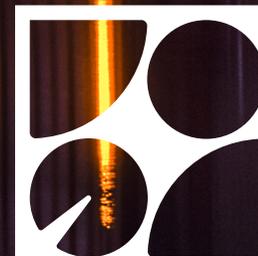


First interim evaluation of Business Finland Missions

Part 3: Evaluation of the Mission Zero Carbon Future

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BUSINESS FINLAND

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Table of contents

Foreword	4	5 Implementation of ZCF	31
Executive summary	5	6 Programmes and ZCF	34
Tiivistelmä	7	6.1 Overview of programmes and campaigns as tools for ZCF	34
Abbreviations	9	6.2 Flexible Energy Systems (FES)	37
1 Background and objectives of interim evaluation	10	6.3 Decarbonized Cities	37
2 Zero Carbon Future (ZCF) Mission	13	6.4 Hydrogen and Batteries	39
2.1 Objectives of ZCF	13	7 Additionality of ZCF	40
2.2 Overview of ZCF RDI funding volumes	16	7.1 Progress towards goals	41
2.3 Overview of three programmes and other ZCF activities	18	7.2 Changing attitudes and practices	45
3 Strategic use of ZCF	24	7.3 Driving developments in innovations, investments and business	46
4 Stakeholder collaboration	27	7.4 Changing the operational environment and society	49
4.1 BF Customers	28	8 How to continue?	54
4.2 Stakeholders and policy makers in Finland	29	Bibliography	56
4.3 Stakeholders and policy makers globally	30		

Foreword

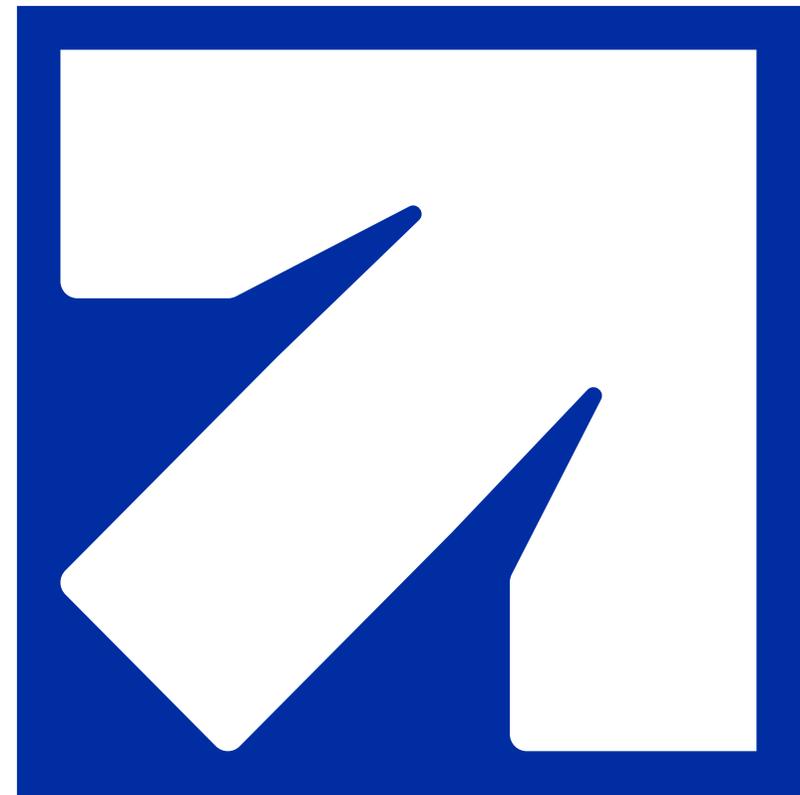
Mission approach was introduced as part of Business Finland's strategy for years 2020–2025. The aims of the mission approach were to scale and identify significant future market opportunities for Finnish companies, to accelerate systemic change, and to help solve major global challenges.

The Zero Carbon Future Mission, launched as one of the initial two missions in 2021, was driven by the urgent need to dramatically reduce greenhouse gas emissions in to curb global warming and achieve Finland's target of carbon neutrality by 2035. Its primary objective was to significantly expand Finland's positive climate impact – the carbon handprint – both globally and nationally, aiming for the widespread adoption of Finnish emission-reducing solutions around the world.

The aim of this interim evaluation was to assess how well the mission is progressing toward its objectives, identifying what is working effectively and where improvements are needed, focusing on the mission's role in implementing Business Finland's strategy, stakeholder collaboration, efficiency and effectiveness of implementation, programmatic work for implementing missions, and the additionality of the missions.

The evaluation team of Sweco carried out the evaluation. Business Finland wishes to thank the evaluators for their meticulous and professional work. Business Finland expresses its gratitude to the steering group and all others who have contributed to the study.

Helsinki, February 2026
Business Finland



Executive summary

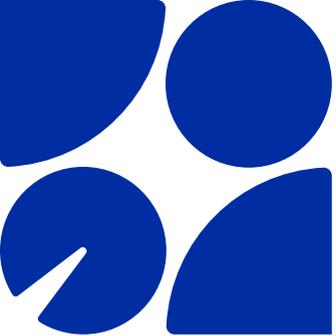
Background

Business Finland's 2020–2025 strategy introduced a mission-based approach to accelerate systemic change, address global challenges, and create broad societal value while opening future market opportunities for Finnish companies.

Zero Carbon Future (ZCF) Mission

Launched in December 2021, ZCF aims to boost Finland's global carbon handprint by promoting low-carbon solutions internationally and supporting Finland's carbon neutrality target for 2035. This interim evaluation (June–December 2025) reviews ZCF's progress, strategic role, stakeholder collaboration, implementation, and impact, focusing on three programmes:

- Decarbonized Cities (2023–2028)
- Hydrogen & Batteries (2023–2028)
- Flexible Energy Systems (FES) (2024–2029)



Strategic Role

ZCF aligns well with Business Finland's strategy 2020–2025, and stakeholders value the long-term thematic focus. However, its scope is broad, and the mission concept remains unclear to many customers and stakeholders. Most activities have targeted global outreach and influencing the operating environment—an approach consistent with BF's strategy but still in early stages.

Stakeholder Collaboration

Companies' climate actions and green transition investments have advanced significantly since 2020. ZCF's theme is relevant, and progress is visible toward increasing Finland's global handprint. Subgoals—EU legislation sense-making, Nordic collaboration, and global visibility—show early success, though future work needs clearer prioritization and systematic planning.

Implementation

ZCF has improved internal collaboration, reduced programme silos, and strengthened global outreach attitudes. It has sharpened external

communication and enhanced networks. However, strategic execution lacks strong management support, sufficient resources, and practical tools for everyday work remain insufficient.

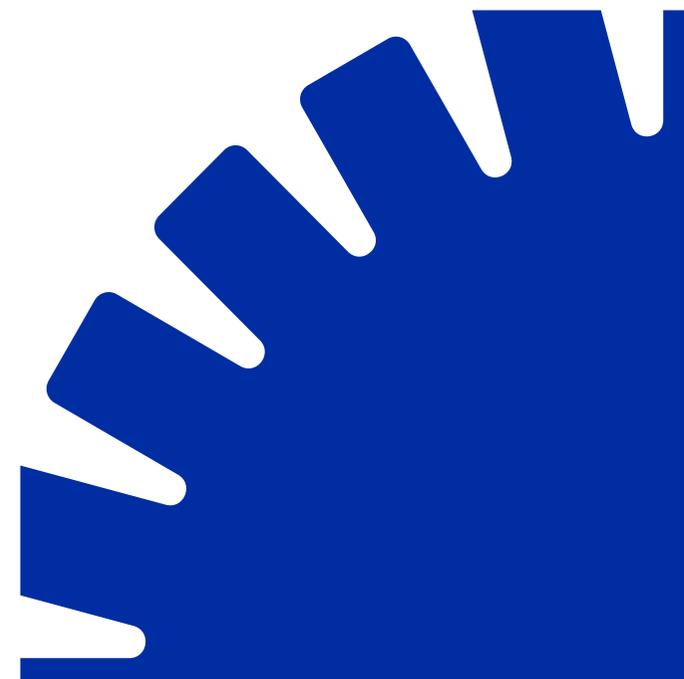
Impact and Additionality

Progress varies across focus areas—industry, transport, and built environment—but positive steps are evident, especially in innovation activities and global visibility. Under ZCF, BF's RDI funding and green transition investments have been significant (approx. €500M, 2022–2025). Behavioral change and systemic shifts are emerging but require sustained effort. Resource constraints will demand sharper prioritization.

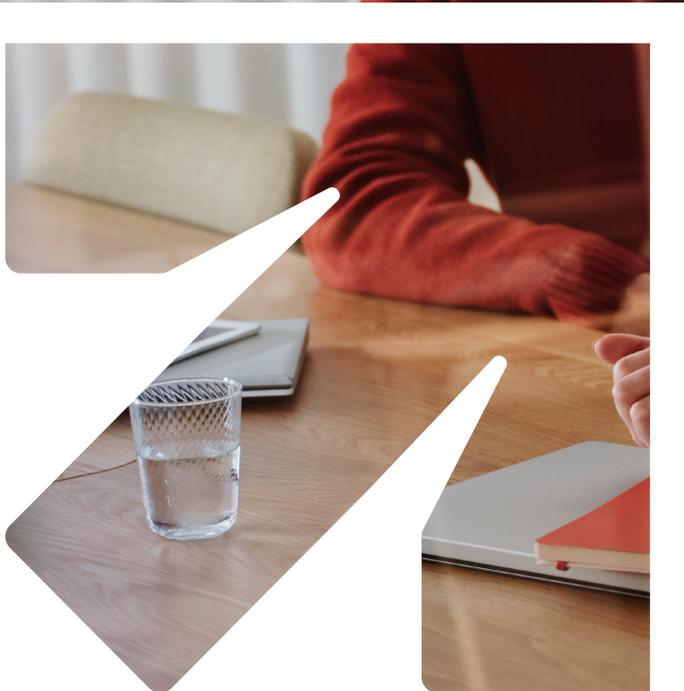
Key Recommendations

1. **Sharpen focus and priorities** to match limited resources and improve communication.
2. **Continue global outreach** to enhance Finland's carbon handprint and competitiveness.

3. **Strengthen policy engagement** and allocate resources for long-term systemic impact.
4. **Integrate Leading Company ecosystems** to mission activities and increase SME/start-up involvement.
5. **Improve internal rollout** and embed mission work into everyday operations.
6. **Ensure in-house expertise** in energy transition and global market knowledge.



Tiivistelmä



Tausta

Business Finlandin strategia 2020–2025 toi käyttöön missio-pohjaisen lähestymistavan, jonka tavoitteena on vauhdittaa systeemistä muutosta, ratkaista globaaleja haasteita ja luoda laajaa yhteiskunnallista arvoa sekä avata tulevia markkinamahdollisuuksia suomalaisille yrityksille.

Zero Carbon Future (ZCF) -missio

Joulukuussa 2021 käynnistetyn ZCF-mission tavoitteena on kasvattaa Suomen globaalia hiilikädenjälkeä edistämällä vähähiilisiä ratkaisuja kansainvälisesti ja tukemalla Suomen hiili-neutraaliustavoitetta vuoteen 2035 mennessä. Nyt tehty väliarviointi (toteutus kesä–joulukuu 2025) tarkasteli ZCF:n edistymistä, strategista roolia, sidosryhmäyhteistyötä, toteutusta ja vaikutuksia kattaen kolmen ZCF-mission ohjelman väliarvioinnin:

- Decarbonized Cities (2023–2028)
- Hydrogen & Batteries (2023–2028)
- Flexible Energy Systems (FES) (2024–2029)

Strateginen rooli

ZCF on hyvin linjassa Business Finlandin strategian 2020–2025 kanssa, ja sidosryhmät arvostavat pitkän aikavälin temaattista fokusointia. ZCF on kuitenkin sisällöltään edelleen erittäin laaja, ja mission käytännön merkitys on monille asiakkaille ja sidosryhmille epäselvä. Suurin osa toimista on kohdistunut globaaliin vaikuttamiseen ja toimintaympäristön muokkaamiseen – lähestymistapa, joka sopii Business Finlandin strategiaan, mutta on ollut organisaatiolle uutta ja toiminta on vielä ollut alkuvaiheessa.

Sidosryhmäyhteistyö

Yritysten ilmastotoimet ja vihreän siirtymän investoinnit ovat edenneet merkittävästi vuodesta 2020 lähtien. ZCF:n tema on asiakkaille olennainen. Mission alatavoitteet – EU-lainsäädännön hahmottaminen, pohjoismainen yhteistyö ja suomalaisratkaisujen globaali näkyvyys – ja näihin liittyvät strategiset kumppanuudet ja yhteistyö ovat edenneet lupaavasti, mutta jatkossa tarvitaan selkeämpää priorisointia ja systemaattista yhteistyön suunnittelua.

Toteutus

ZCF on parantanut sisäistä yhteistyötä, vähentänyt ohjelmasiiloja ja vahvistanut ymmärrystä globaalin vaikuttamistyön olennaisuudesta. Mission teemat ovat olleet hyödyllisiä ja terävöittäneet ulkoista viestintää ja vahvistaneet yhteistyöverkostoja. Strateginen toimeenpano kärsii kuitenkin johdon tuen puutteesta, riittämättömistä resursseista ja käytännön työkalut arjen työhön ovat olleet riittämättömiä. Missiotyö ei ole jalkautunut läpi koko organisaation.

Vaikutus ja lisäarvo

Tavoitteiden edistyminen vaihtelee painopisteelementteittäin – energiasiirtymä teollisuudessa, liikenteessä ja rakennetussa ympäristössä – ja eri osa-tavoitteissa, mutta positiivisia askeleita on nähtävissä erityisesti innovaatiotoiminnassa ja globaalissa näkyvyydessä. ZCF:n alla oleva TKI-rahoitus ja vihreän siirtymän investoinnit ovat olleet merkittäviä (vähintään noin 500 M€, 2022–2025). Käyttäytymisen muutos ja systeemiset siirtymät ovat käynnissä, mutta vaativat pitkäjänteistä työtä. Resurssien rajallisuus edellyttää jatkossa tarkempaa priorisointia.

Keskeiset suositukset

1. Terävöitä fokusta ja prioriteetteja resurssien mukaisesti ja paranna viestintää.
2. Jatka globaalia vaikuttamista Suomen hiilikädenjäljen ja kilpailukyvyyn vahvistamiseksi.
3. Vahvista politiikkavaikuttamista ja kohdenna resursseja pitkäaikaisiin systeemiin vaikutuksiin.
4. Integroi Leading Company -ekosysteemit mission toimintaan ja lisää pk-yritysten/startupien osallistumista.
5. Paranna sisäistä jalkautusta ja juurruta mission työ arjen toimintaan.
6. Varmista sisäinen asiantuntemus energia-siirtymästä ja globaaleista markkinoista.

Abbreviations



AI	Artificial intelligence	RRF	Recovery and Resilience Facility
BF	Business Finland	RRP	Recovery and Resilience Plan
CEM	Clean Energy Ministerial	SGP	Sustainable Growth Programme
DNF	Digital Native Finland	SME's	Small and Medium Enterprises
DNSH	Do No Significant Harm	VC	Venture capital
EK	Confederation of Finnish Industries	VTT	VTT Technical Research Centre of Finland
EU	European Union	ZCF	Zero Carbon Future
GHG	Greenhouse Gas		
IPCEI	Important Projects of Common European Interest		
IT	Information technology		
LUT	LUT University		
MEAE	Ministry of Economic Affairs and Employment		
MI	Mission Innovation		
R&D	Research and development		
RDI	Research, development and innovation		



1 Background and objectives of interim evaluation



Following its strategy 2020–2025, Business Finland (BF) introduced its mission approach which aims to accelerate systemic change and help solve major global challenges while creating value for society on a broad scale and identifying significant future market opportunities for Finnish companies. Missions aim to have long time horizon over the programmes' periods. The first two missions were introduced in 2021, and in 2022 both the concept and its related practices were further clarified and developed. In 2023, three more missions started.

The Zero Carbon Future (ZCF) Mission was one of the two first missions. It started in December 2021 after a preparation period over 2021. The Digital Native Finland (DNF) Mission was the other one that started at the same time. The interim evaluations of these two first missions assess how well the missions are progressing towards their objectives, identifying what is working effectively, and where improvements are needed. This includes evaluating the mission as a strategic tool for BF and examining the added value they bring.

This report focuses on the results of the interim evaluation of ZCF. The results of the DNF Mission



interim evaluation are in a separate report. A separate report presents also a synthesis of these two evaluations as well as a background of BF's mission approach.

BF's programmes and campaigns are the primary thematic instruments within missions. The ZCF's interim evaluation contains mid-term evaluations of three on-going programmes:

Decarbonized Cities Programme (2023–2028),

Flexible Energy Systems (FES) programme (2024–2029)

Hydrogen and Batteries programme (2023–2028)

The interim evaluation of ZCF focuses on 1) ZCF's role in implementing BF's strategy, 2) stakeholder collaboration, 3) efficiency and effectiveness of implementation, 4) programmatic work for implementing missions, 5) additionality of the missions. Table 1 lists detailed evaluation questions.

The interim evaluation also produces suggestions for future, and this report contains the main ZCF-specific suggestions. The overall conclusions and recommendations for BF for developing its

approach for implementing thematic priorities are in the synthesis report.

The interim evaluation of ZCF was conducted between June – December 2025 by a five person Sweco team. The evaluation was based on an extensive round of interviews, data and written material provided by BF, a survey to programme participants and on 10 case studies. BF appointed a steering group for the evaluation which met three times. A joint workshop for BF people was organised by the two evaluation teams together covering both ZCF and DNF evaluation results in November 2025. Details of the evaluation methodology and execution can be provided upon request.

Table 1. Evaluation questions

STRATEGIC USE OF MISSIONS
<ul style="list-style-type: none"> • How well do missions function as a tool for strategic steering in Business Finland, i.e. has the mission-driven approach influenced in and aligned strategic choices, decision-making, and milestone setting within Business Finland and across its various activities? • Has the mission been able to respond to changes in the operational environment, such as geopolitical shifts? • Has the mission approach been effective in driving the desired systemic change / transformation, especially in collaboration with stakeholders, and if so, how? What could be improved? • Have different actors' plans and activities been coordinated? What has been the consensus among a broad group of stakeholders about the need and relevance?
MISSION'S INPUT ADDITIONALITY
<ul style="list-style-type: none"> • What added value has stakeholder collaboration produced? What would be the best practices for stakeholder engagement and commitment? Have decisions regarding the intervention (goals, means, resources) been created collectively by the involved actors? • Have allocation and mobilisation of resources been sufficient vs targets? • How well are mission's inputs, activities, and outcomes generally aligned and contributing effectively to the intended impact? • To what degree have other instruments of Business Finland – such as e.g. funding for leading companies, ecosystems, and innovation clusters – been aligned with and support the mission roadmap.
PROGRAMMES AND MISSION
<ul style="list-style-type: none"> • What has been the added value of the mission to programmatic work? Are programmes of today sufficiently different from programmes before missions? • For the three programmes evaluated: 1) Whether their services, direction and goals are still relevant for the remaining programme period? 2) How well are the programmes supporting the transformation the mission is aiming at? What could be improved?
MISSION'S ADDITIONALITY
<ul style="list-style-type: none"> • Additionality in changing attitudes and practices: To what extent has the mission been driving behavioural change among customers and other stakeholders? • Additionality in driving developments in innovations, investments and business: To what extent has the mission been driving directionality? What other added value has the mission produced in this impact path? • Additionality in changing the operational environment and society: Are there signs that the mission is influencing policies and the operational environment, and if so, how?
SUGGESTIONS FOR FUTURE
<ul style="list-style-type: none"> • What could be improved in order to reach intended impacts in all three impact categories? • In the light of the lessons learned from Zero Carbon Future Mission, how to develop thematic work within Business Finland, considering that programmes and campaigns that are currently residing under missions, are important tools of it?

2 Zero Carbon Future (ZCF) Mission

2.1 Objectives of ZCF

The preparation of the Zero Carbon Future (ZCF) Mission took place during 2021 and the decision to launch the mission was made in December 2021. Throughout the preparation and execution of the ZCF Mission the main goal has been to significantly increase Finland's carbon handprint in the world. The rationale for the mission is the urgency to limit global warming which requires drastic cuts on greenhouse gas (GHG) emissions. An increased global handprint means that Finnish solutions to reduce emissions are used globally and that Finnish companies also use the best solutions in Finland. One driver for the missions is Finland's goal to be carbon neutral by 2035. Through the ZCF Mission, BF also wants to accelerate the international growth of Finnish companies and connect Finnish companies to new value chains emerging in the world.

The energy sector is responsible for 75 per cent of global GHG emissions, consumed mainly in industry, built environment, and transportation. This fact provided the basis for the mission to focus on these areas. The role of cities is big in all

these aspects, and this is taken into account within the Mission's focus areas.

In May 2023, the ZCF Mission goals and sub-goals were further defined as follows (see also Figure 1 with more specific sub-goals by focus areas):

- **Mission Main Goal:** Our future wellbeing is made with global carbon handprint. We speed & scale up innovations and create long-term business opportunities globally. We enhance and lead global networks and partnerships. The focus is on energy transition in industries, transportation & mobility and built environment with maximal utilization of circularity and digitalization.
- **What must change:** We must start measuring our impact through global carbon handprint and targets must be set in international platform co-operation. Companies need to be driven by global disruptions and future needs of end-clients/partners. Cross-sectorality, digitalization and circularity should be used to their full potential with high involvement of start-ups. Focus

must be put on systemic challenges in international markets and a “born global” attitude “From innovation to Green Investment” path.

Subgoals of the mission:

- **Driving Innovations.** The developed carbon-handprint innovations boost Finnish competitiveness & business potential and serve as global benchmarks.
- **Policy Play.** As a wanted partner, BF, together with stakeholders, has significantly contributed to low-carbon policy formulation & implementation in Finland, Europe and worldwide.
- **Investments.** An attractive service path “From Innovation to Green Investment” has been created, by which Finnish innovations scale-up efficiently globally, and significant foreign investments have been attracted to Finland.
- **Behavioral Change.** Finnish end-users and companies are transformed into early adapters to gain competitive edge by strong linkages with global and Finnish

hotspots for agile mission-based business creation to link public, private, people.

- **Cross-cutting enablers.** These actions combine the four levers above to create impact by long-term commitment, out-of-the-box thinking, clear target setting and thrive.

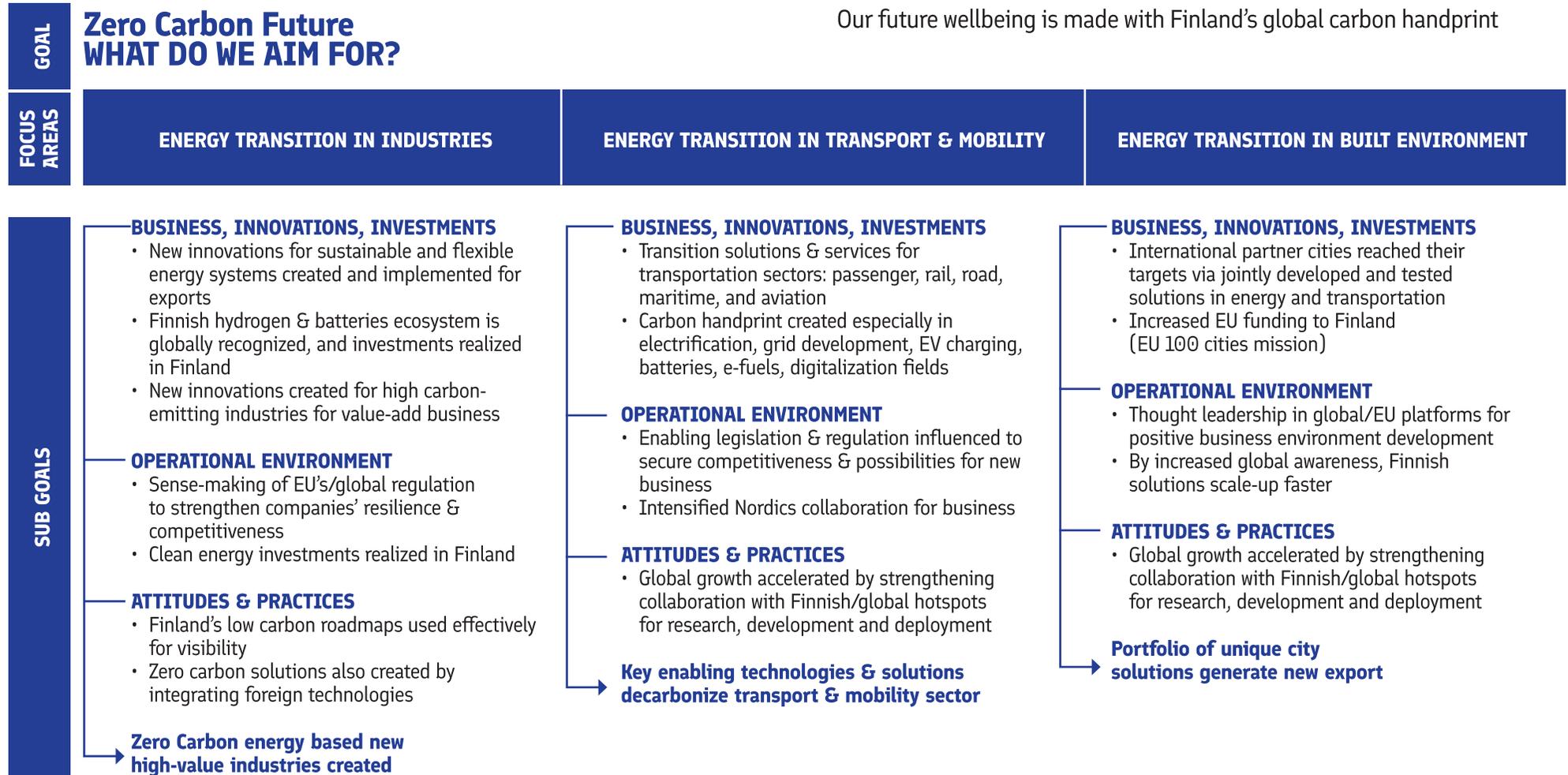


Figure 1. Zero Carbon Future Mission Goals, Focus Areas and Sub-goals

2.2 Overview of ZCF RDI funding volumes

BF is an innovation funding organization, and the majority of its RDI funding has been targeted to thematic areas. Already before the ZCF Mission energy transition has been a major focus of BF's funding. In 2020 it was estimated that about one third (about 2 Mrd€) of the whole Business Finland and preceding Tekes RDI funding has been targeted to the energy sector advancing low-carbon solutions over the years 2006–2019¹. One should note, however, that actual funding decisions are not based on any mission specific criteria (with the exception of the RRF funding). Thematic monitoring of the use of funding is done after funding decisions.

In 2023, BF started to tag funded projects by strategic themes. This tagging was not updated to previous years 2021–2022. ZCF related projects have been connected to “Hiilineutraali ja krii-sinkestävä energijärjestelmä” (carbon neutral and crisis resilient energy system) tag. Thematic

tagging is used in the regular reporting of RDI funding related to missions. One should note that one project may be tagged to more than one mission, which means that the overall volumes related to missions cannot be summed up. Two first missions' taggings do not overlap, but ZCF has joint tagging with the later missions. The thematic connection between ZCF and Circular Transition to Zero Waste Mission is especially strong.

In total, based on thematic tagging 344 M€ of BF funding² has been linked to the ZCF Mission covering the years 2023–06/2025. The total RDI volume related to ZCF, however, is much larger. A modest estimate is that at least 500 M€ of BF funding over 2022–2025 has been closely linked to ZCF. Figure 2 presents an overview of the ZCF Mission's RDI funding. The different funding sources and challenges of estimating the total volume are elaborated in the following.

The total volume of the granted funding of the three programmes was 305 M€ (status in August 2025). 24 per cent (73 M€) of this funding does not have

ZCF theme tagging and is thus not included in the overall figures. The three programmes also do not represent all ZCF project activities, 31 per cent of the funding that has a ZCF tag are outside these three programmes.

Leading company funding is another stream of BF funding that needs to be taken into account. The role and connection of them to the ZCF Mission is further explained in Chapter 2.3, but together the ones closest to ZCF goals are estimated to have a total funding volume of 240 M€. The leading companies which have started 2023 or after are included in the reporting of the three programmes. One should also note that some of the on-going leading company projects have started before 2023 and do not have theme tagging nor are they reported as a part of the monitoring of the programmes.

EU:s Recovery and Resilience Facility (RRF) funding was an important additional resource 2021–2023 (the projects continue until the end of 2025)³ and the objectives of this funding are directly

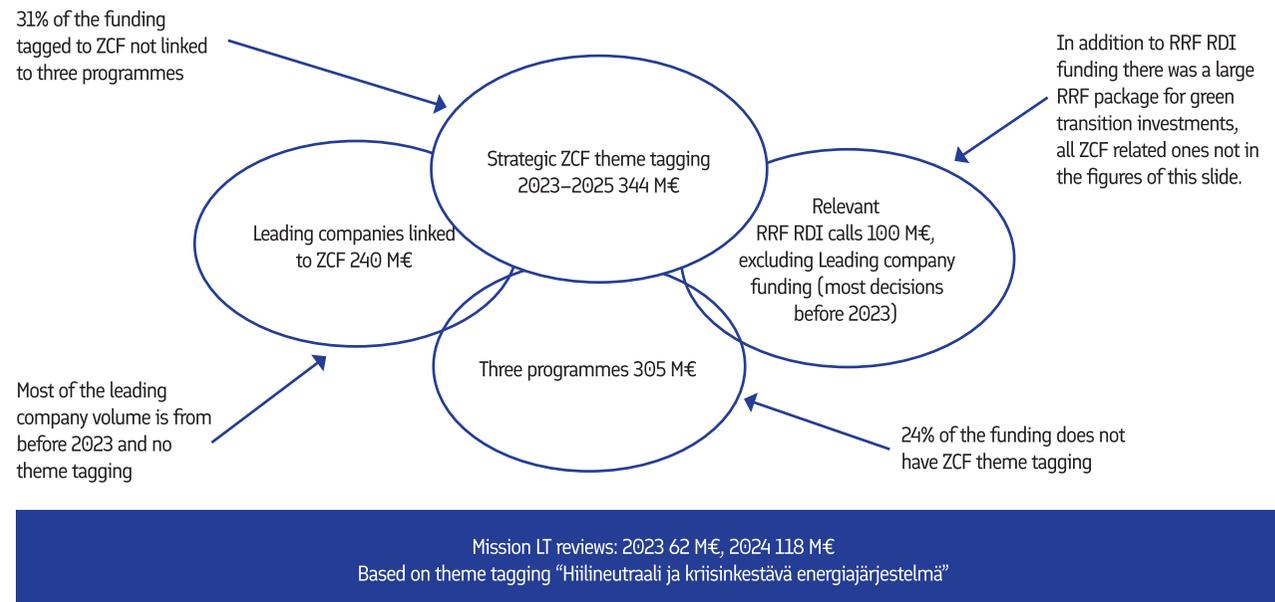
1 Business Finland (2020)

2 Throughout the report, the euros are based on the granted funding figures and represent the status 1.7.2025 when the data was provided to evaluation team.

3 Projects need to be finalized by 2025.

linked to ZCF goals. RRF funding is the main EU instrument for Member States to implement their Recovery and Resilience Plans (RRP)⁴. Business Finland has been allocated around 500 M€ to use RRF funding for RDI and for green transition investments. The relevance of this funding for ZCF stems from the fact that one of the criteria for this funding is that the eligible investment projects had to have positive climate impacts, and all projects had to provide their climate impact assessment (fulfill Do Not Significant Harm (DNSH) criteria). BF organized RRF funding by calls of which Low-carbon built environment and Decarbonized industries RDI calls are directly following ZCF goals and are reported in ZCF's programmes from 2023 onwards. One should also note that the majority of RRF's investment support is targeted to energy transition and to, e.g., hydrogen investments. Finland received Important Projects of Common European Interest (IPCEI) status for some investment ecosystems, and this funding opportunity is also linked to RRF funding. 100 M€ of RRF funding has also been used for leading companies. The precise numbers of the share of RRF funding

package targeted to ZCF are hard to estimate since the programme reporting, different funding instruments (like investment support), and leading company funding overlap.



All numbers are based on the granted funding ("myönnetty rahoitus") and status 06/2025.

Figure 2. Overview of the BF's RDI funding volumes linked to Zero Carbon Future

⁴ Details of Business Finland's role and work in implementing RRP can be found from e.g. Hjelt et al (2025)

2.3 Overview of three programmes and other ZCF activities

The BF's missions' implementation processes were created and defined in detail in a separate development project which also renewed the programme concept and processes. Each mission has a dedicated Mission Lead for coordinating the activities. The missions' road maps provide the strategic guidelines for long term implementation. Practical coordination of mission activities takes place in the mission's core group meetings led by Mission Lead. The missions are also guided by an annual cycle defining activities to, e.g., inform the BF's leadership team of the progress. The Mission Lead has a lot of freedom to design mission specific activities. During the last years, BF's missions has not had a separate operating budget. Missions use the resources of programmes and other BF's functions and services.

Programmes are main tools for implementing missions. In addition to programmatic activities, there are also activities that the Mission Lead designs and executes together with BF's other func-

tions. These activities are, e.g., different marketing and communication activities as well as Invest In operations. Coordination of these takes place in collaboration with the programmes and often it is not clear – or not even needed – to distinguish activities within programmes and beyond programmes from each other. One should also note that quite large share (31%) of RDI funding that has been tagged to ZCF Mission has not been linked to any of the programmes (see Figure 3).

At the starting phase of the ZCF Mission, the Smart Mobility and Batteries programme, Sustainable Manufacturing programme, and Bio and Circular Finland programme were on-going (see Figure 4). These programmes had started already in 2019 and ended in 2022–2023⁵. Especially the Smart Mobility and Batteries programme and Sustainable Manufacturing programme had direct connections to the ZCF Mission focus areas in industry, transport and mobility. The RRF-funded Low-carbon built environment programme was later integrated with Decarbonized Cities programme. The ZCF Mission's scope was narrowed in the planning phase to focus on energy transition, and the circularity

Volume of granted funding linked to ZCF strategic theme 2023–2025

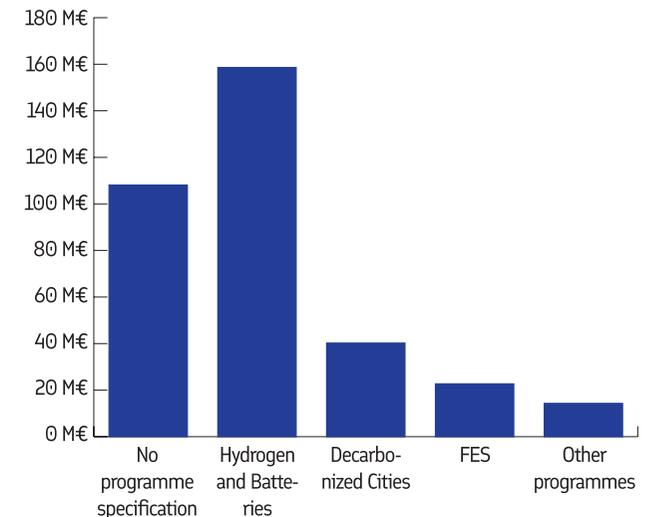


Figure 3. Distribution of ZCF Mission's granted funding by different programmes. Figures represent status by the end of June 2025.

theme was not prominent but in a supporting role next to digitalization. The very large Bio and Circular Finland programme had less direct connections to following ZCF programmes but more to the Circular Transition for Zero Waste Mission which

⁵ Final evaluations of these programmes can be found from Sepponen et al (2025) and Jacobsen et al (2025)

started in 2023. The ZCF Mission and Circular Transition for Zero Waste Mission are, however, close to each other and often share the theme tagging (i.e., one project is tagged to have both of these mission themes).

The Decarbonized cities and Hydrogen and Batteries programmes were designed over 2022, and the Flexible Energy Systems (FES) programme in 2023. Table 2 presents an overview of the main statistics of these three on-going ZCF programmes and short descriptions are provided in the following. Further details of these three programmes are presented in Chapter 6.

Decarbonized Cities programme (2023–2028) aims to improve Finland’s long-term competitiveness and increase exports by encouraging companies to develop internationally successful solutions for the carbon-neutrality challenges of selected partner cities. The programme aims to establish long-term partnerships with selected cities across the world and enable solution development for their challenges.

Hydrogen and Batteries programme (2023–2028) promotes the development and interna-

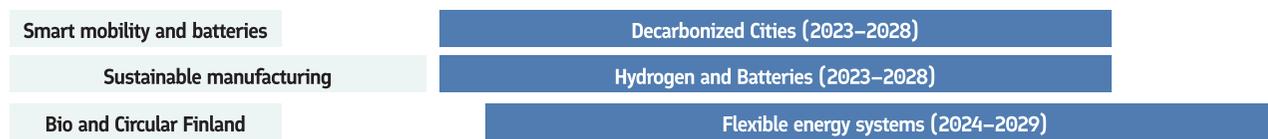
tional growth of the Finnish hydrogen and battery industry value chains, technologies, solutions and services. The programme aims to achieve significant commercial results for both the hydrogen and battery industries, benefiting from strong synergies. Investment projects in Finland will result in significant business, creating wealth, new jobs and tax revenues.

Flexible Energy System (FES) programme (2024–2029) aims to develop flexible and sustainable energy systems that can adapt to various demands and conditions as well as enhance energy security through innovative solutions. These are achieved by promoting collaboration among companies, research organizations, and standardization bodies to maximize EU influence and foster new business opportunities.

The programmes and more broadly the ZCF Mission are also connected to Leading Companies. There are in total 12 Leading Companies which have long term carbon neutrality goals and support directly the goals of ZCF Mission. Figure 4 presents the ones identified by BF to be close to ZCF. Leading companies are also mostly reported under the programme statistics, i.e., the funding deci-

sions are counted to programme funding, and since 2023 they have been tagged under the ZCF Mission when appropriate. Mission oriented innovation policy thinking was a driver for both Leading Company Initiative (LCI) challenge competition concept and BF’s missions, but were, however, designed separately. LCI design took place a little earlier, and the first call was launched in 2020. Although the goals coincide, at the operational level the connections of Leading companies to ZCF Mission and also to programmes are weak.

Zero Carbon Future programmes



Also RRF funded Decarbonized industries and Low-Carbon Built Environment programmes which are included in three programme reporting

Leading Companies connected to Zero Carbon Future (Source: H1 /2025 portfolio report)

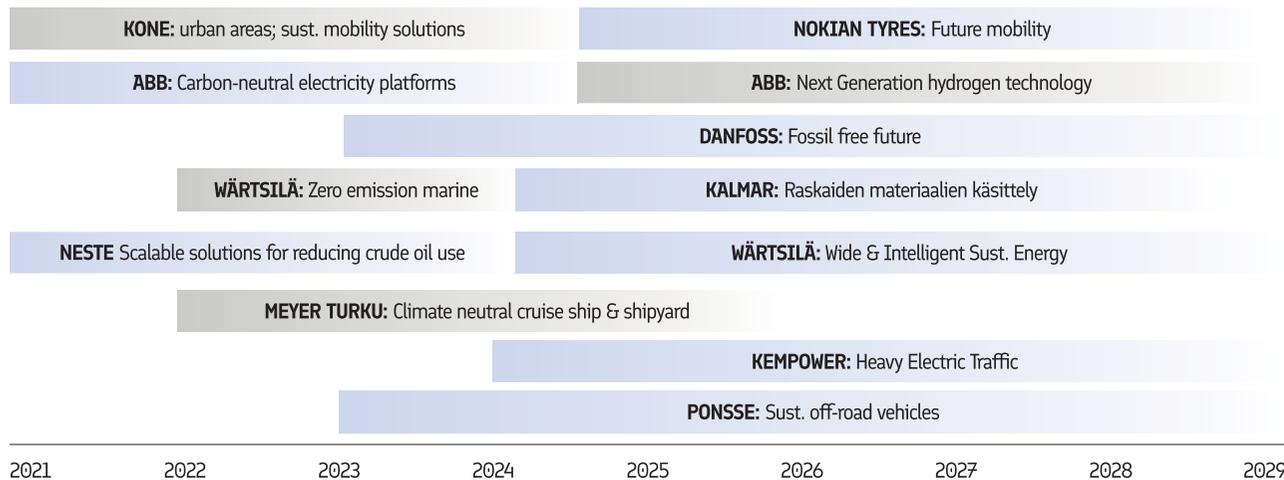


Figure 4. Zero Carbon Future Mission programmes and Leading Companies close to ZCF

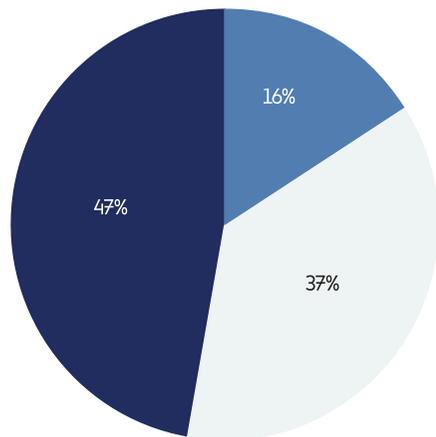
Table 2. Statistics of three ZCF Mission's programmes.
All figures represent the status of the programmes by the end of June 2025.

	DECARBONIZED CITIES – FINNISH SOLUTIONS HELP CITIES WITH LOW- CARBON CHALLENGES	HYDROGEN AND BATTERIES – DUAL HELIX OF DECARBONISATION	FLEXIBLE ENERGY SYSTEMS – NEW ENERGY SECTOR PROGRAM CONCENTRATING ON FLEXIBILITY
Duration	2023–2028	2023–2028	2024–2029
Total volume of granted funding (M€)	79,6	188,4	40,3
# of projects	84	97	21
# of companies	30	50	10
# of research organisations	15	10	8
Granted funding to companies / research organizations	75%/25%	77%/23%	88%/12%
Share of large companies of granted Y funding	84%	94%	86%
# of micro & small companies <10 year old	7	9	3

Programmes coordinate export promotion activities, activation of customers, and RDI funding related activities. Concrete activities of programmes consist of different seminars, webinars and networking events as well as organizing different outbound business visits, invest in events and participating in various co-operation processes. ZCF's Mission Lead work has focused mainly on mission goals that aim to affect the operational environment and general promotion of the mission work and Finland. A major part of this has been general communication, presentations, and information sharing together with BF communications. Over the last years the BF's general international PR and media relationship work has focused on the ZCF Mission's key messages in selected target market areas (US, Germany, France).

The Mission Lead has been active in general mission awareness raising and in marketing communications related activities. The activities paint a picture of a variety of activities, from panel discussions, keynote presentations and podcast appearances to internal planning support and company meetings. In total, there have been over 300 Mission Lead personal mission related

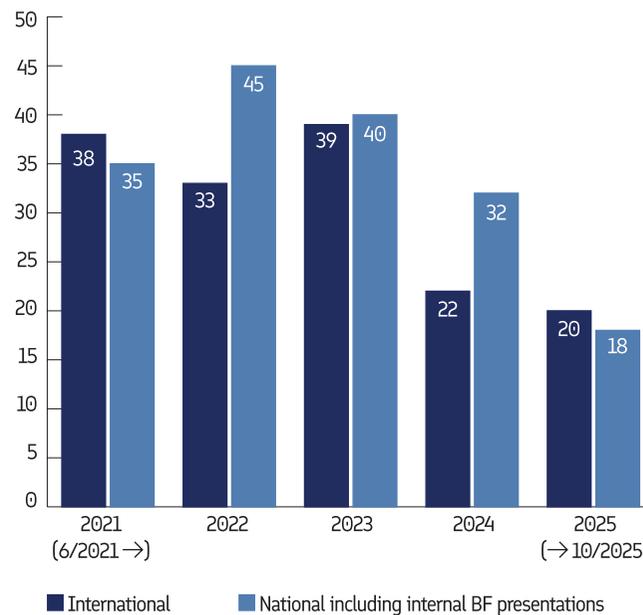
presentations (Figure 5) including also BF internal information sharing and presentations to e.g. BF Board. Figure 6 shows the yearly distribution of the activities. The total number of presentations has declined over the last years. According to the Mission Lead, the work has started to focus



■ BF internal ■ National ■ International

Figure 5. Shares of the presentations given by the Mission Lead 2021–2025. Total = 321.

more on structured projects compared to the first years’ general awareness raising activities. Some of these types of processes are listed on Information Box 1. The Mission Lead has, e.g., been a member in different working groups.



■ International ■ National including internal BF presentations

Figure 6. Presentations given by the Mission Lead, divided by whether the audience was outside or inside Finland. Mission Lead provided the numbers presenting the status by 10/2025. Note: National presentations here include internal BF presentations.

BF responds to and participates in different policy processes and in public consultations close to BF’s operations. BF has done these activities already before missions, but missions have their special role by being involved in the policy processes that directly are connected to mission goals to affect the operating environment. In addition to general presentations and information sharing, the activities include participation in different working groups, reactions to public consultations of forthcoming legislation and national programmes, coordination of targeted research and studies, and work with specific projects to prepare e.g. international high level meetings. Information Box 1 lists examples of the specific Finnish national level programmes and legislation initiatives that ZCF Mission has been involved with.

INFORMATION BOX 1. POLICY PROGRAMMES AND LEGISLATIONS ZCF MISSION HAS PARTICIPATED IN AND/OR PREPARED RESPONSES TO PUBLIC CONSULTATIONS (LAUSUNNOT)	
In English	Suomeksi
Sustainable Growth Programme for Finland (Finland's RRP). Calls for funding applications related to the transformation of the energy system and to the energy solutions in industry (BF responsibility to implement RRP with RRF funding)	Suomen kestävän kasvun ohjelma; Energiajärjestelmän murrokseen ja teollisuuden energiaratkaisuihin liittyvät haut ja RRF rahoitus ovat olleet BF vastuulla
Investment credit for large investments aiming at a climate neutral economy	Verohyvitys suurille puhtaan siirtymän hankkeille
Industrial Policy Strategy (MAEA)	Teollisuuspoliittinen strategia (TEM)
(National) Energy and Climate Strategy (MAEA)	Energia- ja ilmastostrategia (TEM)
Long-term Climate Policy Plan (MAEA)	Pitkän aikavälin ilmastosuunnitelma (TEM)
National strategic choices for RDI policy and activities	TKI-politiikan ja toiminnan strategiset valinnat
Sustainable Public Procurement (Ministry of Environment responsibility)	Kestävät julkiset hankinnat (YM-vetoinen)
Finland's Integrated National Energy and Climate Plan Update	Suomen yhdenmetyt energia- ja ilmastosuunnitelman (NCEP) päivitys
Subcommittee for Employment and the Economy (Finance Committee of the Parliament of Finland) hearing	Uudistaminen ja vähähiilisyys, Työ- ja elinkeinojaoston kuuleminen
National Mineral Strategy	Kansallinen mineraalistrategia
Proposal for regulation on establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem	Komission ehdotus asetukseksi Euroopan nettonollateknologiatuotteiden valmistusekosysteemiä vahvistavasta toimenpidekehyksestä

Missions aim to have long-term strategic focus to advance systemic change to solve societal challenges and create future markets. To support this long-term strategic focus, foresight activities are embedded in mission work. One concrete activity in this has been the Advisory Group that consists of external advisors representing industry, research, and the public sector. Members of the Advisory Group work with two years' rotation. The Advisory Group has used foresight results in their work, and their role is also to comment and provide suggestions to different ZCF's strategic plans. ZCF has also organized internal thematic future workshops on ZCF's strategic themes. Foresight results are also used in external communication.

3 Strategic use of ZCF



Questions addressed in this Chapter:

- How well do missions function as a tool for strategic steering in Business Finland, i.e. has the mission-driven approach influenced in and aligned strategic choices, decision-making, and milestone setting within Business Finland and across its various activities?
- Has the mission been able to respond to changes in the operational environment, such as geopolitical shifts?

BF's missions have been tools for implementing BF's strategy 2020–2025 and they have provided strategic direction on how BF can help businesses accelerate systemic change related to mission themes.

Based on the interviews both within BF and with external stakeholders and customers, there is

strong support for BF to make thematic priorities for its operations. The main arguments from the ZCF interviews supporting BF's decision to make thematic selections are that 1) themes-based targeted actions increase effectiveness and 2) BF needs to demonstrate and verify its societal impact in the future even more and clear themes and key messages help in this. There were also some critical remarks. A worry is that if the thematic priorities are too vague or too many so that they cover all the operations and BF funding, their effectiveness is diminished. There were also some arguments that BF does not have necessary mandate, resources, or expertise to reach the ambitious goals of systemic changes. Generally, the long time span of the missions is greatly appreciated. However, there is concern that results are expected too soon and the mission work will be discontinued before the benefits are visible.

The preparation of the ZCF Mission in 2021 was carried out mainly as internal work at BF and was not based on clear (market) demand or close collaboration with customers and other stakeholders. BF's work in 2022 to define strategic thematic priorities was, however, based on more

extensive stakeholder consultations and validated ZCF's theme to be one of the strategic priorities. The low-carbon focus is generally seen to be appropriate and well justified. It was also a good decision to keep ZCF focused on low-carbon, and not to mix the mission with a circularity theme. Despite this, ZCF still has a very broad scope, and even more focus might be needed in the future to ensure effective implementation when BF's operational resources are diminishing. Interviews also highlighted that the ZCF's thematic content is not very new or renewing. Thematic content of the mission does not manifest BF's role in risk taking or in playing the role of a change agent. The role is more supportive and enhancing the existing developments.

A lot of the ZCF Mission's activities in programmes and beyond programmes were targeted to global outreach focusing on the impact goals to affect operating environment. This choice for the focus was very well in line with BF's strategy, and the global growth work has been appreciated. There is a need to increase awareness of Finland's brand abroad in the thematic areas (like the hydrogen economy) as well as of the mission itself. It

was mentioned that the existence of long-term missions is an important message for global target markets concerning Finland's commitment to climate targets. The brand work and awareness raising calls for continuous, long-term commitment, and clear goal-oriented work.

Directions and decisions of global activities are very much dependent on the Mission Lead. The ZCF Mission's roadmap is reviewed and accepted by BF management, but the strategic guidance for directing the global outreach activities is generally weak. Some activities have been ad-hoc and taking up emerging opportunities. This is a good sign of flexibility to react to changes in the operating environment, but it is a challenge from resource-use and proactiveness points of view, especially regarding the need to clear space for the missions new services targeted to affect the operating environment. Concerns were expressed whether the ZCF Mission can effectively reach the expected impacts when a) the global network is moved to the Ministry of Foreign Affairs and b) BF funding focuses more on R&D and less on innovation.

Generally, the ZCF Mission has reacted to a changing operating environment in an appropriate



manner. It has remained valid in the midst of major changes partly due to its breadth and versatility. ZCF's foresight activities get good feedback both internally and from stakeholders. The role of the Advisory Group could be further strengthened.

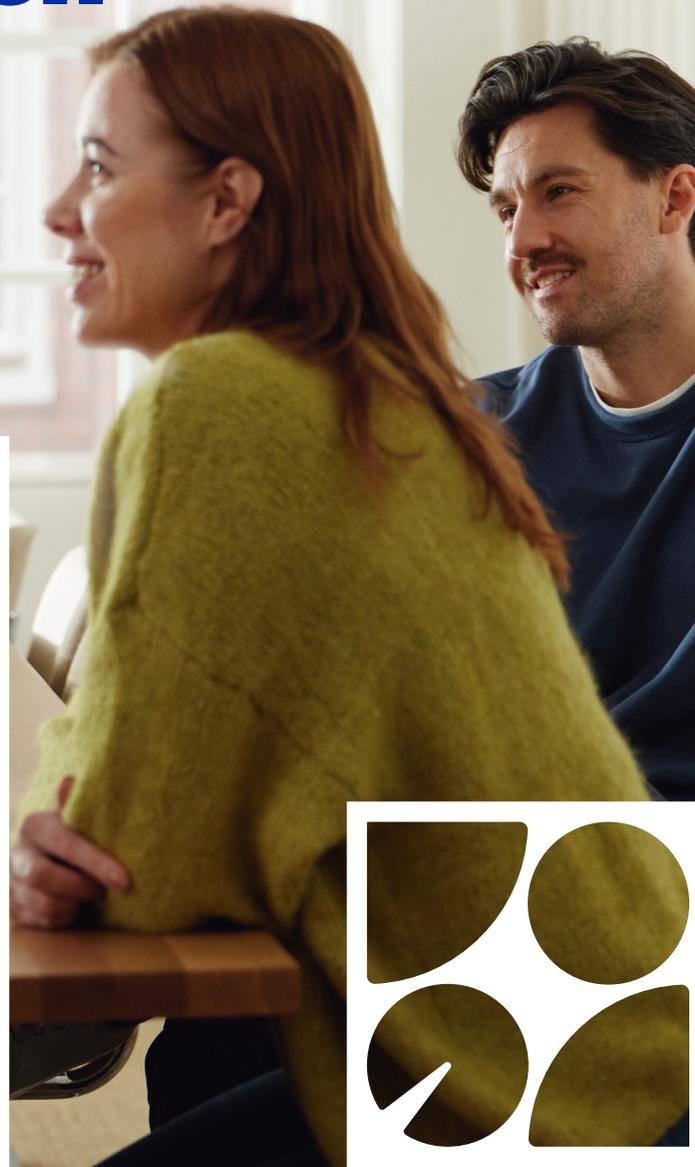
Related to the missions' capability to create the desired impacts and to react to changes in the operating environment, a challenge is that BF's RDI funding does not have any mission specific criteria, i.e., missions cannot steer or affect the allocation of RDI funding. ZCF started at the time of the green transition "hype" and additional funding resources were also available. The first years and large amounts of RDI funding allocated to the ZCF focus areas have created a good basis for advancing the Mission's goals. When in the future there will be less resources and also more missions that would like to have RDI funding in their own areas, the ZCF Mission needs to focus more and there should also be some mechanisms to connect thematic priorities also to RDI funding allocation.

4 Stakeholder collaboration



Questions addressed in this Chapter:

- Has the mission approach been effective in driving the desired systemic change / transformation, especially in collaboration with stakeholders, and if so, how? What could be improved?
- Have different actors' plans and activities been coordinated? What has been the consensus among a broad group of stakeholders about the need and relevance?
- What added value has stakeholder collaboration produced? What would be the best practices for stakeholder engagement and commitment? Have decisions regarding the intervention (goals, means, resources) been created collectively by the involved actors?



4.1 BF Customers

On a general level, companies' climate work and investments to green transition have progressed and intensified during 2020–2025. The Mission's theme is relevant to the customers and there is progress towards the main goal to increase Finland's global handprint.

The Mission's BF customer contacts take place mainly through the three programmes. Customer activation is the core task of programme activities. The existence of the ZCF Mission itself has remained distant and is not relevant for research organisations and companies. The external communication strategy of missions and their role has been somewhat unclear over the first years. First there was a decision that there is no need to promote missions themselves but there should be more focus on external communication in programmes with the missions' key messages. Later, on the other hand, missions have created their own websites and a larger launching event for all five missions was organised in November 2024. Nevertheless, the existence and practical

implementation of the missions is vague to BF customers. One could also argue that missions do not need their own brand if the theme and vision of each mission is clear and effectively communicated towards customers and external stakeholders.

Long-term impact of the ZCF Mission and its activities takes place through companies' low-carbon activities. The RDI company funding of the three programmes has mainly been used by large multinational companies (see Figure 7). The big role of Leading Company funding explains the figures to a high degree. However, it should be noted that the role of the Mission and programme activities towards Leading Company programmes is weak.

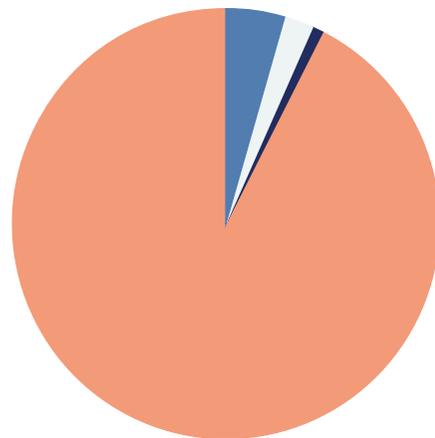
The focus on large companies is not necessarily the wrong direction. Large global companies play a key role in achieving the national carbon neutrality goal through both their own operations and more broadly through their entire business ecosystem. Support for low-carbon solutions targeted at large companies is justified, and sustained investment should continue. The timelines for developing low-carbon solutions are long and also require large research investments. These have

been essential justifications for BF's strong and long-term involvement to direct RDI resources to energy transition.

However, the dominant role of large companies in the implementation raises a few questions. Small and start-up companies have a fairly small role in the Mission despite their actions and reach to global markets being significant in the quest for renewal and growth. In total the three programmes have together had only 17 companies that could be defined as start-up type growth seeking companies⁶. Also, larger multinational companies which are already in the global markets may need less global outreach support and Mission activities may be of lesser importance. It is not clear if the role and needs of the larger companies is taken into account in planning the Mission activities. Especially the connection to Leading Companies is weak and in the future this collaboration could be strengthened.

⁶ This estimate was based on filtering companies that are less than 10 years old and classified to be micro or small in size. The subsidiaries of larger companies and those not any more active were excluded.

Distribution of the three programme granted funding by the size of companies (status 06/2025)



■ Micro ■ Small ■ Middle ■ Large

Note: VTT Oy and other Oy format research organisations excluded

Distribution of the # of companies participating in programme activities (status 06/2025)



■ Micro ■ Small ■ Middle ■ Large

Note: "No information" or "Blank" on size of companies excluded.

Figure 7. Distributions of customers in three programmes. Data based on 06/2025 situation.

4.2 Stakeholders and policy makers in Finland

Based on the interviews, collaboration with selected key stakeholders (e.g. Ministry of Economic Affairs and Employment, Technology Industries in Finland, Research Council of Finland) with selected activities has worked well. Collaboration has been based on working with specific projects or policy processes (see listing of some policy processes in Chapter 2.3). It seems that the collaboration is based on person level contacts and most often building on long term processes that had started already before the Mission. Some examples are described in Chapter 7. Building up from and strengthening the existing processes is a good approach, but proactive strategic plan for partnership building in Finland seems to be missing. With whom and why does the Mission build up new collaboration? Scope of the ZCF is large and there is a huge number of potential meetings and processes that would be useful to participate. The prioritization of collaboration would be needed especially when the operating resources will be diminishing in the future.

4.3 Stakeholders and policy makers globally

The Mission has introduced new types of focused collaborations with national and local governments in selected countries and areas as well as with global stakeholders. This follows the Mission's emphasis on global outreach activities. The Mission has provided a new type of mandate and backbone for BF staff to market and build up collaboration.

The ZCF Mission has been very active in global outreach activities, ranging from conference presentations to the participation in long term policy processes (some examples are provided in Chapter 7). Many of the activities are built on existing processes that BF has already participated in before missions. This is good and strengthens the existing collaboration which support ZCF's goals. Also, there are very limited resources to start a lot of totally new activities. In the same way as with the national stakeholder collaboration, many of the activities seem to be built up ad hoc and not supported by a clear strategic plan. Mission has been active in proposing, e.g., the priorities that BF should take into account in selecting the key EU

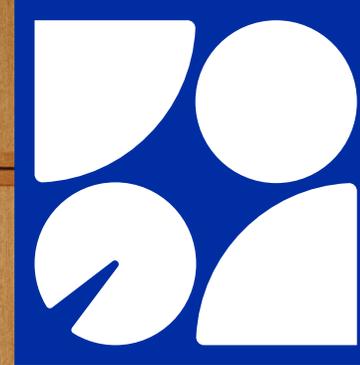
policy processes to participate in but at the time of the evaluation the plans have not yet been strongly guiding for setting the priorities for Mission's activities.

Some criticism came from Finnish stakeholders participating in the global processes related to the lack of resources for concrete (new) actions. The Mission has not had decision power to allocate resources to the work that would have been useful. Concrete examples related to human resources attending high level meetings and financial contribution of BF funding to different activities that would support Finnish businesses in international fora.

Success in building new strategically focused partnerships and collaborations is strongly dependent on the work of representatives of the global network, their actual presence in the target markets as well as their ability to utilize the ZCF Mission as a stronger marketing mandate. Overall, interaction and dynamic engagement has increased, however, and there is an emphasis on being more actively present with stakeholders as well as maintaining continuous interaction rather than relying on reports. This dynamism in interaction is high-

lighted as essential in supporting companies in their export efforts as well attracting investments. This fostering of strong relationships is further shown in that programmes appear to be increasingly viewed as collaboration platforms, both internally within BF and externally. The ZCF Mission supports this development by providing direction and through it consistency in the work towards ZCF goals. From the beginning of 2026 the global network is moved to the Ministry of Foreign Affairs. This change should not alter the type of support the Mission needs also in the future.

5 Implementation of ZCF



Questions addressed in this Chapter:

- Have allocation and mobilisation of resources been sufficient vs targets?
- How well are mission's inputs, activities, and outcomes generally aligned and contributing effectively to the intended impact?
- To what degree have other instruments of Business Finland – such as e.g. funding for leading companies, ecosystems, and innovation clusters – been aligned with and support the mission roadmap?



This chapter presents BF's internal feedback of ZCF's implementation based on the interviews. The implementation practices and activities are shortly described in Chapter 2.3.

There is a general good feeling among BF people about the decision to select thematic areas and of the aim to implement clear focus for BF's own activities. The long term view is valued, but in practice there is a worry that results are expected too soon. It takes a long time to build new types of activities and new collaboration.

Missions' activities that aim to more proactively affect the operating environment were somewhat new for BF. There was a permission given for doing these new types of activities. This is seen in relation to networking with different kinds of partners and support for customers. A challenge is that the resources for these new activities have been very limited. Also, although many interviewees mentioned that there is a type of mandate for new activities, this mandate is neither clearly stated nor taken into account in personal work targets. This then leads to a lack of practical resources for activities which may be additional to normal work and diminishes cross-organisational commitment.

The personality and drive of the Mission Lead have been critical in coordinating the cross-organisational work in cases when there are no formal resources. ZCF Mission Lead gets a lot of positive feedback from stakeholders, customers and BF colleagues, both in the level of expertise and in teamwork attitude.

Many interviewees mentioned that missions have succeeded in removing some internal silos, most notably between the Mission's programmes. Also, it was mentioned that the ZCF Mission has to some extent changed attitudes inside BF with respect to global outreach work so that this global work is not seen only as work of global network but as work of whole BF.

The ZCF Mission has created clear benefits for BF's communication. The ZCF Mission has helped focusing external communication and has improved networks and collaboration.

In the interviews there were many critical comments that strategic execution of the missions has not been sufficiently supported by management. Although processes and models exist, the missions still remain vague for BF personnel

and practical tools for everyday work are missing or left for each individual to invent. Many interviewees mentioned that the ZCF Mission is still unclear and more time should have been devoted in the beginning to go through the practical implications of the Mission to each one's own work. Operational models and processes for the mission and programmes exist, but there was a feeling that the processes are too heavy. Programme and campaign planning is heavier than previously. Although mission's role in programme planning phase was valued, there was a feeling that resources used for the planning phase could be more useful in supporting the actual implementation of programmes.

ZCF, like other missions, is based on strong thematic expertise. Expertise on the specific thematic areas of energy transition is critical in order to be a trustworthy and relevant partner for different policy and stakeholder processes. The existence of sufficient level of expertise is critical as long as there is a strategic intent to be a change agent bringing in insight of future development directions. There were remarks that the specific experts in BF have high demand and



have challenges to devote their time to all tasks that would be useful for mission. In the future, it is a high risk that the availability and renewal of expertise inside BF disappears due to cost savings and move of global network to Ministry of Foreign Affairs.

Generally there were still some different views on whether the missions are seen as only BF's internal tool for implementing strategic focus areas or a tool which aims to have a lot of outreach activities and impact in the world. Recommendations for improvement would depend on which one of these has more emphasis.

6 Programmes and ZCF



Questions addressed in this Chapter:

- What has been the added value of the mission to programmatic work? Are programmes of today sufficiently different from programmes before missions?
- For the three programmes evaluated: 1) Whether their services, direction and goals are still relevant for the remaining programme period? 2) How well are the programmes supporting the transformation the mission is aiming at? What could be improved?

6.1 Overview of programmes and campaigns as tools for ZCF

Generally the content and services of the programmes are rather similar to the programmes before the mission era. The ZCF Mission has, however,

improved the co-operation and joint work among programmes compared to the past and is valued particularly internally. The Mission has helped break programme silos and has pushed BF staff towards working more together across the programmes.

The ZCF Mission’s role has been big in the programme planning phase to initiate new programmes. The Mission should continue in a similar overarching guidance role also in other phases through implementation, monitoring and further development. The Mission’s management of programmes is based on soft leadership and joint coordination. While the expertise and role of the Mission Lead is generally highly valued, there could be stronger tools for the Mission to steer the programme execution. These tools would be a budget control for programmatic activities and some mandate to influence the allocation of funds. The lack of connection from programmes (in BF Oy) to actual funding decisions (Innovation Funding Agency BF) is a challenge. Actual funding is not based on any mission-related criteria.

The goals of the ZCF Mission and the content of the three programmes have been well aligned. The three programmes support the Mission goals

well. This is partly due to the large scope of the Mission as well as the programmes – “it would have been impossible to have a mismatch”, as one interviewee pointed out. The wide thematic content of the Mission as well as the programmes creates a communication challenge to build clear and recognisable Mission and programme iden-

tities. The Mission and its goals are not so clear to the programme participants. Figure 8 presents survey respondents opinions of their projects’ connections to Mission sub-goals on each focus area. 38 per cent of respondents cannot say to which sub-goal their project is connected to or that not connected to any of the sub-goals.

Q: Which one of the following Zero Carbon Future mission sub-goals is your project connected to? N = 48

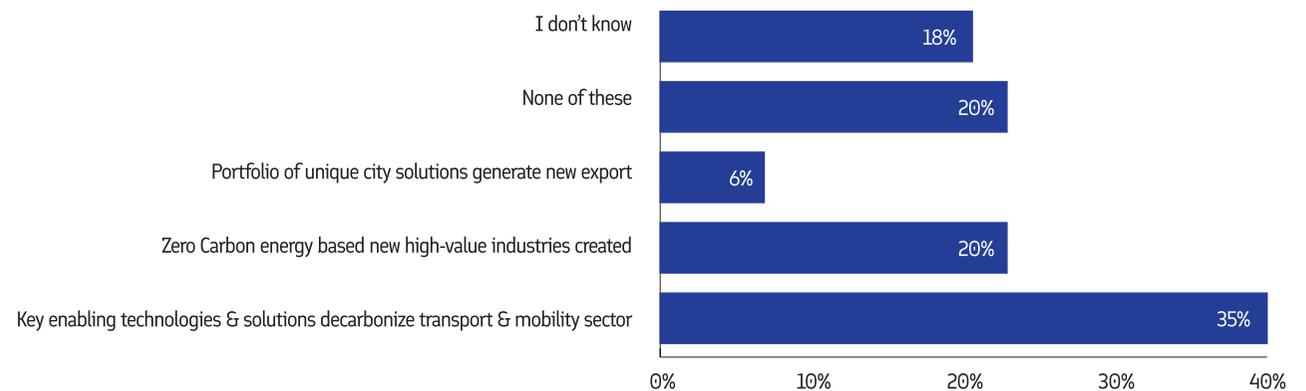


Figure 8. Survey results of the connections between ZCF Mission sub-goals and projects in the three programmes.

Source: Survey to programme RDI projects 09/2025

The three programmes overall function well and there is general satisfaction with programme services indicated by NPS results collected in each programme and validated also in the survey comments. Figure 9 presents the survey results of the programme participants' expectations for the future. Based on the survey's open comments the participants expect more support for networking and collaboration: facilitating networking with other projects, organizing seminars on ecosystem collaboration, and supporting collaborative projects with partners from different sectors. Market research and support to customer connections were also on the wish list for the future. Specific for the ZCF Mission were the requests for programmes to work as advocacy towards key ministries. Achieving green transition goals involves high costs that require regulatory support and favourable political decisions.

The next chapters present specific interim evaluation observations for each of the three programmes.

Q: How much do you expect the programme to support your project in strengthening... where 1 = very little, 5 = very significantly (N = 46)

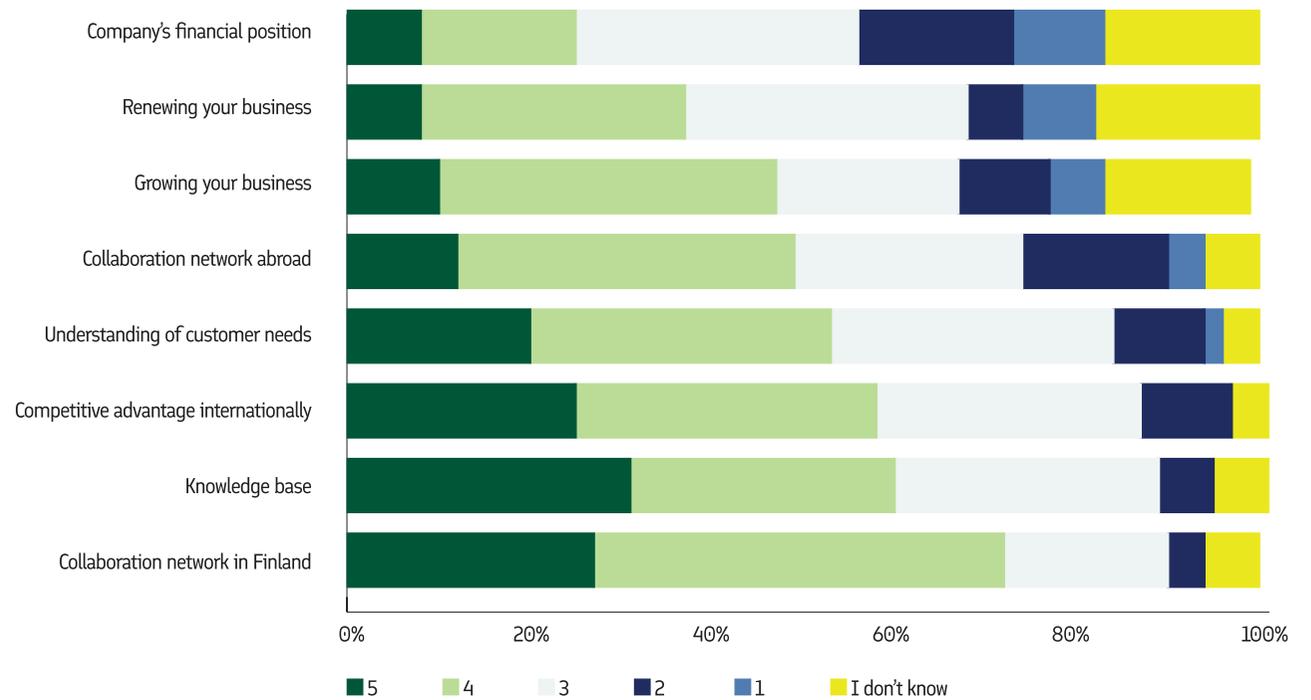


Figure 9. Survey respondents (N = 46) expectations towards the programme support.

6.2 Flexible Energy Systems (FES)

FES is focused on developing innovative energy solutions that enhance resilience and energy security, while promoting sustainability and collaboration. The primary goals of the FES programme are to:

- Develop flexible and sustainable energy systems that can adapt to various demands and conditions.
- Enhance energy security through innovative solutions.
- Promote collaboration among companies, research organizations, and standardization bodies to maximize EU influence and foster new business opportunities.

The programme started in the beginning of 2024 and the first project decisions were done in 02/2024. FES is thus at a ramp-up phase at the time of the evaluation in 2025. The evaluation did not bring up any needs to major changes in the direction and content of the programme. It was noted that FES benefitted from more developed programme planning activities to connect programme to the Mission compared to the other

two ZCF Mission programmes where new planning processes were tested earlier.

FES makes significant contributions to the ZCF Mission with its content and is well aligned with the Mission goals. FES's alignment with the ZCF mission is evident in its strategic focus on joint projects and Leading Company projects that drive substantial advancements in energy technology. These projects, such as Wärtsilä's WISE and Sumitomo's NZEE, have received significant funding and play a major role in achieving the Mission's goals.

Due to being relatively young, the programme identity is developing and there were more expectations towards programme services than in the other two programmes. Communication and customer collaboration work needs to continue and be clear on what services the programme can offer.

There is very high global demand for Finnish competencies in the FES areas and the Mission work has supported the global awareness of this. The ZCF's emphasis on global collaboration and outreach has also helped FES expand its influence and establish partnerships with international stakeholders, thereby enhancing the programme's

effectiveness and reach. Global context and international aspects as well as activities of the programme exist but need continuous attention to make bigger impact. Focus should be on selecting the right stakeholders to team up with, getting EU funding for R&D and being involved in the most important policy processes.

A risk for FES is the shift of global network to Ministry of Foreign Affairs and a worry if the specific market and technology expertise in BF will be available and maintained in the future.

6.3 Decarbonized Cities

The Decarbonized Cities programme (2023–2028) increases and strengthens the multidisciplinary offering and expertise for reducing carbon dioxide emissions in cities and meeting the needs of the energy transition. The programme aims to establish long-term partnerships with selected cities across the world. In the first phase, cooperation has been launched with Madrid, Los Angeles and Singapore. Five partner cities have been selected for 2025: Los Angeles, Singapore, Madrid, Norway/Bodö and Bordeaux.

The primary goals of the programme are the following:

- Help Finnish companies find new partners and business partners in the field of carbon neutrality. The aim is for Finland to be recognised internationally as a provider of sustainable, carbon-neutral urban solutions.
- Increase Finland's long-term competitiveness and increase exports. We encourage companies to develop internationally successful solutions, for example, to the carbon neutrality challenges of selected partner cities, in cooperation with other actors.
- Help to attract new climate tech investments and international talent to Finland. The aim is for Finnish research and expertise to be seen as of high international quality and for Finland to be an attractive target market in the field of carbon neutrality.

The Decarbonized Cities programme is rather fragmented with three pillars (energy systems, transport and mobility, built environment) and

ambitious goals. The programme planning phase was the first of the Mission's programmes and a rather heavy process. The ZCF Mission serves as a guiding tool for the programme and the content of the programme is well aligned with Mission with three focus areas which match with Mission's focus areas.

The programme functions well at the operational level – services and projects are proceeding as planned. The three pillars, however, work very much separately. This challenge is acknowledged and the connections between pillars as well as their link to Mission goals need to be improved.

There needs also to be some further priority setting. There are many wishes and expectations among programme participants but at the same time there are concerns regarding resources. Limited resources have constrained the ability to fully engage in international trade fairs and proactive planning. The programme started with a lot of target cities, but has now narrowed down the number and has more focus on appropriate market areas. This is a good direction to focus the programme.

Stakeholder coordination was often mentioned as an area for improvement. The aim would be to prevent duplication of efforts and do more proactive planning together, particularly export promotion trips and congress participations should be planned more collectively well in advance. Current matchmaking activities are beneficial, but more match-making is needed between start-ups, SMEs and larger companies.

The programme needs to intensify its focus on markets and innovations that are closer to commercialization. To reach the business targets, good references and piloting also in Finnish cities are needed. The funding for these remains a challenge due to the attitudes of cities, small use of innovative procurement funding, and BF's funding rules preventing city participation. The programme can focus on market-ready innovations, explore and leverage funding opportunities through EU programmes, and Nordic Innovation to overcome some of the funding challenges associated with urban projects.

Diminishing innovation funding and export support will be a risk for reaching the programme goals especially if the activation is targeted more to SMEs.

6.4 Hydrogen and Batteries

The Hydrogen & Batteries programme (2023–2028) aims to

- Promote the development and international growth of the Finnish hydrogen and battery industry value chains, technologies, solutions and services.
- Achieve significant commercial results for both the hydrogen and battery industries benefiting from strong synergies.
- Investment projects in Finland will result in significant business, creating wealth, new jobs and tax revenues.

Compared to Decarbonized Cities, Hydrogen and Batteries is an example of two pillar programme which succeeds to be one programme. Although hydrogen ecosystem and batteries ecosystems are at different development phases and programme has clearly these two parts, the programme succeeds to have more targeted focus and identity. There was no indication of needs for changing the programme focus.

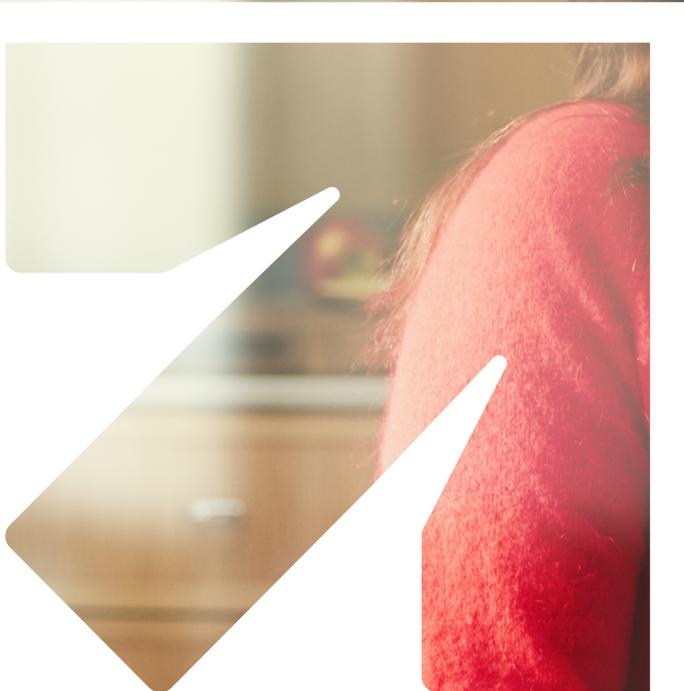
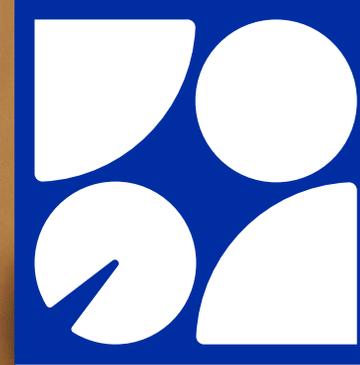
Alignment of the programme with the ZCF mission is good. Mission provides guidance for

the programme and also programme contributes to Mission goals. The Zero Carbon mission has significantly influenced the Hydrogen and Batteries programme, emphasizing collaboration, strategic focus, and stakeholder engagement. Despite smaller-than-expected impacts and challenges in resource allocation and EU influencing, the Mission fosters positive changes and dynamic stakeholder interaction. Project participants consider global collaboration and outreach significant for their projects.

The interviews highlight a mixture of positive aspects, challenges, and areas for improvement within the Hydrogen and Batteries programme. The overall opinion seems to be that while there are notable strengths, especially in stakeholder engagement and innovation, there are also significant challenges, particularly in resource allocation and EU influencing. Finnish position especially with hydrogen is very good and this needs to be utilised effectively. Attention should be paid to translate further the work at the EU level where hydrogen and batteries have high strategic importance. Finnish companies are well positioned at the moment.

The activities in the Hydrogen and Batteries programme are considered extremely relevant for the remaining programme period. It is important to maintain focus on innovation and sustainability to achieve long-term goals in the energy sector. Stakeholder collaboration is good but needs to be continued and pay more attention to long-term collaboration. Continued efforts in policy influence, partnership development, and securing funding are deemed crucial for ongoing success and impact.

7 Additionality of ZCF



Questions addressed in this Chapter:

- Additionality in changing attitudes and practices: To what extent has the mission been driving behavioural change among customers and other stakeholders?
- Additionality in driving developments in innovations, investments and business: To what extent has the mission been driving directionality? What other added value has the mission produced in this impact path?
- Additionality in changing the operational environment and society: Are there signs that the mission is influencing policies and the operational environment, and if so, how?

Expectations on additionality of the ZCF Mission is based on the combination of three impact paths towards broader strategic goals: 1) changing attitudes and practices, 2) driving developments in innovations, investments and business, and 3) changing the operational environment. The impact assessment focused on exploring the ways and the degrees in which ZCF's actions have progressed along these paths. In the analysis it was taken into consideration that while the impact paths focus on different issues, they are also interdependent and may affect one another in multiple ways.

The impact and additionality aspects will be discussed in the following sub-chapters. Overall progress towards ZCF Mission goals in the three focus areas of energy transition in industry, transport and mobility as well as built environment is discussed at a general level in 7.1. In sub-chapters 7.2, 7.3 and 7.4 we will dive more deeply into three different impact additionalities, with examples from the three focus areas. Changes in attitudes and practices in different types of businesses and among other actors are explored in more detail in sub-chapter 7.2. In 7.3 we look at the ways in which the Mission has driven developments in innova-

tions, investments and business. This is followed by 7.4 where the focus is on changing the operational environment and society and the ways in which the ZCF Mission has affected these developments.

The assessment of the three focus areas was done by evaluating the progress towards ZCF mission goals on a 5-point scale. This allowed the analysis to not only show how things have moved forward until now but also what level of action is needed to reach the set goals. The scaling is shown in Figure 10.

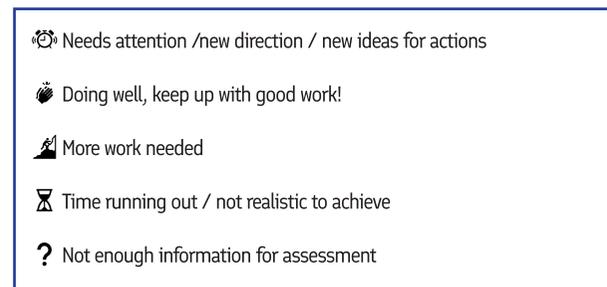


Figure 10. Scaling used for assessing the progress towards the ZCF Mission's goals.

7.1 Progress towards goals

Overall, progress towards the ZCF Mission's goals has been made with varying speed and intensity, both

when it comes to the focus areas and the types of actions. Considering the breadth and scope of the ZCF Mission as well as the fairly short time period in which activities have been implemented, positive steps towards visible results can be seen on multiple fronts. This is particularly the case with regard to pushing innovation actions of the Finnish industry and new kinds of concerted actions on increasing visibility of Finnish products and services on global arenas. Although the assessment scale included also an option that a sub-goal would not be any more realistic to be achieved and time is running out, none of the sub-goals got that rating.

Positive results can be seen particularly on strategic changes that have made to push the themes forward both nationally and internationally. The themes of the ZCF Mission have remained relevant despite constant and multiple changes in the operating environment. Active engagement with stakeholders and policy makers globally shows progress particularly regarding strategic collaboration with national and local governments in selected processes. These have been boosted by the Mission providing a credible mandate for

Business Finland staff's marketing efforts particularly in target markets. However, while the actions show positive results overall, building a solid basis for long-term impacts requires that the actions remain coherent and robust over a longer period of time.

Energy transition in industries

Regarding energy transition in industries, the ZCF Mission has pushed forward several positive developments. Particularly strong evolution is visible in business, innovations and investments, where steps in hydrogen economy and batteries are taking strong steps forward. The Finnish hydrogen and batteries ecosystem and their innovations show significant potential. Positive headway is also seen in utilizing low carbon roadmaps⁷ to promote Finnish competence, using strategic partnerships to identify and access potential markets as well as attracting clean energy investments. However, each of these require further efforts to create sustainable impacts, as described in Figure 11.

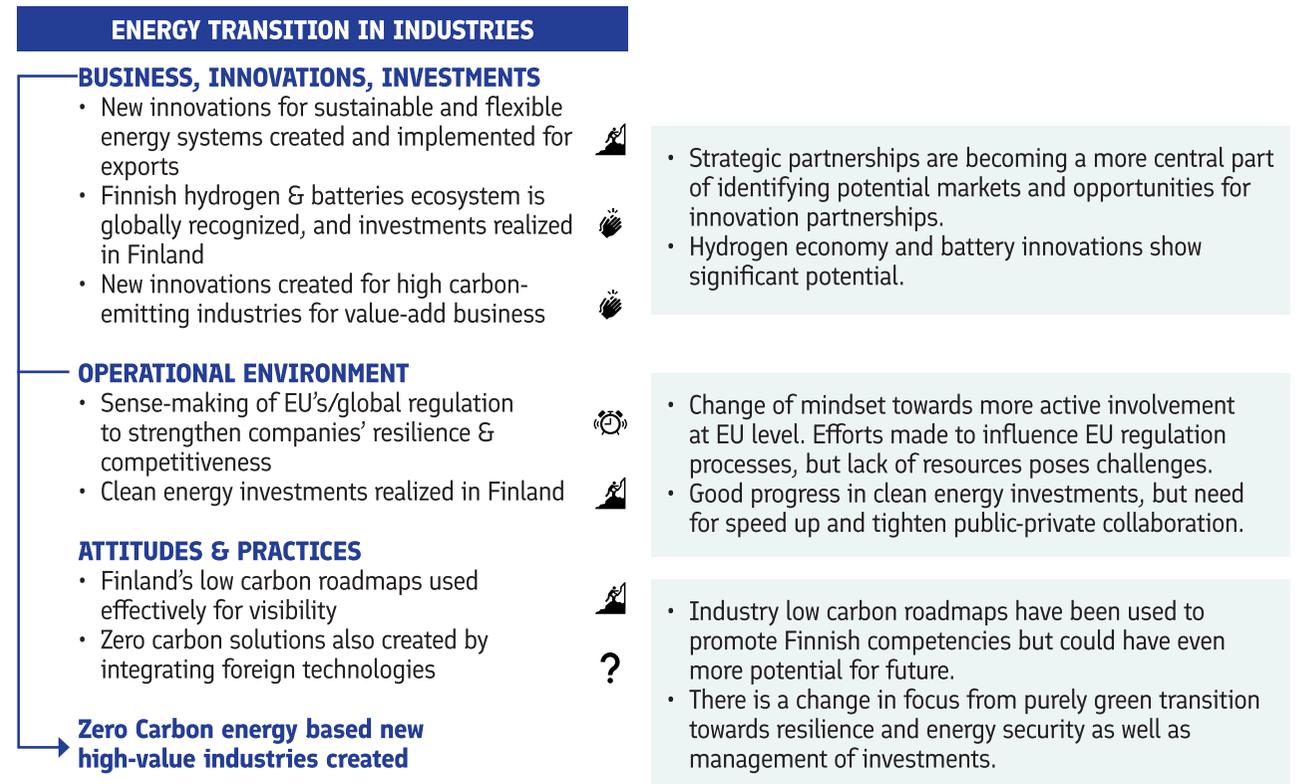


Figure 11. Evaluation assessment of the progress of the Mission towards the sub-goals of Energy transition in industries

⁷ Finnish national low-carbon roadmaps describe the different sectoral paths towards a low-carbon economy. See details in [Low-carbon roadmaps – Ministry of Economic Affairs and Employment](#)

Energy transition in transport and mobility

In the field of transport and mobility, Finnish companies have set goals and adopted business practices aimed at decarbonizing transport and mobility. Progress has been particularly good in developing electric vehicle infrastructure, such as charging facilities, carbon reduction initiatives in logistics, as well as circular business models, such as recycling and reusing vehicle components. The integration of business and policy efforts have supported positive developments in the operational environments as well as supported companies in investment planning. In addition, new partnerships and an emphasis on Nordic cooperation have been proactively built to push the Finnish solutions into global and (international) local markets, as shown in Figure 12.

ENERGY TRANSITION IN TRANSPORT & MOBILITY

BUSINESS, INNOVATIONS, INVESTMENTS

- Transition solutions & services for transportation sectors: passenger, rail, road, maritime, and aviation 
- Carbon handprint created especially in electrification, grid development, EV charging, batteries, e-fuels, digitalization fields 

- Good progress has been made in proactively building up new partnerships and bringing Finnish solutions forward
- Integrating business with policy aspects has supported companies in expert and investment planning.

OPERATIONAL ENVIRONMENT

- Enabling legislation & regulation influenced to secure competitiveness & possibilities for new business 
- Intensified Nordics collaboration for business 

- Emphasis on Nordic cooperation and leveraging collective visibility is boosting business into new strategic markets. More focus is required on actual presence in the new markets.

ATTITUDES & PRACTICES

- Global growth accelerated by strengthening collaboration with Finnish/global hotspots for research, development and deployment 

- While there are efforts made to move towards strategic partnerships, there's a need for more agile processes to commercialize innovations and bring them to markets for piloting and refinement.

Key enabling technologies & solutions decarbonize transport & mobility sector

Figure 12. Evaluation assessment of the progress of the Mission towards the sub-goals of Energy transition in transport and mobility

Energy transition in built environment

Overall progress in the field of built environment is more varied than in the other two focus areas (see Figure 13). Steps are being taken to enable effective international collaboration, and the changes in the geopolitical landscape are providing a further push in the desired direction. Finnish cities are actively pursuing EU funding for sustainable urban projects, such as the European Local Energy Assistance (ELENA) and European Urban Initiative (EUI). In the operational environment, the Mission has provided stronger credibility in the marketing campaigns, which has helped companies to invest in long-term initiatives and partnership building. While Finnish companies and cities are engaging in numerous collaborative projects and workshops aimed at promoting sustainable urban environments and innovative solutions for the built environment, scale-up efforts remain insufficient. There is increasing interest towards Finnish competence, and start-up and small size companies have potential to reach global markets, but BF services do not fully meet their needs.

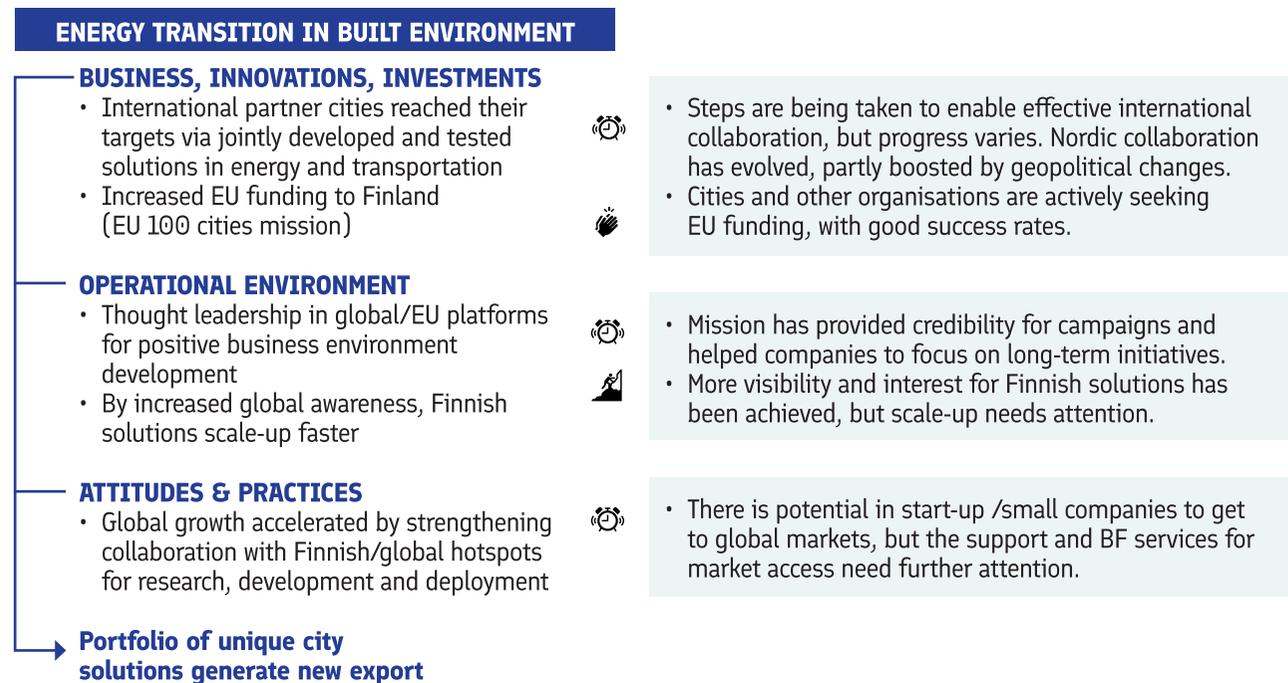


Figure 13. Evaluation assessment of the progress of the Mission towards the sub-goals of Energy transition in Built environment

7.2 Changing attitudes and practices

The ZCF Mission's low carbon and carbon handprint focus has been in line with progress in attitudes and practices of Finnish companies and other stakeholders. Despite the Mission's thematic area being very broad, the handprint angle emphasises contributions to energy transitions, particularly in transport and mobility, industrial renewal and city development.

During the past decade there have been positive developments in the regulatory frameworks governing the ZCF Mission working environment, despite recent setbacks in the political landscape. Alongside this, several Finnish companies have progressed in developing their businesses and new ways of working in a more climate-positive direction. This is visible, for example, in the AI analysis BF completed for a set of biggest companies' annual reports comparing the changes that have taken place in their climate reporting from 2021 to 2025. Finnish sectoral low carbon roadmaps also show clear paths for Finnish industry towards carbon neutrality.

The ZCF Mission has had a role in these changes by making the global growth potential, competitiveness and technical leadership more visible to Finnish companies and inspired further coordination. Collaborative efforts between Finnish stakeholders, including governmental bodies, research institutions and industry associations, enhance the overall impact by coordinating and sharing information. An example of a type of coordination the ZCF Mission has been an appropriate body to work with is the national carbon handprint working group described in Information Box 2.

However, looking at changes in attitudes and practices which are crucial for a sustainable systemic shift, progress has been fairly slow. This is partly to be expected, considering that changes in organisations' attitudes are generally slow and require shifts in deep-seated mindsets and behavior. Organisational cultures are deeply ingrained and their systems interconnected, in addition to new skills needing time to be rebuilt. While the ZCF Mission provides good backing to push for such change and steps are being taken in the right direction, the processes are generally in the earlier stages. The positive progress is likely to yield more results

and impacts that can be attributed to the Mission, but this will require longer term coherent efforts to reach the desired goals. An example is that the actions on moving from low carbon roadmaps to promoting Finnish competencies and turning their potential into actual business in international markets could be stronger. The Mission has been utilized as a strong marketing mandate in some areas, but systematic processes or methods have not yet evolved in a way that would support a more holistic change.

Information Box 2: Case Carbon Handprint working group

Hiilikädenjäljestä viennin työkalu (Carbon handprint as a tool for Finnish export) working group is informal activity for information exchange between policy makers, stakeholders and research on carbon handprint issues. ZCF Mission initiated the activity in 2021 and about 10 bodies of ministries (TEM, YM), stakeholders (like CLC, EK) and research organisations (LUT, Syke etc.) have had regular meetings coordinated by the Mission. BF has also provided funding to research projects in the carbon handprint topic.

At the start there was an assumption that there would be EU level regulation for guiding carbon handprint reporting and joint methodological basis. Better methodological understanding has shown that this is yet unrealistic. The intensity of the working group activities has been slowing down since the start. However, there is an agreement that the Mission (and BF) had a very appropriate role for this type of coordination – bringing together research, policy makers and industry representatives. Timing was also right to initiate this new collaboration.

7.3 Driving developments in innovations, investments and business

Expected impacts on businesses are traditional Business Finland's areas of operations. The ZCF Mission's programmes are progressing well and under the ZCF Mission's umbrella the RDI funding as well as investments in green transition have been significant (see Chapter 2).

The ZCF Mission has driven business impacts particularly in two ways. First, it has provided direction on business development activities by pushing them to become more practical and focused on attracting clean investments and developing businesses in a way that makes them and their potential interesting for international audiences. Secondly, the Mission provides a broad umbrella as well as more thematic focus, which encourage discussions beyond the traditional silos.

Significant transitions are evolving towards low carbon in business practices, with companies setting goals and adopting new business models that promote sustainability. These developments also highlight global success and investments

within Finland. In addition, collaboration with other Nordic countries and strategic partnerships are showing progress. The Nordic Singapore Innovation Days, for instance, showcases Finnish innovations and connects Finnish start-ups with global corporations and local universities in Singapore (see details in Information Box 3). Such collaborations aim to enhance market visibility and business opportunities for Finnish companies. However, while these developments show that the Mission is pushing developments along the right impact paths, these well-functioning initiatives require both a physical presence in the market areas and systematic, long-term efforts to produce sustainable business results (see e.g. case of Los Angeles in Information Box 4).

Based on the analysis, the ZCF Mission shows impacts also in Finland having successfully attracted increasing international investments through various strategic efforts. Finnish companies' advancements in digital transformation, data economy, and sustainable practices have enhanced their global competitiveness and appeal to inves-

tors. Investments in innovative technologies such as quantum technology and hydrogen economy are being pursued through international collaborations and funding mechanisms such as IPCEI (Important Projects of Common European Interest). These investments aim to boost Finland's position in advanced technology and sustainable solutions markets at a global level. Business Finland's Invest-in functions get good feedback regarding the expertise of staff.

Notable marketing initiatives have fostered connections between Finnish companies and global corporations, leading to significant investments particularly in innovative smaller companies. Specific success stories, such as securing a €15 million investment from a Singaporean visit, exemplify the tangible results of these efforts. Similarly, there is very good progress in clean energy investments, but the potential of private-public collaboration has been utilized to a fairly small degree considering its vast potential. The public-private collaborations are considered interesting in several global markets and,

if promoted in a clear and systematic way, have the potential to be turned into profitable changes in the operational environment.

There is variation in how much and how well external funding opportunities have been utilized. There have been significant efforts in influencing EU processes and leveraging initiatives such as IPCEI for hydrogen economy projects. EU funding has been utilized to not only boost business development but also the green transition at city level. A good example of catalysing EU funding is the city of Tampere, which has secured substantial EU funding for urban development projects. The collaboration with international entities like the Nordic Innovation has facilitated effective research and development, focusing on energy transitions and decarbonized cities, though the processes and abilities of utilizing networks are currently still in the beginning phases. Overall, the operational environment has been opportune for attracting green investments and funding to Finland, although the peak has at least for now passed. The allocations and focus of RRF funding

in Finland have given the Mission a further boost and have had an indirect attribution on the impact path developments.

Business Finland has faced challenges in maintaining coherence in its funding allocations, often struggling with resource constraints and contradictory pressures. While there has been proactive engagement in securing EU funding and forming strategic partnerships, internal resource allocation has been more focused on immediate operative needs rather than long-term Mission goals. The Leading Company Initiative and ecosystem development funding has, for example, been excluded from the Mission whole, although several of the efforts under the Mission umbrella are directly connected to the Leading Company ecosystems. Despite efforts to influence EU processes and advocate for Finnish perspectives, the integration of funding opportunities into broader strategic goals has been limited.

Information Box 3: Singapore Nordic+ collaboration

The Singapore Nordic+ collaboration screens potential startups and pushes them to global markets and local partners utilising a joint Nordic Innovation House and Days concept. It functions through a series of coordinated events and initiatives aimed at fostering innovation and business opportunities between selected Nordic+ countries (Finland, Sweden, Estonia) and Singapore. A key initiative is the week-long Nordic Singapore Innovation Days event, which features start-ups and showcases technology innovations. The event includes SWITCH conferences where selected Nordic start-ups get the opportunity to interact with large global corporations as well as Singaporean organisations. Ignite Sweden plays a critical role in this by screening promising start-ups and facilitating online meetings with large corporations. The aim is to both showcase Nordic innovations in a concerted manner and link startups with corporations and local educational institutions (mainly universities) in Singapore. The series is branded under the Nordic Singapore Innovation Days and provides a comprehensive and coordinated approach to linking Nordic and Singaporean actors around business and innovation.

Information Box 4: Case Los Angeles

Collaboration in the LA Olympics involves strategic cooperation that showcases Finnish mobility solutions and innovations and pushes them to major new markets through joint efforts. At the forefront is the initiative to decarbonise Los Angeles through leveraging the expertise and leadership of Finland in environmental sustainability, built environment and transportation. The collaboration involves bi-lateral company visits that showcase Finnish solutions (including public-private partnership models) and engaging in market activities with promise of high returns on investments. So far over 300 Finnish companies and ecosystems from multiple sectors have been activated in the collaboration, with significant agreements and direct procurement.

The operational approach for the LA Olympics is characterised by a proactive stance. It involves continuous market scanning, fostering partnerships and developing comprehensive solutions tailored and branded to the specific needs of Los Angeles. The approach addresses immediate, medium-term as well as long-term commercial objectives, and evolves continually based on market success and emerging new needs. The success of the collaboration is highly dependent on the coordinating efforts of Business Finland and the presence in Silicon Valley. Overall, the collaboration aims to not only deliver successful Olympic games but also build the basis for lasting strategic business cooperation around innovation.

7.4 Changing the operational environment and society

The aim to affect the operating environment and to be active change agent in the society are especially areas where BF's mission concept has initiated new types of activities. The ZCF Mission's subgoals here focused on 1) sense making of legislation, especially at EU level, 2) Nordic collaboration and 3) global awareness of Finnish solutions. These three sub-goals reflect ZCF Mission's choice to focus on global outreach activities.

The ZCF Mission's choice to affect operating environment is to large extent based on building strategic partnerships and collaborative platforms. These activities are directly connected to two other impact paths: strategic partnerships create business opportunities for Finnish companies and building successful partnerships requires also changes in attitudes and practices. Some of these impacts are already elaborated on in preceding chapters.

The ZCF Mission has had a number of very good collaborative efforts, particularly through Nordic partnerships and strategic MoUs. Some of these

cases, such as the Singapore Nordic+ collaboration (Information Box 3) and the Chile-Finland joint platform (Information Box 5), provide inspirational examples with lessons to be utilised by other actors. It should be, however, acknowledged that building these partnerships takes a lot of work, takes long time, is often built on longer history that has started before missions (e.g., Nordic Battery Collaboration, see Information Box 8), and faces also a lot of uncertainties depending on the changes in market situations and political turbulences (see, e.g., the case of Earth Alliance in Information Box 6).

The work with partnerships is in the beginning. The potential of networks has been utilized quite modestly and more needs to be done to integrate funding mechanisms effectively. This applies particularly to building and understanding the role of strategic partnerships in identifying potential markets and opportunities for innovation partnerships. While steps are being taken to market Finnish business and their ecosystems at strategic global markets, the ways of working are still being developed.

Information Box 5: Case Chile- Finland joint platform

The Chile-Finland joint platform represents a significant shift in the operational environment for both countries. It aims to accelerate high-TRL (Technology Readiness Level) innovation through a systemic, value-chain approach that encompasses research and development, demonstration and piloting, and industrial scale-up. The joint platform focuses on strategic domains such as sustainable mining, energy and hydrogen, forest bioeconomy and regional development in a way that is attractive to and fosters the business goals both Finnish and Chilean partners. The collaboration mobilizes public-private co-funding and international investments with the joint aim of building a binational innovation ecosystem.

The approach of the Chile-Finland joint platform enhances operational efficiency of the marketing and business partnership efforts by building on trust and funding mechanisms. The joint platform is driven to a high extent by the technological research centre VTT, which helps bring together research with business and public administration to push new innovations to global markets. The joint platform aims to serve as a replicable model for sustainable business and societal development through integration of industries vertically and improving quality of life through technological advancements. For this to be sustainable in the long term it is vital that the collaboration is supported in a manner that helps develop its collaborative basis from the currently VTT-driven approach to one that is strongly shared also by business actors.

Information Box 6: Earth Alliance

Earth Alliance is a collaboration platform between BF, Vinnova, Enterprise Singapore and Israel Innovation Authority. There are 4 working groups in the Alliance – Start-up, Cities, Food, and Foresight. The ZCF Mission was active especially with Start-up working group. The collaboration started with Israel approaching BF in COP 2023. The goal was to exchange ideas, best practices and experiences on challenges related to supporting start-ups (in similar countries). Plans included actions to help startups with finding specialists, creating an “investor club” for investors interested in the countries’ start-ups, building a mechanism for larger companies to find solutions to their challenges from the start-ups. An event for investors before Slush was planned.

There have been more plans especially linked to increased visibility and showcasing. However, due to the current geopolitical situation, those plans have been buried and already agreed meetings have also been cancelled. The Alliance has not been able to realise its full potential due to Israel involvement, and possible EU funding is also at risk due to the chance of one of the partners becoming unfundable.

Efforts to influence EU processes and contribute to policy formulations at both national and EU levels are integral to the strategy, aiming to incorporate Finland’s perspectives into broader EU agendas. These impacts reflect a strategic approach to enhancing the positive environmental contributions of Finnish companies domestically and internationally. There is clear progress in how changes in the operational environment and sense-making of EU and global regulation have affected the mindset in Business Finland, the companies and stakeholder networks. Involvement at EU level has become more active and appears to function in a more systematic manner in the ways in which efforts are made to influence EU regulation and climate policy. However, in order for these efforts to yield more lasting results, the resourcing and skills development will require longer term investment. Also, clear prioritizations for actions need to be made in the vast area of the ZCF Mission. Although EU level has been a strategic priority for the ZCF Mission, a lot of concrete actions in the area of participating in different policy processes and awareness rising activities have been at a global level (see e.g. CEM and MI case in Information Box 7).

Information Box 7. Case Clean Energy Ministerial (CEM) and Mission Innovation (MI)⁸

The Clean Energy Ministerial (CEM) brings together the world's largest and leading countries, international organisations and companies to achieve a single mission: accelerate clean energy transitions. Mission Innovation (MI) is a global initiative to catalyse action and investment in research, development and demonstration to make clean energy affordable, attractive and accessible to all this decade. Work in CEM and MI has been a national ministerial priority for MEAE already before ZCF Mission. The ZCF Mission has, however, collaborated closely with the Ministry and has brought in additional resources and expertise to prepare the high-level meetings, bring in Finnish visibility and people to participate in the meetings. The Net Zero Industries Mission (one of MI missions) will be announcing the 2025 Net Zero Industries Awards and ZCF Mission has also promoted Finnish companies to participate.

An emphasis on Nordic cooperation has provided a strong push in making the operational environment more positive towards Finnish innovations. Leveraging collective visibility supports Finnish businesses as they push into new, strategic markets in, e.g., Asia. The joint marketing efforts have shown results but the lack of actual presence in the new markets is hampering the development and slowing down success. Such slow changes in attitudes and business practices are also visible the ways that innovations are commercialised. There is much interest towards Finnish innovation potential but the processes from bringing actual new products and services to markets is slower than expected. There is a need to move in a more agile manner from laboratory type of testing to piloting and further refinement in actual markets – preferably with clearly linked marketing efforts attached.

⁸ See Clean Energy Ministerial | Advancing Clean Energy Together and Home – Mission Innovation

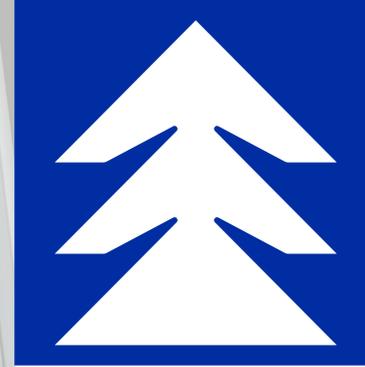


Information Box 8: Case Nordic Battery Collaboration (NBC)⁹

NBC aims to build a strong battery ecosystem in the Nordics by accelerating sustainable production, innovation, trade, and collaboration across the battery value chain. The goal is to be home to Europe's leading sustainable, competitive, and innovative battery ecosystem by 2026. It aims to drive innovation and investments, influence policies and regulation as well as contributing to behavioral change through showcasing successful projects and attracting future talents. NBC was established in April 2021, before the ZCF Mission was launched and was not initiated by the Mission. NBC work also takes place mainly through the programme work. The goals and work of NBC however support directly the Mission goals and the Mission has provided an umbrella for BF programmes leading to better collaboration within BF. Nordic funding capabilities and links to EU level have strengthened.

⁹ See details here: [The Nordic Battery Collaboration](#)

8 How to continue?



Business Finland has renewed its strategy 2025 at the same time when the two evaluations of the first two missions were completed. Business Finland's new strategy for 2026–2030 equally builds upon thematic priorities, but with a different approach, and the role of missions will change. There are still some important lessons that the two pilot missions provide for future to implement the strategic thematic priorities. General conclusions from the two mission evaluations for Business Finland to develop the operational concept for strategic priorities are found in the joint synthesis report. This chapter presents the key lessons for the future learned from the ZCF Mission's first years.

1. **More focus and prioritisation.**

The thematic content of the ZCF Mission has been very wide and goals of the Mission are ambitious. Good progress has been made but with the future diminishing operational resources, some further focus and priority setting needs to be made. This would also help the external communication to sharpen the role of the Mission to BF customers and stakeholders.

2. **Global outreach emphasis should continue.** Following the main goal of the ZCF Mission to increase global carbon handprint of Finnish companies, the focus on global outreach should continue. Many of the activities have been built on existing processes, but the Mission has brought some new energy to this work. This momentum should not be lost.
3. **Policy play activities are in the beginning.** The ZCF Mission activities that aim to affect the operating environment were new for BF. These new types of activities have been initiated and internal support for them has strengthened. The materialisation of the results and benefits, however, take a long time. These activities should be clearly prioritized as well as consistently continued and resourced if BF wishes to continue in this direction. The Mission Lead's role has been big in this work. Dependence of few individuals creates risks for the implementation.
4. **Take Leading Company ecosystems on-board.** Thematic connection of the ZCF Mission to many of the Leading company ecosystems is strong. Ways should be developed to connect these ecosystems to ZCF Mission work to benefit from synergies.
5. **Create better plan for stakeholder collaboration.** The ZCF Mission has benefitted from an abundance of RDI funding that has created a basis for future energy transition in various sectors. The ZCF programmes support the Mission goals well. The wide scope and large number of potential directions for collaboration, however, call for clearer prioritization. On the BF customer side programmes should focus on getting SMEs and start-ups more strongly involved.
6. **Revisit in-house roll-out of mission work.** There has been good progress internally to make the ZCF Mission a joint effort. In particular, ZCF Mission programmes report clear benefits of Mission work. The intention to get the whole organization committed to Mission work has not fully succeeded. Internal work to make missions a joint effort needs to continue and focus on embedding missions to everyday work.
7. **Ensure strong in-house expertise.** Energy transition requires in-depth technological and business understanding which BF should also have in-house. The ZCF Mission goals also require strong business knowledge and understanding of business environment in various market areas. The evaluation received varying feedback of the BF's expertise. Often some key persons with long term expertise were mentioned as critical for the success, but also there were critical remarks of lack of knowledge. Cut-offs in operating expenses and move of global network to MFA create risks for future concerning the availability and quality of in-house expertise.

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