy relevance. AI use cuts across health diagnostics, financial inclusion, logistics, and education. Despite different industries, similar needs emerge from these small, women-led firms: affordable cloud access, ethical-AI guidance, and female participation in STEM and digital-finance ecosystems. Targeted support—grants for women-led AI pilots, gender-responsive accelerators, and cross-border regulatory sandboxes—could significantly expand this cohort’s contribution to inclusive digital trade.

In sum, AI is in evidence in these case studies as both a product as well as an enabler for women entrepreneurs in services. The challenge ahead as expressed in the interviews is to scale inclusion, trust, and transparency at the same pace as technological adoption, while providing adequate support for start-up financing.

Section V. Recommendations based on case studies

The case studies presented in this part highlight the progress and persistent gaps in women-led digital entrepreneurship across APEC. While all profiled firms operate in high-skill, digitally delivered services and most have achieved regional market reach, their experiences reveal consistent patterns: (i) dependence on self-funding and limited access to risk capital, (ii) underrepresentation in accelerator pipelines and AI-intensive innovation programs, (iii) uneven visibility in government startup frameworks, and (iv) the importance of peer networks and inclusive workplaces as enablers of success. Based on this evidence, the following recommendations aim to strengthen the enabling environment for women-led digital and AI-linked start-ups in APEC economies.

For APEC economies and policymakers

- Embed **gender-responsive innovation targets** within domestic AI, digital-economy, and startup policies—reflecting the finding that only a few APEC economies currently do so.
- Ensure **public grant and co-investment schemes** (such as DEPA Thailand, Callaghan NZ) include dedicated windows for women-led digital firms.
- Establish **cross-border accelerator and sandbox partnerships** under PPSTI–PPWE–GOS to help women-founded start-ups scale regionally.
- Support **digital-skills upskilling and re-skilling** programs for mid-career women entering AI-enabled services.
- Provide **scholarships and fellowships** for women in STEM and digital business disciplines aligned with AI-intensive services.

For financial institutions and ecosystem enablers

- Require **gender-disaggregated investment data** from VC funds, incubators, and accelerators operating in APEC economies.
- Expand **gender-lens investing and blended-finance mechanisms** proven to bridge early-stage capital gaps in the cases studied.
- Incentivize banks and impact-funds to **recognize digital assets and IP** as acceptable collateral for women-founded service firms.
- Foster **public–private partnerships** between mainstream accelerators and women-specific networks (e.g., replication of QBO Innovation’s model).

For APEC fora and regional cooperation (GOS–PPWE–PPSTI)

- Launch an **APEC Inclusive Innovation Fellowship** for women founders focusing on AI-linked services.
- Develop an **APEC dashboard** tracking women’s participation in digitally delivered and AI-intensive service start-ups, drawing on PSU methodology.

- Curate and disseminate a **Good-Practice Toolkit** showcasing accelerator models, financing solutions, and inclusive workplace strategies from the 15 case studies.
- Convene periodic **policy-practice dialogues** between women entrepreneurs and regulators to monitor progress and emerging barriers.

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ANNEX

Appendix 1: Profiles of Interviewed Women-Led Digital and AI-Linked Firms in APEC Economies

No.	Company	Economy
1	Accredify	Singapore
2	ANGO Ventures	Indonesia
3	Be-Spoke Inc.	Japan
4	Beyond the Clinic	Australia
5	Laboratoria	Peru
6	MACSO	New Zealand
7	Mindset Global Partner	Chile
8	Neurofrog	New Zealand
9	Noburo Platform	Thailand
10	QBO Innovation	Philippines
11	Qiliang Digits	China
12	Techsauce	Thailand
13	Theodora	Chile
14	TOPLOGIS	Chinese Taipei
15	xcube.co	Singapore

ACCREDIFY (Singapore)

“Our mission is to make authentication accessible to all.”

<https://www.accredify.io/>

Firm activity overview

Founded in 2018, Accredify is a Singapore-based startup that began as an Initial Coin Offering Platform firm but pivoted in 2019 toward secure digital credentialing. The founders (**Quah Zheng Wei (current CEO), Shaun John Cheetham, Derrick Lee, and Edmund Chew**) saw that blockchain technology—often applied in financial services like cryptocurrency—could also serve as an infrastructure of trust for verifying documents across a wide range of sectors. Accredify’s solutions allow organizations to issue digitally verifiable and immutable records such as educational credentials, healthcare documents, government records, business profiles, and product certifications. Accredify’s solution has far-reaching implications on cross-border data sharing, where government and business counterparts across economies can rely on Accredify-issued verifiable credentials to securely access and share data without compromising data security, compliance, and privacy.

The firm experienced rapid growth during the COVID-19 pandemic. Accredify co-developed a healthcare credentialing solution to issue discharge memos and COVID-19 test results with the Singapore Government, enabling digital verification at worksites and immigration checkpoints. This innovation not only solved a pressing public health need but also validated the company’s model for broader use cases. Today, Accredify employs around 30 staff and continues to expand internationally, including in the UAE, while maintaining its base in Singapore.

Digital and AI content of firm’s activities or products

Accredify’s core technology leverages blockchain to ensure the **integrity and verifiability of digital documents**. Each record is assigned a cryptographic hash (a digital fingerprint) that is stored immutably on a blockchain. Verification simply requires recalculating the hash and comparing it with the blockchain record; if altered, the hash no longer matches. Access is enabled via QR codes, making the process simple, tamper-resistant, and privacy-preserving, since original data or private keys are never exposed.

Applications are diverse:

- **Education:** Universities issue degrees and transcripts digitally, reducing reliance on notarization.
- **Healthcare:** Hospitals and clinics issue discharge memos, PCR tests, and vaccination records in secure digital formats.
- **Government & Business:** Accredify provides business profile verification for Singapore’s corporate registry and authentication solutions for physical products (e.g., maritime safety equipment).

While Accredify does not develop AI products for clients, the company incorporates AI into its product suite and encourages its use internally to enhance productivity. Currently, Accredify’s product offers an AI writing feature that enables users to generate relevant copy for their

credential designs. Staff is encouraged to use tools such as ChatGPT to streamline research, writing, and coding tasks, increasing efficiency across teams.

Founder's motivation and challenges faced

Among Accredify's earliest employees is **Tan Jing Yi** who currently serves as a **senior leader in the company**. She has a STEM background (B.Sc. Business Analytics (Hons), School of Computing, NUS). She joined the startup because of its mission-driven approach: providing mobility and trust by digitizing credentials, particularly for individuals from less recognized institutions or backgrounds who would benefit from easier verification processes.

While barriers to gender equality persist in less supportive environments, Jing Yi has not encountered gender-based discrimination in her professional journey—attributing this to Singapore's equitable education system and policies supporting women in STEM. The right to equitable treatment, regardless of gender, is a core principle of Jing Yi, who reflects it in how Accredify is managed. At the company level, Accredify adopts a neutral hiring philosophy, focusing on merit while complying with Singapore's robust statutory benefits framework. Salaries are aligned with market standards, and the firm cultivates a workplace culture centered on empathy, inclusivity, and equity.

Challenges faced by the company have included:

- **Pivoting:** Moving from ICO to product-based solutions required significant restructuring.
- **Scaling internationally:** Competing in markets like Australia, where incumbents were already established, has proved difficult.
- **Financing:** While the company has raised multiple rounds (seed, Series A) with Singaporean and U.S. investors, investor interest is often directed toward trendier sectors. International expansion requires navigating cultural preferences—for example, partnering with local integrators in the UAE rather than contracting directly.

Successes achieved by the firm

- Successfully pivoted from **Initial Coin Offering** to verifiable credentials, becoming the leading provider in Singapore and across APAC.
- Collaborated with the **Singapore Government** during the COVID-19 pandemic to deliver healthcare credentialing solutions.
- Expanded internationally, securing a **major contract with a UAE government agency**, with revenues from non-Singaporean clients now accounting for 10–20% of total business.
- Benefited from **Singapore Government grants** for overseas expansion, covering participation in trade fairs, training, and subsidizing salaries for overseas staff.
- Secured **funding through seed and Series A rounds**, with investors including Okta Ventures and U.S.-based venture funds.
- Built strong internal capabilities through structured training programs, such as AWS certification for engineers and personal development allowances for all staff.

Lessons to impart

- **Pivoting with purpose:** Accredify's transition from ICO to digital credentialing illustrates how startups can seize opportunities by adapting quickly.
- **Trust infrastructure is universal:** Blockchain provides a flexible trust layer that can serve education, healthcare, government, and industry equally well.
- **Workplace neutrality supports inclusion:** Fair hiring and statutory benefits frameworks can underpin gender-inclusive cultures.
- **Talent investment pays off:** Structured training and study leave build skills and loyalty across teams.
- **Government support accelerates expansion:** Singapore's proactive grant system has significantly reduced the risks of entering new markets.

ANGO VENTURES (Indonesia)

“Investing in women-led innovation to build inclusive growth and social impact across Asia”

<https://angoventures.id>

Firm activity overview

ANGO Ventures was established in **2016** by **Mariko Asmara**, a Japanese–Indonesian entrepreneur, together with a group of women investors, with the goal of addressing the financing gap for women-led startups and SMEs in Indonesia and the wider Asian region. What began as a small angel investment fund pooling capital from women has grown into a cross-border network of **85–87 investors from seven economies** (including Japan, Chinese Taipei, India, and European investors based in Asia).

The firm’s investment philosophy combines **financial sustainability with social impact**. ANGO Ventures specifically targets businesses that are led by women, have women in key management positions, or employ a majority of women—particularly working mothers balancing family and career responsibilities. Beyond capital, the fund also provides mentorship, networks, and in many cases acts as a **client or vendor** for portfolio companies, embedding them into a supportive ecosystem.

Over its first seven years, ANGO Ventures has invested in nearly **100 companies**, with an exceptional **90% survival rate**, far above global startup averages. Its portfolio spans food, health, manufacturing, and technology, with notable export successes such as **Burgreens** (vegan food exported to Malaysia and the Philippines, and a supplier to Starbucks Indonesia), **Krakakoa Chocolate** (exporting to Europe and supplying IKEA), **Deeptek.AI** (India-based AI-powered \$1 X-ray diagnostics), and a **3D manufacturing company in Tokyo, Japan producing medical joint replacements**. This expansion beyond Indonesia reflects both opportunity and necessity, as Mariko has deliberately diversified into other markets given Indonesia’s political volatility.

Digital and AI content of firm’s activities or products

Although not all portfolio companies are in the digital industry, ANGO Ventures **requires all investees to operate with digital platforms** for financial reporting, due diligence, and auditing. This insistence on digitalization strengthens transparency and positions firms for scalable growth. Some portfolio companies have gone further, integrating **AI into HR management, recruitment, and operational processes**.

ANGO Ventures itself is a practitioner of digital transformation. The firm uses **AI tools** in multiple areas:

- **Screening and evaluation:** AI processes and summarizes hundreds of startup proposals, helping the investment team decide efficiently which opportunities merit further exploration.
- **Recruitment and HR:** Through its sister recruitment company, AI manages a database spanning 16 economies and serving over 1,200 employees.

- **Content production:** AI supports newsletters, translations, and article drafting for external communications.

Mariko emphasizes that these tools are purchased or accessed through investments, rather than developed in-house, reflecting a pragmatic approach of leveraging proven digital solutions rather than building proprietary AI.

Founder's motivation and challenges faced

Mariko's path to establishing ANGO Ventures reflects both entrepreneurial drive and social purpose. With a career spanning media, creative industries, and traditional businesses in Japan and Indonesia, she observed first-hand how few Indonesian women advanced to top leadership positions. Many women joined the workforce primarily to support household income but hesitated to pursue higher-level careers. At the same time, women-led startups consistently faced greater difficulty accessing external finance compared to their male counterparts.

These barriers inspired Mariko to create ANGO Ventures as a **platform for women's economic empowerment through finance, networks, and mentorship**. The initial capital came from her own exit from traditional businesses, combined with contributions from a group of women investors—including prominent figures such as a family member of Indonesia's **Blue Bird Taxi Group**, who is committed to supporting the growth of women-led companies.

Her journey has not been without challenges. Operating in Indonesia's business environment meant confronting limited transparency, entrenched practices of "double books" in accounting, and cultural skepticism toward governance and disclosure. Convincing SMEs to digitalize their accounting and reporting systems was, and remains, a hurdle. At the same time, building credibility as a woman fund manager in a male-dominated investment landscape required persistence, strong networks, and visible success stories.

Mariko herself does not come from a STEM background; she studied arts, culture, and business management, later learning finance and investment through experience. To compensate, she **intentionally built a diverse investor base** including women with PhDs in AI, stem cell research, medicine, and technical fields. This expertise allows ANGO Ventures to function not only as a financial backer but also as a **strategic partner ecosystem**, where investors may eventually become clients or vendors for the startups supported.

Successes achieved by the firm

- Built a cross-border investor base of **85–87 women investors from seven economies**.
- Invested in nearly **100 companies**, with a **90% survival rate**, well above industry norms. ANGO Ventures also actively invests in companies listed on the Indonesian Stock Exchange, which align with Ango Ventures' vision and mission of sustainability and profitability.
- Supported international success stories including:
 - **Burgreens** vegan food (exports to Malaysia and the Philippines; supplies Starbucks Indonesia).
 - **Krakakoa Chocolate** (exports to Europe; supplies IKEA).
 - **Deeptek.Ai (India)** offering \$1 AI-based X-ray diagnostics.

- A **3D medical manufacturing firm** in Tokyo, Japan, producing joint replacements.
- Helped diversify women's participation in leadership across SMEs and startups in Asia.
- Achieved profitability while maintaining a strong social impact focus.

Lessons to impart

- **Women-focused investment models matter:** Access to finance remains biased; targeted funds help level the playing field.
- **Digital adoption is essential:** Requiring digital reporting and operations enhances accountability and scalability.
- **Impact and profitability align:** High survival rates and export success show that inclusive models can outperform traditional ones.
- **Diversity strengthens ecosystems:** A mix of technical, business, and medical expertise among investors enhances startup support.
- **Leadership must be context-sensitive:** In Indonesia, interpersonal and community-based leadership can be more effective than purely data-driven models.

BE-SPOKE Inc. (Japan)

“Safety, security and clarity through the power of AI”

<https://www.be-spoke.io/en/about>

Firm activity overview

Bespoke Inc. is a Tokyo-based conversational AI company founded by **Akemi Tsunagawa**. Originally inspired by the founder's experience of the 2011 Great East Japan Earthquake, when access to accurate and timely information was lacking, Bespoke was created to ensure that people receive information they can trust, in real time, and in a language they understand.

The company began with a focus on crisis communication and customer service but has since expanded its work to develop **BeTrained**, an AI-powered multilingual workplace training platform. The tool is designed to support companies in training diverse workforces, especially non-Japanese workers, by providing learning modules in multiple languages and formats.

Bespoke operates with an international team of engineers, developers, and designers. It has primarily served clients in Japan but has also exported services to Europe and North America. Currently, there are 49 employees, with 55 percent female.

Digital and AI content of firm's activities or products

Bespoke's activities are **highly digital and AI-intensive**:

- **Conversational AI & NLP**: The firm uses natural language processing (NLP) and generative AI to power chatbots and workplace training modules capable of multilingual communication.
- **Real-time training and support**: BeTrained delivers customized training through AI interfaces that adapt to workers' backgrounds and language needs, making workplace learning accessible to foreign employees.
- **Crisis and information systems**: Earlier products leveraged AI to filter and disseminate accurate safety and crisis updates in real time, reducing misinformation.
- **Virtual operations**: The company runs digital collaboration platforms internally and builds flexible, interoperable systems for clients.

Founder's motivation and challenges faced

Founder **Akemi Tsunagawa** was motivated by her personal experience during the Great East Japan Earthquake. The lack of accessible, reliable information highlighted the social costs of communication breakdowns. This inspired her to build a business that could prevent similar situations and, over time, to expand into workplace solutions that foster inclusion for foreign workers.

Key challenges have included:

- **Building trust and adoption**: Convincing companies to invest in AI-based workplace training, especially in industries slow to digitalize.

- **Balancing speed and accuracy:** Real-time information systems must be fast but also avoid misinformation.
- **Scaling multilingual solutions:** Designing content that accounts not just for translation but for cultural nuance and comprehension.
- **Entrepreneurial hurdles:** As a woman founder in Japan, Tsunagawa has faced barriers in accessing capital and recognition in a male-dominated startup environment.

Successes achieved by the firm

- Developed BeTrained, an AI-powered multilingual training tool that empowers foreign workers in Japan's manufacturing, construction, and service sectors by making workplace training accessible across languages and cultures
- Built and nurtured a diverse, international team of AI engineers and developers, enabling innovation across cultural and linguistic boundaries.
- Successfully expanded operations beyond Japan, delivering AI solutions to clients in Europe and North America.
- Earned credibility as a trusted provider of real-time crisis communication systems, deployed during emergencies to combat misinformation.
- Evolved strategically, pivoting from crisis communication to workplace inclusion and multilingual learning solutions, addressing Japan's urgent need to train and support non-Japanese workers.

Lessons to impart

- **Address real social pain points:** AI adoption is strongest when solving urgent, visible problems such as crisis information or workplace inclusion.
- **Multilingual doesn't just mean translation:** Effective digital training must reflect cultural nuance and ensure comprehension.
- **Balance accuracy with speed:** Trust in AI systems depends on getting both dimensions right.
- **Women founders need access to capital:** Symbolic support is not enough — funding gaps remain a barrier for scaling.
- **Global teams enrich solutions:** Diverse technical teams can design more culturally aware products.

BEYOND THE CLINIC (Australia)

“Redesigning musculoskeletal care through AI-driven virtual health models”

<https://beyondtheclinic.io>

Firm activity overview

Beyond the Clinic is an **Australian digital health startup** founded in **2021** by **Alison Stokes**, a health entrepreneur, together with an orthopaedic surgeon. The company was born out of direct observation of gaps in traditional post-surgical care where patients undergoing joint replacement surgery were often given only 15 minutes of consultation post-operation and photocopied instructions before being sent home. This experience motivated the founders to develop a digital platform that empowers patients to **self-manage musculoskeletal (MSK) conditions** while optimizing the time and capacity of clinicians.

The firm operates as a **virtual-first company** with no physical office. Its team of **12 members** includes four full-time staff and eight contractors such as physiotherapists, UI/UX specialists, and engineers. Beyond the Clinic currently operates in **Australia** and has expanded its services to **operate in New Zealand** as well. Recently it has signed a partnership with a **global medical device company** which could lead to large-scale international distribution.

While the company is **not yet profitable**, it has generated approximately **AUD 650,000 in revenue** to date, with funding from bootstrapping, angel investors, and a co-investment grant from the Queensland Government. Beyond the Clinic expects to reach profitability within two years and is targeting **success with** its technology platform.

Digital and AI content of firm’s activities or products

The core of Beyond the Clinic’s platform is its **vision-based technology** and **transdermal optical imaging**. Patients take a 30-second facial scan through a mobile phone or computer camera, and the system captures blood flow patterns to calculate data points such as **heart rate, blood pressure, and oxygen levels**. Combined with patient-reported measures (surveys, pain scores, functional tests), the technology creates a **holistic digital profile** for each patient.

The platform architecture is **API-first, low-code/no-code, and interoperable** with users’ external devices and clinics’ operating systems. While much of the technology is licensed from partners, Beyond the Clinic’s **proprietary intellectual property lies in its clinical workflows**. These workflows use AI to support decision-making and automate tasks like prompting patients for new measurements or transcribing and summarizing telehealth consultations. Importantly, the company maintains a principle of “**AI to augment, not replace**” **clinicians**, recognizing that sensitive healthcare decisions still require human oversight.

Beyond the Clinic is an entirely virtual company and leverages multiple **digital collaboration platforms** (Slack, Hubspot, transcription tools like Fireflies or Otter, etc.) to run its virtual-first operations efficiently. Its service delivery model combines automated prompts with **telehealth coaching sessions**.

Founder's motivation and challenges faced

Ali's journey to founding Beyond the Clinic was deeply personal and entrepreneurial. She observed how clinical bottlenecks left patients underserved and believed digital solutions could scale care delivery to thousands rather than dozens of patients a day. To finance the startup, she **sold her first home** and reinvested the proceeds into building the business. Since then, the firm has raised angel funding and secured government support.

As a woman founder, Ali has faced persistent **gender-related barriers**, particularly during fundraising efforts. In customer meetings, she often encountered bias, with potential partners directing questions to her male co-founder instead of her. She often relies on his presence with clients, reflecting the workaround of leveraging his presence to gain credibility in male-dominated negotiations. Ali is also critical of "female empowerment" programs that emphasize mentorship rather than actual capital, stressing that **what women founders need most is funding, not symbolic support**. Her leadership style blends pragmatism with advocacy, supporting flexible work arrangements, employee stock option plans (ESOPs), and even side hustles for team members to foster innovation and loyalty.

Successes achieved by the firm

- Generated **AUD 650,000 in revenue** since founding
- Built a **team of 12**, including engineers, physiotherapists, and designers, all of whom operate fully virtually
- Refined its product through **three major iterations**, now delivered as a scalable, API-first platform
- Signed an **international distribution agreement with** a global medical device company
- Expanded operations internationally beyond Australia to **New Zealand**
- Demonstrated measurable patient impact, including cases where patients on surgical waitlists avoided surgery after completing Beyond the Clinic programs

Lessons to impart

- **Build lean and test fast:** Iteration and early failures provide critical learning.
- **Technology isn't everything:** Clinical workflows are as important as deep tech; licensing and integrating external tech can be more effective than building from scratch.
- **Automate cautiously in healthcare:** AI can increase efficiency, but sensitive decisions require human oversight.
- **Female founders need financial, not symbolic, support:** Mentorship is useful, but capital access remains the real barrier.
- **Adapt to systemic bias strategically:** Navigating male-dominated spaces may require unconventional workarounds, but maintaining leadership internally is key.

LABORATORIA (Peru)

“At Laboratoria, we want more women to take an active part in the digital economy, recognize their talent and access real opportunities that allow them to grow with autonomy, confidence and purpose.”

<https://laboratoria.la/en>

Firm activity overview

Laboratoria is a social impact non-profit organization founded in 2014 in Lima, Peru, with a mission to train women for careers in the technology sector. Originally launched as an in-person coding bootcamp, it transitioned to digital delivery during the pandemic and has now expanded significantly to cross-border delivery of its programs, operating fully remotely across Latin America. The firm serves learners in Peru, Chile, Colombia, Brazil, and Mexico. The organization has trained over 5,000 women and aims to significantly scale its impact in the coming years. It employs approximately 40 staff and is led by a woman CEO, with co-founder Mariana Costa currently serving as board president and head of new ventures. The choice to continue as a non-profit was driven by the desire for the firm to remain impact-focused and serve women in need.

Digital and AI content of firm's activities or products

Laboratoria delivers digitally intensive programs, with approximately 90% of its activities conducted online. The organization offers training for women in technical skills (such as coding and web development) as well as life skills and leadership. Its educational content is accessed through a proprietary tech platform. Laboratoria has incorporated artificial intelligence into several operations: automating admissions processes, tracking student engagement, and training students in AI fundamentals. The firm uses AI applications internally as well for its day-to-day operations and in assessing the numerous applications it receives. It is also building learner profiles with integrated metrics to follow graduates' career paths.

Founder's motivation and challenges faced

Mariana Costa, the co-founder, was motivated by the desire to train women to work in the growing digital economy sector. She noted a huge demand for roles in technology along with a huge need for more diversity, as very few women were working in the technology space. She believed in the core mission of the firm to prepare women to participate and thrive in Latin America's growing digital economy and set about to achieve this mission through applying new models of education and training. As CEO of a women-focused organization, Mariana Costa stated that she did not face strong gender-related barriers within the internal culture of Laboratoria. Because she worked primarily in mission-aligned, women-focused environments, she was shielded from many systemic challenges. However, Mariana noted that outside the firm, the broader tech ecosystem in Latin America remains male-dominated, and structural inequalities persist in corporate and entrepreneurial settings. Most of Laboratoria's early graduates were the first women to join their respective tech teams and faced multiple

constraints to advance. Laboratoria since has worked with many companies to support inclusive cultures that give the same growth opportunities to diverse talent.

Successes achieved by the firm

Laboratoria has become a regional leader in digital inclusion for women and has achieved notable success since its founding, including notably the following:

- Trained over 5,000 graduates in five Latin American economies
- Received strong employer recognition for the usefulness of its training programs, with its graduates employed across Latin America in tech firms and startups
- Achieved recognition of the value of the firm's diplomas by companies in need of staff with technology and digital skills
- Formed successful partnerships with industry, providing custom training and talent placement upon the demand of the private sector.
- Diversified its funding base with philanthropic grants, revenue earned from training services, and a recently established endowment fund to ensure long-term sustainability.

Lessons to impart

- ***Mission-driven digital education works.*** Laboratoria's experience shows that high-quality, digitally delivered training can scale impact across borders when rooted in local needs.
- ***Adaptability is essential.*** Transitioning from in-person to fully remote learning enabled Laboratoria to survive the pandemic and extend its reach.
- ***AI applications can strengthen non-profit operations.*** Smart use of AI can improve student engagement, help to track outcomes, and personalize education, even in resource-constrained environments.
- ***A mixed funding model provides resilience:*** Combining philanthropic support with earned income allows social enterprises to scale while maintaining mission integrity.
- ***Women-led ventures make a difference:*** Having women in leadership fosters organizational cultures that reflect empathy, flexibility, and gender equity, which in turn support broader inclusion goals.

MACSO (New Zealand)

“Building sensory intelligence to detect risks early and create healthier, more sustainable farming systems”

<https://www.macso.ai>

Firm activity overview

MACSO is a New Zealand–founded startup established in April 2021 by computer scientist and AI ethicist **Saba Samiei**, with strong support from board chair **Samar Alrayyes** as part of the incubation program by **Bridgewest Ventures** funded by the Bridgewest Group, a US-based Private Equity Investor that invest in deep technology in partnership with the New Zealand Government. The company specializes in **sensory artificial intelligence** technology that enables machines to understand sound, vibration, temperature, and other environmental data. Its first commercial application is in agriculture technology (AgTech), focusing on early disease detection in farm animals. The firm’s flagship product is a respiratory health monitoring solution for swine herds. It uses AI-enabled audio sensors to detect illness days earlier than trained human operators. This innovation not only reduces animal death rates but also minimizes antibiotic use, thereby improving animal welfare and supporting farmers in meeting stricter food safety and regulatory requirements.

Although headquartered in New Zealand, MACSO has a global footprint and is already engaged in exporting its services, with devices already deployed or under installation in **11 economies across Europe, Latin America, and Southeast Asia**, after earlier pilots were conducted in the United States and New Zealand. The company emerged from a **New Zealand government-backed deep tech incubator program** (Bridgewest Ventures / Callaghan Innovation) and has since raised **NZD 5.5 million**, achieving a pre-money valuation of **NZD 13.5 million**. It has now started its Series A fundraising round. The company has 8 employees, from a diverse cultural, talent and gender range of backgrounds.

Digital and AI content of firm’s activities or products

MACSO’s innovation lies in its application of **Edge AI and Tiny Machine Learning (Tiny ML)** technologies. Unlike large-scale AI models that require significant computational resources and cloud infrastructure, MACSO’s algorithms are lightweight and decentralized, running directly on devices installed inside farms. This approach ensures that sensitive data remains on the farm, improves connectivity resilience in rural areas, and reduces the carbon footprint associated with AI processing.

The firm’s AI models analyse coughs and breathing patterns of farm animals, together with barn environment factors such as humidity and air quality to provide continuous, objective monitoring of animal health. This enables veterinarians to make more precise, data-driven decisions about when interventions are required, reducing unnecessary antibiotic usage and improving herd management. Beyond swine respiratory health, MACSO is expanding its roadmap to include other animal species, aquaculture, pets, and eventually environmental monitoring and human health applications. Its sensory AI platform is protected by patents in the **U.S., EU, China, and Brazil**.

Founder’s motivation and challenges faced

MACSO was founded by **Saba Samiei**, whose academic background in computer science and AI ethics shaped her conviction that technology must be used to solve pressing global challenges. The devastating 2018 African swine fever outbreak in China, which killed over 43 million pigs and caused nearly USD 200 billion in losses, highlighted the potential of AI-enabled sensory monitoring to reduce risks in agriculture. From this starting point, Saba and her team developed MACSO's first application in swine respiratory health, building toward a broader vision of sustainability and food security.

Her entrepreneurial journey, however, has been marked by persistent barriers. During fundraising, she faced overt bias and inappropriate behaviour, including investors questioning her commitment to the company because of her gender, age, or potential family plans. Some dismissed her ideas with comparisons to failed female founders, while others openly doubted her leadership capacity. Entering the male-dominated AgTech space added additional challenges. Despite these obstacles, Saba's leadership style, shaped by her ethical perspective and inspired by her mother's example as a "boundary breaker", emphasizes compassion, sustainability, privacy, and inclusivity, which have become defining features of MACSO's culture and growth.

Successes achieved by the firm

- Developed the first AI-enabled respiratory health monitoring solution for swine herds, reducing mortality and antibiotic usage.
- Expanded internationally to 11 overseas markets in less than four years.
- Raised NZD 5.5 million, achieving a pre-money valuation of NZD 13.5 million.
- Secured patents in the U.S., EU, China, and Brazil.
- Built a diverse and inclusive team, with women engineers, young interns, and flexible workplace practices that support work-life integration.
- MACSO has the first female Board Chair across the Bridgewest Venture portfolio.

Lessons to impart

- **Edge AI can be a game-changer:** MACSO demonstrates that decentralized, energy-efficient models can solve global problems while maintaining privacy and scalability.
- **Incorporating ethical concerns can provide a competitive edge:** Embedding sustainability, compassion, and privacy into business models builds trust with customers, regulators, and investors.
- **Diversity fuels resilience:** A blend of gender, age, and cultural backgrounds strengthens creativity and problem-solving.
- **Women founders need resilience and networks:** Bias persists in financing and tech ecosystems; external allies and inner confidence are essential to overcome and flourish despite these biases. Samar has been an advisor and mentor to the Saba from the very beginning, supporting the founder and the company.
- **Frame innovation as part of a bigger story:** Framing innovation as part of solving systemic challenges—food security, climate change, and sustainability—helps inspire investors, partners, and employees.

MINDSET GLOBAL PARTNER (Chile)

“We are a digital-native consultancy committed to advancing inclusive leadership, ethical AI, and digital transformation across Latin America.”

<https://mindset-global.com/>

Firm activity overview

Founded in 2020 during the COVID-19 pandemic, Mindset Global Partners (MGP) is a Chilean consultancy specialized in digital transformation, responsible artificial intelligence (AI), and inclusive leadership. MGP operates across Latin America, delivering training programs, transformation strategies, diagnostic assessments, and consulting services tailored to public and private sector clients. Its approach combines strategic, technological, and human-centered dimensions to help organizations adapt to 21st-century challenges such as digitalization, sustainable growth, and ethical AI adoption. MGP operates as a for-profit **B-type company** (with collective interest). It has been primarily self-financed.

Its founder, Leslie Carol Olave Rojas, is an IVLP Fellow (USA, 2021), a WEAmericas Fellow (2021), and currently serves as Secretary General of State Alumni Chile (2025–2026). MGP is active in global networks including ConnectAmericas Women, WEConnect International, Women in AI, and Global STEM Women, and is a signatory of the Women’s Empowerment Principles (WEPs). In 2025, it completed the first stage of the **Women ConnectAmericas Access to Finance Challenge (IDB)** and was selected for the Specialized Technical Assistance stage, focused on financial diagnosis, business case development, and strategic financing planning.

At the economy-wide level, MGP contributes to public-policy dialogues in Chile through Nodo CINVAL (gender & CTCI), the SENCE Employability Roundtables, Startup Day and Science sessions at the National Congress of Chile (2025), and STEM leadership initiatives of the Ministry of Science. MGP participated in Chile’s 2025 domestic roundtables on women in STEM, employability, and inclusive leadership. Beyond Chile, it leads a community of over 600 companies in Latin America established during Outsource2LAC 2020.

Digital and AI content of firm’s activities or products

MGP develops proprietary AI-based solutions and applies advanced digital technologies in its services. These include: **ALIPA**, an AI solution supporting women-led exporting SMEs; **Inspira** – the first intensive AI leadership program in Chile, co-created with CENIA, combining technical AI skills with change management; and **Ethical AI Diagnostic MVP** (in development) which is innovating a SaaS tool to assess AI maturity and ethical risk in SMEs. AI capabilities within the firm include generative AI for content and training, automated analytics and visualization, AI-based video generation, and collaborative intelligence systems for project management. MGP avoids reliance on closed ecosystems, prioritizing flexible and interoperable technologies.

Founder’s motivation and challenges faced

As a single mother of three, Leslie Carol Olave Rojas, is driven by the need to address structural barriers women face in Latin America which include the burden of unpaid care, limited access to opportunities, persistent glass ceilings, and the fact that many women are primary household providers. She believes that technology, collaboration, and inclusive leadership can create sustainable livelihoods and empower women to lead digital and economic transformation in their lives and professions.

Among the challenges faced by women, Leslie cites in particular gender biases, which result in women often being sidelined in male-dominated industries; and market positioning. Rather than being branded “only for women,” MGP promotes inclusive and collaborative leadership that involves both women and men.

Successes achieved by the firm

- **InspiraIA**: first AI leadership program for women in Chile
- **Development of innovative AI technologies, including ALIPA**: AI solution for women-led SMEs in trade and **Ethical AI Diagnostic MVP**: under development as scalable SaaS
- 3rd place in the first **Pacific Alliance Hackathon** (2023, Peru) with participation from Chile, Colombia, Mexico, and Peru
- **Champion of the Women Connect Americas Challenge** (IDB, 2024)
- **Participation in MIT Innovation Days** (USA, 2023) and **United Nations** (USA, 2023)
- **STEM and leadership initiatives in Argentina (2024)** and participation in the **STEM Symposium at Broward International University (BIU, USA, 2024)** on “AI as a driver of change for organizations and STEM”
- **Outsource2LAC** participation (Jamaica 2023, Argentina 2024)
- **UNESCO–CAF Ministerial Summits** on the Ethics of AI (Chile 2023, Uruguay 2024)
- Training in **AI risk and crisis management** for the White Box Project Institute (Mexico, 2024)
- **VIP delegate** to GBM: Global Banking Digital Infrastructure & Project Finance Summit (USA, 2026); applicant to **eMerge Americas** (USA, 2026)

Lessons to impart

- ***Resilience and adaptability are essential:*** Building a digital-native consultancy during a global crisis demands agility, reinvestment of resources, and the ability to navigate uncertainty.
- ***Inclusive and collaborative leadership drives innovation:*** Less hierarchical leadership styles—often championed by women—enable diverse voices to shape digital transitions.
- ***Networks are powerful levers:*** Engagement in global and regional communities such as IVLP, WEAmericas, ConnectAmericas Women, WEConnect International, Women in AI, and Global STEM Women has been decisive in expanding visibility and opportunities.
- ***Structural barriers require systemic responses:*** Gender biases, unpaid care burdens, glass ceilings, and the prevalence of women as household providers highlight the urgency of real inclusion.
- ***Technology must serve empowerment:*** By focusing on ethical AI, data-driven decision-making, and interoperable SaaS solutions, technology can democratize opportunities for SMEs and women-led businesses.

NEUROFROG (New Zealand)

“Science-driven parenting support, combining neuroscience, developmental psychology, and AI to empower families during the first 1,000 days.”

<https://neurofrog.com>

Firm activity overview

Neurofrog is a New Zealand-based digital health startup providing evidence-based tools and content for pregnancy and early childhood development. Founded in 2020 by Dr. Bruce Allen (radiologist and entrepreneur) and Tim Haynes (social scientist), the company was a result of several earlier pivots in the parenting category. The platform gained a strong neuroscience foundation in 2024 when Dr. Wan-Ting Yeh, an expert in neuroscience, developmental psychology, and AI-behavioural modelling, joined to merge scientific research with the company's innovation and R&D initiatives.

The firm's mission is to deliver neuroscience-informed parenting guidance at scale. Neurofrog operates as both a data-forward platform and consumer app, offering daily and weekly support programs, simplified developmental screening tools, and culturally adaptable content that empowers families during the critical first 1,000 days. While headquartered in New Zealand, Neurofrog is designed for expansion into Asian and ASEAN markets.

Dr. Wan-Ting heads the women-led psychology/neuroscience team as the in-house expert, supported by two women contractors with psychology backgrounds (one PhD holder). This team serves as the core early childhood knowledge engine that powers Neurofrog's product delivery through technology.

Digital and AI content of firm's activities or products

AI is central to Neurofrog's platform and business model. The company combines neuroscience and developmental psychology with advanced digital infrastructure to scale across diverse contexts.

Key elements include:

- **Cloud infrastructure** – AWS-based multi-tenant architecture supports scalable microservices delivery.
- **Data management** – MongoDB Atlas stores diverse data types with geospatial indexing for region-specific delivery.
- **Conversational AI** – empathic AI assistants delivering validated parenting guidance.
- **Knowledge and content management** – AI-driven curation systems supporting expert content creators.
- **Synthetic media** – AI-generated visuals tailored to cultural and developmental contexts.
- **AI agents and orchestration** – multi-agent systems balancing proprietary models and third-party APIs to avoid vendor lock-in.
- **AI-driven QA** – automated testing tools to uphold safety, reliability, and efficacy standards.

Neurofrog has also participated in global and regional accelerator programs, including **NewChip (Austin, Texas)**, the **Callaghan HealthTech Activator**, and the **Angel Association New Zealand**, while promoting continuous digital upskilling internally.

Founder's motivation and challenges faced

While originally founded by Dr. Allen and Haynes, who wanted to spread science-made-easy to parents, Dr. Wan-Ting Yeh joined this adventure because she shared their motivation. Drawing from her academic background and personal journey as a mother, she had been a scientific blogger for years, focusing on sharing scientific parenting knowledge and making neuroscience accessible to families. When she joined Neurofrog, she brought a dual mission: expanding her impact in science communication while pioneering a neuroscience-informed work ecosystem that balances wellbeing and work progress to create a calm workplace.

From Haynes' perspective, challenges lie not only in technology development but also in navigating structural barriers:

- **Limited investor diversity** – male-dominated networks create closed circles where familiarity is mistaken for competence.
- **Conservative risk perceptions** – deep tech ventures with long R&D cycles are measured against traditional B2C cycles, resulting in underinvestment.
- **Geographic bias** – NZ investors favour established EU/US markets, overlooking high-growth ASEAN opportunities that align with Neurofrog's strategy.
- **Cultural bias against parenting tech** – male investors often underestimate the value of care and parenting solutions.

Successes achieved by the firm

- Built and validated a neuroscience- and AI-driven parenting platform.
- Secured a **Callaghan Innovation R&D grant** to fund neuroscience, AI, and technical research.
- Participated in **accelerator programs** regionally and internationally (NewChip, Callaghan HealthTech Activator, Angel Association NZ).
- Established a women-led, multicultural management and research team with a female majority across FTE and wider team composition.
- Positioned for ASEAN expansion with culturally adaptable solutions.
- Advanced AI infrastructure through continuous Proof of Concepts, iterative updates, and agentic system design.

Lessons to impart

- **Bootstrapping builds resilience** – running lean with R&D grants reinforces discipline.
- **AI-native mindset** – scaling sensitive services requires designing beyond tools, toward AI-native systems.
- **Human + AI partnership** – expert validation ensures safety and trust in child health applications.
- **Bias remains systemic** – women-led ventures and caregiving tech face structural under-valuation in funding ecosystems.

- **Alternative markets matter** – ASEAN offers stronger fundamentals than New Zealand's small domestic market for growth.
- **Continuous upskilling sustains innovation** – combining accelerator participation with in-house learning strengthens long-term capacity.

NOBURO PLATFORM (Thailand)

“We empower workers to move from debt to wealth through financial literacy, behavior change, and access to fair credit.”

<https://www.noburo.co/>

Firm activity overview

Founded in 2018, Noburo Platform (commercial name: *Noburo Wealth-Being*) is a Thai hybrid between a social enterprise and a startup. Its mission is to help low-income, blue-collar workers transform from being “in-debt” to “in-wealth,” tackling Thailand’s severe household debt crisis. Noburo provides a combination of financial health checks, debt planning, financial literacy programs, and access to affordable loans. The model is B2B2C: the firm works with employers to offer services to workers, and with financial institutions—particularly government-owned banks—for lending. Noburo itself does not provide loans; instead, it prepares workers through education and behavior scoring to qualify for sustainable credit. To date, it has assisted around 16,000 individuals and employs 20 staff full-time with a balanced gender mix.

Digital and AI content of firm’s activities or products

Noburo integrates technology-driven financial education and AI tools into its platform in several ways:

- **Mobile application:** Uses positive psychology and gamification to encourage financial literacy, debt clearance, and savings.
- **AI for debt planning:** Automates debt analysis by reading credit history PDFs and generating repayment recommendations tailored to each user.
- **Blended learning model:** Combines offline workshops (which are important for onboarding and trust-building) with digital tools, though reliance on in-person sessions limits scalability.
- **Financial health checks and behavior score:** Users complete assessments and tasks via the app, producing a behavior score that is shared with partner banks. This has enabled almost 100% loan approval rates when referrals are made.
- **Human–AI mix:** While AI supports back-end processes, human facilitation remains central for sensitive interactions such as debt counseling phone calls and workshops.

This combination of digital tools and human support allows Noburo to deliver scalable, yet empathetic, financial health solutions to vulnerable populations.

Founder’s motivation and challenges faced

Founder **Thisana Thitisakdiskul**, trained in computer engineering and was inspired by Muhammad Yunus’s social business model while studying in Japan. Exposure to Thailand’s debt crisis—including through her father’s microfinance business—strengthened her conviction that financial literacy combined with access to credit could offer a sustainable alternative to charity. She co-founded Noburo with a tech partner as Chief Technology Officer (CTO) and an operations partner as Chief Operating Officer (COO), developing the platform

and launching pilots with family and friends' companies. Entry into accelerators such as DTAC Accelerator in 2018, and later programs by Thailand's National Innovation Agency, DEPA, and the Stock Exchange of Thailand, helped validate and grow the firm.

Her entrepreneurial path has faced several hurdles. Scaling the business remains difficult, as workshops and counseling are resource-intensive and limit speed of expansion. Balancing the dual identity of social enterprise and profit-driven startup also presents challenges in securing sustainable financing. As a woman in business in Thailand, she reports not experiencing discrimination from investors or government programs, but notes exclusion from informal, male-dominated networking spaces (such as late-night socializing) where deals are often made. She also recognizes that investors in Thailand tend to prioritize hype-driven sectors such as AI, making it harder for impact-oriented models like Noburo to attract funding.

Successes achieved by the firm

- Assisted **16,000 individuals** with debt management, financial literacy, and savings.
- Established strong **partnerships with employers** and government-owned banks to deliver services.
- Maintains a **70% female user base**, reflecting women's critical role in household financial management.
- Benefited from recognition and support through:
 - National Innovation Agency (social innovation grants)
 - DEPA (convertible notes)
 - Stock Exchange of Thailand's social enterprise program
 - International Catapult Program in Luxembourg, highlighting Noburo's potential for regional expansion.
- Built a reputation for impact, with media coverage and endorsement from the **Governor of the Bank of Thailand** boosting credibility and visibility.

Lessons to impart

- ***Behavior change + financial access = lasting impact***: Literacy alone is not enough; it must be paired with access to tools like credit and savings.
- ***Hybrid models can thrive***: Combining social enterprise purpose with startup agility creates sustainability while keeping mission central.
- ***Gender-aware design? (interest and applicability?) emerges naturally from relevant product offerings***: Even without targeting women specifically, Noburo's services attract women, underscoring their role in household financial stability.
- ***AI complements, but does not replace, human trust***: Automation increases efficiency, but sensitive counselling requires human contact.
- ***Scaling requires partnerships***: Regional expansion will depend on building reliable local partnerships with banks and employers in other economies.

QBO INNOVATION (Philippines)

“Enabling Filipino startups to thrive through mentorship, inclusivity, and community building”

<https://www.qboinnovation.com>

Firm activity overview

QBO Innovation is the Philippines’ first public–private partnership innovation hub, established in **2016** through a collaboration amongst JP Morgan, the **Department of Science and Technology (DOST)**, the **Department of Trade and Industry (DTI)**, and **IdeaSpace Foundation**, the corporate accelerator of the First Pacific Group led by Manny V. Pangilinan. The hub was created to broaden access to entrepreneurial support beyond corporate-linked initiatives and to serve as a domestic platform for fostering innovation.

As an **enabler of the Philippine startup ecosystem**, QBO provides structured programs, mentorship, consulting services, and strong linkages with government, corporate, and academic partners. Over the past nine years, it has **supported more than 300 startups** across sectors ranging from agritech to fintech, healthtech, and creative industries. About **5 percent of these startups have expanded internationally**, demonstrating the global potential of Filipino entrepreneurs.

The organization maintains a **lean team of 12 staff**, with a strong female majority (nine women and three men), reflecting its commitment to gender balance not only in programming but also internally. QBO has become a **recognized thought leader in the Philippines’ innovation ecosystem**, often partnering with the Government, multilateral agencies (such as the ITC), embassies, universities, and corporations to deliver accelerator programs and startup events—including the annual **Philippine Startup Week**, the economy’s largest innovation gathering.

Digital and AI content of firm’s activities or products

QBO relies heavily on **digital technologies** to deliver its programs and maintain networks. The hub uses platforms such as **Zoom, Teams, Google Meet, and Streamyard** for training and webinars, **Slack** for internal collaboration, and more accessible tools like **Facebook Messenger, Viber and WhatsApp** for outreach—reflecting local communication norms.

The organization also experiments with **AI tools** like ChatGPT and Gemini for administrative tasks, event support, and program delivery. However, as a nonprofit operating mainly on grants, **financial constraints limit advanced AI adoption**. As Executive Director **Alwyn Joy Rosel** noted, donor funding is usually earmarked for direct startup support rather than for strengthening enabler organizations themselves. Despite these limitations, QBO exemplifies **resourceful digital adoption**, leveraging available tools to increase team productivity and ecosystem reach.

Leadership motivation and challenges faced

QBO’s leadership team is deeply embedded in the Philippine startup ecosystem. Executive Director **Alwyn Joy Rosel**, who began her career in the BPO industry before moving into startup incubation at the University of the Philippines and the Asian Institute of Management,

has worked in innovation for over **13 years**. Her professional journey reflects a shift from corporate to developmental work, with a focus on **building collaborative networks** rather than technical product creation.

Several challenges shape QBO's operations. First, as a **grant-funded nonprofit**, the hub struggles to invest in its own organizational capacity and advanced tools. Second, **tracking startup outcomes** remains resource-intensive, with limited response rates to annual surveys; social media monitoring often substitutes for formal reporting. Finally, while QBO emphasizes inclusivity, achieving greater international expansion for Filipino startups has been difficult, with only a small proportion reaching foreign markets. These obstacles highlight systemic gaps in financing, scaling support, and ecosystem maturity.

Successes achieved by the firm

- Supported **over 300 startups** since 2016, across diverse sectors.
- Enabled **5 per cent of startups** to expand into international markets.
- Established itself as the **Philippines' leading innovation hub**, bridging government, private sector, and development partners.
- Pioneered **Startup Pinai**, an initiative ensuring women's representation in panels, judging committees, mentorship, and program activities.
- Built a **gender-diverse team** (75 per cent women) and contributed to normalizing women's leadership in the innovation ecosystem.
- Partnered with global organizations (e.g., ITC, U.S. Embassy, EU) to deliver accelerators and capacity-building programs for young entrepreneurs.

Lessons to impart

- ***Inclusivity requires intentionality***: QBO demonstrates that policies like “no all-male panels” and gender-balanced mentorship pools can shift norms in startup ecosystems.
- ***Digital adoption can scale impact***: Even without proprietary AI, consistent use of available digital tools enhances reach, collaboration, and efficiency.
- ***Nonprofits need capacity-building too***: Sustainable ecosystem enablers require donor support not only for startups but also for their own digital and institutional strengthening.
- ***Collaboration drives ecosystems***: Public–private partnerships create legitimacy, funding, and networks that startups cannot access alone.
- ***Representation in external initiatives matters***: Highlighting women entrepreneurs through initiatives like *Startup Pinai* changes perceptions and builds aspirational role models for the next generation.

QILIANG DIGITS (China)

“We harness AI and digital trade innovation to help Chinese enterprises build sustainable success in global markets.”

<https://qldigits.com/en/>

Firm activity overview

Founded in 2020 by CEO Arylin Wu, Qiliang Digits (QL Digits) is a Shanghai-based cross-border trade technology company. Its mission is to help Chinese firms globalize through intelligent digital trade solutions. Guided by the vision to “make the world fall in love with Chinese enterprises,” QL Digits aims to build genuine brand value and cultural recognition for Chinese products and services in overseas markets.

The company has assembled a multidisciplinary “AI-native” team of experts from firms such as Shanda, Ernst & Young, and NetEase. This culture of bottom-up innovation allows every team member to experiment with AI tools and embed them across workflows.

QL Digits has built an ecosystem of 2,000+ media resources worldwide. Its proprietary Cross-border Digital Intelligence SaaS Platform integrates global data sources, providing real-time market monitoring, insights, and automated decision support. The firm serves clients in digital finance, gaming, Web3, AIGC, and cross-border e-commerce, helping them expand into markets across Europe, North America, Southeast Asia, and Latin America. Strategic partnerships with Google, TikTok, Facebook, and Amazon strengthen its role as both a service provider and a system integration innovator.

The company achieved profitability in its first year, showing strong commercial viability and resilience.

Digital and AI content of firm’s activities or products

QL Digits is fully digitalized, with AI embedded in all operations. Initially investing over 20% of profits in proprietary AI R&D, the company pivoted after the emergence of GPT-3.5 in 2022. Rather than compete with foundational AI developers, QL Digits chose to become an “AI application innovator,” rapidly integrating new tools into business practice.

By 2024, all workflows were re-engineered around AI. In business intelligence, AI analyzes client needs and generates personalized solution recommendations. In market monitoring, AI tracks global dynamics and adjusts strategies in real time, ensuring clients’ overseas campaigns remain aligned with market shifts. The company also applies AI to massive cross-border trade datasets, identifying new opportunities and risks, and generating automated response strategies to regulatory or policy changes within minutes.

The flagship Cross-border Digital Intelligence SaaS System integrates global platform data for automated advertising optimization, personalized recommendations, and cultural adaptability analysis. Its strength lies not in reinventing platforms but in consolidating and orchestrating them into a unified decision-making network. This allows QL Digits to provide clients with both global reach and localized insights.

Founder’s motivation and challenges faced

Arylin Wu's entrepreneurial drive comes from more than 15 years in marketing and advertising. She observed that many high-quality Chinese products lacked recognition overseas because traditional marketing was labor-intensive and outdated. She concluded that digital capability—not just product quality—was the key to gaining international respect. Inspired by the idea of promoting Chinese enterprises through value creation rather than low prices, she founded QL Digits to help firms build true brand value abroad.

The biggest challenge came with the GPT-3.5 breakthrough, which disrupted the company's costly AI development strategy. The team had to choose between persisting with in-house R&D or embracing general AI tools. This pivot triggered internal debate but ultimately reshaped QL Digits as an agile AI application leader.

Another challenge was investor perception. Many viewed cross-border digital trade as a traditional service sector rather than a technology-driven industry. Educating the market while maintaining growth demanded perseverance.

The COVID-19 pandemic created both risk and opportunity: accelerating digitalization worldwide but also forcing QL Digits to build organizational resilience under uncertain conditions.

Successes achieved by the firm

- **Profitability and strategic autonomy:** Achieved profitability in the first year, ensuring independence from investor pressures and enabling long-term strategic planning.
- **Integration with global platforms:** Secured partnerships with Google (Greater China Partner), TikTok, Facebook, and Amazon, enabling precise targeting and expansion into multiple global markets.
- **Flagship AI platform:** Developed the Cross-border Digital Intelligence SaaS System, delivering real-time market insights and adaptive strategies.
- **AI-native organizational culture:** Established a bottom-up culture where employees use AI tools daily, fostering continuous innovation.
- **Academia-industry links:** Built collaborations with Shanghai University and the University of Shanghai for Science and Technology; CEO serves as MBA mentor and advisor.
- **Policy and industry influence:** Participates in policy discussions through CATIS and CCF, contributes to digital trade standards, and holds "High-tech Enterprise" certification.
- **Knowledge sharing and philanthropy:** Regularly shares practical experience through seminars, contributing to the development of China's cross-border digital trade ecosystem.

Lessons to impart

- **Cognitive agility matters more than technology alone:** The GPT-3.5 shock highlighted that competitiveness comes from the ability to reframe strategies quickly, not from clinging to sunk investments.
- **Systems thinking over control:** In complex markets, synergy and adaptability matter more than controlling every variable. QL Digits positions itself as an open system that optimizes flows of information and value.

- **Redefining competition:** Shifting from price competition to value recognition elevates the role of cultural identity and brand influence in global markets.
- **Independent thinking as a scarce resource:** Early profitability allowed the firm to maintain intellectual independence and make judgments based on first principles rather than external pressures.
- **From company to standard-setter:** Contributing to industry standards and policy processes shows that leadership lies not in monopolizing knowledge but in shaping frameworks that benefit the broader ecosystem.
- **Capability-focused culture:** True equality stems from focusing on skills, mindset, and value creation rather than gender. Flexible work arrangements support balance and help attract top talent.

TECHSAUCE (Thailand)

“Empowering Southeast Asia’s tech ecosystem through events, media, and innovation programs”

<https://techsauce.co/en>

Firm activity overview

Techsauce is a **technology ecosystem enabler** founded in **2015** by **Oranuch (Mimee) Lerdsuwankij** and three co-founders. Within two to three years, Mimee bought out her co-founders’ shares and became the sole active founder, steering the company into one of Southeast Asia’s most influential innovation platforms.

The company operates across four main platforms: (1) the **Techsauce Global Summit**, one of the region’s largest technology conferences, attracting more than **18,000 participants from 60 economies**; (2) a **media portal** providing in-depth coverage of technology, digital transformation, and innovation trends; (3) an **accelerator program** that runs hackathons and growth-stage support initiatives, including collaborations with organizations such as the Digital Economy Promotion Agency (under the Ministry of Digital Economy and Society), and (4) the **Techsauce Academy**, which delivers upskilling and reskilling programs using AI and digital tools.

From its origins in Thailand, Techsauce has steadily expanded its footprint. It now exports services by attracting international participants to its Bangkok summit (Mode 2) and by organizing **physical events in Viet Nam and Indonesia** (Mode 4).

With a **team of around 70 employees**, of whom **60–65% are women**, Techsauce is notable for its internal diversity, which also includes LGBT staff. It has been **profitable since its first year**, supported by careful cash flow management, venture capital investment, and government grants.

Digital and AI content of firm’s activities or products

Techsauce is **digitally intensive**, relying on over **50 different cloud-based software tools** to run its operations, including Google Workspace, Google Cloud, and Slack. For its flagship Techsauce Global Summit, it has also co-developed a custom **event and speaker management platform** with a local Thai startup that Mimee co-founded separately.

The company uses **AI extensively but cautiously**. Its media and content team employs **Google Gemini** for research and drafting, always under human editorial oversight to ensure quality and originality. Internally, Techsauce also uses **AI video tools** for storyboarding and event preparation, though it avoids publishing AI-generated videos externally due to copyright concerns. At its Global Summit, the company deploys **real-time AI translation systems** to deliver multilingual content, including Thai, Chinese, Korean, and Japanese, thereby making events accessible to a diverse regional audience.

The Techsauce Academy integrates digital and AI-enabled training into its programs, using hackathons to encourage employees and participants alike to identify bottlenecks and embed AI in workflows. Staff are also given training budgets to pursue self-selected digital courses, reflecting a culture of continuous learning and adaptation.

Founder's motivation and challenges faced

Mimee's path to Techsauce reflects a strong entrepreneurial trajectory and a passion for technology. With a background in **telecommunication engineering** and over a decade of experience in corporate product management, she left the corporate world in 2012 to launch her own startups. Techsauce is her **fourth company**: her first e-venture failed, her second—a digital marketing media platform—was acquired by online agency, and her third—a social media monitoring platform—was acquired by a Korean unicorn.

By the time she raised funds for Techsauce, the company was already well established, which spared her some of the gender-related fundraising challenges often faced by women founders. She reports being treated with respect and equality by investors, though she acknowledges that many female peers in Thailand's startup ecosystem encounter scepticism when disclosing family plans. Mimee credits **mentorship networks like IMETMAX**, along with role models such as Jareeporn Jarukornsakul of the WHA Group, for guiding her in business and society.

Techsauce's internal policies reflect this ethos. With a majority female workforce, the company supports **mothers with flexible work arrangements**, extending work-from-home or reduced-scope roles after maternity leave. It also actively ensures inclusivity by providing opportunities for LGBT employees and by embedding gender considerations in accelerator and hackathon activities.

Successes achieved by the firm

- Built a reputation as one of **Southeast Asia's largest and most influential tech ecosystem platforms**, hosting annual summits with **18,000+ international participants**.
- Expanded Techsauce Global Summit to **Viet Nam and Indonesia**
- Created a **multi-platform model**: global summits, media portal, accelerators, and academy.
- Achieved **profitability from inception**, supported by venture capital and government grants.
- Established a **diverse workforce** (60–65% women, LGBT-inclusive).

Lessons to impart

- **Diversified platforms create resilience**: Techsauce combines events, media, accelerators, and training to build an end-to-end ecosystem model.
- **AI is a tool, not a replacement**: Treating AI as a “colleague” ensures quality while maximizing efficiency.
- **Ecosystem growth requires inclusivity**: Gender balance, flexible work arrangements, and LGBT inclusion strengthen innovation communities.
- **Profitability and impact can align**: Techsauce demonstrates that ecosystem enablers can be financially sustainable while delivering social and economic value.
- **Founders' persistence and adaptability matter**: Mimee's multiple entrepreneurial experiences illustrate that failure and exits both feed into long-term success.

THEODORA (Chile)

“Theodora AI is the golden standard for managing reputational risk and creating rapid innovation by removing bias in your organization”

<https://www.theodora.ai/>

Firm activity overview

Theodora is a Chilean-founded startup established in 2022 by lawyer **María José Martabit**, in partnership with AI worldwide expert **Ricardo Baeza-Yates**. The company develops artificial intelligence (AI) to detect, analyse, and correct **biases in communication**, defined as any unconscious, unfair affirmation or comment about a group of people. Working with linguists, neurologist, AI specialists, and lawyers globally, the firm’s main product is a "bias report" that provides organizations with an "x-ray" of how bias impacts their communications, both internal and external. Originally focused on legal tech, Theodora pivoted to a focus on banking, retail, and creative industries after it encountered resistance to its objective and product from legal professionals, and has been much more successful with this focus. The company currently operates in Chile and Mexico, and works with multinational companies that have a worldwide presence. It maintains a diverse team of seven specialists worldwide.

Digital and AI content of firm's activities or products

Theodora’s operations are focused nearly one hundred percent on the utilization of digital and AI technology. The firm’s innovation lies in its **patented AI technology**, which integrates social listening tools with proprietary algorithms. The system draws on a unique and proprietary dataset which was built from scratch through consolidating input from individuals in 20 economies around the world. Creation of the dataset was financed through global competitions sponsored by Microsoft. Theodora uses the information in this dataset to assess online communications and the reports of firms and organizations for **gender, ethnic, disability, and sexual orientation biases**, as well as the assessment of their readability and reputational risk. The firm also collects information through a mobile app system on its website where people can submit and label biases in content. Theodora’s technology can process **text, images, and videos**. Theodora’s technology to detect and mitigate biases in texts is under patent protection in the United States, and now protecting new developments in the United State and in the European Union, which has opened a company in the U.S.to manage its IP portfolio. The firm also operates a **brain lab component** to study how unconscious bias impacts human decision-making, and is currently expanding its IP portfolio in this direction. It has developed an online anti-bias world challenge with psychiatrists available to all to complete.

Founder’s motivation and challenges faced

The founder credits her role models first and foremost as the hardworking women in her own family. Her motivation stems from her personal experience of 15 years in Chile’s legal profession, where despite multiple qualifications she felt herself to be “invisible” in the traditional legal system structure. She describes this experience as a reflection of the **“architecture of society”** that prevents women from advancing professionally to leadership

roles. She was also motivated by a sense of justice and equality that should be the basis for the treatment of all individuals. Establishing Theodora required significant personal sacrifice: María José and her husband financed the first year of the firm's operations with their savings and by selling an apartment. Currently Theodora is funding its operations through grants, prizes, and client revenue. Beyond the financial sacrifices, further challenges included the high cost of IP protection and the difficulty of finding specialized AI lawyers in Latam to patent the innovative technology locally (which was patented in the U.S. and the EU as a result).

Successes achieved by the firm

Despite the above challenges, Theodora can attest to several notable successes. These include the following achievements:

- Developed and patented a novel technology with applications across different types of industries (retail, finance, and creative industries)
- Developed complementary tools, such as an **anti-bias quiz** with psychiatrists to allow individuals to test themselves and reflect about the bias they might have.
- A mobile app "**The bias project**" to allow people around the world to contribute to label text and images in several bias categories, in summary is a mobile app for bias submission and labelling.
- Built a multidisciplinary and international team of seven (ages ranging from 28 to 60+), including linguists, lawyers, sociologist, neurologist, engineers, and AI experts.
- Secured funding and recognition from multiple sources, including **Microsoft**, **Manateech (Miami)**, the **Ministry of Science of Chile**, **Corfo**, **Inria**, and impact investors.
- Conducted projects with multinational firms in banking and retail, and a political analysis project for the Mexican Consultant Firm on Latino voting behaviour in the US (during the last presidential election).

Lessons to Impart

1. **Resilience and adaptation:** Theodora's experience demonstrates how resistance encountered to the firm's output in one industry (legal services) can be overcome by pivoting toward more open sectors (banking, retail and creative services).
2. **Women must create their own platforms:** Structural gender biases in society and the professional world mean that women may need to create their own platforms rather than wait for existing ones to open.
3. **A global mindset is an asset:** Working from the outset with a global mindset to build international networks, distributed teams, and cross-border IP protection patents can strengthen resilience and credibility for a start-up firm.
4. **Financing is a big challenge:** Women founders are often forced to rely on personal savings and family resources at the outset as other financing is not available commercially; external grants and accelerators become essential later for the firm's expansion.
5. **AI can act as an enabler in the right environment:** Artificial intelligence can empower small teams to be more efficient and productive but requires constant investment in innovation and the right skill set of employees.

6. **Networking can and should be used to advantage:** Engagement in networks established by engagements in Theodora (but not preexisting professional associations or similar networks) has proved very useful in creating channels of support and providing visibility to the firm's operation and objectives.

TOPLOGIS Inc. (Chinese Taipei)

“Smarter Supply Chains, Seamless Logistics.”

<https://www.toplogis.com/>

Firm activity overview

Founded in 2004 by CEO Peng Li-Chen (Catherine), TOPLOGIS Inc. is a cloud-based logistics platform headquartered in Chinese Taipei. The company helps businesses, especially high-tech manufacturers, manage complex supply chains with greater efficiency. Today, it is recognized as the largest B2B logistics platform in Chinese Taipei. TOPLOGIS serves around 80% domestic clients—principally major electronics firms—while 20% of its customer base spans the United States, China, Singapore, and Japan. Its mission is to deliver intelligent, digitalized logistics solutions that allow manufacturers to outsource supply chain operations and focus on their core competencies.

The firm employs about 50 people, with women making up 70% of staff and 80% of managers. Family-friendly policies, such as work-from-home options and support for working mothers, underpin a high retention rate, especially among women employees.

Digital and AI content of firm’s activities or products

TOPLOGIS develops proprietary software that digitizes logistics and automates customs clearance. Its AI models, trained on large datasets and supported by ChatGPT technologies, can auto-generate clearance documents with roughly 95% accuracy. Human experts verify the final step, creating a human–AI hybrid process that continues to learn and improve.

The platform also integrates supply chain actors—shippers, freight forwarders, customs brokers, and trucking companies—into a unified cloud-based system. By processing information once and sharing it across the chain, TOPLOGIS reduces redundancy, minimizes errors, and accelerates shipment cycles. Through this digital backbone, the company transforms traditional paper-heavy logistics into a streamlined, near paperless process. Clients benefit from faster compliance, lower risks of penalties due to errors, and enhanced operational efficiency.

Founder’s motivation and challenges faced

Catherine studied applied mathematics and later completed a master’s degree in IT. Early in her career, she worked in Hsinchu Science Park, where she saw women in shipping departments performing tedious manual paperwork in high-tech companies that otherwise drove Chinese Taipei’s GDP growth. This contradiction motivated her to build a digital platform to make logistics smarter, more efficient, and more rewarding for workers.

Inspired by Salesforce.com’s transformation of CRM, she envisioned a similar disruption for supply chain management. Her personal motto, “do something different,” reflects this ambition.

The journey was not easy. Catherine invested USD330,000 (NTD 10 million) of her own savings to start the firm and faced repeated rejections when seeking bank financing. Banks in Chinese Taipei did not understand her business model, and she believes gender bias may have played a role—investors even questioned whether her husband supported her entrepreneurial decision. A breakthrough came when Acer’s founder, Mr. Stan Shih, invested

through ID Soft Tech Capital, attracting further investors such as ACORN Campus, CTC Capital, and Evergreen Marine. With several million USD raised, TOPLOGIS grew steadily, finally achieving profitability in 2014 after a decade of losses. COVID-19 became a turning point for the logistics industry in 2020, accelerating global demand for digital logistics and significantly boosting the company's growth trajectory.

Successes achieved by the firm

- **Market leadership:** Now in position as largest B2B logistics platform in Chinese Taipei, trusted by leading electronics manufacturers.
- **Patented technology:** Developed proprietary AI-driven logistics software, with patents registered in Chinese Taipei.
- **Profitability after persistence:** Achieved profitability in 2014 after 10 years, demonstrating resilience and long-term commitment.
- **AI-enabled customs clearance:** Reached 95% accuracy in automated document generation, reducing compliance risks and improving efficiency.
- **Gender-inclusive workplace:** TOPLOGIS features a team that is 70% female, with women holding 80% of management roles, supported by family-friendly policies.
- **Mentorship and advocacy:** Women entrepreneurs are actively mentored. Catherine promotes STEM education for girls and advocates persistence in male-dominated sectors.

Lessons to impart

- ***Persistence pays off:*** Building profitability took a decade, but persistence, coupled with the right investors, sustained the firm.
- ***Innovation can come from lived experience:*** Observing inefficiencies in the shipping departments inspired a platform that transformed logistics practices.
- ***Gender bias in capital markets:*** Female entrepreneurs face additional scrutiny; overcoming it requires both persistence and strong proof of concept.
- ***AI can be used as a practical tool:*** Rather than replacing people, AI can complement human expertise, reduce errors, and enable staff to focus on higher-value tasks.
- ***Inclusive leadership is important:*** A focus on family-friendly policies and capability building fosters loyalty and talent retention, particularly among women.
- ***Doing things differently:*** Innovation often begins with challenging entrenched assumptions, as shown by applying cloud technology to logistics long before it became mainstream.

XCUBE.CO (Singapore)

“We bridge the gap between corporates and startups, turning ideas into market-ready solutions that deliver real impact.”

<https://www.xcube.co>

Firm activity overview

xcube.co is a Singapore-based venture studio and innovation partner established in 2023. Its mission is to help financial institutions, large corporations, and early-stage ventures transform concepts into viable, market-ready products. xcube.co focuses on the “zero to one” innovation phase, combining strategic advisory, venture building (“innovation as a service”), leadership development and Public-Private Partnership (PPP) to ensure innovation drives measurable business results.

A flagship portfolio is **DEFY (Defiant for Good®)**, dedicated to inclusive finance, which develops technology solutions aimed at improving economic empowerment and inclusive growth by addressing structural gaps in traditional financial systems. Within two years of launch, xcube.co expanded beyond Singapore; Hong Kong, China; and Malaysia into the Middle East, establishing a hub in Bahrain due to the Central Bank’s progressive regulatory sandbox and innovation-friendly environment. The firm has a core team of 10 people, and employs a network of contractual experts according to project needs. It has ensured a strong gender and cultural diversity within its team, with more women than men in the core group and a multinational workforce.

Digital and AI content of firm’s activities or products

xcube.co’s operations are digital by design. Its activities span digital strategy, prototyping, product development, Go-To-Market strategy and Public-Private Partnerships. It deploys advanced technologies in its operations, particularly AI and blockchain. Applications include:

- **AI-driven alternative risk scoring:** enabling approval of customers often excluded by traditional credit scoring, while predicting and managing default risks.
- **Behavioural analysis:** uncovering customer patterns for incumbent banks to expand into new segments.
- **Real-time KYC (Know Your Customer):** lowering underwriting costs while maintaining compliance across diverse jurisdictions.
- **Continuous machine learning:** real-time updates to maintain trust and regulatory compliance.

Beyond client projects, xcube.co also runs innovation programs. A notable example is the **Global Challenger competition** with Ant International, which drew applications from over 30 economies across four continents and emphasized impact-focused solutions aligned with the UN SDGs, particularly education, gender, sustainability, and inclusion.

Founder’s motivation and challenges faced

xcube.co was founded by **Sebastien Picard**, a serial entrepreneur with a PhD in Strategic Management and experience spanning pharmaceuticals, corporate innovation, education technology, and fintech. He created xcube.co as his fourth business, motivated by the need

to help corporations innovate beyond their core business and integrate frontier technologies. **Eelee Lua**, Executive Director and Chief of Staff, joined as part of the founding team shortly after inception and co-leads the inclusive finance portfolio, DEFY.

Eelee, with a background in business and international management rather than STEM, highlights her personal journey as proof that non-technical leaders can thrive in tech if they act as translators between developers and clients. However, she also underscores the **gender-related challenges** faced in fintech: in some contexts, she is not taken seriously due to her young appearance, and often finds herself the only woman on panels or at industry events. Fundraising difficulties are compounded by reliance on male-dominated networking channels (golf, late-night drinks), which many women cannot access due to social roles or preferences. Her response has been to mentor younger women and encourage them to build **alternative networks**, such as morning coffee meetups for impact investors, which now thrive in Singapore.

Successes achieved by the firm

- Expanded geographically to **Bahrain as GCC hub** within two years of founding
- Ran the **Global Challenger program** with Ant International, attracting applicants from 30+ economies and providing winners international exposure at a major tech inclusion conference in Shanghai
- D4Good, a technology developed within DEFY, was selected as a finalist for the **Investment Tech of the Year** at the Asia FinTech Awards 2025
- Invited by Bahrain Ministry of Sustainable Development and UN Bahrain to contribute to the Fourth International Conference on Financing for Development (FfD4) workshop
- Established a workplace culture of **employee autonomy**, providing flexible hours, and financial support for professional development, conferences, and memberships. Interns are paid, and international placements are hosted. **Executive leadership development program** for board directors from Malaysian financial institutions via a strategic partnership with FIDE Forum
- Developed leadership roles in industry networks with active contribution to the **Singapore Fintech Association's Women in Fintech subcommittee** and the **Women in Alliances** network

Lessons to impart

- **Bootstrapping builds resilience:** Running lean on client revenue forces discipline and strong project delivery.
- **Inclusive finance creates both impact and opportunity:** Financial solutions designed with inclusion in mind can expand markets while addressing social needs.
- **Networking formats matter:** Alternative, women-led networking spaces can expand access and visibility beyond male-dominated channels.
- **Diversity strengthens innovation:** Gender-balanced and multicultural teams fuel adaptability and creative thinking.
- **Non-STEM leaders can thrive:** Business acumen, communication skills, and the ability to bridge clients with technical teams are critical in tech ventures.
- **Mentorship multiplies impact:** Building inclusive pipelines through mentoring supports long-term systemic change.

- **Regulatory partnership accelerates trust:** Sandbox engagement and consultation with regulators enable compliant, faster innovation.

Appendix 2: Project Brief and Interview Details for Case Study Participants

This note provides background, project objectives, and outlines what participation involves for participants invited to join the case study on Women entrepreneurs in digital firms or AI-driven startups. Interview questions are appended to the note.

1) Project background

The rapid digital transformation in APEC economies has fundamentally reshaped services trade and employment, making **digitally delivered services (DDS)** the region's most dynamic growth area. Despite these advances, **significant gender gaps persist**: women remain underrepresented in high-skill, high-wage, and decision-making roles—including critical sectors such as ICT, financial, and professional services—while being overrepresented in lower-paid service work. These disparities are not just social issues; they substantially inhibit regional economic performance, as the underutilization of women in the formal sector costs Asia-Pacific economies billions annually.

Guided by the [La Serena Roadmap for Women and Inclusive Growth](#), this APEC project carried out for the APEC Group on Services seeks targeted action to close these gaps, focusing on improving women's access to capital, markets, skills, and leadership, especially in the context of digitalization and technological change.

The project's previous phases have:

- Analyzed the root causes of gender gaps in digitally intensive services (Analysis).
- Presented private sector perspectives, using surveys and private-public dialogues to illustrate both progress and continuing barriers for women in ICT, financial, and professional services (Private Sector Perspectives).

2) Objectives of this component of the project

The current and final phase turns to the critical role of **women-led startups and entrepreneurial ventures** in digital and AI-linked activities.

- **Primary objective:** To systematically explore the unique pathways, enablers, challenges, and outcomes for **women-led startups** in digitally intensive or AI-driven sectors across APEC economies.
- Through a small number of **in-depth case studies** representing diverse geographic locations, this phase seeks to illuminate:
 - How women founders enter and navigate digital and AI-focused startups.
 - The business models, digital enablers, and support networks that shape their entrepreneurial journeys.
 - The main barriers, turning points, and gendered perceptions that influence success.
 - Impacts to date and market reach—locally, regionally, or globally.
- A cross-cutting analysis will then draw out common success factors and persistent obstacles, summarizing implications for policy or future research to accelerate inclusive innovation and gender equality region-wide.

3) Interview purpose and involvement of the interviewee

As part of this case study series, you or your organization are being invited to participate as a valued example of women-led innovation in your sector and economy.

- **Purpose:** The interview aims to understand your startup's journey and experiences as a woman-led firm in a digitally intensive or AI-driven sector. The findings will help illustrate opportunities and persistent barriers for women entrepreneurs across the APEC region, supporting evidence-led policy and ecosystem interventions.
- **Involvement:** Participation will require a modest time commitment. We ask for:
 - Agreement to an **online interview** based on the provided interview questions (60 min).
 - Sharing relevant, non-confidential information about your founder's or yours background, business model, enabling factors, challenges faced, and progress made.
 - Optionally, review and validate a draft case profile before inclusion in the final public report.
- All case studies will be credited as appropriate and with your consent. Findings will be shared with participants before public dissemination.

Thank you for considering this request to help advance impactful research on women's entrepreneurship in digital services in APEC. This research will contribute to a broader effort to enhance women's economic empowerment in the region's thriving digital services sector. If you have any questions or need further information, please let us know.

INTERVIEW QUESTIONS

for the study on Women entrepreneurs in digital firms or AI-driven startups

Section A: Profile of the firm

- What does your firm do and when it was established?
- What market niche did your firm set out to enter?
- How digitally intensive are your firm's activities?
- What type of AI does your firm use and when was it adopted as part of output?
- Does your firm export? If so, is this within the APEC region or beyond? How many different markets do you export to?

Section B: Background & motivation

- What gave you the idea to start this business?
- Do you have a STEM background?
- Did you have a role model to help you start a firm (or work) in a digitally-intensive industry?

Section C: Digital enablers

- Which digital platforms or tools have been essential in starting or growing your business?
- Did you participate in any incubator, accelerator, or digital skills program?
- Does your firm use AI applications and what are they?

- How much does AI contribute to making your firm competitive and profitable? How often do you have to upgrade AI applications?

Section D: Financing

- How did you finance your startup in the early days?
- What challenges did you face as a woman in accessing finance for your business venture?
- Were you offered financing on less favourable terms than men entrepreneurs?
- Have you raised capital since then? If so, was the experience easier?

Section E: Gender-relevant issues

- What type of gender-related challenges, other than access to finance, have you encountered in running a digital business?
- Are there any professional networks that have helped you in your career path?
- What is the policy of your firm in advancing professional women employees?
- Are there any non-monetary incentives your firm has put in place to attract, maintain and help advance the careers of women professional employees (for example, childcare, flexible work hours and/or flexible requirements for medical leave).

Appendix 3: Glossary of terms for Table 4

Acronym / Term	Definition
AI	Artificial Intelligence – computer systems performing tasks requiring human-like reasoning or perception.
ALIPA	Artificial Intelligence Leadership for Inclusive Public Administration – Mindset Global Partner’s program promoting AI leadership among SMEs and public institutions.
API	Application Programming Interface – a software intermediary enabling different applications to communicate.
AWS	Amazon Web Services – cloud-computing platform widely used for hosting AI and data services.
CRM	Customer Relationship Management – systems that manage client data and interactions.
DEPA	Digital Economy Partnership Agreement – referenced by Thai start-ups participating in digital trade initiatives.
DTAC	Digital Telecom Asia Corp. – Thai telecom accelerator supporting digital-finance and AI ventures.
Edge AI / Tiny ML	AI computation performed locally on small or embedded devices rather than in the cloud.
GenAI	Generative AI – AI systems (e.g. ChatGPT, Gemini) that generate text, images, or other content.
IoT	Internet of Things – network of connected devices exchanging data.
KYC	Know Your Customer – due-diligence process in financial services, often automated using AI.
LMS	Learning Management System – digital platform for managing online education.
ML	Machine Learning – sub-field of AI where systems learn patterns from data.
NIA	National Innovation Agency (Thailand) – government body supporting innovation and AI entrepreneurship.
NLP	Natural Language Processing – AI technique for interpreting or generating human language.
PPP	Public–Private Partnership – collaboration between public and private sectors, often in digital-innovation policy.
R&D	Research and Development – systematic work to innovate or improve technologies.
SaaS	Software as a Service – cloud-based software delivery model.
SME	Small and Medium-Sized Enterprise.
STEM	Science, Technology, Engineering and Mathematics – education fields relevant to digital skills.
UX/UI	User Experience / User Interface – design aspects of digital products.
Inspira	Mindset Global Partner’s AI-leadership curriculum linking innovation and ethics.
DEFY	xcube.co’s Defiant for Good® portfolio – inclusive-finance initiative using AI for alternative risk scoring.

