BUSINESS
FINLAND

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SHAPING FINLAND'S DIGITAL FUTURE

Evaluation of Business Finland's AI Business, Digital Trust and Experience Commerce Programs

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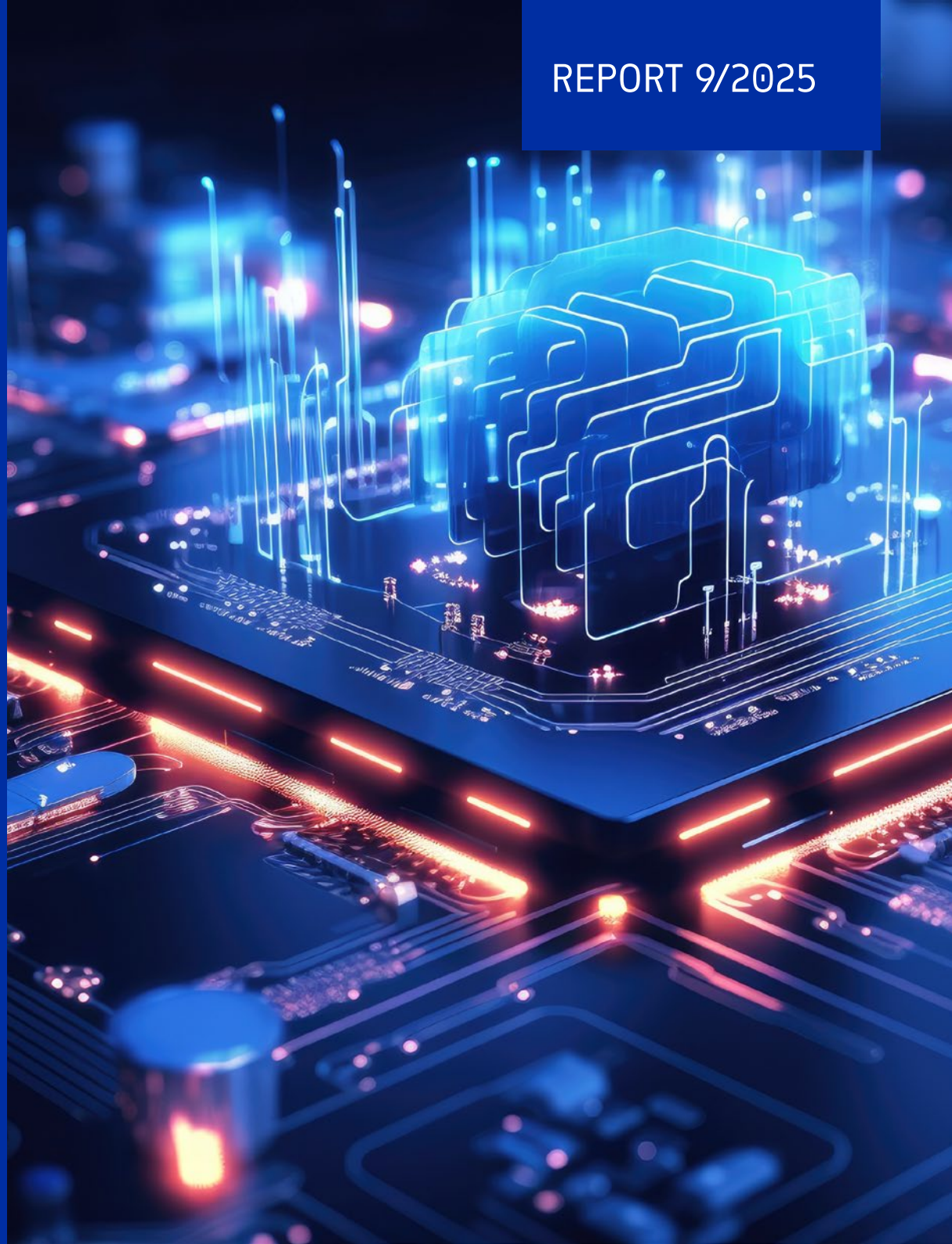

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BUSINESS FINLAND
We believe in the power of ideas. That's why we fund and help Finnish companies grow quicker and develop their innovations to become global success stories.

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FOREWORD

Business Finland's programs are strategic, time-bound initiatives designed to promote innovation, international growth, and sustainable development among Finnish companies and research organizations. These programs are a key tool in implementing Business Finland's innovation and export strategies, and they play a central role in building business capacity, boosting exports, developing expertise, and fostering networks, ecosystems, and collaborative platforms.

This evaluation focuses on three of Business Finland's recent programs, each with a strong emphasis on advancing digitalization in critically emerging areas: AI Business (2018–2021), Digital Trust (2019–2023), and Experience Commerce (2019–2023).

The AI Business program aimed to accelerate business growth through the use of artificial intelligence, a field that was rapidly gaining momentum at the time. Experience Commerce addressed the ongoing disruption in consumer business, driven by digitalization and changing customer expectations. Meanwhile, Digital Trust focused on building trust and ensuring security in digital environments, with themes including critical communications and cybersecurity.

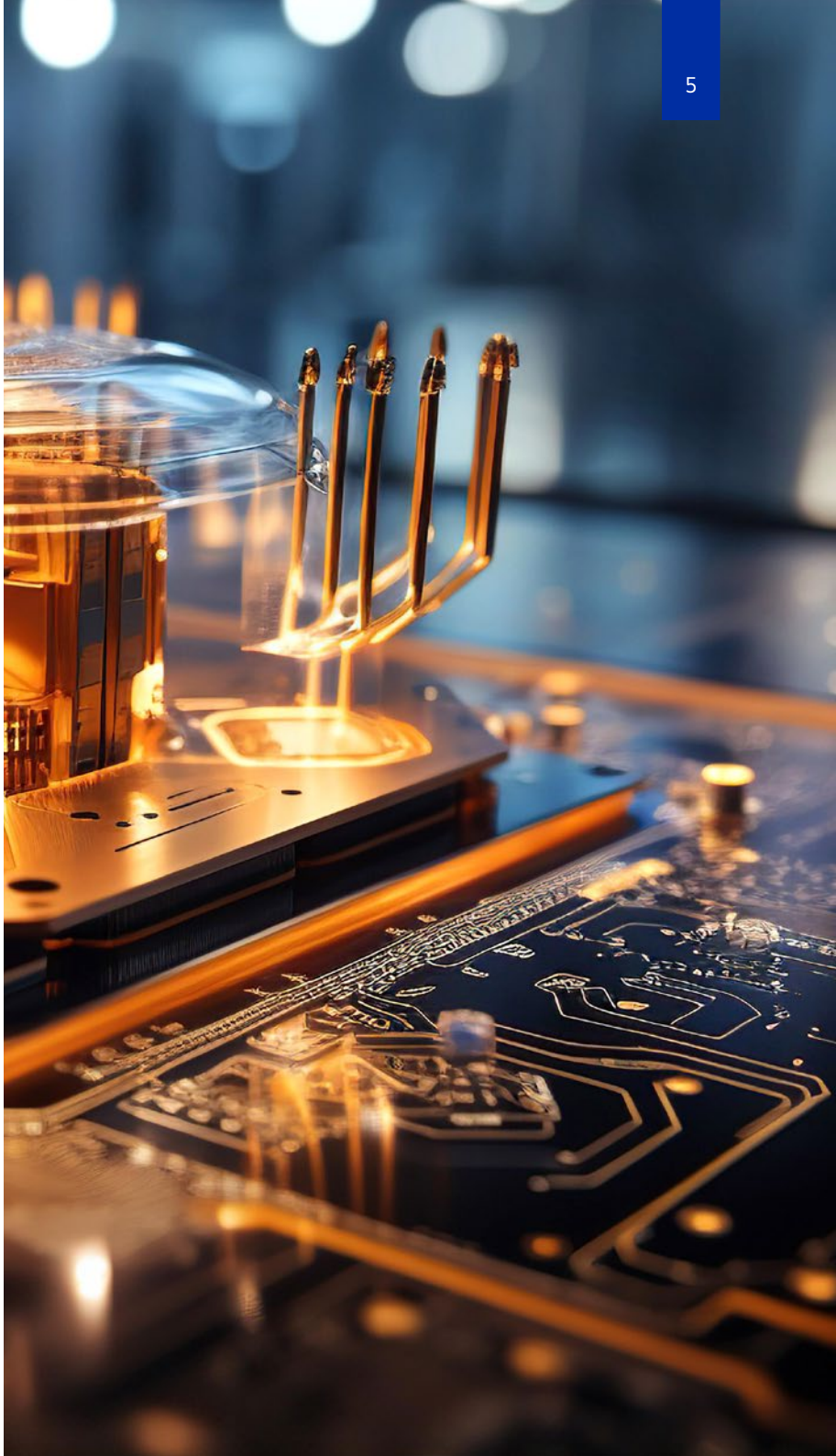
The primary objective of this evaluation was to provide insights into the results, relevance, added value, and impacts of the three programs.

It is worth noting that these programs represent the first generation of Business Finland programs integrating R&D funding with a broad spectrum of export promotion and investment attraction services. As such, the evaluation also contributes to the further development of Business Finland's programs.

This impact study was conducted by ADC, the Amsterdam Data Collective. Business Finland extends its sincere thanks to the evaluators for their thorough and systematic work and expresses its appreciation to the steering group and all other contributors to this evaluation.

Helsinki, April 2025
Business Finland

EXECUTIVE SUMMARY



This is an evaluation report of three programs of Business Finland. The evaluated programs are “Digital Trust Finland, “Experience Commerce” and “AI Business”.

The Digital Trust Finland program (2019–2023) was launched to support Finnish companies in developing business opportunities based on digital trust, attracting investments, and fostering global ecosystems in Finland. The program aimed to capitalize on Finland’s strong reputation for trust and security to drive innovation and business growth in security and trust-based solutions and services, benefiting both solution providers and end users. A key focus of the program was to explore the opportunities and challenges presented by emerging technologies, such as quantum computing, while advancing the internationalization and strategic development of Finnish ecosystems. The program consisted of a total of 119 projects with total program volume of €104.3 million. Of this, €50,6 million was Business Finland funding.

The Experience Commerce program (2019–2023) aimed to support Finnish companies in the evolving global consumer landscape, where customers increasingly make purchasing decisions on an international scale and expect personalized, seamless experiences from brands. Its pri-

mary objective was to enhance companies' ability to meet the expectations of digitally driven consumers, thereby driving export growth. The program targeted retail companies, brand owners, technology firms specializing in data, AI, machine learning, and AR/VR, as well as businesses in logistics, payment, and security solutions, alongside research institutes. A total of 84 projects were funded with a total volume of €72.9 million, including €35.3 million in funding from Business Finland.

The AI Business program (2018–2021) originated from the Augmented Intelligence campaign (2017) and aimed to accelerate the international growth of Finland's digital service sector by creating a modern B2B platform economy that leveraged artificial intelligence to create new value from data. The overarching objectives were to enhance Finland's position in the global digital services market and to generate high value-adding employment within the country. The program targeted startups, SMEs, midcap, and large enterprises registered in Finland, as well as Finnish research organizations. A total of 309 project were included in the program (and the Augmented Intelligence campaign) with an overall volume of €238.3 million, whereas €132.8 million was funding from Business Finland.

The purpose has been to evaluate the programs separately regarding results, relevance, and impacts, while also helping to produce understanding of programmatic features related to scoping and stakeholder collaboration. The evaluation utilized different methods, including traditional desk research of program documentation, AI assisted desk research of project specific documentation, company portfolio analysis, survey, interviews, and case studies.

RELEVANCE

All three programs are rated as very or somewhat useful by at least 95% of the respondents in the survey to funded projects and described as "timely". The programs share a common theme of addressing significant challenges faced by organizations, particularly in securing funding for research and development (R&D). The importance of funding is highlighted as a key obstacle for participants prior to engaging with the programs. However, each program was relevant in distinct ways. Digital Trust Finland projects primarily mentioned the funding needs of research organizations, specifically for R&D. While addressing the funding needs, project participants in Experience Commerce also emphasized the need to improve their customer experience strategies as a main obstacle before joining the program, indicating that many participants required additional expertise in this area. AI Business participants, in contrast, focused on export and international expansion, where participants mentioned funding barriers but also

challenges related to accessing expertise and resources for global growth.

CHALLENGES

The evaluation has identified recurring implementation challenges across the three programs, particularly internal resource constraints, budgetary limitations, and operational disruptions. All three struggled with insufficient staffing, which hindered execution and continuity, while fluctuating budgets and underspending, often due to a lack of personnel, restricted their ability to fully implement planned activities. The COVID-19 pandemic further disrupted operations, forcing programs to reprioritize and adapt to a more digital approach. Additionally, governance and collaboration challenges emerged, with the AI Business program lacking an advisory board, placing greater strain on the program head.

RESULTS

The evaluated programs have collectively contributed to strengthening the international competitiveness of Finnish companies, fostering innovation, and supporting the development of key ecosystems. A key outcome across the initiatives has been increased export and revenue growth among participating companies.

Capacity-building initiatives played a significant role, with training programs and peer-to-peer learning networks engaging many companies. The establishment of regional learning clubs has been particularly successful, fostering collaboration and knowledge-sharing beyond the duration of the programs.

Ecosystem development was a central ambition across the three programs, with progress made in uniting market actors around shared objectives. One program notably contributed to the creation of a new digital commerce ecosystem, which via a newly established company continues to drive industry collaboration and knowledge exchange. Similarly, in the field of AI, the Finnish AI landscape has transformed significantly. At the program's start, Finland was just beginning to prepare its national AI strategy, with few AI startups and large international companies dominating the market. By the end of the program, hundreds of Finnish SMEs and startups were utilizing AI to remain competitive, supported by local AI hubs.

Efforts to promote joint offerings faced challenges, since collaborations require long-term commitment to materialize. Additionally, while the programs aimed to attract foreign direct investments, these goals were not fully realized, partly due to resource limitations in sustaining investment promotion efforts.

IMPACT

The projects in the **Digital Trust Finland** program had a significant impact on collaboration, business growth, and networking, connecting Finnish companies and creating synergies. Many companies strengthened relationships and formed new partnerships in target markets, aligning with the program's goals. The program also contributed to business growth, with improved financing options for R&D and new customer contacts for many participants. The program enhanced the visibility of Finnish companies internationally, helping them expand their market reach. Technological advancements, particularly in AI, machine learning, and blockchain, were also achieved.

The **Experience Commerce** program successfully strengthened the position of Finnish consumer businesses globally, emphasizing business development, international partnerships, and innovation. Key impacts included the creation of Digital Commerce Finland Oy and advancements in sectors like mobility and tourism. Networking and collaboration were central, with participants highlighting the value of expertise, research resources, and international connections. Financially, the program facilitated access to R&D funding and created new business opportunities, for example in sustainable tourism.

Technological advancements and innovation were central impacts of the participating organizations in the timely **AI Business** program, with AI projects leading to new technologies and frameworks. The program focused on competence development and knowledge sharing, enhancing companies' capabilities. It also fostered economic and societal benefits, creating new business opportunities and strengthening ecosystems through collaborations. However, the early stage international acquisition of Finnish AI companies presents a challenge to sustaining long-term job creation and business growth in Finland.

CONCLUSIONS

The evaluation concludes that while the participating organizations in all three program's projects demonstrate compelling impacts, the evaluation reveals gaps in terms of the role of the programs, the program logic, goal alignment, and resource allocation. ADC recommends Business Finland to clarify the strategic purpose of the program format, and ensure alignment between goals, KPIs, and activities by requiring program specific Theory of Change frameworks when starting new programs.

1 INTRODUCTION

The purpose of this report is to present the evaluation of three different Business Finland programs namely “AI Business” (2018–2021), “Digital Trust Finland” (2019–2023) and “Experience Commerce” (2019–2023). The report will present an analysis of the results, relevance and impacts of the programs and explain programmatic features related to program scoping and additionality through stakeholder collaboration. The results will be presented individually for each program.

1.1 BACKGROUND AND EVALUATION QUESTIONS

The evaluation aims to provide answers to the following questions:

1. The evaluation needs to create detailed information for each of the programs on what concrete results each of the programs have created, how relevant have the programs been, how well have the objectives set for the programs been achieved, and what impacts they have had.

2. What has been the main added value from the programs?
3. What can be said about the advantages/disadvantages, results and impacts of executing programs that have a wide scope vs. narrow scope (e.g. regarding the scope of thematic focus or scale of services).
4. What implications and practical recommendations can be made regarding the extent and ways of stakeholder collaboration, to increase resource-efficiency and handprint of Business Finland?
5. For which types of goals do intensive stakeholder collaboration and partnerships particularly enhance impact, and how do they achieve this?
6. What has been the contribution on business development, exports, jobs and internationalization of the participating companies?
7. Regarding implementation and services of the programs, what has worked well and what has not, with reasons explained. What have been the mechanisms of impact of successful services?
8. What have been the critical bottlenecks or obstacles, if any?
9. How does the perspective of sustainable development manifest in the programs and in the results and impacts achieved?

1.2 EVALUATION APPROACH

The evaluation approach can be described as two parallel tracks, all together enabling us to answer the evaluation questions defined in section 1.1. We call the tracks the "traditional track" and the "AI track". Figure 1.1 illustrates how the parallel tracks interact and contribute to the deliverables. Except utilizing different methods (e.g. traditional desk research vs AI assisted desk research), the tracks are conducted on different text documentation. While the traditional track focuses on program documentation (program proposal, annual reports and final report), the AI track focuses on project specific documentation including specific datasets from the project application phase and project reporting phase. The AI assisted desk research is presented more in detail in section 1.3.1. By combining and comparing program documentation with project specific documentation, we believe this evaluation offers a 360 perspective of the programs.

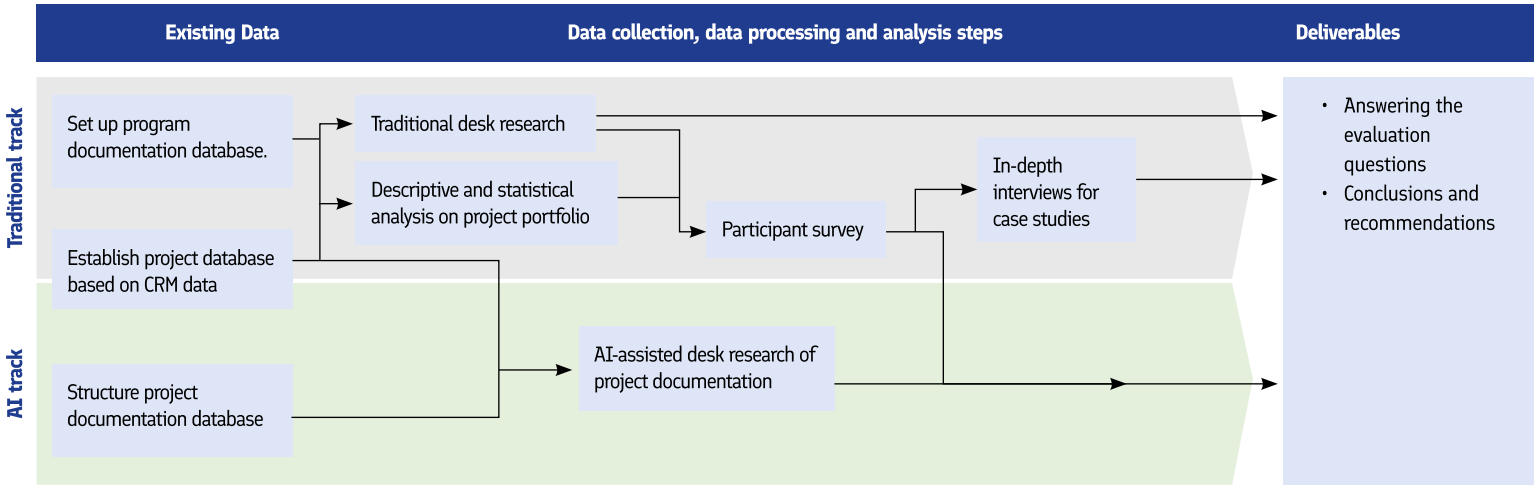


FIGURE 1.1

Throughout the entire evaluation process, ADC have maintained ongoing dialogue with Business Finland to ensure effective communication to allow for timely questions to be answered and strategic decisions to be made. Additionally, status meetings relating to the different analysis steps have been held at the outset of the process to keep all parties aligned.

1.3 METHODS

This section presents each method approach more in detail.

1.3.1 AI-ASSISTED DESK RESEARCH OF PROJECT DOCUMENTATION

The AI-assisted desk research followed a structured, iterative approach designed to process and analyze relevant data for the evaluation. The process was divided into five key phases, each building on the previous step to refine the system and enhance its effectiveness.

The first phase involved understanding the data by investigating available project documents and identifying the most relevant ones for initial processing. Then a system blueprint was created, drawing on previous experience and integrating Business Finland's team in the approach to ensure a solid foundation for the AI setup. In the second phase, the scope of the analysis was defined, and a repre-

sentative subset of project specific documents was selected for inclusion in the AI system. This selection aimed to capture the full range of potential challenges presented in the larger dataset. Decisions were made on how to structure the data within the vector databases to ensure accurate retrieval and analysis. Further, ADC and Business Finland agreed on which exact variables and documentation to include in the analysis with regards to data security and confidentiality.

The third phase focused on setting up the first version of the RAG (Retrieval augmented generation) model. RAG is a technique that combines information retrieval with generative AI models to produce contextually accurate and relevant text by grounding it in real-world data. Documents were embedded into the vector databases according to the defined strategies, and a multi-agent approach was established to manage the system's behavior. A validation system was created, involving curated questions and answers to assess the system's performance, with adjustments made based on the results. Once the system was functioning successfully, the scope was expanded in the fourth phase. Additional project documents were integrated into the system in an iterative manner, with continuous validation and updates to ensure the system's accuracy.

Finally, in the fifth phase, the RAG model was integrated into the evaluation process to enhance the analysis. User and stakeholder feedback were collected to improve the system further, ensuring that the AI-assisted desk research contributed meaningfully to the evaluation while continually improving its performance.

1.3.2 COMPANY PORTFOLIO ANALYSIS

Project funding data on participating companies were analyzed to assess key characteristics on participants, such as funding granted, regional and sector distribution, and activity participation.

1.3.3 SURVEY

Two electronic surveys were designed to fit all programs and sent to organizations participating in funded projects and participants in any activity organized by the programs. Throughout the report the survey for funded projects is called 'funded projects survey' and the survey for activity participants is called 'activity survey'. Survey data was collected about the programs' relevance, results, added value, impact, and sustainability. The total response rate for the funded projects survey was 12% (45/370 completed surveys). The response rates varied across the programs, with AI Business having the lowest response rate (9%, 18/204). For Experience Commerce (16%, 12/73) and Digital Trust Finland (18%, 17/95) the response rates were slightly higher. The overall response rates were anticipated by Business Finland (specifically for AI Business since the program ended three years ago) but were agreed

upon as an approach to be able to collect otherwise lacking project specific data.

The activity survey sent to 2 065 individuals (not unique, since an individual can participate in activities in more than one program) participating in any of the activities organized by the programs received an even lower response rate, 7% (149/2065). The low response rate was once again anticipated by Business Finland. However, the lack of other quantitative data on how the activities contributed to the programs' objectives made us make the decision to go forward with sending the survey to add nuance to the anecdotal qualitative data.

1.3.4 INTERVIEWS

A total of 13 thematic interviews were performed to gain more detailed insight into the programs. The interviewees represented beneficiaries of the programs, program heads, Director of programmatic actions, and the head of Digital Native Finland Mission. There were also two steering board meetings held during the evaluation process.

1.3.5. CASE STUDIES

A case study approach was applied to deepen the understanding of the functionality of specific projects, the relevance of the program, the connection between project and program objectives and impacts, collaboration between Business Finland and the project participants, challenges and bottlenecks and lessons learned from participating in the program. Selected case examples of each program are included in the evaluation report.

1.3.6 LIMITATIONS

During the evaluation, we identified several limitations in the data provided by Business Finland. These limitations have, to some extent, impacted our ability to conduct a comprehensive and accurate assessment. Identified data limitations are described below.

LIMITED USE OF QUANTITATIVE DATA ON EXPORTS, TURNOVER, AND PERSONNEL

Although company specific data on exports, turnover, and personnel was available upon request, we did not request company specific data from Business Finland. Instead, we made use of the aggregated program data available through the final, annual, and bi-annual reports of the evaluated programs. This decision was based on the understanding that the programs concluded relatively recently (2021 and 2023), and thus significant impact on exports, turnover and personnel are unlikely to be realized within the timeframe of the evaluation. The interviews with the program heads also pointed to this unlikeliness. Thus, this evaluation does not focus on identifying long-term effects due to the evaluated programs have been concluded fairly recently.

LACK OF STRUCTURED FOLLOW-UP IN FINAL REPORTS

The follow up of original objectives and KPIs presented in the initial and annual program plan documents is often unstructured and lack critical information. Objectives and KPIs not reached are often not presented in the final reports which limits the reliability of the reports as a source for thorough evaluation.

UNCERTAINTIES RELATED WITH CRM DATA

The CRM data is a recently established dataset, and this is the first time it is being used in an evaluation. According to Business Finland, the CRM data is deficient before 2021 and only starts to be extensive from 2021 and onwards. Further, the practices as for what data is filled in and in what way have been evolving over time. Our assessment of the dataset is that it contains valuable information but lack documentation about their content, including descriptions of variables. For example:

- The CRM file showing participants of services includes many observations categorized under "no data" for project type. Based on survey responses and interviews with participants, some of these companies might not have participated in any activities and could merely represent invitees or mailing list entries.

In this report, CRM data is only used to present data on service participation.

DATA INCONSISTENCIES

There are noticeable discrepancies between the data in the final reports and the project funding data database and the CRM data provided by Business Finland. For example:

- The final report of the Experience Commerce program claimed to have hosted 55 events with an average of 300 attendees, equating to 16,500 attendances. However, the CRM data registers only 3,417 attendees.

2 FINDINGS FROM DIGITAL TRUST FINLAND (2019-2023)

The Digital Trust Finland program responded to the increasing need for secure, reliable solutions in a rapidly digitalizing and interconnected world. As digital societies and businesses grew, global demand for robust cybersecurity solutions was projected to reach $240 billion by 2025. Aiming to position Finland as a model for future-proof digital trust, the program leveraged Finland's strengths to access nation-state markets and create substantial business opportunities.

By fostering cross-sector collaboration, the Digital Trust Finland program encouraged stakeholder dialogue and established cross-industry ecosystems that prioritized holistic, built-in security. Targeting software and solution providers, research organizations, and key end-users in public safety and critical supply security sectors, the program focused on establishing Finland's leadership in digital trust and resilience.

2.1 DESCRIPTION OF PROGRAM AND OBJECTIVES

The main objective of the Digital Trust Finland program was to enable a multi-billion-euro business by encouraging the development of safe and cybersecure solutions. Specifically, the program aimed to:

- allow nation states in building digitally trusted societies and
- create new industry driven ecosystems and global multi-billion business boosted by research

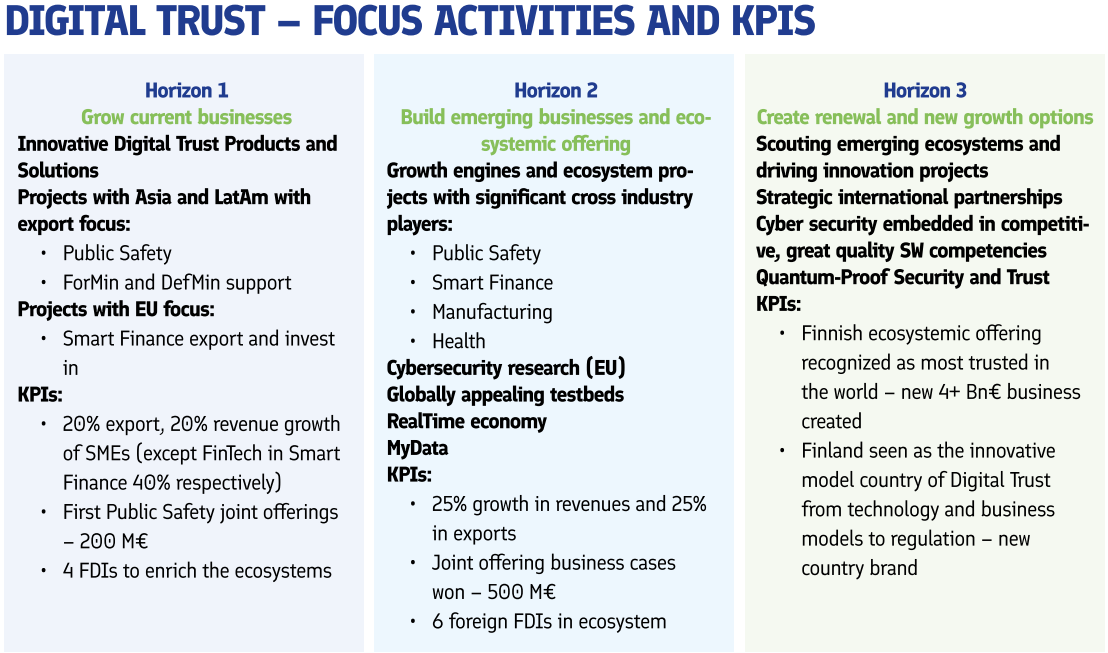


FIGURE 2.1

To fulfil the objective of the program, the objective was divided into activities and key performance indicators (KPIs) stretching over three-time horizons: 2019–2020, 2021–22, and 2025–2030 (Figure 2.1). Section 2.4 presents the assessment of whether the objectives of the program were met.

The focus of the first horizon followed a logical reasoning of initially activating and growing current businesses, while the second horizon focused on building emerging business and ecosystemic offerings. Already for the first horizon the KPIs to measure the progress towards the main objective included specific quantitative goals for export and revenue growth. Further, the KPIs for the first horizon included a First Public Safety joint offering of 200 M€ and 4 FDIs to enrich the ecosystems. The KPIs for the second horizon furthers the specific quantitative goals for revenue and export growth, winning joint offering business cases for 500 M€ and having six FDIs in the ecosystem. The long-term goals in the third horizon were mainly meant to provide a strategic direction via the two KPIs: 1) "Finnish ecosystemic offering recognized as most trusted in the world – new 4+ Bn€ businesses created", and 2) "Finland seen as the innovative model country of digital trust from technology and business models to regulations – new country brand". At the time of this evaluation (December 2024), it will not be possible to evaluate whether the program has achieved the specific KPIs for horizon 3. They will, however, be considered in the overall assessment of the program impact.

CASE STUDY – SEAMLESS AND SECURE CONNECTIVITY

Bittium is an international company that specializes in the development of reliable solutions in communications and connectivity. Bittium fosters innovative services, products and ideas. Additionally, the organization provides customized solutions based on their platforms and R&D services.

As a part of the Digital Trust program led by Business Finland and to accommodate the expected increased need for secure end-to-end diagnostics in the healthcare industry – Bittium started the "seamless and secure connectivity" project. This challenger initiative strived to develop end-to-end interoperability across private and public networks and within the terminals and devices connected to these networks through implementing secure and interoperable technological solutions.

The project had the objective of enhancing cyber resilience against information security attracts. Additionally, the project aimed to advance the creation of end-to-end diagnostic life cycle solutions by leveraging software-intensive and AI technologies. The project also focused on developing applicable 5G networks and beyond, such as 6G end-to-end digital infrastructures, systems and processes to achieve interoperable, seamless and secure connectivity. Lastly, focus was placed on improving development models, such as RegOPs.

2.2 PROGRAM IMPLEMENTATION

The Digital Trust Finland program (2019–2023) consisted of a total of 119 projects with total program volume of €104.3 million. Of this, €50,6 million was Business Finland funding, whereas the initial target estimate had been €100 million. The matched funding from participants reached €53.7 million, whereof €45.6 million came from companies and €8.2 million came from public research organizations. Of Business Finland funding €31.7 million were grants to companies, €1.5 million loans to companies, and €17.3 million grants to public research. As presented in Figure 2.2, the Business Finland funding started in 2019 with €3.4 million and increased yearly to 2021 when the granted funding was €13.5 million. The year after the funding decreased to 7.3 before the last year of funding which was also the year of the most funding €17.4 million in 2023.

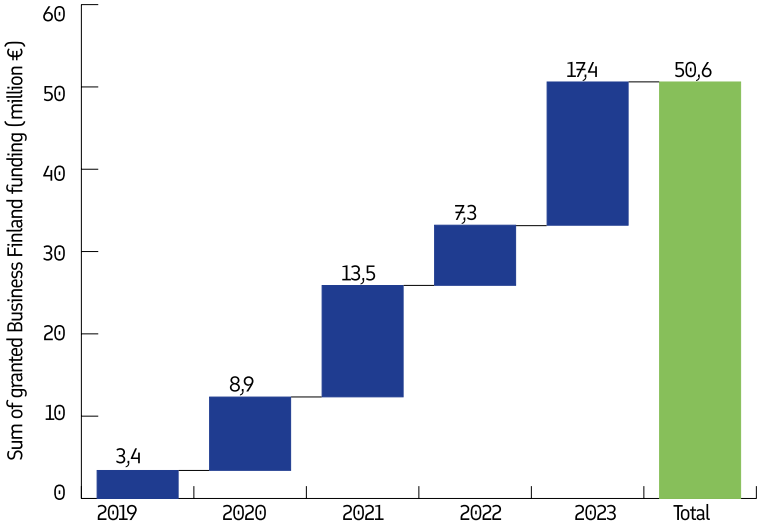


FIGURE 2.2
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

As shown in figure Figure 2.3, there is some geographic spread of the 119 funded projects. Most of the organizations who received funding are located in the Uusimaa region where 57 projects were granted funding. The region home to the second most funded projects was Pohjois-Pohjanmaa which had 20 projects.

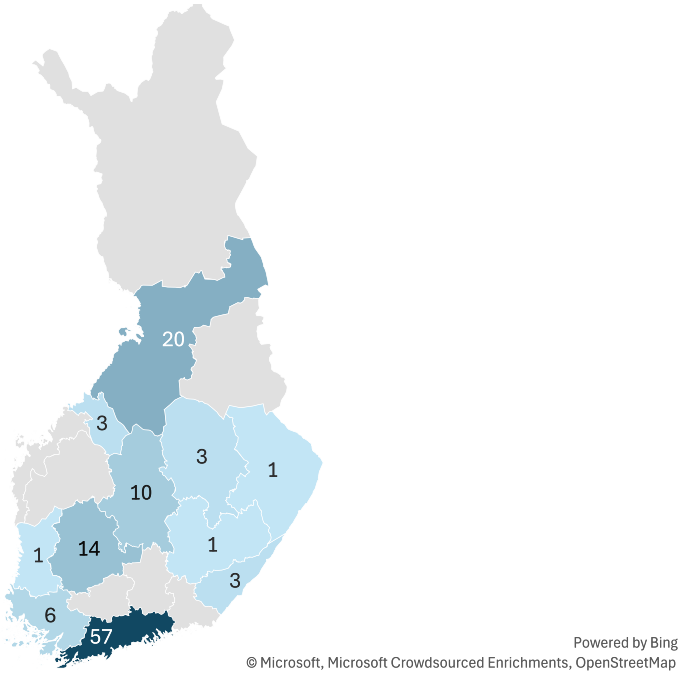


FIGURE 2.3
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

The Digital Trust program had prior to implementation identified three main target groups: 1) software and solutions providers, 2) research organizations and 3) end-customers in public safety and security of supply sectors. Figure 2.4 presents the sectors the 76 funded organizations belong to according to the project funding data. The program managed to do particularly well in reaching target group 1 (software and solutions providers) as almost half of the funded organizations are classified as an organization active in the sector "software, consulting and related activities". The program also managed to do well in reaching target group 2 (research organizations) as the second largest sector (12 organizations) of funded organizations was "education" which includes universities. From the project funding data it is not possible to conclude if organizations from target group 3 have been reached.

In Figure 2.5 the size of the funded organizations is presented. The size of the funded organizations varied but the majority (55%) were large organizations, and the second largest group was micro-organizations (23%).

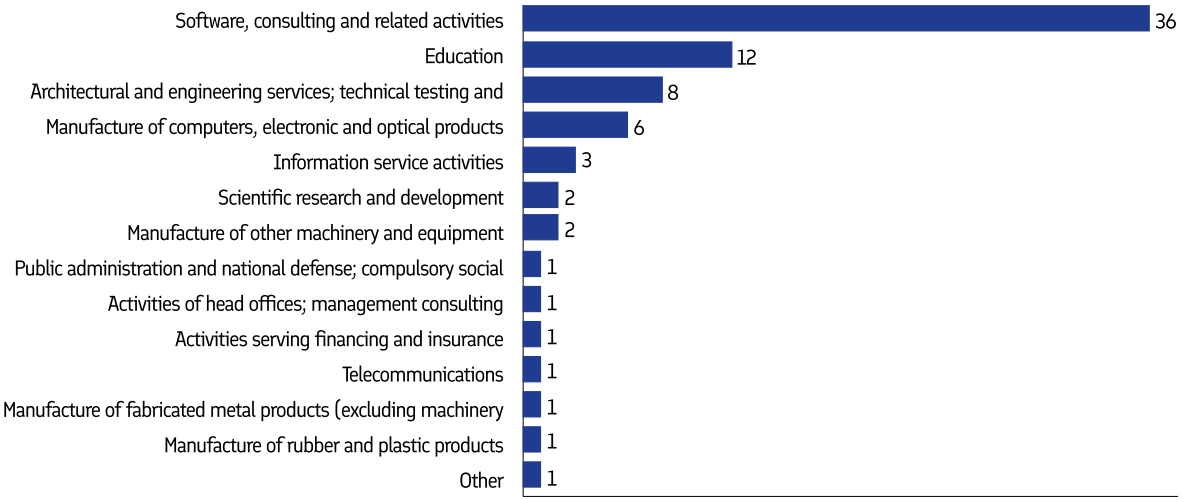


FIGURE 2.4
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND.

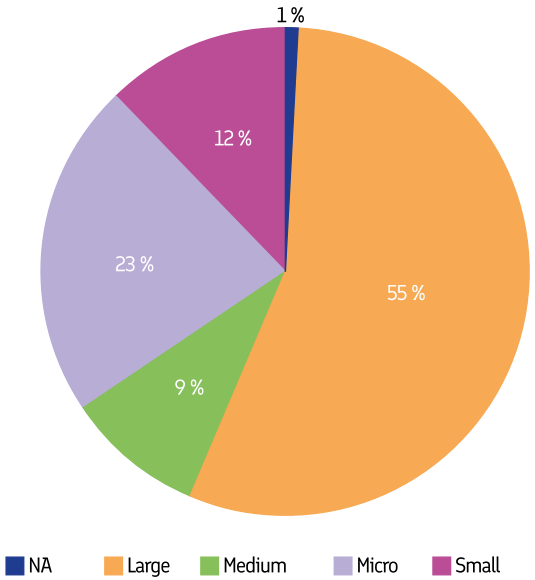


FIGURE 2.5
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND.

FIGURE 2.6
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 17
QUESTION: PRIOR TO TAKING PART OF THE PROGRAM, WHAT WERE THE PRIMARY OBSTACLES YOUR ORGANISATION FACED REGARDING EXPORTS AND INTERNATIONAL EXPANSION? PLEASE SELECT UP TO THREE MAJOR OBSTACLES.

2.2.1 RELEVANCE

According to the funded projects survey, 95% found the Digital Trust Finland program very (62%) or somewhat useful (33%), while 5% did not find it useful. Understanding the challenges faced by organizations before engaging with the program provides valuable context for its relevance. Figure 2.6 illustrates that the main obstacle for the organizations relates to funding, particularly for R&D, which is expected as one of the reached target groups are research organizations.

2.2.2 SERVICES AND ACTIVITIES

The Digital Trust Finland program provided a wide range of services and activities for organizations to take part in. The program services and activities consisted of the following:

- Marketing, PR and offerings.
- Business intelligence services.
- Market specific information sharing and networking to activate customers to take part in internationalization services.
- Export services.
- Invest in services.
- Funding services.
- Other activities related to safe and secure digitalization.

Through tailored marketing efforts, the program highlighted Finnish expertise in cybersecurity and Fintech, developed promotional materials, and engaged in interna-

tional publications and events. It provided market insights via reports, webinars, and advisory sessions, while also sharing business opportunities to activate participation in global markets. Export activities included trade missions, representation at major industry events, and hosting delegations from regions like Latin America and Japan. The program further supported partnerships between Finnish and international companies, by promoting funding opportunities for innovation projects, and supporting secure digitalization through strategic collaborations and networking events.

The participation data from the CRM system provides an overview of engagement levels across the different services. This data highlights the extent to which organizations have utilized the available resources, reflecting the program's reach and accessibility. As presented in Figure 2.7, the most attended activity types were webinars (346 attendances) and seminars (254 attendances). There is variability in how the data is reported and thus the least participated activity type is seminar/workshop/networking events. Since seminars and networking events have their own categories but not workshops, one conclusion could be that workshop is the least attended activity (21 attendances).

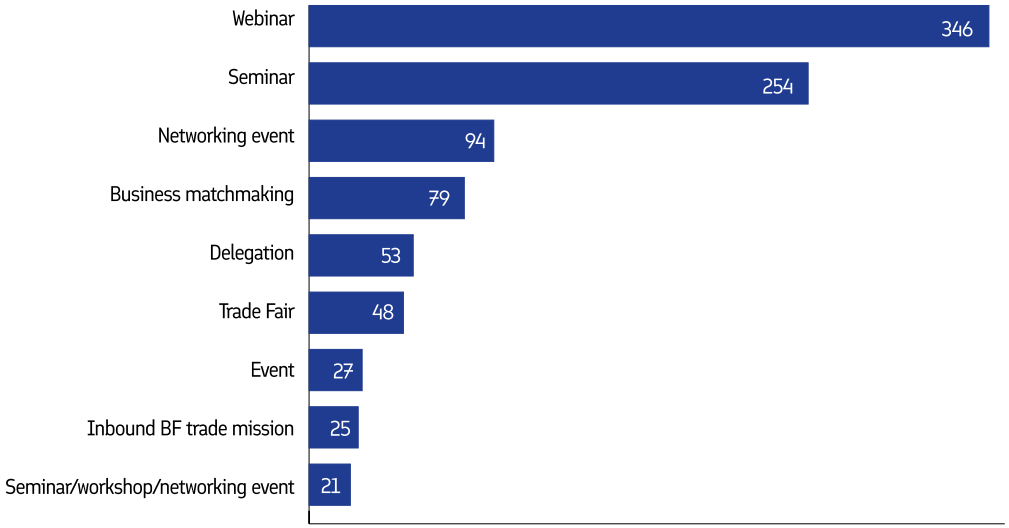


FIGURE 2.7
SOURCE: CRM DATA ON ACTIVITY PARTICIPATION PROVIDED BY BUSINESS FINLAND.
NOTE: MISSING DATA OF SERVICE TYPE FOR 363 OF THE 1310 OBSERVATIONS

The activity survey results provide further insights into the perceived value and impact of the activities and are presented in Figure 2.8. The most attended activities webinar and seminar was found by at least 60% of the attendees to provide moderate or significant value to the organization. The variability of the perceived value is larger for the seminar attendees as 20% found the seminars to give significant value but 40% found them to give limited value.

Furthermore, the impacts of these activities on organizational operations are illustrated in Figure 2.9. Participants identified key impacts, such as gaining insights into digital business trends and future developments, establishing new partnerships in the target market, and getting enhanced knowledge of the target market.

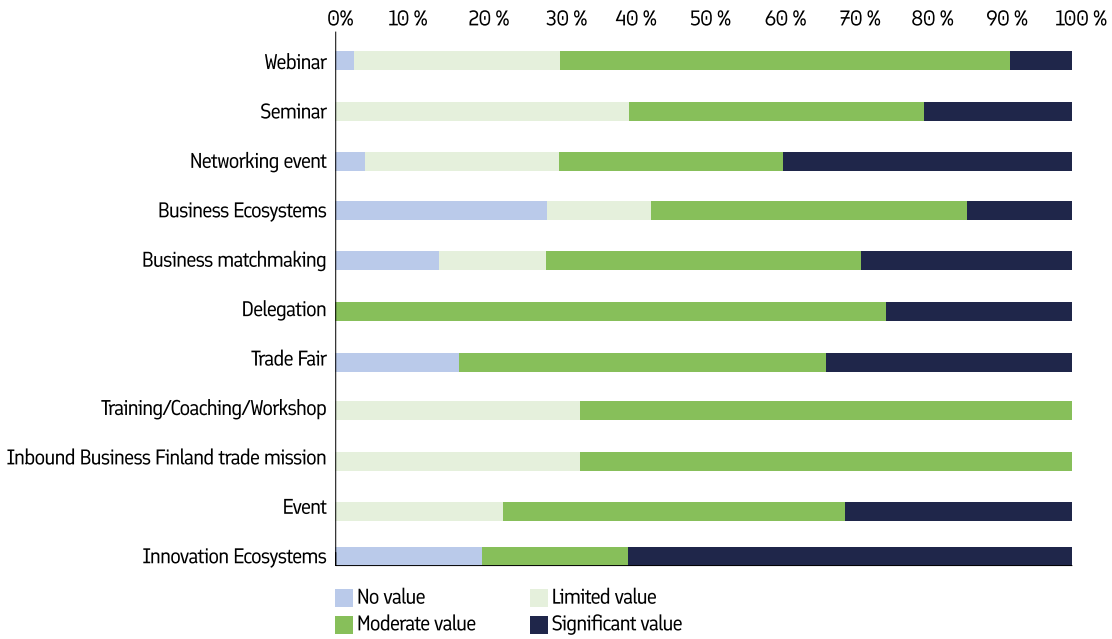


FIGURE 2.8
SOURCE: SURVEY FOR PARTICIPANTS OF NON-FUNDING SERVICES, N = 53.
QUESTION: HOW MUCH VALUE DID THE ACTIVITIES YOU PARTICIPATED IN PROVIDE TO YOUR ORGANISATION?

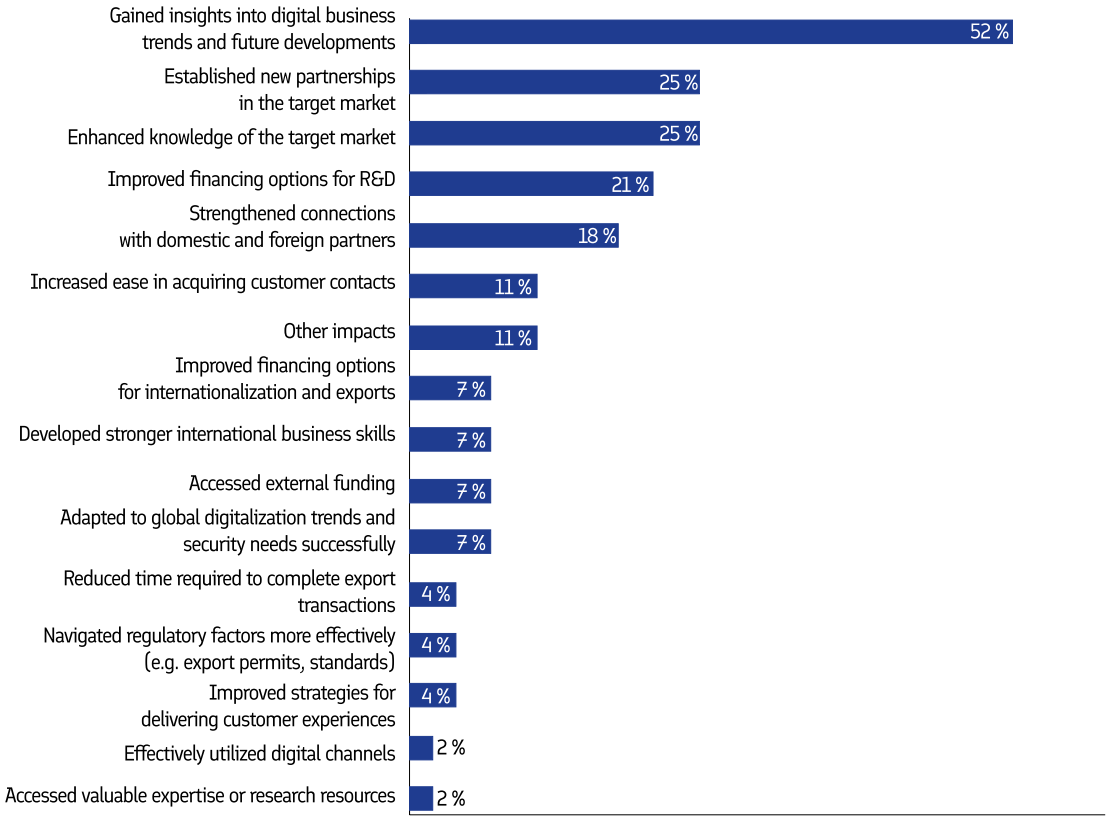


FIGURE 2.9
SOURCE: SURVEY FOR PARTICIPANTS OF NON-FUNDING SERVICES, N = 53
QUESTION: WHAT MAIN IMPACTS DID THE ACTIVITIES HAVE ON YOUR OPERATIONS? PLEASE SELECT UP TO THREE IMPACTS

2.2.3 CHALLENGES

The program faced several challenges which affected the planned implementation and services. These challenges relate to i) resource availability, ii) budget fluctuations and underutilization, and iii) system limitations.

RESOURCE AVAILABILITY

One major consequence of both the organizational changes and covid-19 was that Business Finland was not able to provide the number of full-time employees (FTE) that was agreed to be allocated to the program. During the six active years between 2019 and 2024 the FTEs varied between less than 1 and 3.1 which is significantly less than the planned 5 FTEs. In the final report of the program this is described to hinder the program's ability to execute all the planned activities. These external changes did not only lead to less resources but also an inconsistency of the team that affected the continuity and efficacy of the work. To tackle the lack of resources the program had to work actively with prioritization to deliver an acceptable level of what they set out to do. Something that aided them in doing this was to quickly accept the situation and focus on how they best could adjust to the new conditions. Despite the changes that affected the program from the start, the scope of the program or its goals were not adjusted. This left the program in a situation where they had to reach the same goals as planned, but with significantly less resources.

BUDGET FLUCTUATIONS AND UNDERUTILIZATION

With a budget varying from 484 000 euro in 2019 at the start of the program to 200 000 euro in 2023 in the end, the program had to face great variability and adjust their work accordingly. Regardless of the varying annual budgets, the program consistently spent less than what was planned.

The underspending can be explained by three main reasons: 1) The insufficient number of team members available to carry out all planned activities. This manpower shortage meant that certain initiatives could not be executed as intended, leading to unutilized funds. 2) The program's ability to form effective collaborations with industry partners and other stakeholders helped in sharing costs. For example, joint events or shared marketing efforts reduced the need for full expenditure from the program's budget alone. 3) There was a conscious effort to minimize expenses wherever possible, such as by choosing less expensive alternatives for event services. Instead of using high-cost streaming services offered by event partners, the program opted for more economical solutions.

The collaboration with other stakeholders and cost minimization approaches are economical approaches which contributed to the underspending. However, the underspending because of insufficient human resources suggest that the program may not have reached its full potential impact.

SYSTEM LIMITATIONS

In the final report the problems of the immature CRM system were briefly mentioned, and this was expanded on by the program head in an interview. At the onset, the CRM and other tools were in their early stages, almost starting from scratch. The systems lacked advanced features and functionalities that could have supported more efficient program management, reporting, and engagement with stakeholders. This affected the program during the first years until the tools were developed to a more advanced level. By appointing a "CRM-champ" in the program team, the necessary improvements of the tools could be developed over time.

2.3 RESULTS

As presented in section 2.1, the program's KPIs focus on 1) export and revenue, 2) joint offerings and 4) foreign direct investments (FDI).

Over the entire program period, the exports from the funded companies increased from €714 million to €1,022 million which corresponds to an increase of 43.1%. During Horizon 1 the export growth reached 13% which is below the target of 20% (the export growth statistics is on aggregate level, thus it is not possible to assess whether the goal for

fintech companies was reached). For Horizon 2 the provided data on export growth only stretches to 2022 (due to the report being finalized before 2023 ended). Despite this, the recorded export growth was 26.3%, which is higher than the KPI target of 25% export growth.

The KPI for revenue growth matched the KPI for export growth meaning 20% in Horizon 1 and 25% in Horizon 2, and data for 2023 is similarly missing from Horizon 2 in the reporting. The revenue growth over the entire program period increased from €3,690 million to €4,957 million which corresponds to an increase of 25%. During Horizon 1 the revenue growth reached 5.9% which is well under the 20% KPI target. The revenue growth was stronger during Horizon 2, 18.2% but still missed the KPI target of 25%. Thus, neither the export nor the revenue KPI targets were met.

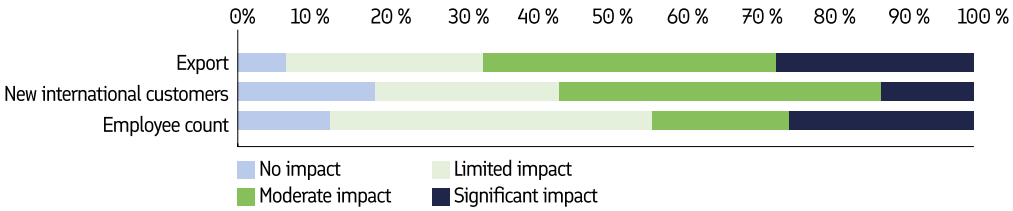


FIGURE 2.10
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS N = 17
QUESTION: TO WHAT EXTENT DO YOU BELIEVE THAT PARTICIPATING IN THE PROGRAMME HAS CONTRIBUTED TO AN INCREASE IN YOUR ORGANISATION'S EXPORT, NEW INTERNATIONAL CUSTOMERS, AND EMPLOYEE COUNT?

According to the program head, considerable export and revenue growth would only be expected to show a couple of years after the end of the program. In the final report it is emphasized that export figures are expected to grow due to closer collaboration of companies and activation of them to export. It is further recognized that some projects are very long term, and the time from market studies to leads, go-to-market activities and sales can take years. However, as the export and revenue statistics show, there has evidently been an increase in both export and revenue for the funded companies. The causality between participating in a funded project and export and revenue growth can thus be questioned. Based on the characteristics of the funded projects, it is not very likely that the activities in the funded projects have triggered the instant export and revenue growths.

The issue was further investigated in the survey sent to participants in the funded organizations. Participants were asked to assess the impact of the program on their organizations' exports, acquisition of new international customers, and employee growth. As illustrated in Figure 2.10, the program is perceived to have the most impact on increased exports out of the three different categories. 27% of the respondents found the program to have contributed to a significant impact for increased export and 40% found it to have a moderate impact. The area where the largest share of respondents found the program to not have contributed at all is the area of new international customers (19%).

The second KPI focused on joint offerings and existed both for Horizon 1 and 2. While the goal for Horizon 1 was to produce a first joint offering on Public Safety of €200 million, the goal for Horizon 2 was to win join offering businesses case for a value of €500 million. According to the annual reports, the joint offering services during Horizon 1 consisted of market insight activities and identifying relevant calls. During Horizon 2, the services were more focused as participating in networking events, business delegations, and marketing presentations. The KPIs for joint offerings were thus not met. In both the final report and in interviews with the program head it is described that the goals regarding joint offerings were too optimistic since joint offering project are very long-term and can take up to 10 years to form.

The last KPI in Horizon 1 and 2 relates to enriching the ecosystems with foreign direct investments (FDIs). The goal for Horizon 1 was four FDIs and the goal for Horizon 2 was six FDIs. The program did not live up to the KPI goals as no FDIs are mentioned as a result of the program, neither in the final and annual reports, nor in interviews with the program head. The initial annual reports highlight examples of interested companies and leads for fintech and cybersecurity firms. However, according to the program head, Invest in Finland's support ceased after the first two years, making it difficult for the team to maintain focus on this KPI. The annual reports identify this as a critical missing resource.

CASE STUDY – POST QUANTUM CRYPTOGRAPHY (PQC)

The Post-Quantum Cryptography (PQC) research project aimed to develop cryptographic solutions capable of withstanding the threats posed by emerging quantum computing technologies. This initiative brought together a consortium of research organizations, universities, and leading industry partners—including SSH, a leader in communication security and the inventor of the widely used SSH protocol.

In an era where cybersecurity is critical to protecting digital infrastructures from future threats, the project addressed the challenges associated with the transition to the post-quantum era. By investigating the properties and operational principles of post-quantum algorithms, developing robust and secure solutions, and creating early implementations for commercial use, the initiative paves way for a more secure digital future.

SSH contributed its expertise in secure communications and advanced key management for large-scale environments. During the project, the company developed an early PQC implementation that was later integrated into another commercial product. This achievement not only provided valuable technical knowledge and generated significant publicity but also positioned both SSH and the consortium to meet future regulatory requirements and technological advancements.

While quantum computing is still in its early stages, the project demonstrates that investments in post-quantum technology are essential for safeguarding critical systems.

2.4 IMPACT AND ADDED VALUE

To evaluate if the objectives of the Digital Trust Finland program were achieved, we need to look at its impacts and assess how the program contributed to the participants' development. A clear majority (69%) of the survey recipients agreed that they would have completed developments also without the program, but with a smaller budget (38%) or with a different approach or focus (31%), acknowledging the program's role in shaping their efforts either by enabling larger budgets or refining their approach.

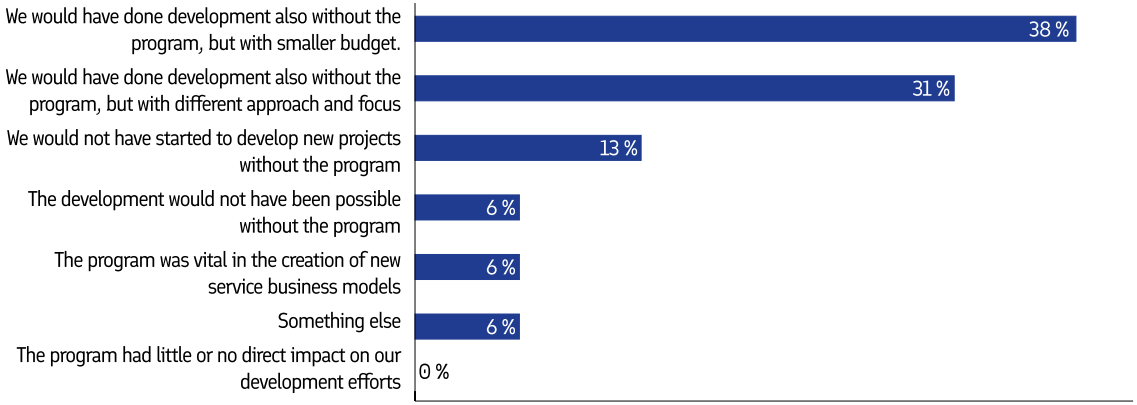


FIGURE 2.11
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 17.
QUESTION: TO WHAT EXTENT DID THE PROGRAMME CONTRIBUTE UNIQUE ADDED VALUE TO YOUR ORGANISATION'S DEVELOPMENT EFFORTS? PLEASE SELECT THE OPTION THAT BEST DESCRIBES THE PROGRAM'S ROLE IN YOUR DEVELOPMENT

For a portion of participants, the program had a transformative impact on their development efforts. According to the survey, 13% would not have started new projects without the program, while 6% reported that such developments would have been impossible otherwise. Similarly, 6% indicated the program was instrumental in creating new service business models. The program head's emphasis on fostering synergies among companies supports these findings, demonstrating how collaboration enabled participants to innovate and achieve outcomes that might not have been feasible individually.

The survey shows that 50% of the respondents think that participating in the program improved financing options for R&D, which is expected given the significant focus on research and development within the program. The program's impacts extend beyond this though, as both the survey results and interview insights from the program head highlighting its role in fostering collaboration, enabling business growth, and creating new opportunities for participants. A central theme is the program's ability to bring companies together, creating synergies and strengthening partnerships. According to the program head, this collaborative approach was particularly valuable for small Finnish companies that benefitted from working together to achieve common goals. This aligns with the survey findings in Figure 2.12, where 31% of participants reported strengthened ties with domestic and foreign partners, and

25% established new partnerships in target markets. The program's impact extended beyond networking to include immediate business benefits. The survey revealed that 25% of respondents gained ease in acquiring customer contacts, and a similar percentage enhanced their knowledge of the target market. These findings are reinforced by the program head's observation that some companies, particularly in FinTech, directly benefited from sales leads, illustrating how the program supported both strategic growth and tangible outcomes.

FIGURE 2.12
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 17.
QUESTION: WHAT MAIN IMPACTS DID THE PROGRAMME HAVE ON YOUR OPERATIONS? PLEASE SELECT UP TO THREE IMPACTS

Another significant contribution of the program was its role in improving visibility for Finnish companies. The program head emphasized the positive international media coverage generated through the initiative, which bolstered the participants' global presence. This is complemented by the survey results, where participants cited increased insights into digital business trends and future developments, showing how the program helped companies better position themselves in competitive markets.

In analyzing the final reports of the Digital Trust Finland projects, we have identified key impact areas using the Retrieval-augmented Generation (RAG) approach. This method allowed us to systematically evaluate the outcomes and effectiveness of each project by integrating relevant data and generating insights based on detailed project documentation. The impact areas we identified span multiple dimensions, ranging from technological advancements to market growth, showcasing the broad contributions these projects have made. Table 4.2 summarizes the key impact areas we identified through this analysis:

KEY IMPACT AREA	IMPACT
Research and development	Projects have guided research on relevant and timely topics, facilitated the creation of expert networks, and provided substantial data and research results. For example, one project significantly impacted current research interests and activities by focusing on data-driven societal issues and building a network of experts.
Business competitiveness	Many projects have strengthened business networks and enhanced industry competitiveness. By fostering collaboration between companies and other stakeholders, they have supported the development of new innovations and created opportunities for internationalization. Initiatives such as the PRIORITY project have demonstrated how targeted efforts can help build competitive skills and expand market reach.
International collaborations	Projects have established new partnerships and collaborations with international entities, enhancing market reach and expertise. For example, one project established partnerships in the North American market and learned about the types of partnerships to aim for in other markets.
Technological advancements	Technological breakthroughs have been another key outcome, particularly in areas such as AI, machine learning, critical communications, and blockchain. Some projects have successfully developed and demonstrated new technological solutions, that can be used for future productization
Societal and economic impacts	Projects have supported the development of high-education jobs, sustainable development competitiveness, and the renewal of key clusters in the national economy. For example, a project highlighted in Nokia's flagship roadmap promoted collaboration between companies and research organizations, contributing to the renewal of the national economy.

TABLE 2.1
SOURCE: BUSINESS FINLAND PROJECT DOCUMENTATION PROCESSED BY ADC

The survey, interviews, and project documentation all identify significant impacts of the program, focusing on collaboration, business growth, and networking. A common theme across all sources is the program's success in connecting Finnish companies, particularly small ones, and fostering synergies. In the survey, 31% of respondents reported stronger relationships with domestic and international partners, while 25% formed new partnerships in target markets. These findings align with the project documentation, which emphasizes the development of new business networks and international collaborations, such as the partnerships established in North America that expanded market reach. This impact is much in alignment with the Horizon 2 focus of building emerging business and ecosystems as these goals are related to the collaboration and networking that took place.

The program also had a clear impact on business growth and competitiveness. Half of the survey respondents noted that the program improved financing options for R&D, while 25% gained new customer contacts or insights into digital business trends. The project documentation confirms this impact, highlighting the development of competitive skills and international market expansion, particularly through initiatives like the PRIORITY joint project. Also, this impact aligns well with the target of the program with the aim in Horizon 1 being to grow current business and Horizon 3 with the aim of creating renewal and new growth options.

Another impact that is highlighted is the visibility the program provided to Finnish companies, both internationally and within specific markets. The project documentation describes how partnerships with international entities helped enhance market reach. In the survey and interviews, the program's role in raising the profile of Finnish companies through international media coverage was emphasized. This visibility made it easier for companies to acquire customer contacts and gain a better understanding of their target markets, resulting in practical business advantages.

The program's contribution to technological advancements is emphasized more strongly in the project documentation compared to the survey and interview with the program head. Breakthroughs in fields such as AI, machine learning, and blockchain technology are highlighted in the projects' final reports, with specific projects achieving laboratory-level demonstrations that could lead to future productization. While the survey and interviews did not focus as much on these technological advances, they did capture how the program helped participants gain insights into digital business trends and future developments, showing the program's role in raising technological awareness.

The project documentation highlights the program's societal and economic impacts, such as its support for high-education jobs, sustainable development, and the renewal of key national sectors. For example, projects like Nokia's flagship roadmap contributed to economic renewal by fostering collaboration between companies and research organizations. While the survey did not emphasize these broader societal impacts, it focused on more immediate business outcomes, such as market expansion and customer acquisition. These national and societal benefits demonstrate the program's longer-term value. Even though it is difficult to conclude how the fulfilment of the long-term goal will occur, the aim to create new industry-driven ecosystems and global multi-billion businesses boosted by research. These types of impacts, with longer-term value, indicate that the efforts by the program might generate impacts after its completion.

3 FINDINGS FROM EXPERIENCE COMMERCE (2019–2023)

The rationale behind the Experience Commerce program built on Finland's strengths in digital innovation and the global shift towards personalized customer experiences. Finnish consumers, like others worldwide, increasingly expect tailored interactions, and Finland was recognized well-positioned to deliver ranking in the top in smart technology adoption.[1] Emerging digital tools and AI-driven automation would enable Finnish companies to gather consumer data and create customized experiences, enhancing satisfaction and customer loyalty.

In the 2019 program proposal, Finland's digital commerce market was valued at €8.5 billion within the €42 billion Nordic market, presenting substantial growth potential, particularly as global e-commerce expanded at an annual rate of 24.8%. By 2021, online retail was projected to comprise over 15% of total global retail sales, creating a strategic opportunity for Finnish companies to scale their digital offerings. This program was therefore designed to support Finnish businesses in capturing this growth, rein-

1 https://www.mckinsey.com/~/media/mckinsey/featured%20insights/artificial%20intelligence/how%20artificial%20intelligence%20will%20transform%20nordic%20businesses/how-artificial-intelligence-will-transform-nordic-businesses.pdf

forcing Finland's position as a leader in digital and personalized customer solutions.

3.1 DESCRIPTION OF PROGRAM AND OBJECTIVES

The Experience Commerce program was designed with the vision of positioning Finnish consumer businesses as global leaders in shaping the future. The mission of the program was to create new waves of success by inspiring, encouraging, and accelerating Finnish consumer businesses to make a global impact. Section 3.4 presents the assessment of whether the objectives of the program were met. The targets of the program together with KPIs are presented in Figure 3.1.

The first target, "Accelerate companies international export growth through digital channels and business models" is associated with the KPIs of the annual export growth of 13% and the tripled reach. To measure the outcome related to the second target "Create a top customer experience for your customers by using latest insights and smart technologies" the KPI of C-level peer-to-peer activities is used. By facilitating these peer-to-peer activities, the idea was to create a new commerce culture with knowledge sharing.

The target "Develop more environmentally friendly and sustainable eCommerce" does not have a clear KPI. In the program proposal sustainability is however mentioned to be an important part of the program's services, such as peer-to-peer learning. It is also mentioned as a source of new innovations and that the program can help accelerate the development with their innovation funding. For evaluating the target "Benefit from funding, cross-disciplinary and –sectoral research and ecosystems in the area of future commerce" the KPIs of three new ecosystems and EU-funding is applied. The ecosystems were planned to bring organizations with shared interest together. To get a benefit from funding, there must be funding which leads to the KPI of ten companies receiving EU-funding. Why the KPI is based on EU-funding specifically is not specified in

PROGRAM TARGETS AND KPIS

Targets

- Accelerate companies' international export growth through digital channels and business models.
- Create a top customer experience for your customers by using latest insights and smart technologies.
- Develop more environmentally friendly and sustainable eCommerce.
- Benefit from funding, cross-disciplinary and -sectoral research and ecosystems in the area of future commerce.

KPIs

- Export growth of the companies: 13% per annum
- Established peer-to-peer activities for C-level
- Companies' reach tripled (3x) during the program
  - Reach = Companies' online store sessions from outside Finland
- 3 new ecosystems: retail, fashion, and travel
- 10 companies apply and receive EU-funding during the program
  - For their own project, or for a joint project with other companies/universities

FIGURE 3.1

CASE STUDY
– CONSUMER DECISION-MAKING IN MULTISENSORY AND MULTIUSER METAVERSE MARKETING

Tampere University is a multidisciplinary university focused on applied sciences. The university's focus on innovation and research has fostered its focus on the MetaMarketing project. The project aimed to examine the features of metaverses and the business opportunities these XR environments offer for consumer interaction. However, the XR environments do not only offer opportunities but also present challenges in customer management, as these metaverses contribute to changes and an increased divide of consumer attitudes, expectations, emotions, motivations and behavior patterns – specifically related to information seeking, processing, engagement, decision making and evaluations.

The MetaMarketing project therefore aimed to address these challenges through strategically identifying and investigating the mechanisms of consumer decisions and marketing opportunities in these XR, metaverse environments. Their research further explored various business settings, such as virtual advertising, digital product presentations, XR streaming and brand storytelling.

The results of this research project will provide crucial knowledge and research gaps as well as foster the important guidance to businesses to communicate with consumers to simplify and conduct virtual brand and customer management.

the program material provided by Business Finland. The results of these targets are presented in section 3.3.

3.2 PROGRAM IMPLEMENTATION

The Experience Commerce program (2019–2023) consisted of a total of 84 projects with total program volume of €72.9 million. Of this, €35.3 million was Business Finland funding, whereas the initial target estimate had been €40 million. The matched funding from participants reached €37.6 million, out of which €35.7 million came from companies and €19 million from public research organizations. Of Business Finland funding €20.3 million were grants to companies, €9.0 million loans to companies, and €6.0 million grants to public research. As presented in Figure 3.2, the Business Finland funding started in 2019 with €6.1 million and more than tripled in the next. Thereafter there was a rapid decrease in funding. In 2021 only €1.7 million of funding was granted from Business Finland and 2022 only €600 000 was granted. In the final year of the program the funding from Business Finland increased to €8.1 million.

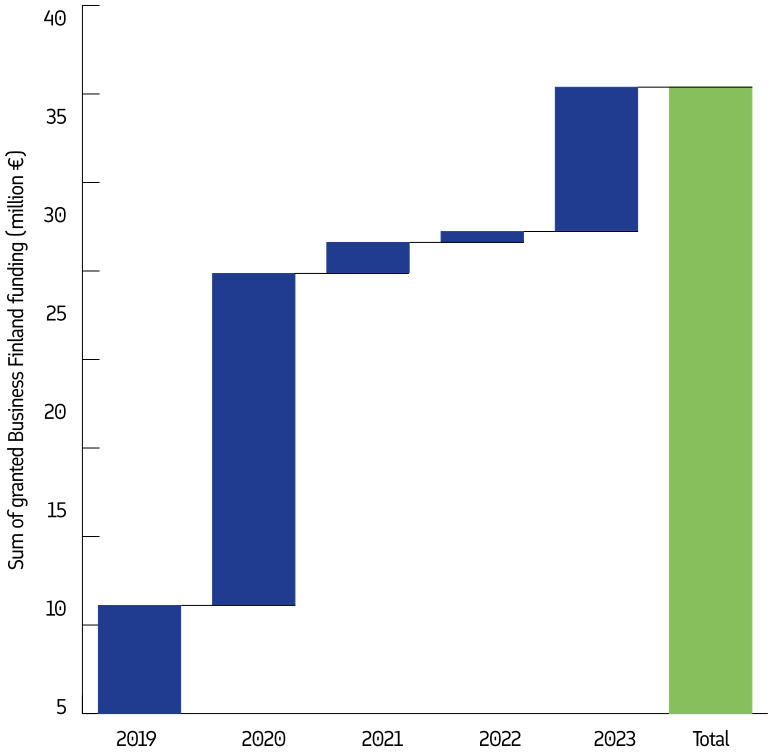


FIGURE 3.2
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

Figure 3.3 illustrates the geographic distribution of the 84 funded projects. A significant majority – just over two-thirds – were awarded to organizations located in Uusima. Keski-Soumi was the second most funded region, receiving support for 7 projects. In contrast, several counties secured funding for only one or two projects, and five of Finland's 19 regions did not receive any funding at all.

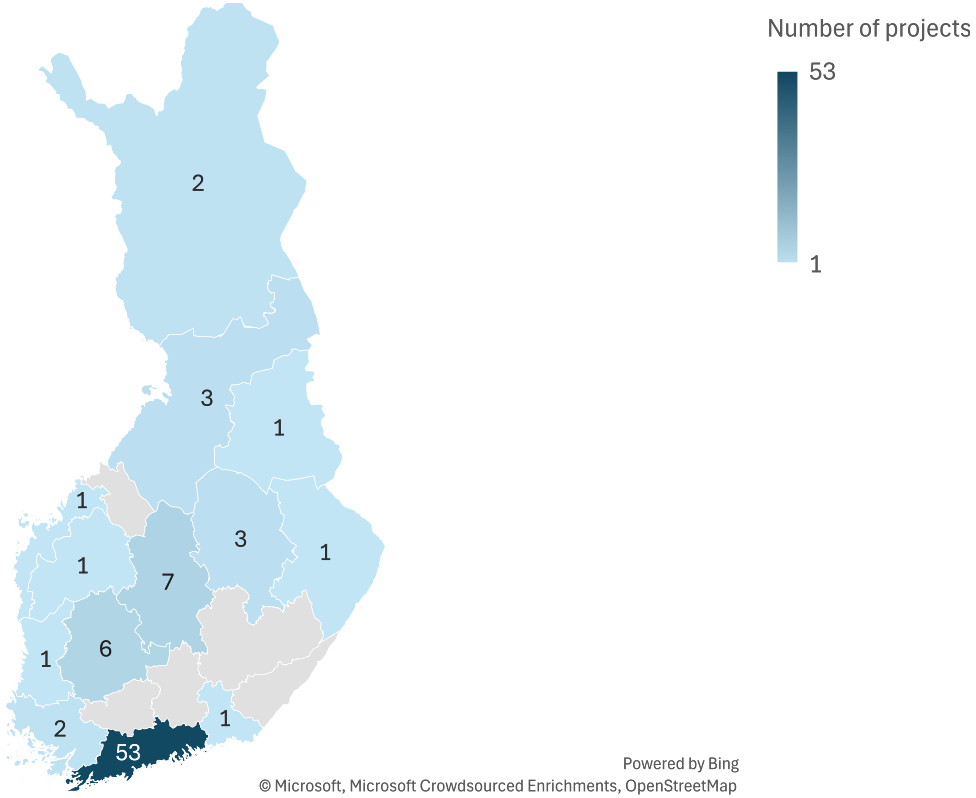


FIGURE 3.3
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

The Experience Commerce program focused on targeting a specific range of organizations to achieve its objectives. The program's services were directed towards retail companies and brand owners due to their significant roles in shaping consumer experiences. Additionally, it sought to engage retail technology companies and related service providers, such as those in logistics and payment sectors, to support the development of comprehensive commercial solutions. Research institutes were also targeted to provide their expertise and facilitate innovation in the field. The sectors of the 67 organizations that were funded by the program are presented in Figure 3.4. The industries where the most organizations who received funding are active, are similar to the targeted industries of the program. The industry with most organizations was "Software, consulting and related services" and the second largest sector was education with 8 funded organizations. As the program aimed to involve the expertise and innovations of research institutes, the funding of educational organizations can be considered to demonstrate the success of this goal. Other than these sectors there were also funded companies active in different types of retail and industries that could be relevant service providers. Examples of such sectors are "Retail trade" (7), "Wholesale trade" (6) and "Clothing manufacturing" (4).

The size of the organizations funded can be found in Figure 3.5. Of the 67 funded organizations 24 (36%) were micro, 23 (34%) large, 12 (18%) small, and 8 (12%) medium organizations.

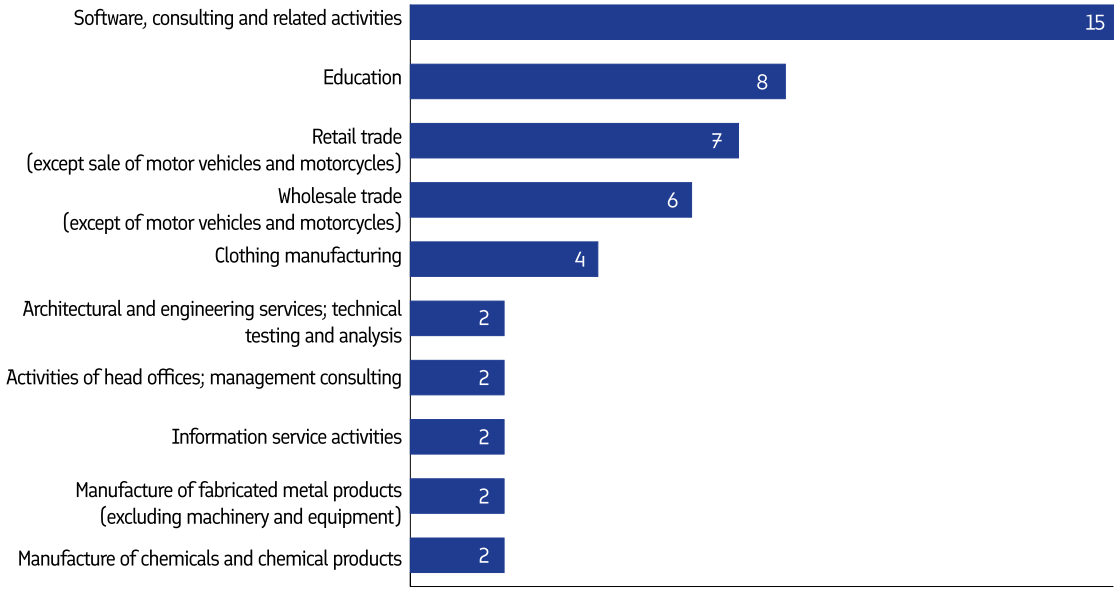


FIGURE 3.4
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

3.2.1 RELEVANCE

The Experience Commerce program, running from 2019 to 2023, was related to the evolving commerce landscape where digital engagement became increasingly central. The program aimed to address the shift towards digital platforms as the main point of business interaction, reflecting

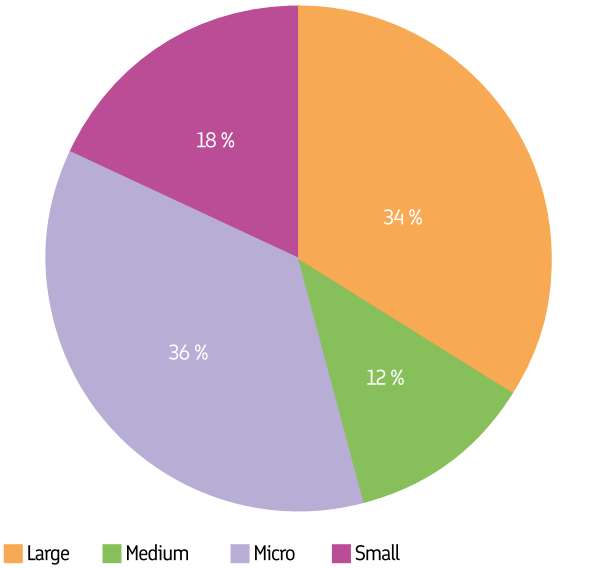


FIGURE 3.5
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

the growing influence of customer preferences in shaping market dynamics. The program began during a phase of growth in digital commerce and gained further significance with the onset of the global pandemic in early 2020. This period brought about a notable change in consumer behavior, leading to a substantial increase in e-commerce sales globally. Companies, particularly those in sectors such as gardening, outdoor hobbies, and home refurbishing, experienced significant sales growth during this time.

As the pandemic accelerated the adoption of e-commerce, many businesses, including those previously hesitant, transitioned to digital commerce methods. The program's advisors provided guidance and financial support to these companies, assisting them in developing and establishing e-commerce operations. According to the survey for funded organizations, 80% of the respondents from Experience Commerce answered that the program was very useful, and 20% answered that it was somewhat useful. None of the respondents answered that it was not useful.

Figure 3.6 illustrates the primary obstacles identified by respondents which include a variety of challenges. Out of the survey respondents, 36% stated that one of their three main challenges before participating in the program was the need for better understanding and implementation of customer experience strategies. As this is a main theme for the Experience Commerce program, the results of this survey question indicates that the program have

CASE STUDY – DIGITAL COMMERCE

Varusteleka is the largest army store in Europe, focused on providing high quality products. For their project with Business Finland, Varusteleka explored possibilities of expanding to the US market through testing and piloting a digital operating model that prioritizes customer experience, own brand and commercial optimization.

In the ever-changing landscape of digital commerce, platforms such as Amazon, Rakuten and Alibaba have become the new standard, as they all hold different commercial platforms. Through recognizing these changes in digital commerce, Varusteleka needs to reconsider its channel strategy. The multichannel approach has changed, and traditional strategies and brick-and-mortar methods now fail to provide the necessary digital experiences for customers.

Thus, the primary objective of this project was to investigate, research and validate strategies for leveraging digital platforms as part of Varusteleka's internationalization strategy.

managed to reach organizations that require more knowledge in the customer experience area. 36% of respondents also responded that a main challenge is limited financing for R&D and 29% responded that one main challenge was accessing external funding. This highlights that the organizations were lacking funding to realize their ideas before the program.

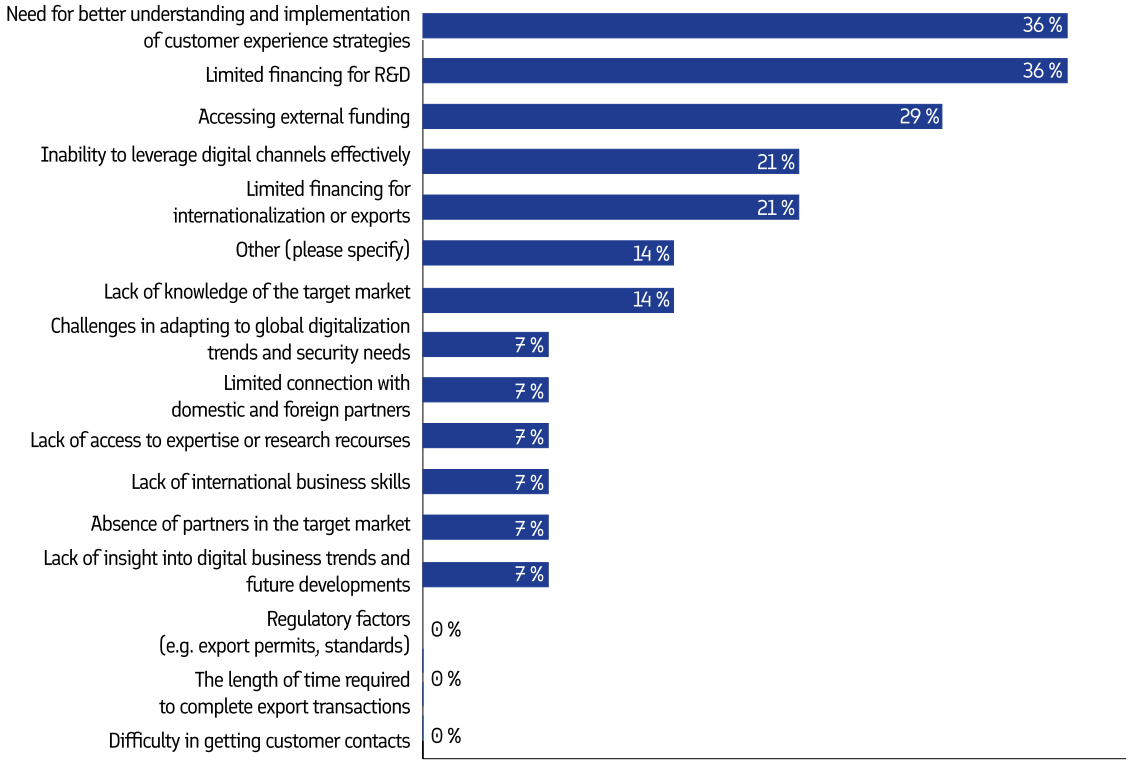


FIGURE 3.6
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 12
QUESTION: PRIOR TO TAKING PART OF THE PROGRAM, WHAT WERE THE PRIMARY OBSTACLES YOUR ORGANISATION FACED REGARDING EXPORTS AND INTERNATIONAL EXPANSION? PLEASE SELECT UP TO THREE MAJOR OBSTACLES.

3.2.2 SERVICES AND ACTIVITIES

The Experience Commerce program had a large focus on activities and offered many different types of services.

- Events
- Ecosystem development
- Tools and insights
- Peer to peer learning
- Sustainability
- Research and funding co-operation

By leveraging digital channels and business models to improve organization's ability to advance customer experiences the program aims to increase export growth and engage customers. As mentioned above, the activities and services within the experience commerce program are visualized in figure 3.7. The coaching seminar events were especially popular, as each training day had around 200 in person participants and an additional 150 – 400 participants joined online. The program further focused on peer-to-peer learning which resulted in the establishment of a national network of eCommerce clubs. The eCommerce clubs support regional operators such as e.g. universities

of applied sciences or regional development agencies to initiate mentoring activities for eCommerce companies across Finland.

Furthermore, the program also worked to develop education and other "ecosystems" through their ecosystem development division, where their program in national education was focused on advancing education. The experience commerce program worked with vocational education development in collaboration with the National Agency for Education where they introduced reforms and created the first university-level digital commerce study module. Furthermore, the program resulted in the creation and support of four university programs across two universities, to support higher education.

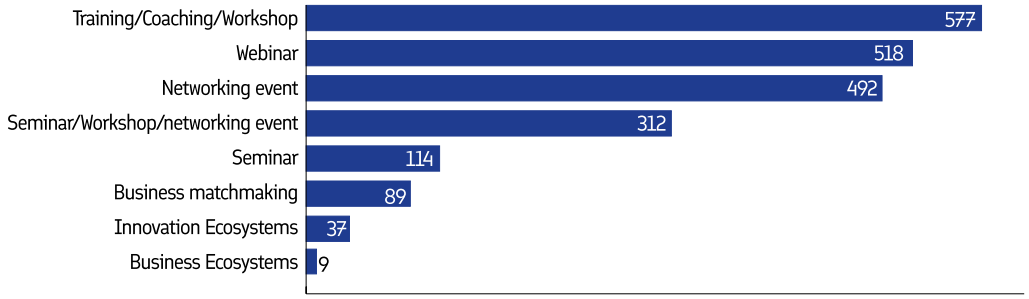


FIGURE 3.7
SOURCE: CRM DATA PROVIDED BY BUSINESS FINLAND
NOTE: MISSING DATA OF SERVICE TYPE FOR 1269 OF THE 3417 OBSERVATIONS

The experience commerce program also focused on sustainability, an area which they explored through the development of a sustainability playbook. This sustainability playbook aimed to serve as a tool for businesses that enable an organization to understand their responsibility and serve as a competitive edge. The sustainability playbook initiative consisted of a workbook, a webinar series and a coaching pilot to engage participating organizations and serve as a benchmark for sustainable responsibilities.

The participation data sourced from the CRM system offers a comprehensive view of engagement levels across various services. This data underscores the degree to which organizations have leveraged the available resources, showcasing the reach and accessibility of the Experience Commerce program. As shown in Figure 3.7 the activities with the greatest attendance were training/coaching/workshops that had 577 attendees. Also, webinars and networking events had many attendees with 518 and 492 attendances respectively.

The survey results provide further insights into the perceived value and impact of the activities. In general, the participants have gotten value from the different types of activities offered by the program. For all activities, except for the trade mission[2], at least four out of five attendees reported that the value was either moderate or significant. The activity for which the largest share of attendees

2 "Inbound Business Finland trade mission" only received one response, and the response was "No value".

was provided significant value was the seminars. 81% of the respondents that reported attendance to at least one seminar found that they gained a significant value from attending this activity type. This aligns with the final report where the coaching seminars are highlighted as an example of a successful activity and with an average customer rating of 4.6 out of 5.0.

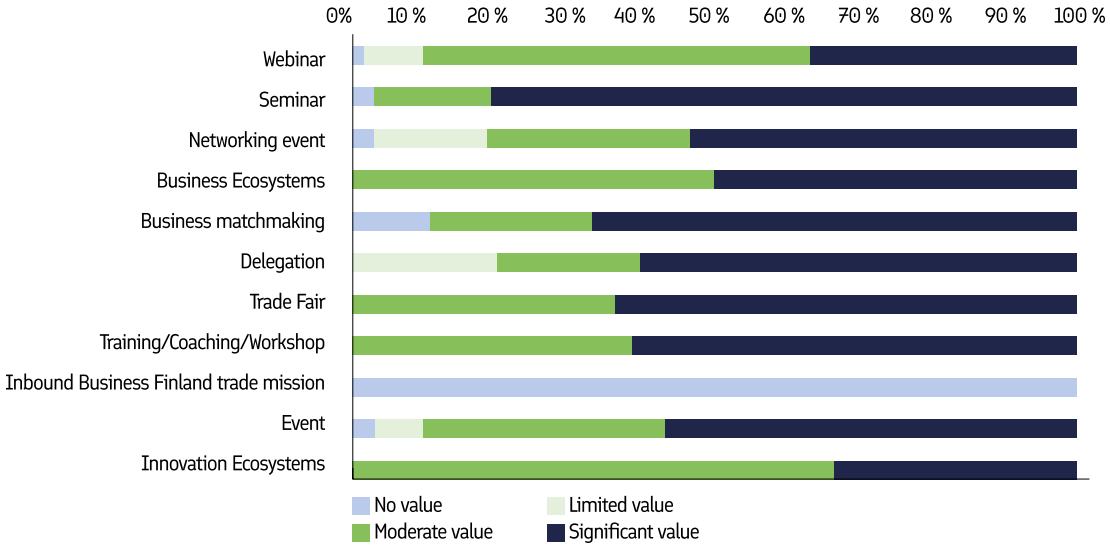


FIGURE 3.8
SOURCE: SURVEY FOR PARTICIPANTS OF NON-FUNDING SERVICES, N = 74
QUESTION: HOW MUCH VALUE DID THE ACTIVITIES YOU PARTICIPATED IN PROVIDE TO YOUR ORGANISATION?

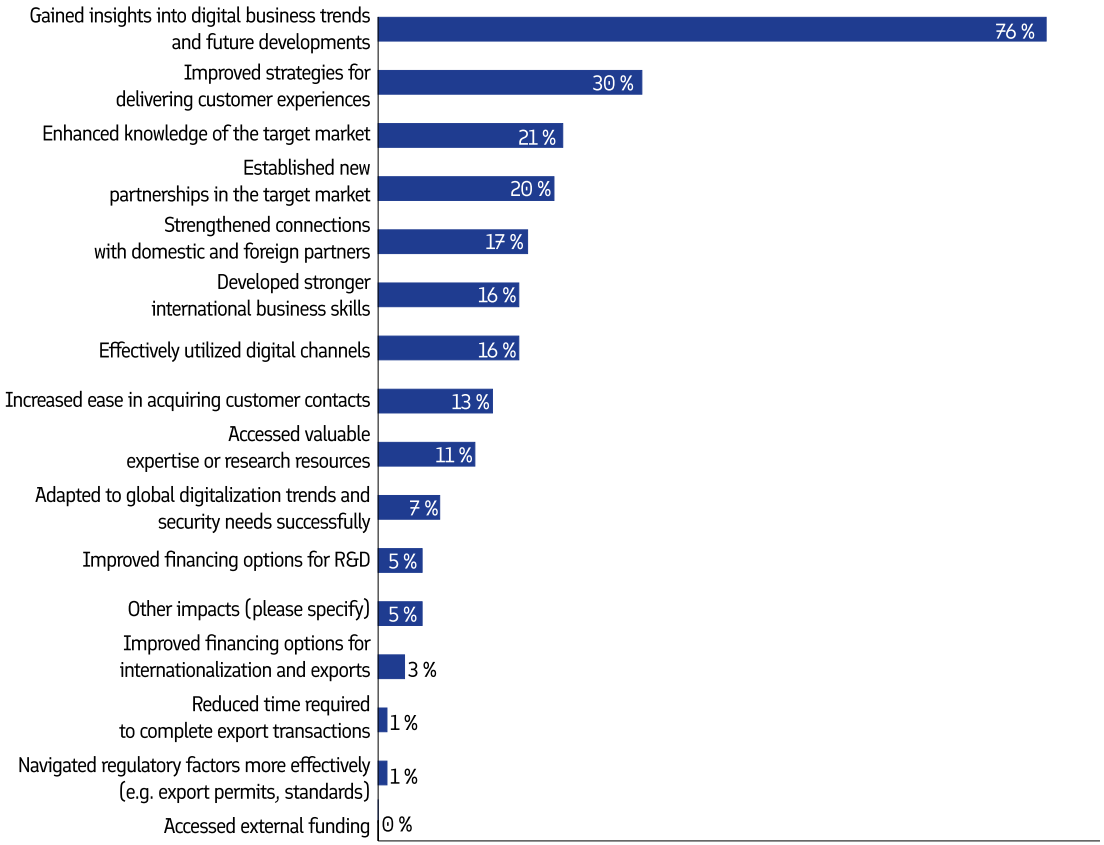


FIGURE 3.9
SOURCE: SURVEY FOR PARTICIPANTS OF NON-FUNDING SERVICES, N = 74.
QUESTION: WHAT MAIN IMPACTS DID THE ACTIVITIES HAVE ON YOUR OPERATIONS? PLEASE SELECT UP TO THREE IMPACTS

The impacts of these activities on organizational operations are presented in Figure 3.9. The most frequently reported impact is the gained insights into digital business trends and future developments, with 76% of participants identifying this as a main impact. Additionally, almost a third of the attendees recognized enhanced strategies for delivering customer experiences as a key impact. At the lower end of the spectrum, fewer participants identified financing-related alternatives as main impacts.

3.2.3 CHALLENGES

The program faced two main challenges relating to i) R&D funding and ii) cooperation with research entities.

R&D FUNDING

One of the primary challenges encountered by the Experience Commerce program was related to funding, particularly when it involved research and development (R&D) instruments. In interviews with the program head, she highlighted that the criteria for accessing these funds were often stringent and challenging to meet, especially for companies with a more commercial focus rather than a research-oriented approach. This posed a significant bottleneck, as many businesses within the program were primarily driven by commercial objectives and found it difficult to align with the R&D funding requirements. Consequently, this challenge limited the ability of some companies to fully

leverage the financial support intended to foster innovation and growth within the digital commerce sector. Addressing this issue was critical to ensuring that the program could effectively support a broader range of businesses in adapting to the new era of commerce.

COOPERATION WITH RESEARCH ENTITIES

Looking back, the program could have potentially addressed these challenges by fostering greater cooperation with research entities. By doing so, the program could have helped companies realize the specific R&D needs within the field. Initially, there was a perception that aligning commercial activities with R&D requirements was overly complex and potentially a waste of time. However, enhancing partnerships with research organizations might have provided valuable insights and support, enabling companies to better navigate the R&D funding landscape. This approach could have facilitated a more seamless integration of commercial objectives with research-driven innovation.

3.3 RESULTS

In evaluating the effectiveness and impact of the Experience Commerce program, it is essential to consider the specific targets and KPIs that were established at the outset. These targets and KPIs were designed to guide the program's strategic direction and measure its success in fostering digital commerce innovation and growth. By examining these metrics, we can gain insights into the program's achievements and areas for improvement, providing a comprehensive understanding of how well it met its intended objectives.

The KPIs for the program were i) for the companies to achieve 13% export growth per annum, ii) establish peer-to-peer activities for C-level, iii) triple the companies' reach during the program, iv) 3 new ecosystems (retail, fashion and travel), and v) for 10 companies to apply and receive EU-funding during the program for their own project, or for a joint-project with other companies/universities.

The KPI for measuring reach was designed to track the number of online store sessions from outside Finland for participating companies. However, there was a lack of clarity regarding how to effectively measure this metric, and as a result, the KPI was not systematically monitored or followed during the program. Further, the Business Finland team also realized during the program that there were not suitable funding instruments for consumer companies in the EU. Therefore, the program changed this initial focus to other funding opportunities.

In the program's final report, it is presented that the export growth for SMEs between 2019 and 2022 was 29%. This number excludes larger organizations which constituted of more than a third of the funded companies (34%).

For the program to have reached their goal of 13% export per annum, the total growth in export between 2019 and 2022 would have had to been at least 52%.

One service that Export Commerce provided was Coaching. The aim of the coaching days has been to improve participants' skills, thereby aiding companies in achieving international growth in digital commerce. Following each training session, a customer satisfaction survey has been administered. Feedback from customers has been favorable, with the events receiving an average rating of 4.6 out of 5.0

Although the export target was not met, 45% of the funded organizations that responded to the survey reported that the program had significant impact on increasing their exports, as illustrated in Figure 3.10. However, an equal proportion indicated that the program had only a limited impact on their exports, while 9% reported no impact at all. These findings reveal considerable variation in how the program is perceived to support export growth within Experience Commerce, underscoring differing levels of benefit among participating organizations.

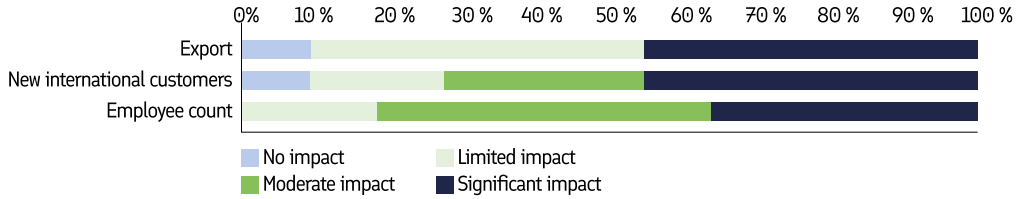


FIGURE 3.10
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 12
QUESTION: TO WHAT EXTENT DO YOU BELIEVE THAT PARTICIPATING IN THE PROGRAMME HAS CONTRIBUTED TO AN INCREASE IN YOUR ORGANISATION'S EXPORT, NEW INTERNATIONAL CUSTOMERS, AND EMPLOYEES?

Peer-to-peer activities played a significant role in the program, with over 20 companies participating in pilot groups between 2020 and 2022. In addition, Experience Commerce offered training programs led by external consultants, which participating companies funded themselves. A total of seven training programs were implemented, involving more than 50 companies.

The program also established 22 regional peer-to-peer learning clubs, which attracted over 200 members and were highlighted as one of the program's key successes in the final report. While no data is available regarding the participation of C-level personnel in these events, the learning clubs were highly appreciated by participants. Several survey respondents identified them as a key example of the activities they believe Business Finland should prioritize in the future.

One of the targeted three new ecosystems was formed out of the program, namely via the company Digital Commerce Oy. The company stems from the ecosystem project 'eCom 2030' which was initiated in the spring of 2022. The purpose of this project was to unite various market entities with a shared interest in advancing digital commerce in Finland, with the intent to sustain these

efforts beyond the duration of the Business Finland program. The company was established in September 2023 and has since then continued organizing activities such as digital commerce events, peer-to-peer learning and online trainings. This company is, according to the program head of Experience Commerce, mainly a retail ecosystem but it also includes fashion and travel. Although the different ecosystem activities were executed during the program, the KPI of establishing three new ecosystems was thus not fully reached.

In addition to delivering results directly aligned with the program's KPIs, the initiative generated several other significant outcomes. Notably, it produced 22 reports, including a key government report on the future of the retail sector. The program played an active role in a working group composed of public officials and experts, contributing to the development of this report. The report addressed the structural changes underway in Finland's retail sector and examined the broader global transformation of retail. Its primary objective was to provide a comprehensive analysis of the sector's current state, serving as a foundation for political decision-making and supporting the sector's long-term strategic development. Furthermore, the report outlined a vision for the future, incorporating scenarios that project potential developments in the retail sector through to 2032.

CASE STUDY – WISDOM

Kesko is a trading sector operator with a focus on trading in the grocery, building, technical and car industries. Kesko's many divisions collaborate and work closely with retailers and other partners.

As the size of the sector increases, new initiatives are required to foster a sustainable trade sector ecosystem. The Wisdom project is a part of the Experience Commerce initiative and aimed to develop the overall well-being and a trade sector ecosystem that promotes the export of Finnish products and services.

3.4 IMPACT AND ADDED VALUE

To be able to assess whether the objectives of the Experience Commerce program were met, we need to assess the impacts program and evaluate the program's unique contribution to participants' development efforts. A clear majority (66%) of the survey recipients acknowledged that the program had a significant role in their outcomes, as they would not have achieved similar results without it. Figure 3.11 shows 33% stated that their development

efforts would not have been possible without the program, while 25% indicated they would not have started to develop new projects without its support. This sentiment is reflected in the interviews with the program head, where she emphasized the role of the program in facilitating the creation of new businesses. For example, the establishment of Digital Commerce Finland was highlighted as a direct outcome of the program, a milestone that would not have been achieved without its support. This illustrates the program's role not just in supporting existing efforts, but also in helping to create entirely new business initiatives.

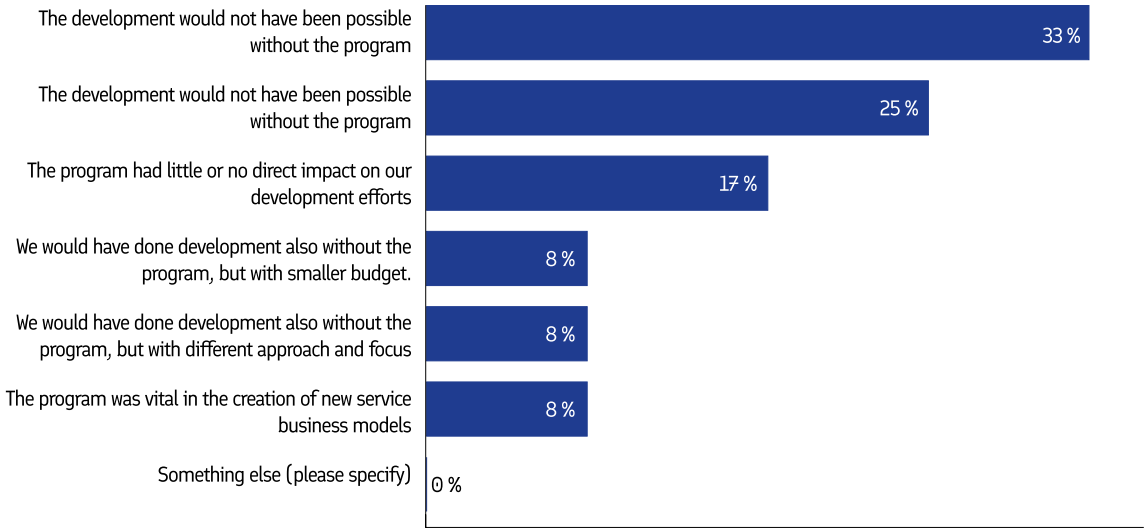


FIGURE 3.11
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 12.
QUESTION: TO WHAT EXTENT DID THE PROGRAMME CONTRIBUTE UNIQUE ADDED VALUE TO YOUR ORGANISATION'S DEVELOPMENT EFFORTS? PLEASE SELECT THE OPTION THAT BEST DESCRIBES THE PROGRAM'S ROLE IN YOUR DEVELOPMENT

For 17% of participants, the program had little or no direct impact on their development efforts, highlighting a more limited role for certain recipients. Meanwhile, 8% reported that they would have carried out development efforts even without the program, though with a smaller budget or a different focus. Additionally, for another 8%, the program was vital in enabling the creation of new service business models.

Networking and collaboration emerged as key themes in both the survey and interview responses. Figure 3.12 shows that 33% of participants identified access to valuable expertise and research resources as one of the main impacts, while 25% highlighted stronger connections with both domestic and international partners. These findings align closely with insights from the interview with the program head, who described how the program brought together various stakeholders, including companies, to foster cooperation and peer-to-peer learning. The regular events and webinars, where companies shared insights and discussed trends and technologies, were particularly valuable for knowledge exchange and establishing new partnerships, both domestically and internationally.

The survey also highlighted the program's financial impact, with 33% of respondents noting improved access to financ-

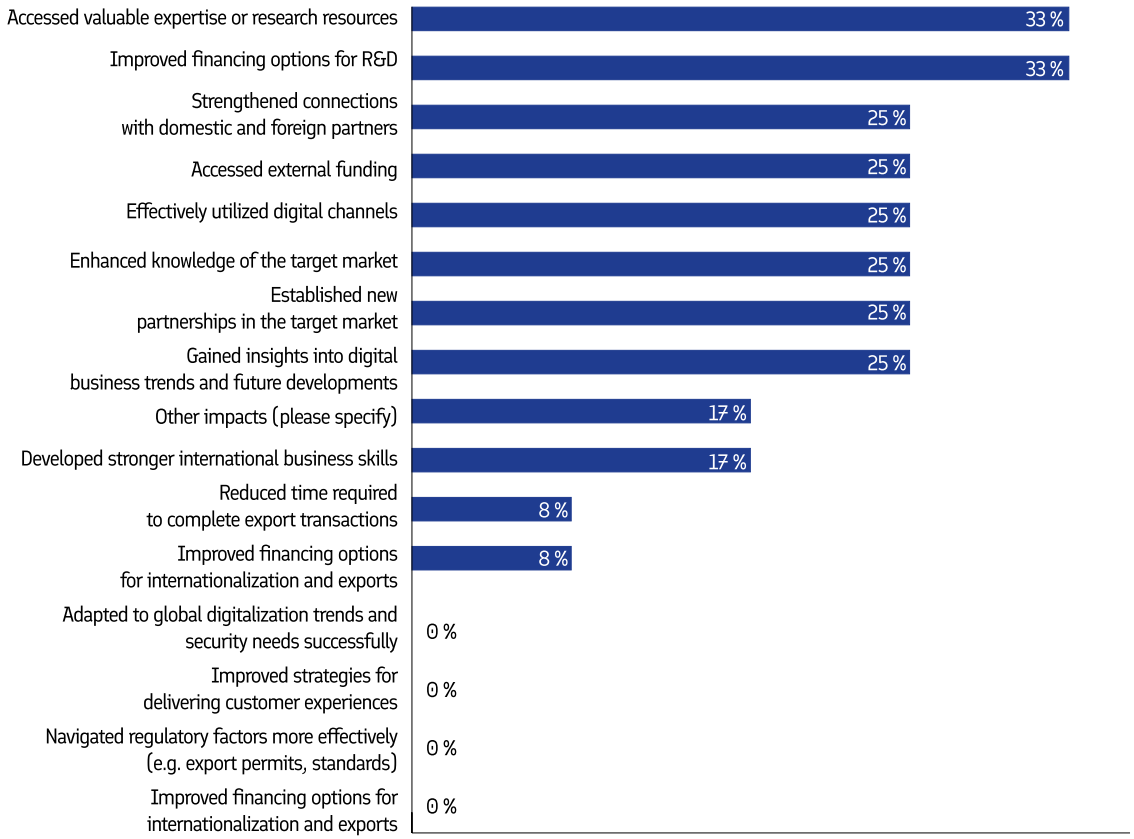


FIGURE 3.12
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 12.
QUESTION: WHAT MAIN IMPACTS DID THE PROGRAMME HAVE ON YOUR OPERATIONS? PLEASE SELECT UP TO THREE IMPACTS

ing options for R&D and another 25% indicating better access to external funding. While the program head did not explicitly mention financing, she highlighted how the program's collaborative approach created a platform for business development, which opened doors to financial opportunities. The establishment of new partnerships and the sharing of expertise were closely tied to the financial benefits reported in the survey, showing that the program's networking and collaborative efforts were key enablers of business growth and access to funding.

Although digital transformation was not explicitly identified as a primary impact in the survey, the interviews pointed to the program's role in keeping participants informed about industry trends and technological advancements. While the program did not focus solely on digital transformation, it provided a space for participants to learn about emerging technologies and digital trends through networking opportunities and knowledge-sharing events. This indicates that, while not a core focus, the program indirectly supported companies in staying abreast of the latest developments in digital business.

In analyzing the final reports of the Experience Commerce projects, we have identified key impact areas using the RAG approach. This method allowed us to systematically evaluate the outcomes and effectiveness of each project by integrating relevant data and generating insights based on detailed project documentation. The impact areas we identified span multiple dimensions, ranging from technological advancements to market growth, showcasing the broad contributions these projects have made. Table 3.1 summarizes the key impact areas we identified through this analysis:

Based on the impacts identified via the survey, interviews, and project documentation, the Experience Commerce program has achieved its objective by improving the position of Finnish consumer businesses as global leaders and helped accelerate their impact on the global stage. The impacts identified emphasize the program's role in business development, building international partnerships, and promoting innovation.

KEY IMPACT AREA	IMPACT
Product and service development	Multiple projects have focused on creating new product concepts and service models, such as the development of six new product concepts in the mobility theme and innovative products for future tourism marketing.
Customer understanding	Improved customer understanding through market surveys and needs assessments has been a significant outcome, leading to more comprehensive service offerings.
International business and partnerships	Projects have strengthened international business connections and partnerships, with some companies joining international accelerators and creating new customer connections with foreign companies.
Strategic tools sustainability	The development of tools for assessing and managing companies' biodiversity impacts and creating strategic frameworks for responsible strategies have shown significant market potential.
Competitive skills development	Projects have enhanced the skills that provide a competitive advantage, promoting collaboration between organizations and supporting the development of new services and products.
Sustainable tourism	The projects support national goals for promoting sustainable tourism, positioning Finland as a pioneer in this field.

TABLE 3.1
SOURCE: BUSINESS FINLAND PROJECT DOCUMENTATION PROCESSED BY ADC

Participants in both the survey and interviews highlighted the program's contribution to the creation of new business ventures, such as the establishment of Digital Commerce Finland, which would not have happened without the program. This reflects the program's broader influence in enabling the development of new product concepts and service models, as detailed in the project documentation, including innovations in sectors like mobility and tourism marketing.

Networking and collaboration emerge as consistent themes across all sources. Both the survey and interview responses show the importance of access to valuable expertise and research resources, as well as the strengthening of connections with domestic and international partners. The program's events and webinars were particularly mentioned as key opportunities for sharing insights, discussing trends, and establishing valuable business relationships. These collaborative opportunities align with the project documentation, which highlights the program's success in fostering international business partnerships, such as participation in international accelerators and the formation of new customer connections across borders.

Financial impacts were also a key outcome mentioned across the sources. While the survey specifically pointed to improved access to funding for research and development, the interviews emphasized the program's ability to create new business opportunities that likely facilitated access to financial support. The project documentation adds to this narrative by pointing out the development of strategic tools for managing sustainability impacts, which could open up additional financial opportunities, especially within the growing sector of sustainable tourism.

Although digital transformation was not explicitly identified as a major outcome in the survey, the program head highlighted the program's role in providing participants with insights into emerging technologies and industry trends. This indirect support for digital adaptation is consistent with the project documentation's focus on innovation, where new product and service development was key. The program's focus on fostering collaboration and providing access to knowledge played a central role in keeping participants informed about the latest developments in digital business, even though digital transformation was not its primary focus.

4 FINDINGS FROM AI BUSINESS (2018–2021)

The AI Business program started as the Augmented Intelligence campaign in February 2017. The purpose of the campaign was to increase the capabilities of SMEs and startups in utilizing AI and data, and to improve their competitiveness. According to the AI Business Program for approval document, it was evident that the Augmented Intelligence campaign should be upgraded into a program, which would also include co-innovation projects and could thus involve bigger companies as well. The AI Business program was launched in January 2018 with a four-year timeframe until the end of 2021. It aimed to increase the Finnish international digital service business by creating a modern B2B platform economy that utilizes artificial intelligence to create new value from data. It was agreed that the AI Business program would be horizontal by supporting all vertical Business Finland programs in leveraging AI and data.

4.1 DESCRIPTION OF PROGRAM AND OBJECTIVES

The AI Business program was launched with a vision for 2025:*The current narrow artificial intelligence is applied creatively and efficiently by Finnish companies and public service providers to create economic growth and increase productivity.* Complementary to the vision, the primary objectives of the program were to increase Finnish digital service business internationally and to increase the number of high value-adding jobs in Finland by 2025, as illustrated in Figure 4.1. Section 4.4 presents the assessment on whether the objectives of the program were met.

The program focused on at the time recent advancements in machine learning, particularly deep learning, which had proven effective in identifying patterns in large datasets. Finland's National AI Strategy guided the program, recognizing Finland's limitations in competing with larger nations such as the US and China in developing groundbreaking AI technologies due to their significantly higher investment levels. Instead, the strategy emphasized applying AI broadly within Finnish companies' products and services to drive economic growth and improve productivity. In the public sector, the program aimed to support development through Business Finland's Innovative Public Procurement funding instrument, enabling companies to expand their portfolios with AI-based solutions. Achieving

THE IMPACT AND THE GOALS OF THE PROGRAM

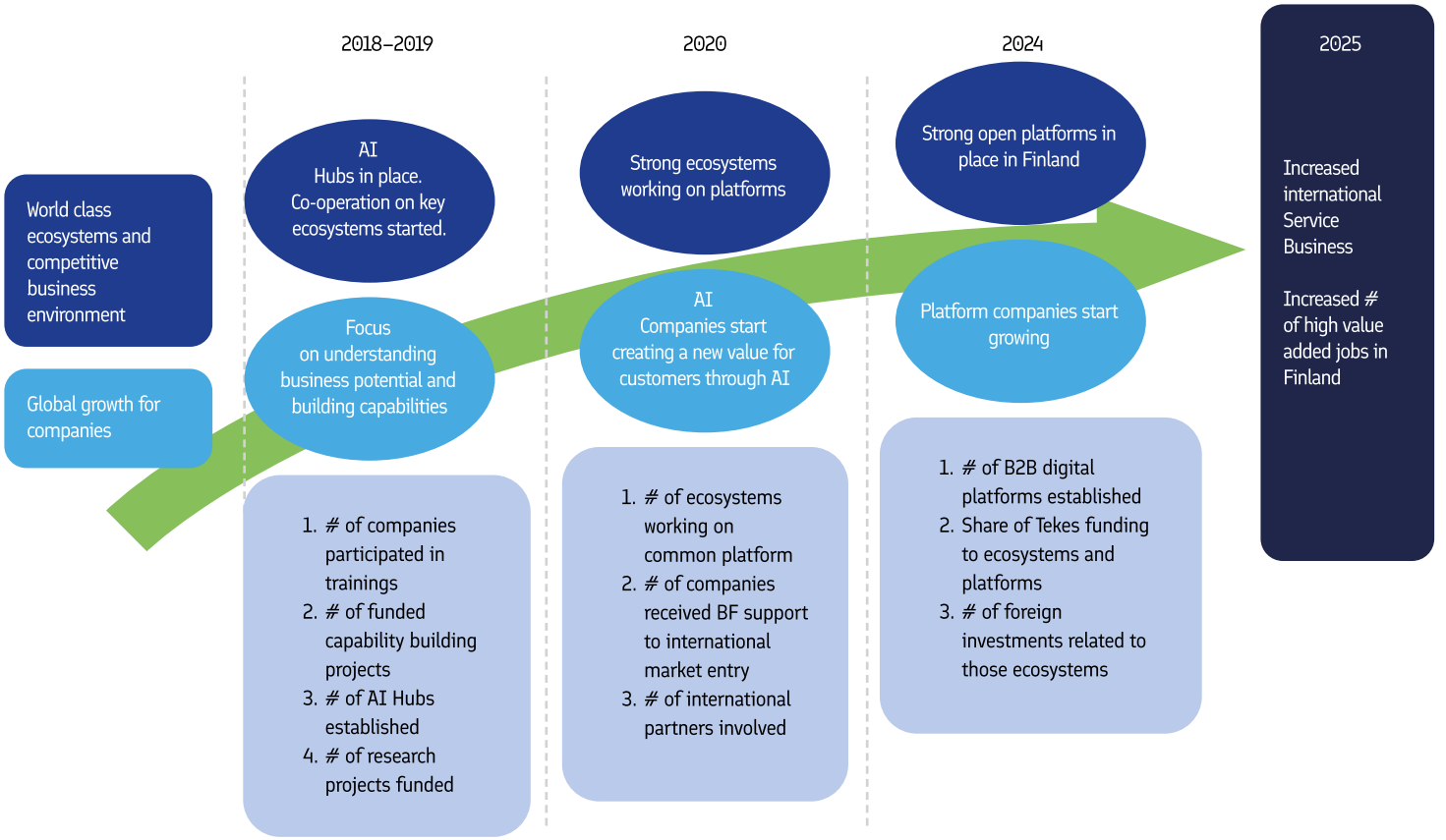


FIGURE 4.1

these goals required widespread transfer of AI knowledge and expertise between companies and from research institutions to businesses.

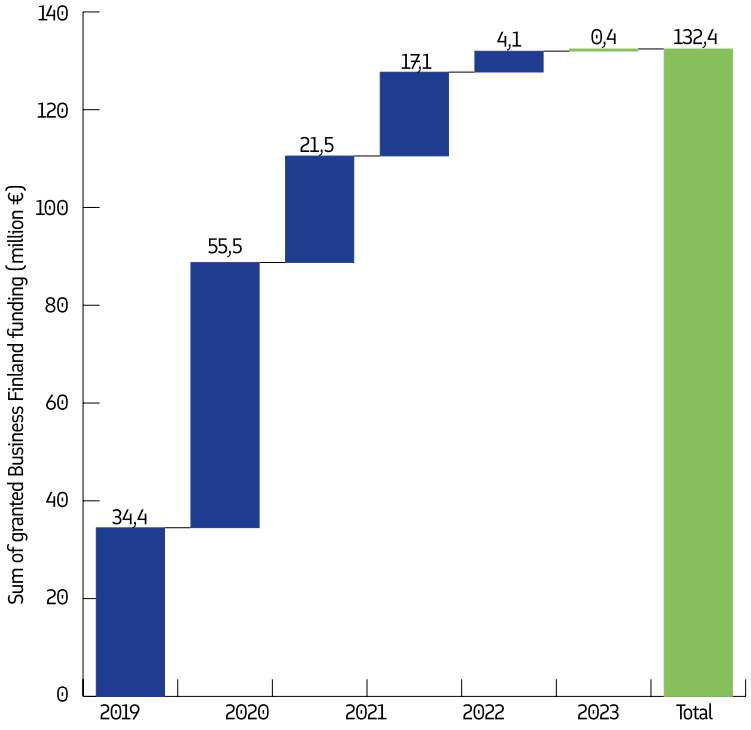


FIGURE 4.2
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

4.2 PROGRAM IMPLEMENTATION

The AI Business program (2018–2021) (including the Augmented Intelligence campaign) consisted of a total of 309 projects with total program volume of €238.3 million. Of this, €132.8 million was Business Finland funding, whereas the initial target estimate had been €165 million. The matched funding from participants reached €105.5 million, whereof €94.4 million came from companies and €11.1 million came from public research organizations. Of Business Finland funding €55.6 million were grants to companies, €56.2 million loans to companies, €20.1 million grants to public research. Additionally, there was €0.8 million European regional development funding (ERDF) distributed by Business Finland. As presented in Figure 4.2, the most Business Finland funding took place in the first two years of the program with €34.3 million funding in 2018 and €55.5 million in 2019. The funding then decreased significantly to be €21.5 million in 2020 and 17.1 million in 2021. Even though the program officially ended in 2021 there was $4.1 million funded in 2022 and €400 thousand in 2023.

Figure 4.11 shows the geographical distribution of the 309 funded projects. 181 of the projects that received funding are located in Uusima. Pirkanmaa is the home of the second most funded projects, 55 in total. Only two regions did not receive funding via organizations in the AI Business program, namely Kanta-Häme and Kainuu.

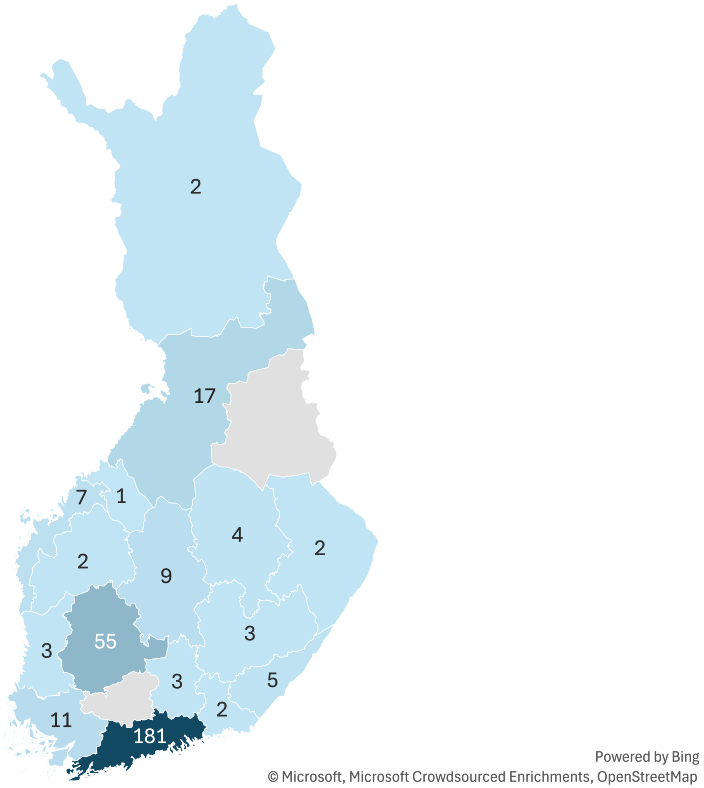


FIGURE 4.3
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

The activities in the program were planned in two phases with different focuses, as shown in Figure 4.1. During the first phase of the program (2018–2029), the activities were supposed to provide attractive, low-threshold support for companies, ideally leading to funding the first co-innovation projects. Activities included raising awareness of AI and the platform economy, accelerate knowledge transfer, and launch initial co-innovation projects with support mechanisms such as Proof-of-Concept (PoC)) funding and local AI hubs. Following the awareness activities in the first phase, the second phase required more international visibility, cooperation and marketing. For example, develop AI-intensive vertical ecosystems in cooperation with other Business Finland programs, identify and connect with key stakeholders, including R&D investors, solution providers, sales channels, and other partners, to strengthen the ecosystems and support AI companies, and marketing efforts to position Finland as a leading environment for AI applications.

According to the initial planning documents, the target groups and stakeholder for the program included the whole economy (Finnish companies, foreign companies, research organizations, public sector, Finnish and EU decision makers etc). A total of 216 organizations received funding through the AI Business program and the number of organizations within the top 10 most common industries are presented in Figure 4.4. The by far most common industry for funded organizations is “Software, consulting and related services”. This sector has 94 organizations funded by AI Business, which corresponds to 44% of all funded organizations.

The final report acknowledges that funding and services have mainly focused on SMEs since the impact of the program was expected to be most powerful among them. However, as shown in Figure 4.5, even though the majority of the funded organizations were SMEs, a third were in fact large organizations.

4.2.1 RELEVANCE

Through interviews with the program head and participants, and survey respondents, it is clearly communicated that the AI program was very timely and "before its time". Regulatory frameworks were not yet in place and the wide use of AI we see today was still to come. When the program was initiated, Finland was just starting to prepare the first national AI program and strategy, and only a handful of Finnish AI startups existed. Bigger companies like Microsoft and IBM provided AI based services for companies and some medium sized Finnish companies had started to build their own AI teams. At the same time, Finland had a long and strong reputation in AI research.

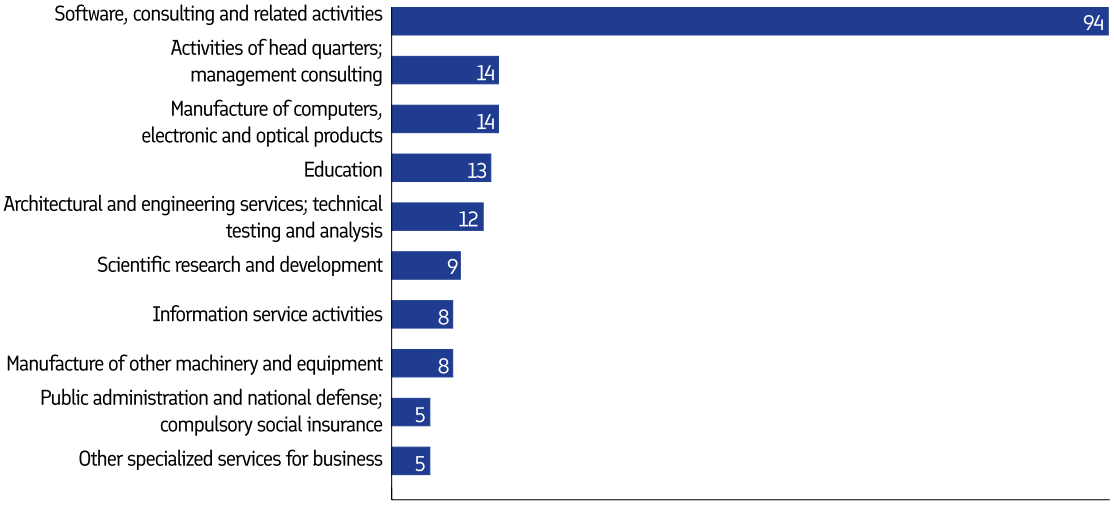


FIGURE 4.4
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND
NOTE: TOP 10 SECTORS

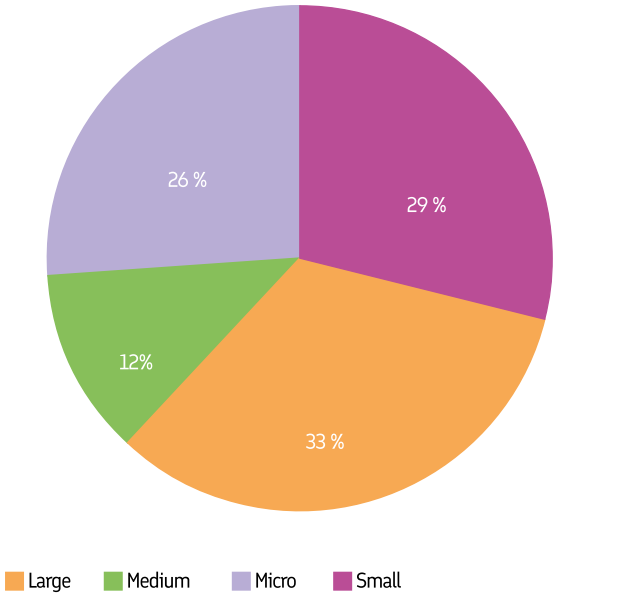


FIGURE 4.5
SOURCE: PROJECT FUNDING DATA PROVIDED BY BUSINESS FINLAND

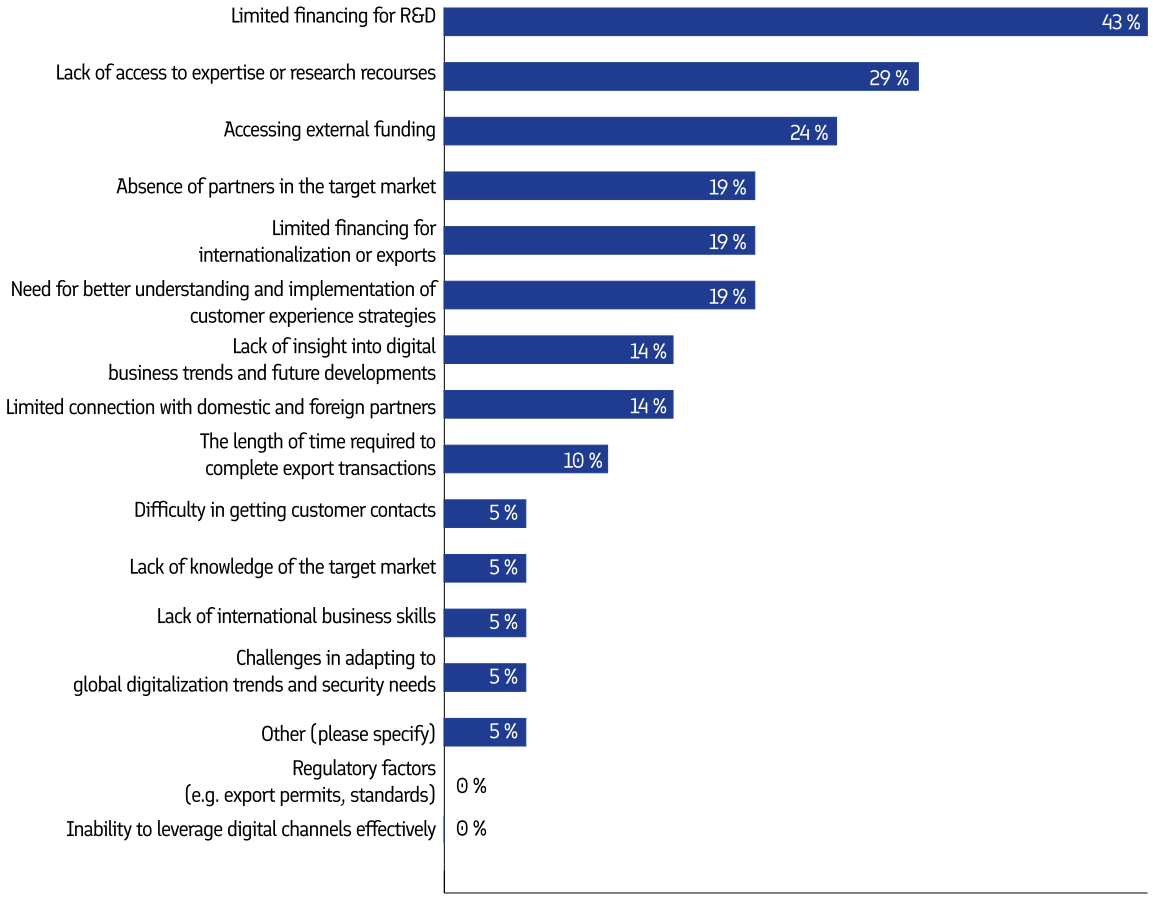


FIGURE 4.6
SOURCE: P SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 18.
QUESTION: PRIOR TO TAKING PART OF THE PROGRAM, WHAT WERE THE PRIMARY OBSTACLES YOUR ORGANISATION FACED REGARDING EXPORTS AND INTERNATIONAL EXPANSION? PLEASE SELECT UP TO THREE MAJOR OBSTACLES.

According to the survey, 96% of the funding recipients found the AI Business program very (46%) or somewhat useful (50%), while 4% did not find it useful.

Understanding the challenges faced by organizations before engaging with the program provides valuable context for its relevance. Figure 4.6 illustrates the survey responses of participants in funded projects on which were the primary obstacles the organizations faced regarding exports and international expansion prior to participating in the funded projects. 43% of the survey respondents report limited funding for R&D being the primary obstacle. Other major obstacles reported are “lack of access to expertise of research resources” and “accessing external funding”. All top three obstacles are thus concerning financing and resources.

During an interview with the program head, she highlighted specific funding gaps and activities that could not be fully implemented during the program’s duration. Regarding funding, she noted the absence of a suitable funding instrument tailored for startups and universities. While the existing co-innovation funding mechanism worked well for larger companies, startups inherently struggled to meet the long-term funding requirements. The program head believed this limitation hindered their ability to participate fully in collaborative projects under the program.

CASE STUDY – APASSI

Outotec is an organization that aims to create positive change through sustainable development and technologies in the metal, chemical, mining and energy industries. Now, the papermaking industry is expected to become fully autonomous, thus, to address these changes in infrastructure – the APASSI co-innovation consortium was developed. The project had a total budget of 3.2 million euro between 2019 and 2021, and its extensive partner network consisted of around 25 small and medium-sized businesses from Finland and the EU. The APASSI project further consisted of six work packages and aimed to accelerate Outotec's digital strategy and strengthen the partner ecosystems to enable aligned innovation.

The project resulted in an innovative product that worked to reach the objective of autonomous large-scale processes in infrastructure. The project further fostered knowledge sharing and networking, enabling new collaborative projects and initiatives between the participating organizations.

4.2.2 SERVICES AND ACTIVITIES

In the final report, the types of services and activities provided via the program are categorized into four different types:

- Activation services
- Competence development and transfer including funding
- Introducing new partners to strengthen ecosystems
- Legislative and regulative actions in Finland and EU

The participation data from the CRM system provides an overview of engagement levels across the different services. As mentioned in Section 1.3.6, the CRM dataset was recently established and, according to Business Finland, only becomes extensive from 2021 onward. Therefore, readers should note that CRM data provides the least coverage for the AI Business program.

This data highlights the extent to which organizations have utilized the available resources, reflecting the AI Business program's reach and accessibility. Webinars has been the most attended activity organized by the program, followed by program events, and innovation ecosystems. A bundled category including seminar/workshop/networking event has also been relatively well attended. The least attended kind of event if Business ecosystems.

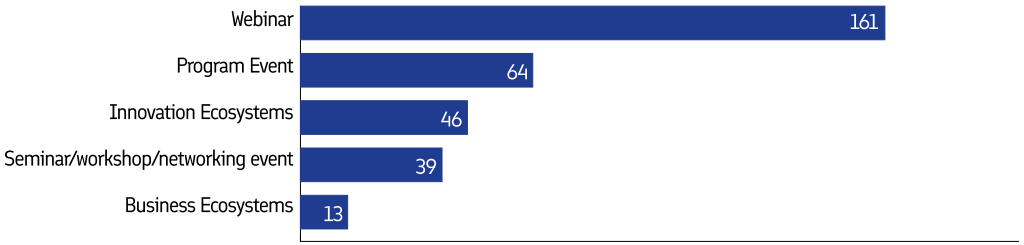


FIGURE 4.7
SOURCE: CRM DATA ON ACTIVITY PARTICIPATION PROVIDED BY BUSINESS FINLAND.
NOTE: MISSING DATA OF SERVICE TYPE FOR 606 OF THE 929 OBSERVATIONS.

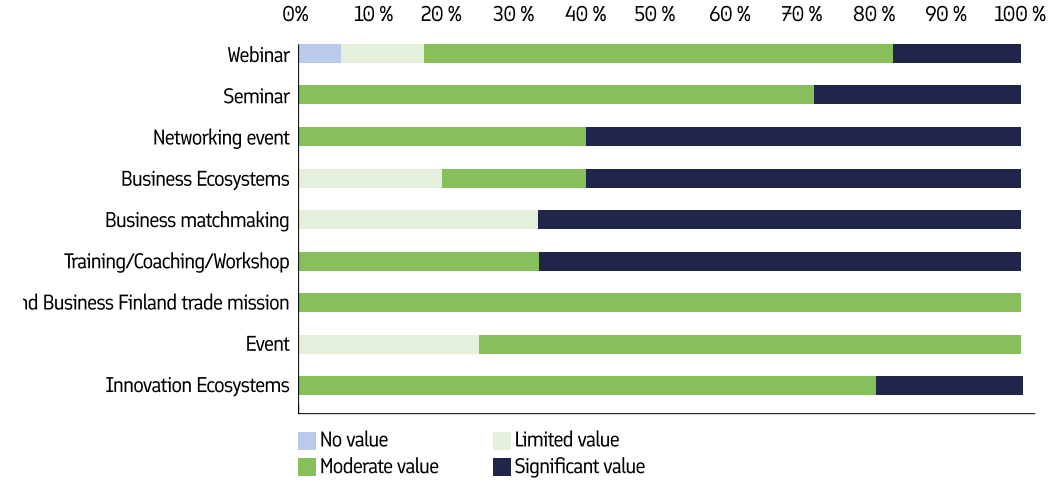


FIGURE 4.8
SOURCE: SURVEY FOR PARTICIPANTS OF NON-FUNDING SERVICES, N = 21
QUESTION: HOW MUCH VALUE DID THE ACTIVITIES YOU PARTICIPATED IN PROVIDE TO YOUR ORGANISATION?
NOTE:

The survey results provide further insights into the perceived value and impact of the activities. All activities are perceived by the majority of the survey respondents as bringing moderate or significant value. Seminars, networking events, training/coaching/workshops, inbound Business Finland trade missions, and innovation ecosystems are all perceived as bringing at least moderate value to the organizations. Business matchmaking has received the most diverse response. 25% reports on limited value, while 75% reports on significant value.

The survey respondents were further asked to select up to three impacts the activities had on their organizational operations. Figure 4.9 presents the responses. 61% of the responses report gaining insights into digital business trends and future developments as a main impact, which makes sense since webinar was the most attended type of activity. Other top impacts the activities had on participating organizations are “established new partnerships in the target market” (30%), “improved financing options for R&D” (26%), “strengthened connections with domestic and foreign partners” (26%), and “enhanced knowledge of target market” (22%). None of the respondent’s report “reduced time required to complete export transactions” or “effectively utilized digital trends” as top impacts made by the events.

FIGURE 4.9
SOURCE: SURVEY FOR PARTICIPANTS OF NON-FUNDING SERVICES, N = 21
NOTE: SURVEY QUESTIONS: WHAT MAIN IMPACTS DID THE ACTIVITIES HAVE ON YOUR OPERATIONS? PLEASE SELECT UP TO THREE IMPACTS.

ACTIVATION SERVICES

The AI Business program began by addressing gaps in AI knowledge within Finnish ICT companies, collaborating with major players like Microsoft and IBM to provide expertise. In 2018–2019, the program organized a roadshow in Finnish university cities that had not previously hosted AI-focused events. This initiative, in partnership with Suomen Yrittäjät, TIEKE, and local universities, aimed to raise awareness and engage businesses in AI opportunities. A significant milestone came in 2020 with the launch of the national AI Finland event, which was held annually and continued in 2021. The event, organized by the program in collaboration with the Ministry of Economic Affairs and Employment and local cities, brought together over 1,200 participants from Finland and beyond, facilitating connections between the public sector, research, and industry.

In 2019, the program organized the "Alustatalous 2.0" event, which aimed to create platform solutions for Finnish industries such as healthcare, education, and manufacturing. This event, focused on APIs and microservices, helped form ecosystems that could eventually expand into international business. Following the event, a call for Proof-of-Concept (PoC) projects was launched to encourage companies to develop these platform-based solutions. In parallel, the program published 15 company case studies on its website, showcasing the achievements of Finnish AI companies. To keep stakeholders informed, the program also launched the AI Business Newsletter, which was sent monthly to over 300 contacts, providing updates on events, research, legislative changes, and international collaboration opportunities.

COMPETENCE DEVELOPMENT AND TRANSFER INCLUDING FUNDING

Several initiatives took place to strengthen the AI capabilities of Finnish SMEs, promote regional innovation, and enhance Finland's global position in AI. One key focus was addressing funding needs through tailored instruments like Proof-of-Concept grants and support for using advanced resources such as the LUMI supercomputer, which enabled the development of innovative AI-driven products and services.

Knowledge sharing and peer learning were central goals. The AI Breakfast sessions, held in person before the COVID-19 pandemic, were highly effective in fostering collaboration and trust among AI professionals. However, when these sessions moved online during the pandemic, participants' willingness to share experiences decreased, emphasizing the value of in-person networking for building trust.

Regional innovation was supported by establishing AI hubs and encouraging cross-regional projects, ensuring that local SMEs received tailored assistance while promoting cooperation. The program also highlighted Finland's leadership in areas such as trustworthy AI and tried to establish international collaborations, despite limited resources.

INTRODUCING NEW PARTNERS TO STRENGTHEN ECOSYSTEMS

The AI Business program worked to enhance Finland's international visibility as a leader in AI and strengthen its brand in the global market. Central to this effort were marketing and PR activities aimed at showcasing Finnish expertise in AI and the platform economy. The program organized events, created promotional materials, and collaborated with international media to highlight Finnish advancements in AI technology, education, and business success stories, generating positive media coverage in key European markets.

CASE STUDY – DATA ORIENTED INTERNATIONALISATION

Medanta OY is a global textile manufacturer that specializes in professional workwear. The company is based in Finland and produces their own material that adheres to international quality and environmental standards. The company's innovative, antimicrobial fabrics are comfortable and durable and ensure the health and safety of clients.

Their project in Experience Commerce with Business Finland was focused on examining the digital market through a data-based approach. The objective was to understand the current market, its challenges, opportunities and trends to advance their global presence on a factual basis.

The program also produced comprehensive materials mapping Finland's AI landscape, including companies, research, and public initiatives, to support international promotion. This work was complemented by targeted efforts to foster partnerships, such as connecting Finnish AI companies with major global system integrators and facilitating investor engagement in vertical ecosystems like Health and ICT. The actions aim at strengthening Finland's position as a competitive player in the global AI ecosystem.

LEGISLATIVE AND REGULATIVE ACTIONS IN FINLAND AND EU

The program targeted actions to influence decision-makers at both the national and EU levels, aiming to foster regulatory environments that support AI innovation and new business models. A key focus of these efforts was contributing to the development of the EU's AI legislation, working in close collaboration with the Ministry of Economic Affairs and Employment and the Confederation of Finnish Industries (EK). The program also partnered with the Finnish Center for AI to amplify its influence on EU-level policy discussions.

On the national front, the program collaborated with Aalto University to develop a policy recommendation promoting the platform economy in Finland, emphasizing its potential as a driver of economic growth. Moreover, the program played an instrumental role in preparing a Finnish MEP parliamentary question to the European Commission in November 2021.

4.2.3 CHALLENGES

The AI Business program faced several challenges that hindered its ability to achieve its objectives. These challenges stemmed from both internal and external factors, significantly impacting the program's operations and strategic implementation. The main challenges can be grouped into three key themes: resource constraints, international collaboration and export limitations, and budget and governance issues.

RESOURCE CONSTRAINTS AND OPERATIONAL DISRUPTIONS

A significant challenge for the program was the shortage of skilled internal resources to support Program Head, which could not be supplemented by external consultants due to confidentiality concerns. This shortage affected critical areas such as international collaboration, export events, and co-innovation projects related to AI development and the platform economy. Additionally, the program lacked a designated Ecosystem Lead until the end of 2021, which resulted in the program head taking on additional responsibilities, further straining resources. The COVID-19 pandemic also exacerbated the situation, as the program head had to manage the program alone during a period of operational disruption from March to August 2020. This led

to wasted resources, as attention was diverted to address immediate needs, and ongoing activities were disrupted.

INTERNATIONAL COLLABORATION AND EXPORT PROMOTION LIMITATIONS

The program's efforts to engage in international research and development collaborations were severely constrained by the lack of resources. The program head had originally aimed to establish early partnerships with international stakeholders to ease Finnish companies' access to foreign markets. However, insufficient resources to build and maintain these international relationships meant that many planned export promotion activities could not be carried out as intended. Although these activities were limited, a key achievement was the establishment of an early partnership with VDI/VDE Innovation + Technology from Germany in late 2021, which will continue through the Sustainable Manufacturing program.

BUDGET AND GOVERNANCE CHALLENGES

The program struggled to fully utilize its allocated budget due to the lack of personnel to execute projects and the impact of the COVID-19 pandemic. The shift to virtual operations and the cancellation of events further compounded the issue. Additionally, the program faced governance challenges, operating without an advisory board or steering group, which left all decision-making to the program head. Over time, the program was managed under different units within Business Finland/Tekes, potentially leading to inconsistent oversight.

4.3 RESULTS

The final report presents a figure describing the evolution of the Finnish AI landscape (Figure 4.10). A year before the program started, Finland was just starting to prepare its national AI strategy. A small number of AI startups existed and only the large international companies were able to provide AI-based services. By the end of the program, the Finnish AI landscape has developed and expanded. There are now hundreds of Finnish SMEs and startups utilizing AI in a competitive way, and local AI hubs support companies building AI all over Finland. The Finnish Center for Artificial Intelligence (FCAI) has been established, and the IT Center for Science (CSC) is providing massive GPU computing capacities to research and companies through the LUMI supercomputer which was piloted during the AI Business program together with CSC, Business Finland, and a couple of AI companies.

EVOLUTION OF THE FINNISH AI LANDSCAPE

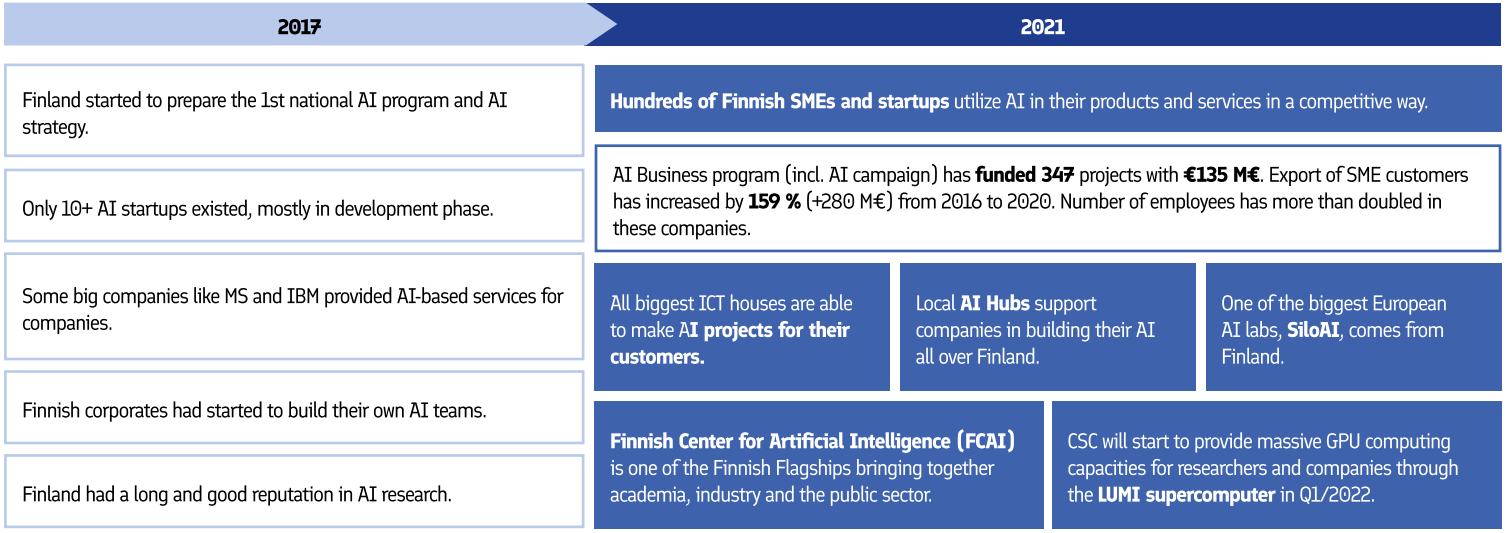


FIGURE 4.10

The long-term goal of the AI Business program was to expand the Finnish digital service sector on an international scale and to increase the number of high value-adding jobs in Finland by 2025. To achieve these goals, various focus areas were established along with KPIs as presented in Figure 4.1. To evaluate the extent to which the AI Business program has achieved its objectives, the KPI achievements are presented in Table 4.1. While most of the KPI targets have been reached, data is missing and not reported for some.

KPI	TARGET	REALIZED
# of SMEs participated in trainings	2020: 100 2021: 80	2020: 138 2021:135
# of funded capability building projects	-	347
# of AI hubs established	5	6
# of ecosystems working on common platform	10	13
# of companies received BF support to international market entry	-	217
# of international partners involved	10	11
# of B2B digital platforms established	-	-

TABLE 4.1

According to the final report, the main objective of the program was to increase the export of Finnish SMEs. To evaluate progress, key indicators such as export value, turnover, and personnel growth were analyzed for SMEs participating in funded projects. The final report presents data retrieved from the Tax Authority for the years 2016 to 2020 and cover all companies that were either SMEs or non-existent in 2016. Using 2016 as start year instead of 2018 is motivated by the Augmented Intelligence campaign that started in 2017 which led to the start of the AI Business program.

In 2016, the total export value for SMEs was €176 million, which increased to €457 million by 2020. This represents a 159% increase over the four years, corresponding to an average annual growth rate of 27%. Turnover also grew significantly, rising from €488 million in 2016 to €1050 million in 2020, reflecting an overall increase of 115% and an average annual growth rate of 21%. Employment in the funded SMEs expanded substantially as well, with the number of employees growing from 3 087 in 2016 to 6 457 in 2020, a total growth of 109% and an average annual growth rate of 20%. These results demonstrate substantial progress toward the program's objective, highlighting robust growth across all key indicators. It is however not clear from the final report how many companies are included in the data each year. It is thus possible that the number of companies included in the 2016 data is lower than the number of companies in the 2020 data. If true, the increasing export, turnover and personnel growth for SMEs may simply reflect that more companies were included in the program in 2020 compared to 2016, rather than a growth effect from participating in the program.

To investigate the KPIs further, Figure 4.11 presents survey results for funded projects of to what extent the participants believe that the program contributed to an increase of the organization's exports, new international customers, and employee count. Over half of the respondents believe the AI Business program had moderate of significant impact on increasing the organization's export, thus indicating similarities with the export growth data from the final report. In contrast, less than half believe the program

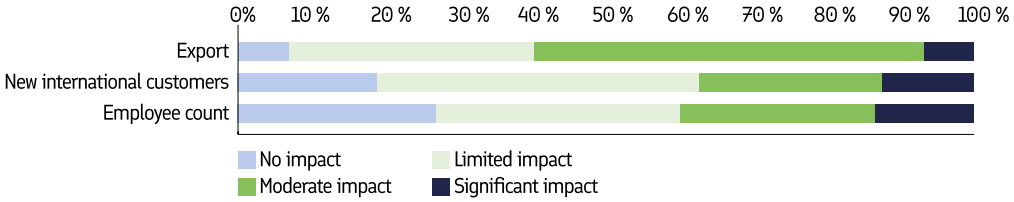


FIGURE 4.11
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 18
QUESTION: TO WHAT EXTENT DO YOU BELIEVE THAT PARTICIPATING IN THE PROGRAMME HAS CONTRIBUTED TO AN INCREASE IN YOUR ORGANISATION'S EXPORT, NEW INTERNATIONAL CUSTOMERS, AND EMPLOYEE COUNT?

had no or limited impact in terms of increasing new international customers and employee count.

According to the program head, an unanticipated effect of growth within Finnish AI companies is that successful companies are being sold abroad. The international acquisition of Finnish AI startups and scaleups in early stages makes it difficult to achieve the long-term goals of the program presented in Figure 4.1 about increasing the number of high value-added jobs in Finland and international business services. This threat is further described in the final report, urging for the topic to be included in future programs under Business Finland's Digital Native Finland mission.

4.4 IMPACT AND ADDED VALUE

To determine whether the objectives of the AI Business program were achieved, it is necessary to evaluate the program's impacts and assess its unique contribution to the development efforts of the participants.

According to the survey responses, the AI Business program had a moderate incentive effect, with its impact varying across participants. 50% of the survey responses agreed that they would have done development also without the program, but with different approach or focus (33%) or smaller budget (17%). In contrast, the program acted as a key driver of innovation for 22% in the creation of new service business models, and 17% stated that they would not have started to develop new projects without the program. Furthermore, 6% emphasized that the development would not have been possible without the program. Only 6% of the survey responses reported little or no impact on the development efforts, indicating that the program generally provided value to most respondents.

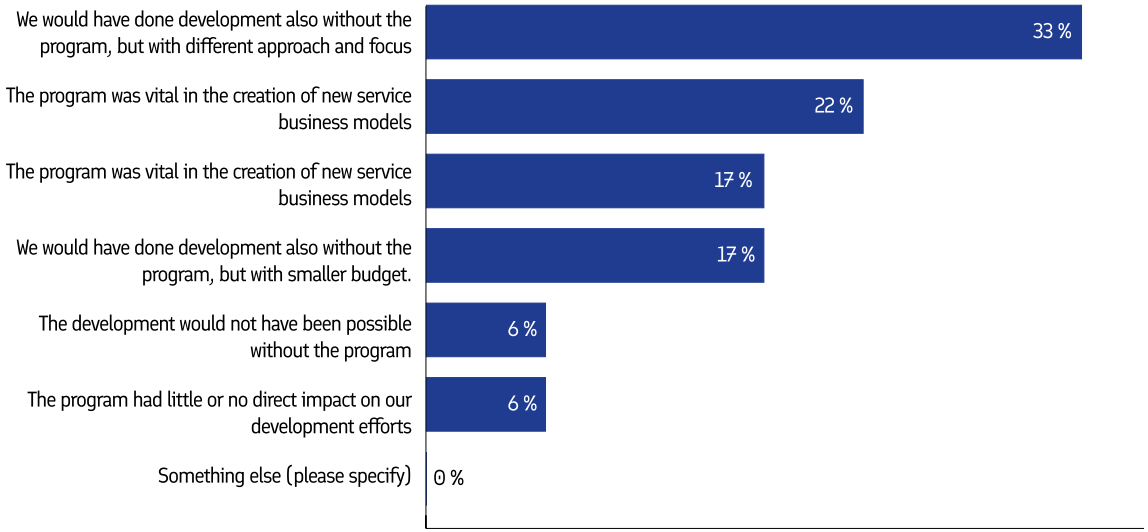


FIGURE 4.12
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 18
QUESTION: TO WHAT EXTENT DID THE PROGRAMME CONTRIBUTE UNIQUE ADDED VALUE TO YOUR ORGANISATION'S DEVELOPMENT EFFORTS? PLEASE SELECT THE OPTION THAT BEST DESCRIBES THE PROGRAM'S ROLE IN YOUR DEVELOPMENT.

When interviewing the program head as part of this evaluation, she identified the program's unique contribution and added value as lying in its role as a catalyst for change. According to her, Business Finland's programs often act as an initiator, with responsibility for ongoing efforts eventually being taken over by other organizations. In her dialogues with program participants, she highlights the transfer of competencies to and between companies, enabling them to build their own capabilities and significantly increase their overall competence in AI as the program's key impacts.

The survey shows that almost 50% of the respondents' report gaining insights in digital business trends and future developments as the main impact the AI Business program had on their operations. 42% report improved financing options for R&D and strengthening connections with domestic and foreign partners. 37% emphasized accessing valuable expertise or research resources as a main impact of the program. In contrast, very few of the respondents report establishing new partnerships in the target market, reduced time to complete export transactions, increased ease in acquiring customer contacts, and enhanced knowledge of the target market as main impacts. The survey results thus suggest that the program has focused on enhancing participant's capabilities for innovation and collaboration, rather than market entry or export support.

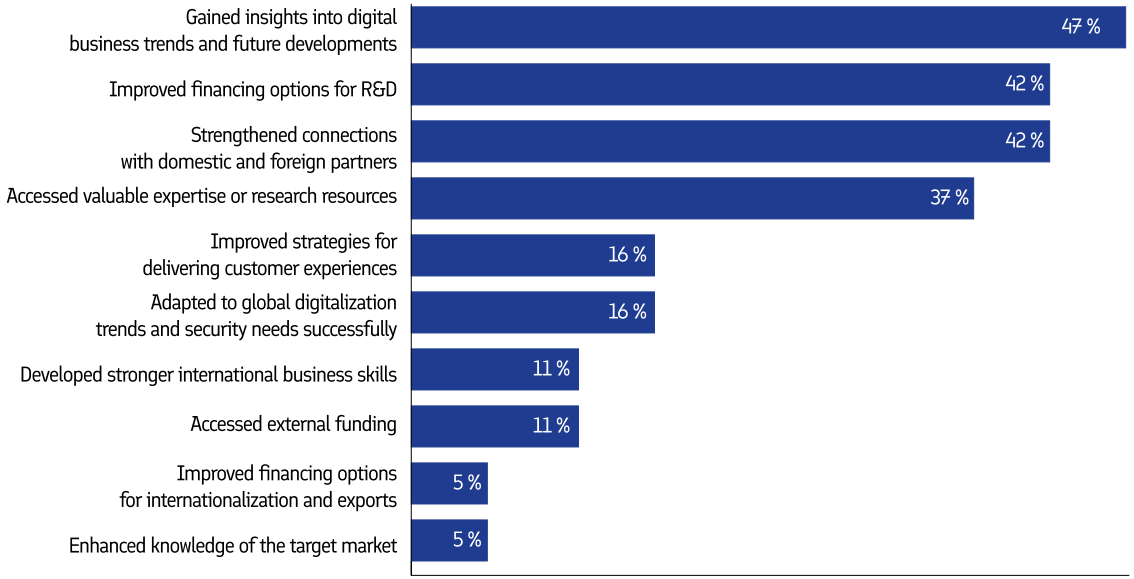


FIGURE 4.13
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 18
QUESTION: WHAT MAIN IMPACTS DID THE PROGRAMME HAVE ON YOUR OPERATIONS? PLEASE SELECT UP TO THREE IMPACTS.

In analyzing the final reports of AI Business projects funded by Business Finland, we have identified key impact areas using our RAG approach. This method allowed us to systematically evaluate the outcomes and effectiveness of each project by integrating relevant data and generating insights based on detailed project documentation. The impact areas we identified span multiple dimensions, ranging from technological advancements to market growth, showcasing the broad contributions these projects have made. Table 4.2 summarizes the key impact areas we identified through this analysis:

KEY IMPACT AREA	IMPACT
Technological advancements and innovation	The AI Business projects have led to the development of new AI technologies and frameworks, applicable across multiple industries. Examples include the creation of machine learning-based visual AI enablers for smart city and public safety contexts. Projects like AIGA enhance AI capabilities and integration into business processes, offering competitive advantages.
Improved decision-making and efficiency	AI technologies have improved decision-making by offering predictive analytics and better insights. For example, the combination of bottom-up machine learning, top-down explainable AI (XAI), and autonomous/self-managed AI is expected to refine sales and demand forecasts. AI-enabled content recommendation systems have streamlined customer service, enhancing user experiences and increasing revenue generation.
Resource efficiency and environmental impact	AI projects emphasized resource efficiency by optimizing processes and reducing emissions. Technologies are being used to make smarter, more informed decisions, improving resource management and reducing environmental impact. This is supported by innovations in smart data collection, integration, and representation.
Economic and societal benefits	AI projects are expected to generate significant economic benefits, creating new business opportunities and enhancing existing ones. For instance, AI-enabled products and services in the Philips project aim to boost productivity and turnover. Additionally, the societal impact includes the creation of new roles, such as the "Head of Sustainable AI" at Solita, and a growing focus on AI ethics in business.
Collaboration and knowledge sharing	Collaboration is a key driver of success in AI projects, with companies, researchers, and experts pooling resources and sharing knowledge. For example, the AIGA project fosters business creation by combining the best resources from company networks and research. Workshops and joint research have also led to identifying new AI applications in search, taxonomy classification, and more.
Commercial value and market growth	The commercial value of AI projects is high, with significant market growth potential. Companies expect AI-driven innovations to lead to expansion and increased market share. Pilot projects with customers and internal training programs help businesses better understand and implement AI technologies, supporting their future growth.

TABLE 4.2
SOURCE: BUSINESS FINLAND PROJECT DOCUMENTATION PROCESSED BY ADC

Based on survey results, interviews with the program head, and AI-assisted desk research, our assessment is that the objectives of the AI Business program—namely to increase Finnish digital service businesses internationally and to increase the number of high value-adding jobs in Finland by 2025—were largely met.

Through the project documentation, we identify several key themes that align with those found in both the survey results and the program head interviews, although each provides a distinct perspective. All three highlight technological advancements and innovation as central objectives. The analysis illustrates how AI projects led to the

development of new technologies and frameworks, while the program proposal emphasized providing companies with insights into future digital business trends and supporting them in building the necessary capabilities to succeed in the platform economy. Both perspectives underline the importance of competence development and knowledge sharing, noting how AI technologies enhance decision-making and efficiency, as well as focusing on training, expertise, and collaboration to improve companies' capabilities.

Another shared theme is the focus on economic and societal benefits. The project documentation emphasizes the creation of new business opportunities and market growth driven by AI, while the program proposal stresses the importance of influencing decision-makers and strengthening ecosystems through new partnerships. Additionally, the program head interview highlights the program's role in initiating long-term industry collaboration, which is consistent with the project documentation's focus on collaboration and resource sharing among companies, researchers, and experts.

However, according to the program head, an unanticipated effect of growth within Finnish AI companies is that many successful companies are being sold abroad. The international acquisition of Finnish AI startups and scaleups in their early stages poses a challenge to achieving the long-term goals of the program, particularly in

terms of increasing the number of high value-adding jobs in Finland and expanding international business services. This trend is further described in the final report, which suggests that future programs under Business Finland's Digital Native Finland mission should address this issue more explicitly. The early-stage acquisitions make it difficult to sustain the long-term economic and societal benefits envisioned by the program.

CASE STUDY – AIGA

The research program AIGA consisted of the Finnish Tax Administration, Talent Base, Dain Studios, Aivan Ai, Saidot, Solita, Siili Solutions and the Universities of Turku & Helsinki. AIGA aimed to foster transparent and reliable AI decision making to tackle the challenges that arise as an increasing amount of public and private organizations use and integrate algorithmic and AI decision making in their practices – The European Commission released a whitepaper with guidelines regarding the responsible use of AI. This exemplifies the need for new practices and mechanisms to amplify citizens' and consumers' trust in these decisions.

The AIGA program was designed to tackle this issue through filling in the knowledge gaps related to algorithmic decision making. The program aims to examine and create governance practices, policy and mechanisms that support the practical implementation of reliable and transparent AI in both public and private organizations. An additional objective was to examine how such practices (governance, policy and mechanisms) can be turned into commercial solutions through products and services and to understand potential emerging business ecosystems around this AI governance auditing.

5 SCOPE, STAKEHOLDER COLLABORATION AND SUSTAINABILITY

5.1 STAKEHOLDER COLLABORATION

We have mainly used three data sources to explore how stakeholder collaboration has been handled in the three programs. First, we will present the findings based on interviews with program heads and study of biannual, annual and final reports of the programs. Second, we will present the findings based on our study of project documentation.

In interviewing the program head for AI Business, it becomes clear that they have worked closely with academic and industry partners, such as the Finnish Centre for Artificial Intelligence and universities like Aalto and Helsinki. The program aimed to grow skills in Finland's AI sector, addressing a limited range of opportunities at the time. Events like the AI breakfasts helped people in the sector connect and share knowledge, encouraging companies to start using AI in their operations.

Digital Trust took an active and coordinated approach, focusing on collaboration in Finland's small, connected ecosystem. The program worked with ministries, industry

groups, and organizations like the Bank of Finland. It held regular meetings and joined European innovation projects to build shared goals, especially in improving financial markets and cybersecurity skills. Experts with long-standing roles also played a key part, contributing to projects like creating the National Competence Centre for Cybersecurity in Finland.

Experience Commerce focused on working with companies by organizing events and seminars that showcased success stories to inspire action. Unlike the other programs, these activities were mostly led by the program itself, not as joint efforts. The program also built connections internationally, working in countries like Germany, Japan, and France to boost exports through digital channels.

By employing our RAG model with project documentation data, we have compiled a summary of what specific outcomes have been directly influenced by stakeholder collaboration in the projects across the three programs. These objectives are detailed in Table 5.1 and explained below.

The project documentation shows that projects in the

CASE STUDY – SCOPESENSOR

Scopesensor is focused on developing system solutions for the Internet of Things (IoT). Additionally, Scopesensor primarily works with critical infrastructure, marine applications, and industrial applications – with an emphasis on cybersecurity and resilient communication. Scopesensor's vast experience with wireless communications enables them to contribute with innovative, new technologies. Scopesensor was a part of the Digital Trust program.

The immense expansion and increased adoption of the Internet of Things has changed the operation and utilization of a broad range of application environments such as homes, offices, infrastructure, smart buildings and smart grids. As a result of this expansion of IoT systems, there is a growing concern for their security. Threats and cyberattacks could compromise the security, privacy and safety of the systems and individuals.

To address these security challenges, Scopesensor set the objective to ensure that not every node within the network should be required to possess cybersecurity functionalities. Instead, the entire network should embody these cybersecurity functionalities. The network was thus designed to possess awareness and collective intelligence, which it later distributed to the nodes through AI signaling development with the project.

The result of this initiative was the CISSAN IoT platform, which facilitated secure development, testing and validation of IoT applications and solutions. The platform was validated through various joint user cases, including e.g. those in public transport, bank IoT and network monitoring.

PROGRAMME	OUTCOMES INFLUENCED BY STAKEHOLDER COLLABORATION
DIGITAL TRUST FINLAND	• Multilevel collaboration: Projects like those involving the PRIORITY research community and the 5GTNF phase 3 community emphasize multilevel collaboration through regular meetings, workshops, and seminars. This approach produces diverse results such as conference presentations, journal publications, and academic degrees, which are beneficial for companies in further research and commercialization. • Company and research institution partnerships: Collaborations with companies and research institutions have been crucial. For instance, the cooperation between team members and collaborative firm members in implementing tools like the Blockchain Governance Compass has led to operational advancements and the publication of research papers. • International and national projects: Engaging with international projects and entities, such as the FASTER project and the French Ministry of the Interior, enhanced visibility and brought in diverse perspectives, which were deemed vital for the project's success. • Ecosystem development: Digital Trust Finland's projects often aim to create or expand ecosystems. For example, the development of a cybersecurity ecosystem that is self-sustainable and viable, involving various stakeholders, helped in secure and ethical application development, opening global markets and business opportunities. • Subcontracting and SME involvement: Involving numerous Finnish SMEs and large companies as subcontractors helped projects in rapid development and expertise sharing between the companies, which are reported as essential for the project's success and competitiveness in global markets. • Feedback and user engagement: Active feedback from companies and defined user levels and profiles based on use cases ensured that the solutions developed were practical and met the needs of the end users.
EXPERIENCE COMMERCE	• Research and business collaboration: Projects often involved close cooperation between universities and companies, where research questions were formulated interactively, and results were shared through workshops and documentation. For example, collaboration with the University of Helsinki and companies like Reaktor and Rockway facilitated the development of scientifically significant research that supported product development. • Consortiums: Many projects were carried out through consortiums that brought together diverse expertise from different fields and sizes of organizations. For instance, the CREDU joint project allowed Reunamo Education to collaborate with companies developing educational technology and university research groups, demonstrating the model's effectiveness. • International collaboration: A few projects involved international partners, which helped in understanding global markets and enhancing the international business potential of Finnish companies. For example, a project incorporated innovation into a German company to commit to global reporting practices and standards. • Sector-specific partnerships: Collaborations with specific sectors, such as the retail sector for health service providers, enable the exploration of new business areas and internationalization opportunities. The joint project with Aava and retail sector players exemplifies this type of partnership.
AI BUSINESS	• Industry partners: Collaboration with industry partners has been crucial in expanding the companies' collaboration network, improving business expectations, and enhancing international competitiveness. For example, the project involving Noptel and Kaltiot highlighted the importance of networking with customer and partner companies. • • Academia: Universities and research institutions have played a significant role in providing expertise and facilitating co-development. The collaboration with the University of Jyväskylä and the involvement in the EU's European Data Spaces project are examples of this. • Government entities: Funding from Business Finland and participation in EU projects have provided essential resources and support, accelerating project timelines and enabling broader societal impacts. Business Finland's support has been particularly impactful in expanding project content and improving business expectations.

TABLE 5.1
SOURCE: BUSINESS FINLAND PROJECT DOCUMENTATION PROCESSED BY ADC

Digital Trust Finland program focused on regular meetings and workshops with its partners. These activities led to results such as academic publications and degrees and were supported by partnerships with companies and research groups. The program's involvement in international projects helped it gain more visibility and brought in new ideas, which were important for growing the ecosystem and staying competitive globally.

Experience Commerce worked on building connections between research and business. The projects engaged collaborations between universities and companies to encourage interactive research and shared the results in workshops. Groups of experts, or consortiums, brought together skills to create new products and services. Projects also partnered with specific sectoral actors and worked internationally to find new business opportunities, aiming to stay focused on practical, market-related goals.

In the AI Business program, projects focused on building networks and improve competitiveness. Academic experts from universities and EU projects played a big role in the program. Support from Business Finland and other central government agencies provided the program with resources to speed up projects and create broader impacts, showing the importance of working closely with government and institutions.

5.2 SUSTAINABILITY

The sustainability perspective has differed somewhat between the programs. Only Experience Commerce had explicit goals of sustainability that were presented in the final report. Digital Trust Finland expressed in the yearly planning from 2022 that they focus more on qualitative sustainability goals than quantitative. These goals have related to encouraging innovation initiatives with criteria of sustainability, including a sustainability viewpoint for offering materials and including sustainability in some events. As shown in Figure 5.1, AI Business is the program where the fewest respondents found that it contributed to making their organization more sustainable compared to other programs. The program's perceived lower contribution to sustainability should be understood in the context that the campaign and program were initiated before sustainability became a goal of Business Finland. Consequently, sustainability was never part of its original objectives or focus.

Respondents from Experience Commerce perceived that the program contributed to their organization being more sustainable to a larger extent than the other two programs. These survey results correspond to some extent to the relativeness on how much the perspective of sustainability has been included in the program documentation. The difference between the survey results for the programs is however not very large and given the much bigger focus on

sustainability in Experience Commerce, the survey results were expected to differ more.

The target for Experience Commerce was to 'Develop more environmentally friendly and sustainable eCommerce.' As mentioned in Section 3.1 this was tied to certain KPIs but an additional initiative that was not planned from the beginning was carried out; The Sustainability Playbook. The project started in early 2022 and was a pilot of the sustainability goals and services for Business Finland's strategic priority area. The program received additional funding of €82 000 to carry out this initiative. The project aimed to develop a method, process, or tool to help a consumer business company better understand the different aspects of responsibility. It intended to make responsibility a central part of the company's business and corporate culture, with the goal of gaining a global competitive advantage.

The initiative resulted in approximately 200 companies attending the sustainability seminar, with around 40 participating in the coaching course. An average of 170 independent participants engaged with the online content. Six growth companies took part in a pilot course for sustainability strategy implementation.

Business Finland's sustainability goals involved engaging advisors in workshops to develop the playbook, which remains a benchmark for sustainability developments. In Spring 2023, workshops were held to create a roadmap for further playbook enhancement. These efforts resulted in a project to expand the playbook's use in customer work.

In an interview with the program head of Experience Commerce, the program participants appreciated the sustainability work and found it very useful but also challenging. The reflections on inclusion of sustainability perspectives are that that there is no simple solution, and it requires dedicated work.

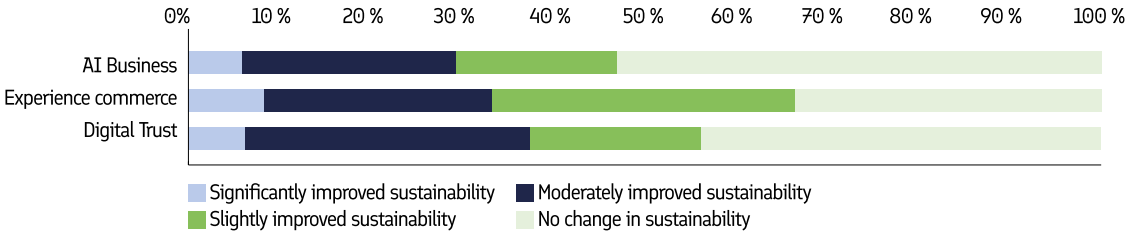


FIGURE 5.1
SOURCE: SURVEY FOR REPRESENTATIVES OF FUNDED PROJECTS, N = 47.
QUESTION: HAS THE PROGRAMME CONTRIBUTED TO MAKING YOUR ORGANISATION MORE SUSTAINABLE?

By using our RAG model on project documentation data, we have compiled which sustainability objectives have been explicitly stated in the projects of the different programs. Examples are presented in Table 5.2 on the next page. Although the programs themselves expressed a relatively weak explicit focus on sustainability, the program projects reflect priorities in this area. Projects in Digital Trust Finland emphasized technological innovation, projects in Experience Commerce concentrated on consumer engagement and market strategies, while projects in the AI Business program integrated ethical considerations into technological solutions.

PROGRAMME	SUSTAINABILITY OBJECTIVES
DIGITAL TRUST FINLAND	• Cyber-physical energy communities: The goal was to enable secure, more efficient, and more automated use of decentralized energy-sensitive resources controlled by buildings, electric mobility, and producers/consumers to increase energy flexibility potential, economic efficiency, reliability, and environmental sustainability. • CTAC project: This project aimed to provide solutions for more efficient use of work efforts, improving product quality and safety, and solutions to reduce product development costs, all within the framework of sustainable development goals. • Energy consumption reduction: One project aimed to reduce the energy consumption of the user's devices and improve their performance and user experience, even when the devices communicate wirelessly with the ecosystem.
EXPERIENCE COMMERCE	• Berner's E-commerce Platform: This project included sustainability attributes in its new e-commerce platform for consumer products, aiming to facilitate responsible consumer choices. The attributes cover aspects like carbon footprint and waste management. • Wisdom consortium: The goal was to design a sustainability index to help consumers make responsible choices. Although creating a new sustainability certificate was deemed challenging, the project shifted focus to e-commerce to incorporate sustainability attributes. • Food waste reduction: This project aimed to develop solutions to halve food waste by 2030, aligning with the European Commission's goals for carbon neutrality and waste reduction. • Weekendbee: The project aimed to test the competitive advantage and customer promise of the Weekendbee sustainability certificate in international markets, with objectives to open new markets and outline market potential for future funding.
AI BUSINESS	• One project aims to develop a modular, data-driven solution to support the management and operation of process and manufacturing industries, with a focus on sustainability at the business, technology, and societal levels. • Another project has the objective of integrating ethics and compliance into data-driven decision-making and artificial intelligence solutions by 2025, emphasizing the development of sustainable and ethical international business practices.

TABLE 5.2
SOURCE: BUSINESS FINLAND PROJECT DOCUMENTATION PROCESSED BY ADC

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

This evaluation of three programs highlights key achievements, challenges and opportunities in Business Finland's program-based model. While the participating organizations in all three program's projects demonstrate compelling impacts, the evaluation reveals gaps in terms of the role of the programs, the program logic, goal alignment, and resource allocation.

6.1.1 POSITIVE IMPACT CREATED BY THE PROJECTS

The evaluation finds that the individual projects funded within the programs have generated impact in many meaningful ways. Across the project portfolio, we observe advancements in technology and innovation, improvements in decision-making processes, and enhanced resource efficiency. Many projects have also contributed to economic and societal benefits by fostering collaboration, knowledge sharing, and the development of competitive skills.

While projects from the three programs have created impact, their focus areas and approaches have varied.

Projects in the Digital Trust Finland and AI Business programs were more research-focused, emphasizing advancements in technology, security, and artificial intelligence. These initiatives have primarily strengthened knowledge creation, industry capabilities, and long-term innovation capacity. In contrast, projects in the Experience Commerce program were closer to the market, with projects directly supporting commercial applications, customer engagement strategies, and business growth in digital commerce. Even though the programs had different scopes, all final reports indicate significant growth among participating companies in terms of revenue and export demonstrating how funding may have translated into actual business outcomes.

As survey data presented in the report shows, almost all project participants regard the program as very or somewhat relevant, emphasizing that the funding has been crucial in enabling them to drive development and achieve tangible results.

6.1.2 PROGRAM LOGIC AND STRATEGIC PURPOSE

Business Finland funds projects both within and outside of programs, yet the intended added value of program-based funding compared to direct project funding is not clear based on this evaluation. The purpose of the program format is to:

- prompt businesses to benefit from market transitions and to increase understanding of themes affecting the future of business.
- enable the participants to resolve common challenges and learn from their peers.
- provide a unique way for bringing together various different operators: companies of different size seeking growth, renewal and internationalization as well as research and other organizations working in cooperation with the companies.
- mobilize a critical mass of actors and build joint offerings from Finland in strategically selected sectors and markets.

Since project funding outside of programs also enable participants to resolve common challenges and learn from peer together with different operators, those are not unique purposes of the program format. The uniqueness of the program format must therefore be in the sense of mobilizing a critical mass of actors and increase the understanding of themes affecting the future of business. All three evaluated programs were very timely in the sense of focusing on themes affecting the future of business. However, none of the programs have resulted in joint offerings, and was only included as a KPI in the Digital Trust Finland program.[3] The lack of a clear purpose of the program format is mir-

3 Joint offerings were initially a KPI for the Experience Commerce program too but was dropped during the first year due to the team realized there were no suitable funding instruments for consumer companies in the EU at the time.

rored in the lack of well-defined, program specific Theory of Change (ToC) frameworks. Together, this makes it difficult to assess whether programs have effectively contributed to its intended impacts and strategic goals.

Without a clearly stated strategic purpose, the programs risk becoming administrative structures rather than instruments for targeted impact. If the intent is to create synergies across projects, this should be explicitly reflected in program design and implementation. If the goal is to provide thematic focus and structure to funding efforts, then more effort is needed to ensure coherence among funded projects. A stronger emphasis on defining the role and function of program-based funding would enhance its legitimacy and strategic direction.

6.1.3 ALIGNMENT BETWEEN GOALS, KPIS, AND ACTIVITIES

A recurring issue, especially for the Digital Trust Finland and Experience Commerce programs, is the disconnect between stated goals, selected KPIs, and the actual activities taking place within the programs. Many KPIs are set with a strong emphasis on short-term impacts such as expected revenue and export growth, tripling participating companies' online store sessions, and attracting foreign direct investments within the first year of the program, while a significant share of funding is directed toward large research projects and early-stage development activities. This misalignment creates unrealistic expectations and makes it difficult to measure success within the program cycle. The absence of a well-defined ToC exacerbates this issue. A ToC provides a framework that links program activities and funding to desired outcomes, offering clear guidance on how progress should be measured and what specific impacts are expected at each stage. Without such a framework, KPIs risk being disconnected from the program's core objectives, leading to ineffective or misleading measures of success.

A more structured and continuous approach to monitoring, supported by a clearly defined ToC, would improve the ability to assess whether the right activities are being carried out to achieve the intended impact. A ToC helps ensure that program goals are not only aligned with activities and funding but that there is a clear roadmap for monitoring and adapting the program's progress. Aligning goals, KPIs, activities, and funding more systematically would allow for a clearer evaluation of impact and effectiveness, ensuring that programs are both responsive and accountable to their strategic objectives.

6.1.3 RESOURCE ALLOCATION AND FINANCIAL EFFICIENCY

Finally, the evaluation reveals a consistent pattern of budget underspending across all three programs, raising questions about financial efficiency and the role of the

program in driving impact. At the same time, project documentation highlights successful initiatives, and the programs themselves report achievements in meeting their goals, including export and revenue growth in the final reports. This discrepancy makes it unclear how program activities contribute to objectives and what added value the program format provides compared to individual project funding.

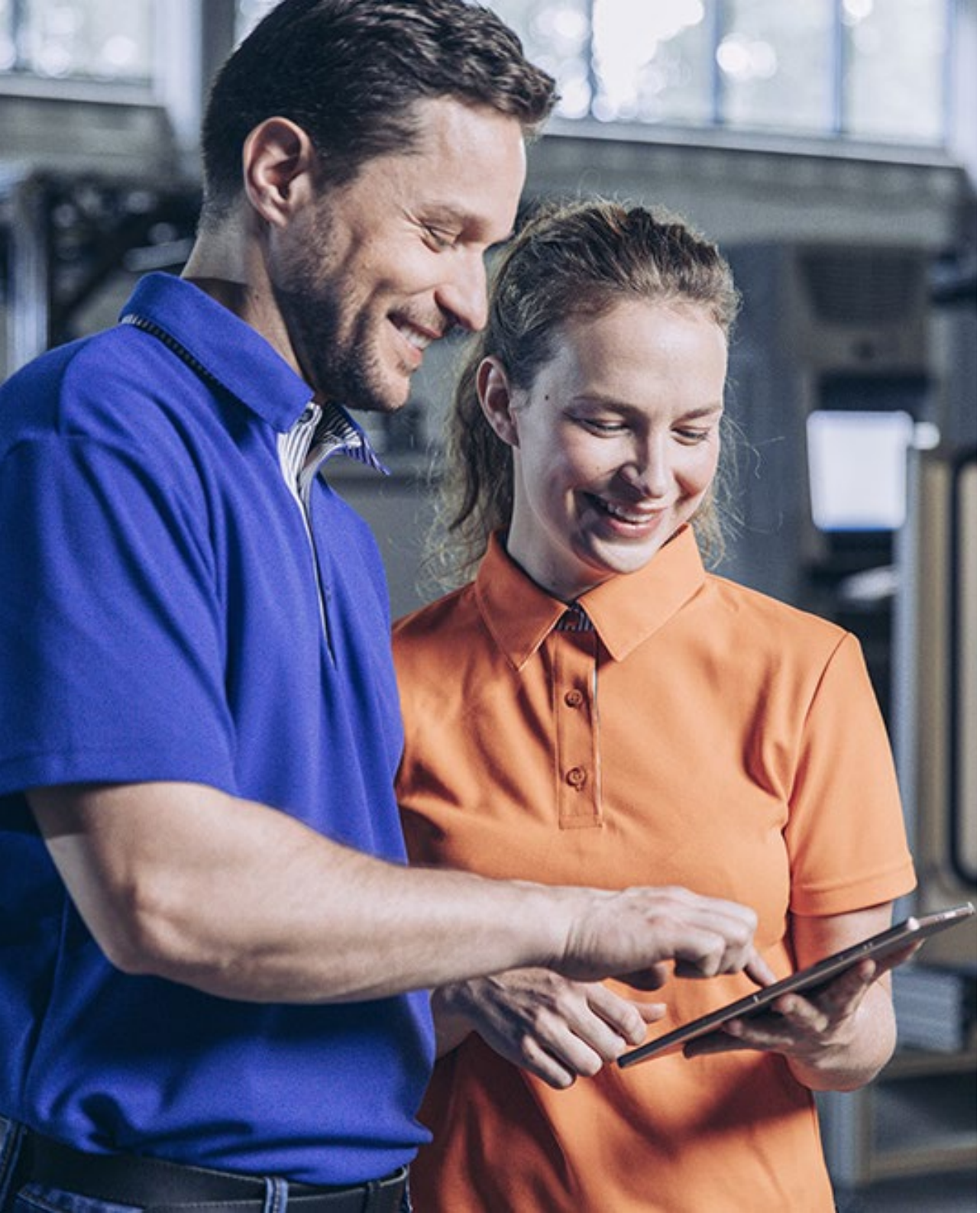
Underutilized budgets may indicate inefficiencies in program execution, challenges in mobilizing project participants, or financial structures that do not align with actual funding needs. However, the simultaneous reporting of positive outcomes suggests that some program effects are materializing despite lower than expected spending. This raises concerns about whether financial planning accurately reflects the strategic intent of the programs and whether underspending indicates inefficiencies or a structural misalignment between budgeting and program design.

The link between budget utilization and program objectives thus remains ambiguous. This is further compounded by the absence of a direct link between financial planning and the program's ToC, which would clarify how resources are expected to translate into outcomes. Strengthening the connection between budgeting processes, program goals, and intended impacts, along with a more adaptive approach to reallocating resources based on evolving needs, would improve financial efficiency and ensure that funding mechanisms support the long-term strategic purpose of the programs.

6.2 RECOMMENDATIONS

This section presents recommendations based on the findings of the evaluation, aiming to enhance the effectiveness and strategic impact of programs. The evaluation highlights that the programs have supported meaningful advancements in technology and innovation, strengthened industry capabilities, and contributed to business growth among participating companies. The findings also reveal structural challenges, including a lack of clarity regarding the strategic purpose of program-based funding and inconsistencies between program goals, KPIs, and activities. Addressing these issues would enhance the effectiveness and strategic impact of future programs. ADC recommends Business Finland to clarify the strategic purpose of the program format, and ensure alignment between goals, KPIs, and activities by requiring program specific Theory of Change frameworks when starting new programs.

- **Clarify the strategic purpose of programs**
  The intended added value of programs compared to individual project funding remains unclear. While programs aim to create synergies, support market adaptation, and increase understanding of future



business trends, these objectives are not consistently reflected in program design or implementation. Without a distinct strategic purpose of the programs, they risk becoming administrative structures rather than targeted instruments for impact. Future initiatives should define their unique contribution compared to individual project funding more explicitly to enhance their legitimacy and effectiveness.

- **Ensure alignment between goals, KPIs, and activities**
  Many KPIs emphasize short-term economic impacts, such as revenue and export growth, while a significant share of funding is allocated to research-driven projects with long-term innovation objectives. This misalignment creates unrealistic expectations and makes it difficult to assess program success. Establishing a program specific ToC would provide a structured framework linking activities to expected outcomes, ensuring that KPIs accurately reflect strategic goals and that program progress can be effectively monitored and adapted over time.

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