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Constructing Sectoral Micro Acceleration Programs (MAPs) and Bringing New Partners to the Entrepreneurship Ecosystem

BREAKOUT SESSION 1 – ROLE OF INNOVATION SPACES IN THE DEVELOPMENT OF TECHNOLOGY, INDUSTRY, AND FINANCE

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EXECUTIVE SUMMARY

This paper examines the role of Science and Technology Parks (STPs) and Areas of Innovation (AOIs) in the entrepreneurship ecosystem by fostering sectoral micro acceleration programs (MAPs) and attracting new partners to the ecosystem. The study argues that corporate entrepreneurship and acceleration programs often face challenges related to efficiency, sustainability, and self-sufficiency. ITU Cekirdek, recognized in 2023 as the world's best university incubator by UBI Global, has successfully implemented sectoral micro-acceleration programs for over 10 years, demonstrating a proven model to address these challenges. As a result of this experience, a three-phase model has been developed for institutions. This paper presents the structure of these phases and shares program outcomes through case studies of Energy Micro Accelerator Program (E-MAP) carried out in partnership with the Energy Market Regulatory Authority (EPDK) and the Association of Electricity Distribution System Operators (Elder) in Turkiye.

INTRODUCTION

Companies increasingly seek external solutions to develop new technologies, and startups offer the faster and more flexible responses to these needs. Consequently, various organizations such as corporates, public institutions, sectoral associations and organizations are taking steps to support startups. Corporations generally attempt to launch entrepreneurship or acceleration programs and assess outsource innovation. However, these programs often struggle to achieve sustainability despite utilising internal resources and external consultancy.

At this point, many firms turn to Science and Technology Parks (STPs) and Areas of Innovation (AOIs) like ITU Cekirdek Incubation Center of ITU ARI Sciencepark to implement micro-acceleration programs tailored to their industries. With a decade of experience running sectoral microacceleration programs, ITU Cekirdek has produced successful outcomes nationally and globally. As a result, it was recognized as the world's best university incubator in 2023 by UBI Global, ranking first among 1,895 institutions from 94 countries. This vision has demonstrated how a successful collaboration and financial model can be built for organizations aiming to develop new technologies and achieve industrial-scale growth. Through partnerships with these firms, our model has demonstrated success by integrating them as long-term ecosystem players, thereby reinforcing its sustainability and impact.

COMMON PROBLEMS OF CORPORATES' ACCELERATION PROGRAMS

When companies launch their entrepreneurship programs, they encounter three core challenges: limitations in capacity and resources, difficulties in tracking program outcomes, and ensuring the program's long-term sustainability.

The first challenge pertains to the limited capacity for program execution. This encompasses constrained public relations resources, low visibility of program calls, and a limited or insufficient number of startup applications. Moreover, institutions that establish entrepreneurship programs frequently rely on external consultants for program management. Key activities such as operational processes, specific training sessions, collaboration with startups, project evaluations, and the formation of juries are typically handled by in-house personnel from departments such as innovation, R&D, or business development. However, the perspectives and capabilities of large corporations often differ significantly from those of startups, which can complicate potential collaborations. This discrepancy presents obstacles when integrating new technologies developed by startups into corporate structures. Staff members involved in these processes may sometimes hold misconceptions, such as expecting startups to deliver solutions that perfectly align with the company's specific pain points or assuming that integration can occur without taking risks.[1] Furthermore, there is often a reluctance to outsource solutions to startups when the company's R&D teams believe they can develop these solutions in-house. These challenges hinder the creation and implementation of innovative technologies. Another issue is that startups, when participating in acceleration programs, require and request several forms of support. Sales support alone is often not sufficient in the collaboration process. Startups require complementary resources such as CRM tools, cloud services, laboratories, workshops, production and prototyping capabilities, legal and financial consulting, intellectual property protection support, guidance for entering international markets, etc. It is not feasible for companies to provide all these resources in-house. Even when sales and collaboration processes are completed, startups need further corporate partnerships and support.[2]

The second critical challenge is tracking program outcomes. The most important outcome of these programs is the startups themselves. Whether early-stage startups or scaleups, they benefit from a range of rewards and opportunities such as cash support, collaboration opportunities, and investment aid during the acceleration program. However, after the program concludes, the needs of these startups

continue. Since the support and follow-up provided by companies after the program ends is often limited to a small number of startups, the survival rate of the participating startups naturally declines. Research indicates that the effectiveness of corporate accelerator programs largely depends on the extent of post-program support, as tailored follow-up initiatives can play a crucial role in enhancing startup survival and long-term performance.[3]

The third challenge is ensuring the sustainability of the program. The resources and costs associated with developing technologies should be integrated into a financial model that supports the program's continuation in future years. Additionally, the benefits generated by the program must be tangible and aligned with the efforts and costs invested. Without this alignment, the accelerator program risks becoming a corporate social responsibility initiative that requires ongoing funding. Consequently, many companies struggle to relaunch their entrepreneurship programs on a regular basis. As Bergek and Norrman (2008) highlight, the long-term sustainability of such programs depends on securing continuous funding and delivering clear, tangible benefits to the corporations involved. This aligns with the challenges many organizations face when managing entrepreneurship programs, as financial sustainability often dictates their ability to maintain value for startups across multiple cycles.[4]

SUCCESSFUL SOLUTION: SECTORAL MICRO-ACCELERATOR PROGRAMS UNDER STPs

To address these challenges, ITU Cekirdek has a platform to enhance corporate capacity. With minimal effort, startups gain immediate access to a network of over 500 mentors, training programs, and resources such as CRM and cloud services. The key outcome is that this optimized structure is scalable, ensuring consistent operation regardless of the number of participating startups or corporate partners.

Another crucial solution is that startups participating in ITU Cekirdek programs benefit from lifelong support. The 5-year survival rate of startups at ITU Cekirdek is 45%. This success can be attributed to continuous support, including business coaching and investment guidance, which helps startups navigate through the critical 'death valley' phase**.** The 'death valley' period—typically the first three years of a startup's lifecycle, experiences the highest failure rates, with 90% of tech startups failing to scale during this crucial stage.[5]

Furthermore, program continuity is essential. Corporations tend to discontinue programs that do not yield concrete results. To prevent this, ITU Cekirdek has developed a three-phase model:

Phase 1: Awareness and Initial Support – Raising awareness, increasing visibility, and providing initial support to startups.

Phase 2: Business and Investment Readiness – Enhancing technological and commercial maturity to enable startups to secure investments and commercial deals.

Phase 3: Cluster Expansion – Transforming the partnership into an independent entity that includes other industry stakeholders, investors, and public institutions.

This model is further illustrated through a case study of the Energy Micro Acceleration Program (E-MAP) in collaboration with Energy Market Regulatory Authority (EPDK) and Association of Electricity Distribution System Operators (ELDER).

PHASES OF SELF-SUFFICIENT AND SUSTAINABLE PROGRAMS: A CASE STUDY OF THE ENERGY MICRO ACCELERATOR PROGRAM (E-MAP)

To foster technological and industrial advancements, numerous institutions reach out ITU Cekirdek annually. Over the past decade, ITU Cekirdek has conducted sectoral micro-accelerator programs, establishing successful models in various fields such as aviation, energy, automotive, sustainability, healthcare, and smart cities. This paper presents a case study on the ongoing collaboration of ITU Cekirdek between the Energy Market Regulatory Authority (EPDK) and the Association of Electricity Distribution System Operators (ELDER) through the Energy Micro Accelerator Program (E-MAP).

EPDK and ELDER, focusing on fostering new technologies and industrial efficiency in the energy sector, have outlined the first phase of their collaboration. This phase details the specific technological areas to be developed and the resources to be made available. Utilizing methods such as social media outreach and accessing domestic and international energy databases through ITU Cekirdek, the program has invited startups that meet the requirements to participate directly. Entrepreneurs within the E-MAP are provided with training and mentoring, aligning them with industry specific collaboration opportunities. At the conclusion of this phase, 15 startups with potential for strategic partnerships present their solutions to EPDK and ELDER at the Final Demo Day. This mark the completion of the first phase of the program.

The second phase serves as the cornerstone for the program's continuity. Due to the participating startups' varying stages of development and adaptation, many cannot finalize agreements by the program's end. However, given their future potential, these startups continue receiving post-program support through customer meetings, sales coaching, and investment processes. This ensures the sustained growth and development of these startups. Furthermore, this phase facilitates a more efficient utilization of resources from the previous year's cohort. While startups may have only been seen as "promising ideas" in the first year, by the second year, many are now positioned to address the challenges of organizations, conduct POC studies, or even engage in collaborative projects. Notably, only in 2024, startups participating in the program were introduced to 21 Electricity Distribution Companies (EDAS) which are members of ELDER, leading to 140 distinct connections. These introductions resulted in joint project proposals, POC initiatives, and sales, demonstrating the program's concrete impact. This success also contributes to the program's sustainability by providing motivation and necessary resources. As a result, the number of startups securing sales and establishing partnerships with EPDK & ELDER has tripled in the second phase. This advancement has also led to a structural evolution within the program, introducing a new dedicated category for late-stage startups. Focused exclusively on sales and collaboration, this new category within the program signifies the program's growth and the increasing maturity of its startups.

The third phase envisions the evolution of E-MAP into a broader ecosystem. To this end, a clustering model is employed, with the organization integrating into a group of late-stage companies within the energy sector, currently comprising 40 companies at similar or more advanced stages. In addition to the program's original participants, this cluster will encompass investor partners, public institutions, universities, and other key players within the sector. Rather than focusing solely on the challenges of individual organizations, the cluster will address more significant, sector-wide issues. A sustainable revenue model will be developed to ensure the ongoing viability of the cluster. As the inclusivity and benefits of the process expand, operational burdens and costs will be reduced. In the case of EPDK & ELDER, this clustering process takes place under the umbrella of ARI Sciencepark, involving companies within the Sciencepark and those from outside the region. A separate financial plan and budget have been established for the cluster, with a dedicated management board determining which institutions will join, what projects will be undertaken, and which collaborations will be formed. The Sciencepark supports operational activities, while inter-organizational collaborations are formalized through agreements. A self-sustaining and scalable structure is created by minimizing direct involvement from İTÜ ARI Sciencepark. Furthermore, the inclusion of global firms into this process mitigates the risk of the program remaining confined to a local scale, thereby paving the way for international collaborations.

CONCLUSION

Corporate startup collaborations are crucial in fostering technological advancements and supporting industrial-scale growth. However, standalone corporate acceleration programs often fall short in achieving sustainability and impact. The three-phase model developed at ITU Cekirdek provides a structured approach for corporations to maximize benefits while minimizing effort.

The capabilities of STPs, combined with lifelong startup support, structured tracking, and cluster formation, extend beyond traditional sectoral programs, creating a self-sustaining innovation ecosystem. By adopting this methodology, İTÜ ARI Sciencepark has successfully attracted new and long-term stakeholders to the entrepreneurship ecosystem, contributing to global economic and technological development.