



EMERGE Action Plan Izmir Region, TURKEY



Co-funded by the
Erasmus+ Programme
of the European Union

EMERGE Action Plan

Izmir Region, TURKEY

EXECUTIVE SUMMARY

A cross sectoral partnership involving 15 representatives of stakeholders from VET, HE, Engineering, enterprise and economic development sectors, drawn from public, private and non-profit organizations was found in Izmir, TURKEY in the leadership of Ege University. Until now, 3 plenary meetings were organized in the dates, 17.05.2019, 29.07.2019 and 04.10.2019. The partnership meetings were held to understand the needs of the project course and the platform. This Action Plan, include concrete individual and collective commitments to improving access and quality of support from the entrepreneurship education ecosystem for women in engineering.

INTRODUCTION –

The EMERGE (Empowering Female Engineering Entrepreneurs) project is an international project financed by ERASMUS+ program as a part of ‘Cooperation for innovation and the exchange of good practices’ key action. The project is implemented from the 1st of December 2018 to 30th of November 2020 in international environment of 6 Partners from Poland, Ireland, Turkey, Denmark and Norway (see figure 1).

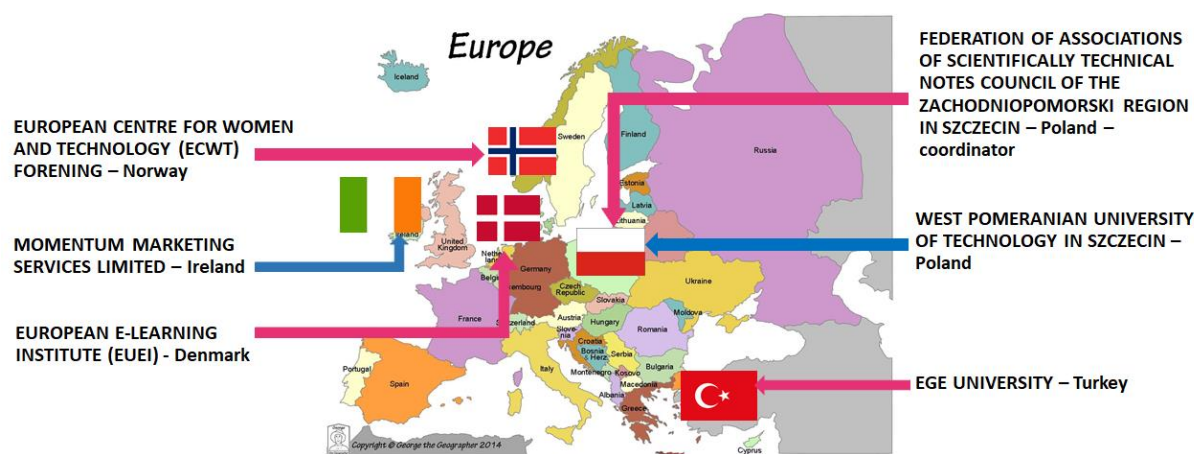


Fig.1 Partners of EMERGE Projects

The EMERGE project aims at increasing the number of female entrepreneurs working in engineering, as a result of improved access and quality of support from the entrepreneurship education ecosystem. To achieve this goal three main activities are provided:

- Establishing of 3 EMERGE Partnerships between actors in the engineering development ecosystem in Poland, Turkey and Ireland in order to share knowledge and practice,
- Development of a suite multilingual Open Educational Resources (OERs) for Vocational Education and Training & Higher Education (VET & HE) practitioners to update their knowledge and skills, and with an online course for female entrepreneurs, implementing the most recent pedagogic strategies,
- Implementation of an innovative apprenticeship-style learning placement framework for young woman with engineering start-up potential in high growth engineering Small & Medium Enterprises (SMEs).

The background of the proposed activities is focused on recognition and development of key competences in entrepreneurship for female engineers. The applied approach, to recognize and describe the needs on this field as well as to indicate solutions and best practices specific in different part of Europe, is focused on elaboration of 3 regional Action Plans in Poland, Ireland and Turkey.



Action Plan is a document resulting from formal and informal collaboration with stakeholders representing: Universities providing engineering fields of study, VET organizations providing entrepreneurship education, VET organizations providing engineering education, organizations providing social skills (including coaching), governments, entrepreneurship supporting organizations, venture capital, business angels, incubators/ TTOs and science parks, private trainers and consultants, employment agencies and entrepreneurs. It is dedicated to analyse the situation of women engineering entrepreneurship, identify learning areas needed to be increased and not covered by courses and trainings delivered by existing education systems and indicate learning objectives and pedagogical recommendations for innovative OER.

In accordance with applied methodology, to elaborate 3 regional Action Plans covering individual interests of EMERGE project goals, there were organized plenary and informal meetings letting to gather necessary information, including regional context and justification for learning pathways, for woman in engineering in Ireland, Poland and Turkey.

The conducted discussion and obtained guidelines were the basis to include in Action Plan:

- the knowledge areas to develop referring to woman engineers' entrepreneurship,
- the proposal of course curriculum range and pedagogical approach to answer the identified needs,
- the analysis of the education programs and opportunities in the region and outside the region taking into consideration the entrepreneurs education,
- the actions that could be taken in regions to increase the entrepreneurship attitudes,
- the potential perspective offered in region to finance and develop new business,
- the personal profile (persona) of typical woman engineer in relations to education level and needs.

This document is the Action Plan elaborated on the basis of information gathered in Turkey summarizing in two main sections the current problems in the field of woman engineers' entrepreneurship education as well as presenting the recommendations of possible actions that could be taken to improve this state of art. We encourage you to familiarize yourself with its content.

PART 1 – Regional Learning Framework

1.1.Context and justification for learning pathways for woman in engineering in the region

According to of Turkey Statistical Institute (TSI), data from the “2016 Women in Statistics” the employment rate in the population aged 15 and over in Turkey is 46.3%, this rate is 65.1% in men and 28% in women. While the labour force participation rate among the population aged 15 years and over is 51.3%, this rate is 71.6% for men and 31.5% for women.

The process of legitimizing the traditional roles starting in childhood continues in the selection of engineering training, during the training process and enter the labour market after graduation. The link between men with mathematics brings the perception that engineering is also a “natural choice for them. The engineering profession is identified with male gender roles. The engineer is considered suitable for men because it means problem solving, being good with machines. It is possible for women to insist on mathematics is mainly because the existence of a family that supports them, or if there is someone they can see as role models.

According to the statistical data prepared by the Council of Higher Education (YÖK) in 2016-2017; The total number of male students in the areas under the engineering and engineering works classification is 219.590, and the number of female students is 61.861 in Turkey. Women prefer certain engineering programs more. While the male engineering fields are mechanical, construction, electrical -electronics, petroleum and metallurgy, the female engineering fields are categorized as food, chemical and environmental engineering.

As we have seen women's employment in Turkey remain at a very low level. The male-dominated social structure in Turkey may cause barrier to women's entrepreneurship as well.



Izmir is the third largest city in Turkey with a population of around 4 million, the second biggest port after Istanbul, nearly half of its population is under 30. It has 8 universities and all of them have engineering programs.

Strategy for Improving the Izmir Entrepreneurship Ecosystem (document in Turkish available at <https://www.izka.org.tr/>) was prepared in 2012 in order to understand the potential of İzmir in the field of entrepreneurship, analyse its current situation and contribute to local innovation, economic growth and employment growth, Looking at the profile of entrepreneurs in the region, it is seen that there are much less female entrepreneurs than male entrepreneurs.

İzmir regional learning platform was established by Ege University partner of EMERGE project with the regional stakeholders given in Table 1. With those organizations, we have organized the first plenary meeting at 16th of May, Business Partnership Agreement signature ceremony at 2nd of July and second plenary meeting at 29th of July.

Table 1: Regional Learning Platform of Ege University, Izmir

Organization	Role
Batı Anadolu Sanayici ve İş İnsanları Dernekleri Federasyonu, BASİFED, http://www.basifed.org/	NGO, Industrialists and Businessmen Association
Ege Bölgesi Sanayi Odası, EBSO, http://www.ebso.org.tr/	NGO, Chamber of Industry
Ege İş Kadınları Derneği, EGİKAD, http://egikad.org.tr/	NGO, Business Women Association
Ege Teknopark A.Ş., http://teknoparkege.com/	Private, Technopark
Ege Üniversitesi EBİLTEM Teknoloji Transfer Ofisi, https://ebiltem.ege.edu.tr/	HEI, TTO
İŞKUR Bornova Hizmet Merkezi, https://www.iskur.gov.tr/	Public, Employment Agency
İzmir İş Kadınları Derneği, İZİKAD, http://www.izikad.org/	NGO, Business Women Association
İzmir Kâtip Çelebi Üniversitesi Teknoloji Transfer Ofisi, http://tto.ikc.edu.tr/	HEI, TTO
İzmir Sanayici ve İşadamları Derneği, İZSİAD, http://www.izsiad.org.tr/tr	NGO, Industrialists and Businessmen Association
İzmir Ticaret Borsası, İTB, https://itb.org.tr/	NGO, Commodity Exchange
Yasar Üniversitesi Bilgi ve Teknoloji Transfer Ofisi, https://btto.yasar.edu.tr/	HEI, TTO
Karsiyaka Sanayici ve İşadamları Derneği, KASİAD, http://karsiyakasiad.org.tr	NGO, Industrialists and Businessmen Association
NuvEGE, https://www.nuvege.org/	Private, Incubation Center
İşim Gelişiyor Derneği, http://isimgelisiyordernegi.com/	NGO
Nailtronics, www.nailtronics.com	Private, Startup

BASIFED, Western Anatolian Federation of Industrialists and Businessmen Associations, was established on 9 September 2003 in İzmir with the cooperation of 16 associations in a region covering the Western Anatolian region. Its mission is to develop cooperation in line with the needs of the business world and member associations, to produce regional and sectoral policies, projects, to carry out activities that will contribute to the development of members, region and country.



EBSO, Aegean Region Chamber of Industry established in 1954, the Aegean Chamber of Industry is the first and the only regional chamber and is active in 64 different industrial branches with a total active membership of around 4.500 companies. The Aegean Region Chamber of Industry, since its establishment, has been at the serving to accelerate industrial activities in the region, to extend technical assistance to entrepreneurs who intend to engage in industrial investments, to establish organized industrial zones and thus to serve regional and national economic development.

EGIKAD, Aegean Business Women's Association established by coming together with businesswomen who continue their active business life in the Aegean Region, especially in İzmir to support women who have entrepreneurial spirit with business ideas, but who need support to bring it to life, to search and create sources of funding for women who do not have sufficient resources. They direct the newly started women to export with activities such as collective participation visits to domestic and international fairs and to develop market areas, prepare projects to support women's entrepreneurship and education by benefiting from grant support programs such as European Union and World Bank. Bringing businesswomen delegations from abroad and within the country to Aegean business women to share information and develop collaborations with institutions and organizations around the world. It is aimed to transfer the experiences of businesswomen to women making various productions in their homes and encouraging them to become business women, enabling them to cooperate with business women in this process.

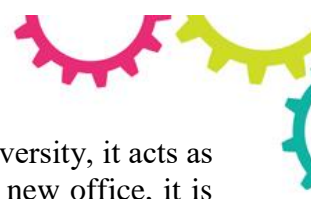
EGE TECHNOPARK is an important part of R&D assets of Ege University, started its activities with its first tenants in January 2015. Ege Teknopark aims to exploit the academic expertise and excellent research infrastructure of Ege University, together with its numerous research labs conducting a number of specialized R&D services including 160 accredited tests. Unique Pilot scale production and Clinical Research facilities available at twelve different academic units will provide an opportunity for the companies to further develop their proof of concepts.

ISKUR, Turkish Employment Agency obtained its establishment law through Turkish Employment Agency Law with the number 4904 which was adopted by Grand National Assembly of Turkey in 25.06.2003 and came into force by being promulgated in the Official Gazette with the date 05.07.2003 and the number 25159. Turkish Employment Agency established for aiding activities of protecting, improving, generalizing of employment and preventing unemployment, and for executing unemployment insurance services has obtained a structure that enable it to implement active and passive labour force policies alongside its classical services of finding jobs and employees within an extended mission area.

IZIKAD, Association of Business Women in Izmir established to create a cooperation and solidarity environment among women entrepreneurs in order to contribute in the realisation of a civilised, leader, modern, democratic, productive and science and expertise envisioned Turkey which acknowledges and appraises the economic value and contributions in production to be created by women as an individual and hence to empower existing women entrepreneurs, to increase their numbers in order to strengthen their position in business world.

EBİLTEM, Ege University Science and Technology Application and Research Center started operation as the first University-Industry Cooperation Interface institution of Turkey in 1994. The Center, with academic and professional staff all focusing on research, was established with an aim to strengthen R&D activities of the University and to encourage University-Industry Cooperation. Ege University was selected as one of the first 10 Universities among Turkish Universities within the scope of the TÜBİTAK 1513 Technology Transfer Offices Support Program in 2013 and it was granted with the honour to be supported for 10 years. EBİLTEM continues Technology Transfer Office activities with gradual improvement as of 2013 with an aim to efficiently execute services to put information and technology developed at our university into practice and to commercialize, to create cooperation between our university and industrial organizations as well as to facilitate development of information and technology required by the local industry at our university.

IKCU-TTO, Katip Çelebi University Technology Transfer Office established in 2014 provides communication and with domestic and international organizations and transforming information into practice



with the strength of the infrastructure and competent faculty staff of İzmir Katip Çelebi University, it acts as an effective interface organization in University - Industry relations. Although it is a very new office, it is expanding its scope with its patents and licensing supports as well as dozens of seminars, panels and conferences in its regional and national scale. In addition to the project support it offers, it is currently involved in two EU project teams as offices. It is the youngest but most dynamic technology transfer office of the entrepreneurship and innovation ecosystem of İzmir with its non-governmental organizations, chambers and associations, organized industrial zones and cluster formations, which has signed a bilateral cooperation protocol at national and international scale.

IZSIAD, İzmir Industrialists and Businessmen Association was established on January 20, 1992 by gathering the Industrialists and Businessmen in İzmir under one roof. It is a non-governmental organization aiming to develop and grow member companies by protecting the problems of their members. It works at local and international level for the integration of businessmen with the world economy. Provides training support to members to enhance productivity, competition, profitability, personal and corporate development.

ITB, İzmir Commodity Exchange was established in İzmir, the 3rd largest province of Turkey, in 1891 as the first commodity exchange of Turkey in order to handle the purchase and sales of the goods quoted in the commodity exchange market and to determine, register and declare the prices of those goods in the market. İzmir Commodity Exchange strives for enhancing foreign relations of member companies, by organizing participation to trade shows, announcing high-level delegation visits, bilateral meetings, country visits and reports; searching for grant programs and project calls and providing information regarding market access. It maintains close relations with the related Ministries, all public and private sector organizations and non-governmental organizations.

BTTO, Yasar University the Information and Technology Transfer Office manages the process of transforming information and infrastructure at Yaşar University into economic and social value. BTTO organizes conferences, courses, presentations, seminars and trainings for the purpose of transferring the knowledge produced at the University to the society; providing consultancy services, R & D projects funded by contract or grant supports jointly carried out with public and private sector organizations; patent, utility model and industrial design registrations; transfer and licensing of technology and spin-off and start-up companies.

KASIAD, Karsiyaka Industrialists and Businessmen Association is a voluntary non-governmental organization founded in 1992, gathering Industrialists and Businessmen aiming to ensure problems and solidarity between professions in Karsiyaka region.

nuvEGE, Incubation Centre providing end to end support for early stage startups focused on life sciences and hardware. It supports creation of high-tech startups with life science facility, machine shop, co-working space and 1-1 coaching & mentoring. It also delivers a tailor made program for each team; in short it works as one stop shop for promising, dedicated startups!

İsim Gelisiyor Derneği is an association established to organize mentoring and networking activities to its members by training, seminars and fairs on subjects that people who have established or plan to start their own business may need in business development processes.

Nailtronics is a hardware startup to develop a smart ring or artificial nail-based wearable device interface.

Problems observed in the region – results of individual interviews from İzmir Region

Following issues were discussed about the women engineering entrepreneurship with our stakeholders during the interviews;

- *The problems that the women engineers in our region face in their entrepreneurship journey.*
- *Entrepreneurial female engineers in the region to establish / conduct business face;*
 - a) *facilitators, such as State subsidies,*



- b) difficulties, such as society's view on women engineers,*
- c) other conditions such as official, legal, individual (prejudices, women's role in society, etc.)?*

As a result of the stakeholder interviews carried out within the scope of the EMERGE project, a number of findings were obtained regarding the current status of the women entrepreneurship ecosystem in the region.

- Individuality and extreme self-confidence cause weak cooperation and a resulting weakness of trust in joint business. In this framework, cooperation and joint business culture should be developed. Innovative acts generally develop collaboratively.
- Although female engineers do not experience problems in their working environments, the feedback we received shows that even though they have the same idea in decision-making mechanisms, the opinions of female engineers may not be as valid as male engineers.
- It is important to transfer practical training to application areas. In other words, after increasing the theoretical knowledge learned in training programs, it should be ensured that theoretical knowledge is put into practice by making matches with various entrepreneurs. For example, while male entrepreneurs can speak more easily in a company internship or job application, we have been informed that female engineers have difficulties in this regard.
- Informal education of Applied Entrepreneurship Trainings is organised with cooperation between KOSGEB and other organisations for the purpose of universalising entrepreneurship culture and entrepreneurs establishing their businesses based on a work plan. Regarding formal education, many universities offer, although in a scattered manner, courses regarding entrepreneurship.
- For the purpose of increasing the participation of entrepreneurs in national scale business plan competitions are being held by participation of universities, chambers and businessmen associations. Participation from Izmir to national business competitions, which are generally based in Istanbul, is quite limited.
- Although entrepreneurship is an issue in which many organisations have an interest, communication and cooperation between organisations are limited. The lack of a platform to bring together these organisations is felt.

1.2. Specific learning objectives for the Female Start-up in Engineering curriculum –

Following issues were discussed about the education of women engineer entrepreneurs with our stakeholders during the interviews;

- *The knowledge, skills and competences of a women engineer entrepreneur*
- *Innovative teaching models for entrepreneurship training for women engineers and available pedagogical methods.*
- *Necessary changes to education programs and trainings at universities to support entrepreneur skills of female engineers*

At first, it is important to analyse and find determine an entrepreneur woman engineer persona. For this aim, we used a Web2.0 tool to collect data by visualizing and increasing the effective participation. Therefore, Mentimeter which was an effective online tool for meeting our needs was created. All questions were added for gathering answers from all participant. They used their mobile phones to answer all question. They also see the results at the same time. We also had brief discussions for each question after finishing to answer for each question. As a result, we had the chance to combine their own answers by using Mentimeter and group discussions after completing their answers. This Figure below reflects both written and oral answers of stakeholders.



Figure 1: An entrepreneur woman engineers persona

As a result of the stakeholder interviews carried out within the scope of the EMERGE project, a number of findings were obtained regarding the training of the women entrepreneurs' ecosystem in the region.

- Entrepreneurial individuals should have similar competencies and skills in general. In addition to having technical knowledge about the sector they are aiming to establish their business, Entrepreneur candidates must have competencies such as Developing an Effective Business Model, Critical Thinking and Problem Solving, Leadership and Management, Communication Skills, Financial Knowledge (especially cash flows, break-even analysis, cost calculations etc.), knowledge of law and legislation related to her work
- Especially, if a job will be done for manufacturing, she needs to know;
 - I. Permits / licenses / documents / standards etc. required for the workplace.
 - II. Details of equipment required for manufacturing processes (machine capacities, technologies, etc.)
- She must have the knowledge for a realistic marketing plan (customers and competitors, gaps in the market)
- She needs general management skills (especially communication / negotiation / conflict management with staff), Creativity-innovation skills and Competence to use technological software / hardware / systems related to her job
- The most difficult part for entrepreneurs to manage starting up is in administrative and legal terms. Thus, at least as a road map, information about where to get information and where can be taught in universities.

1.2.1.Existing learning pathways

Education of women engineer entrepreneurs have limited existing learning pathways, however all those learning pathways are based on general skills to improve for engineer entrepreneurs.



Stakeholders mentioned that

- There are limited or no pathways to discover and learn new worlds needs and skills for women engineer entrepreneurs.
- Learning pathways for specifically women engineer entrepreneurs do not really exist, therefore it should be very well-set by teaching not only theoretically but also practically.

1.2.2. Skills and learning pathways gaps

During the interviews gaps to different skills and learning pathways were mentioned Those statements were sorted below.

- a. Finding strong partners to collaborate.
- b. Lack of taking risks
- c. Cultural enforcement.
- d. Social pressure
- e. Having leadership skills
- f. Digging funding options / Access to funding
- g. Limited network
- h. Limited knowledge on starting up their company
- i. Limited knowledge on legal procedures
- j. Not to believe in the necessity of mentorship
- k. Life-long learning of technical and technological skills

1.2.3. Proposed areas of learning objectives

The decision-making process was shaped by stakeholders' views. According to the stakeholders' replies to our interviews, the objectives as outcomes of the training were decided. At the end of the course, the trainee will be able to;

- have knowledge about their role in engineering education,
- know about the entrepreneurship roadmap to be followed in the field of in engineering,
- explain the relationships between the main approaches of entrepreneurship in the field of engineering,
- be aware of own competencies for entrepreneurship,
- decide her own roadmap on entrepreneurship,
- be a volunteer to participate in entrepreneurship activities and events,
- decide to use effective strategies in the real-life cases during their entrepreneurship voyage,
- define himself/herself as an entrepreneur and show consistent behaviours.

1.2.4. Innovative pedagogical approaches used and needed

According to interviews, stakeholder emphasized online learning as a pedagogical approach for training. They also mentioned;

- It should be supported by e-learning approaches.
- Virtual and augmented reality may be a part of the training.
- SCAMPER approach might be used for especially innovative and creative modules.
- Webinars, videos, workshops, mentorships, guidance and work coaches might be included as innovative pedagogical approaches.
- Good examples of and stories of women engineer entrepreneur who are active in different fields may be shown in videos.

They also highlighted that couple of contents to be needed. Those contents are listed below.

- Leadership Skills
- Strategic Planning Skills



- Financial Literacy
- Management
- Communication skills
- Marketing and Sales Management
- Cost Management
- Team building and recruitment techniques
- Information on Business Establishment

1.3. Policy recommendations regarding the introduction of innovative flexible pedagogical approaches –

In Turkey, entrepreneurship education is a part of Turkey Lifelong Learning Strategy Document and Action Plan (2014-2018) and social entrepreneurship was included in Turkey's Education Vision 2023, published this year. Thus, entrepreneurship educations are increasingly being added to the primary, high and higher education syllabi.

Below statements about Turkish entrepreneurship education and support mechanisms that include entrepreneurship education are taken from the Turkish Entrepreneurship Strategy & Action Plan (2015-2018):

For more information, please see;

https://www.kosgeb.gov.tr/Content/Upload/Dosya/Mali%20Tablolar/Gisep_2015-2018_EN.pdf

“Teacher Education: “Developing the Entrepreneurship Protocol” is signed on 25th January 2012 by the Ministry of National Education, Ministry of Science, Industry and Technology and TÜBİTAK in the extent of this protocol, 5 days long entrepreneurship, 2 days long innovation educations are given to the total 120 teachers and 4 Vocational and Technical Training Programmers at least from 1 of each city of 81. Educated teacher are missioned to educate the other teacher in their 39 cities.

Entrepreneurship training in higher education is run under the scope formal/organized education (entrepreneurship courses), non-formal education (KOSGEB trainings) and various projects. KOSGEB, as of year 2012, approves the entrepreneurship lessons/courses lectured in higher education institutions that are in accordance with the criteria determined by KOSGEB, as “KOSGEB Applied Entrepreneurship Trainings”, in line with the request of relevant high education institution. Therefore, those students who receive certificate by passing these lessons/courses, get the right to apply for “New Entrepreneur Support” of KOSGEB, when they start a business.

TÜBİTAK 1512 Progressive Entrepreneurship Support Program handled by TÜBİTAK, aims to support the activities right from the idea stage up to the market, in order for the entrepreneurs to transform their technology and innovation oriented business ideas into value-added and qualified enterprises with high potentials of employment generation, and, to create R&S intensive inception companies that are innovative with international competitive power, high level technology product and improvable process.

This program is composed of four phases, such as, training and improving the business plan intended for transformation of innovative business ideas into commercial product/process; capital supporting with no refund, additional R&S supporting and access to enterprise capital.

KOSGEB Applied Entrepreneurship Trainings are organised in order to spread out entrepreneurship culture and ensure establishment of successful enterprises through introducing entrepreneurs with work plan concept, and they consist of at least 46 hours of courses and 24-hour workshop in total, regarding 40 qualifications of entrepreneurship, developing work ideas, concept and elements of work planning. After putting into practice the partnership model improved by KOSGEB during 2010, spreading of entrepreneurship trainings all around the country was made possible.”

Among our regional partners, KOSGEB has a facilitating role as training and financial support for women engineers in starting their business. The extra support provided by support organizations to women entrepreneurs positively affected women entrepreneurship. It should be noted that increasing awareness on



these support mechanisms will need extra effort.

Following issues were discussed about the policy supporting innovative pedagogical approaches for women engineer entrepreneurs with our stakeholders during the interviews;

- *Necessary changes in the organizational and structural level in Turkey In order to support women entrepreneurs in engineering*

As a result of the stakeholder interviews carried out within the scope of the EMERGE project, a number of findings were obtained regarding the policy supporting innovative pedagogical approaches for women entrepreneurs' ecosystem in the region.

- For large scale companies in İzmir to play an encouraging and supporting role on entrepreneurship, they need to have the required information, awareness and take place inside networking structures. It is said those companies should offer inter positions to entrepreneur candidates.
- It is observed that interest towards entrepreneurship is growing within non-governmental organisations where businessmen associations and chambers actively participate, which bring together experienced businessmen and managers who may be mentor or investor, and lend a helping hand by giving counsel to new entrepreneurs, by aiding in their funding search, or by sharing new business ideas in İzmir. However, the mechanisms linking these businessmen and managers to entrepreneurs with whom they can become mentors or investors are lacking.
- Basic entrepreneurship education must be compulsory in all engineering departments within the university education programs. In addition, elective advanced entrepreneurship courses should be added for students who wish to do so.
- University compulsory internship program should cover all years of university education and training programs should be developed to enable successful examples of entrepreneurship to meet students more. Longer internship programs should be developed instead of short-term internship programs.
- Any training program is expected to guide and support the trainees for reaching;
 - a. Domestic and global finance
 - b. Internal / External Market
 - c. Consultancy
 - d. In-house entrepreneurship programs and training
 - e. Incentives and supports
 - f. Female employees to become shareholders
 - g. Mentor networks
 - h. Women entrepreneur portals
 - i. Success stories
 - j. Funding for commercialization of R&D outputs

PART 2 – Plan for actions

2.1. Implementation of policy recommendations in the regional context

Our plan with the regional partners is to conduct a needs analysis with them and determine the course targets, then those partners will be playing an important part in application phase. The methodology of the action plan is designed in Figure 2 below.

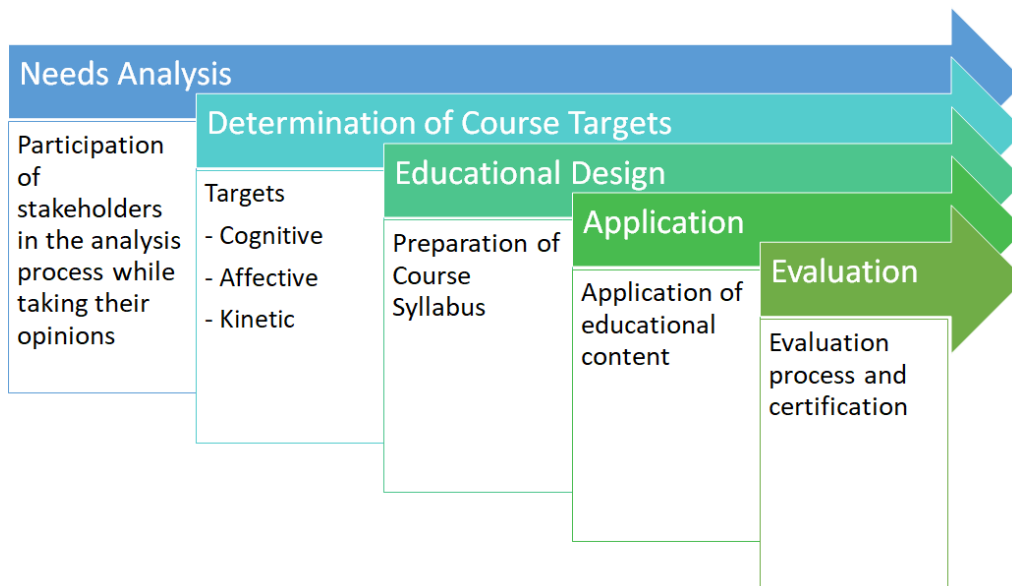


Figure 2: İzmir Regional Business Partners Plan for Action

2.3. Training targets & targeting

Until now, we have the feedback from the partners how they can be involved in the partnership with different goals. Our strategic partnership Canvas is still in progress, see Figure 3.

<p>To design a training program for women engineer entrepreneurs</p> <p>Increase networking in the ecosystem</p> <p>Improve the skills and competences of women engineer entrepreneurs in the region</p> <p>OUR INTERESTS</p>	<p>UN/ATTAINABLE OPPORTUNITY</p> <p>Entrepreneurship trainings, finding mentors, Support for international cooperation, Access to technical support oriented academics, Free patent search</p>	<p>Increased number of skilled (women) entrepreneurs in the ecosystem</p> <p>Increased collaboration with the education experts in terms of entrepreneurship</p> <p>THEIR INTERESTS</p>
<p>Skills and competences in terms of designing online courses</p> <p>Access to young trainee candidates in the ecosystem (graduates of engineering faculty)</p> <p>Experienced trainers</p> <p>OUR ASSETS</p>	<p>COMBINED ACTIVITY</p> <p>Mentoring services, facilitation of networking activities, promotion of their projects/ products and services, support to training activities and internship</p>	<p>Women engineers from the sector who can act as mentors</p> <p>Start-up companies for internship and training</p> <p>Experience in the sector</p> <p>THEIR ASSETS</p>

Figure 3: İzmir Regional Business Partners Strategic Partnership Canvas



ASSETS OF OUR PARTNERS

IZIKAD

Member institutions can provide mentoring support to entrepreneurs. They can provide internship support. IZIKAD may help finding individual entrepreneurship stories from the member institutions and publish them on the project website.

ESCON

Finding the right product in the right market is very important at these stages, in other words, it is very important to train people in the idea stage. It is very important that people question themselves not only technically but personally where they are in the future. It is important to have a technical academic and visionary approach. ESCON can help with training content related documents and finding companies for internships. The biggest trouble of an entrepreneur is to reach to investors. Leadership training is important for entrepreneurs. Trainings such as business plan creation, communication sales marketing and financial literacy are very important. ESCON may collaborate to support the training program in terms of these issues.

ITB

ITB already organizes project competitions and supports entrepreneurs who receive awards. There are some initiatives that have a very good project idea, ITB can help to direct those to industrialists for easy implementation in the agriculture and food sector. ITB has a good connection with media and may use social media effectively for dissemination of EMERGE.

ISKUR

ISKUR is organizing joint entrepreneurship courses with KOSGEB. They can provide consultancy activities. ISKUR has its own internship support. They can increase the recognition of our program. Women engineers, especially food engineers, benefit from these supports. In Turkey, ISKUR has about 4000 employees giving mentorship in human resources and support entrepreneurship.

BASIFED

They can give the greatest support in terms of internship. They can provide support to for dissemination. Cooperation with EGIAD is also possible. All associations have a total of 1200 members and can share the project materials with them.

With our business partners we have carried out interviews to find answers to questions for realizing our action plan to reach EMERGE goals

1. How can we help women engineers to do their jobs?

Women engineer techno-entrepreneurs can be supported, particularly in the field of appropriate business development mentoring, within the business plans (BASIFED and EGE TEKNOPARK). This mentorship is a field that can be supported due to our experience as a TÜBİTAK 1512 implementing organization. In addition, it can be directed and promoted to funds that support women's entrepreneurship. (EGE TEKNOPARK) Guidance on access to funding sources (Investor/Public Fund Presentation) may be provided for women engineering entrepreneurs (EBİLTEM). Mentoring in business modelling and operations follow-up (EBİLTEM, IZIKAD) design support for corporate identity and promotional materials in marketing processes (EBİLTEM).

İŞKUR provides additional pocket money to the workplaces with at least two employees within the scope of the “İş Başı Eğitim Programı” for 3 to 9 months provided that it is registered with İŞKUR and invests in occupational accident (Universal Health Insurance) insurance premiums. Subsequently, the current SSI can benefit from premium incentives. (İŞKUR)

As ITB, we provide information about the developments in legislation and inform about project calls in the agriculture and food sector. We provide trainings, seminars, and other similar supports in these areas.



2. *What are the short- and long-term goals of your organization in line with the need of women engineers to support entrepreneurship activities?*

The fact that Ege Teknopark TGB is a TÜBİTAK 1512 implementing institution, its experience enables it to support women's entrepreneurship in the short term in terms of mentoring and business plan preparation. In addition to such short-term support, this training and mentoring can also be provided to women entrepreneurs in the general context if appropriate funding programs are available and/or created. (EGETEKNOPARK)

İŞKUR organizes entrepreneurship programs open to all citizens already organized with KOSGEB and other partners and pays the educational expenses. (İŞKUR)

As İZİKAD, within the scope of our Young İZİKAD project for young girls studying at universities, we provide mentorship support with businesswomen who are members of the association and provide technical and personal development trainings for them so that they can become entrepreneurs. (İZİKAD)

We provide mentorship support with our member associations under the roof of BASİFED and provide technical and personal development trainings for them so that they can become entrepreneurs. (BASİFED)

The B2B commodity trading portal www.ecommoditybazaar.com, created by ITU, aims to enhance the electronic trading capacities of women entrepreneurs as well as all entrepreneurs in the agriculture and food sector. Women's entrepreneurship is supported by the activities of TOBB İzmir's Women Entrepreneurs Council whose coordination is carried out by our Exchange.

3. *What are the resources/benefits that the organization can bring to the process?*

The main source of resources for women entrepreneurs contributes to their inclusion in the techno-enterprise ecosystem. In particular, access to the necessary networks can be provided for investor and fund seeking issues. In addition, their activities such as events, competitions, fairs, etc. can be promoted. (EGETEKNOPARK)

Limited free use of desktop online applications that may be needed (ScreenoCast, Freepik, Flaticon, Doodle, Zoom, etc.) (EBILTEM)

We can support the sharing of problems and solutions that women entrepreneurs face in real life. (İZİKAD, BASİFED)

Infrastructure and organization support can be provided for promotional activities and meetings. Internship and mentoring support will contribute to the promotion of the program. (ITB)

4. *How can your organization support the following EMERGE Activities?*

Creation and dissemination of EMERGE training content:

This content can be supported by TÜBİTAK 1512 program experience. (EGETEKNOPARK)

Distribution in announcement channels (EBILTEM)

İŞKUR Business and Professional Advisers (all about 4000 staff in Turkey, nearly 250 staff in İzmir) inform citizens on basic issues such as Set Up Your Own Business and directs. Entrepreneurship programs are also within the scope of this orientation. With the implementation of EMERGE project and with the approval of



the authorities of our institution, the citizens can be informed in the form of verbal information, brochures, posters, prepared materials) to contribute to the dissemination and promotion of the project. (İŞKUR)

Within the scope of dissemination of training content, informing our members, announcements from our social media accounts and informative meetings for the target audience can be organized. (ITB)

Providing hands-on training for women engineers:

In particular, a special internship program can be created by using EBİLTEM business network. (EGETEKNOPARK)

Internship in incubation/techno park companies in related companies (EBİLTEM)

Internship opportunities can be provided from the member firms of TOBB İzmir's Women Entrepreneurs Board whose coordination is carried out by our Exchange and especially for engineering departments related to agriculture and food sector. (ITB)

Using and developing the EMERGE information platform:

Necessary announcements and information can be provided to our stakeholders regarding the promotion and dissemination of EMERGE program (EGETEKNOPARK)

Announcement, promotion, transfer to routing channels (EBİLTEM, ITB)

5. What can we do about the implementation of training activities and the use of the results?

We may include women engineers in techno-entrepreneurs operating in our field. Activities can be supported in the form of sharing experiences. We can also use the outputs of these training activities in our TÜBİTAK 1512 reports. (EGETEKNOPARK)

Monitoring of internship programs, prepare a joint (national or international) project (EBİLTEM)

We can support women engineers to share their experiences. We can evaluate the results together and benefit from our projects. (IZIKAD, BASİFED)

Cooperation can be made in training activities. In the trainings, exchange of experience of Exchange members can be organized. Mentoring support can be provided to the participants after the training. (ITB)

6. What problems are likely to be faced in the actual implementation of these activities?

Due to the unavailability of an office for rent in techno park area, there may be some physical shortages. In addition, there may be problems in finding companies for internships. In addition, there may be disruptions in finding and sustaining voluntary support. (EGETEKNOPARK)

Bureaucratic leave processes (trainee leave, employment, SGK, agreement etc.) (EBİLTEM)

Reluctance/ non-following participant (EBİLTEM, ITB)

Lack of participant competencies (EBİLTEM)