



türkiye ekonomi politikaları araştırma vakfı

İZMİR LOCAL ENTREPRENEURSHIP ECOSYSTEM STRATEGY DOCUMENT

FINAL REPORT DRAFT

October 2012

INTRODUCTION

This strategy document aimed at entrepreneurship ecosystem development in İzmir is prepared by Economic Policy Research Foundation of Turkey (TEPAV) Entrepreneurship Policies Workgroup (Ussal Şahbaz, Damla Özdemir, Beril Benli, Nihan Sırıklioğlu, Selin Kırıl).

The study was conducted by İzmir Development Agency Planning, Programming, Coordination Unit Director Sibel Ersin, Specialist Emine Özçelik and their team.

Related perspective obtained from a series of international entrepreneurship programs where TEPAV is either executive or partner is represented in the study:

- Global Entrepreneurship Program (GEP) which aims to improve relations of entrepreneurship ecosystems in developing markets with ecosystems in USA in partnership with US Department of State since June 2011,
- Regional Entrepreneurship Acceleration Program (MIT) conducted by Massachusetts Institute of Technology,
- AllWorld Turkey Fast Growth 25 project conducted in partnership with Harvard University,

Studies on ecosystems used as examples in USA were carried out in TEPAV's international entrepreneurship consultant Koltai&Co. by Steven Koltai, Vanessa Holcomb and Justin De Rise.

List of stakeholders who supported the study with their opinions are in Appendix 1.

TEPAV wishes this document to contribute in efforts on making İzmir a center of attention in entrepreneurship in coming years.

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LIST OF ABBREVIATIONS

USA: United States of America

Batı-BİNOM: Western Anatolian IT and Electronics Regional Innovation Centre

BİDEB: Science Fellowships and Grant Programmes Department

DPT: The State Planning Organization

EBİLTEM: Ege University Research and Application Center of Science and Technology

EGİAD: Aegean Young Businessman Association

GEDI: Global Entrepreneurship and Development Index

GEM: Global Entrepreneurship Monitor

İMKB: İstanbul Stock Exchange

ISO: İstanbul Chamber of Industry

İZKA: İzmir Development Agency

İZMİRSEM: İzmir University Continuous Education Center

İZTEKGEB: İzmir Technology Development Zone

KOBİ: Small and Medium Sized Enterprises

KOSGEB: Republic of Turkey Small and Medium Enterprises Development Organization

MIT: Massachusetts Institute of Technology

MÜSİAD: Independent Industrialists and Businessmen's Association

METU: Middle East Technical University

OECD: The Organisation of Economic Co-operation and Development

SGK: Social Security Institution

NGO: Non-governmental Organization

TEKMER: Technology Development Center

TEPAV: Economic Policy Research Foundation of Turkey

TDZ: Technology Development Zone

TOBB: The Union of Chambers and Commodity Exchanges of Turkey

TPE: Turkish Patent Institute

TÜBİTAK: Scientific and Technological Research Council of Turkey

TÜİK: Turkish Statistical Institute

TÜRKONFED: Turkish Enterprise and Business Confederation

UCSD: University of California, San Diego

UNCTAD: United Nations Conference of Trade and Development

YÖK: The Council of Higher Education

EXECUTIVE SUMMARY

This study proposes a strategic framework aimed at entrepreneurship development in İzmir in 2014 - 2018 Planning Period. The proposed framework focuses on establishment and growth of new enterprises with fast growth potential defined as scalable startup enterprises, other entrepreneurship types such as social entrepreneurship, corporate entrepreneurship and small enterprise entrepreneurship are out of the scope of the study.

Although a new policy field, entrepreneurship development is rapidly becoming a national priority. This prominent position of entrepreneurship development also acts as a basis on local development strategies.

In the study, framework conditions related to entrepreneurship development and local entrepreneurship ecosystem built on these conditions are examined in İzmir and goals are set in mobilizing the ecosystem swiftly.

Advantages and disadvantages of İzmir related to entrepreneurship framework conditions such as human resource, innovation infrastructure, economic activity and geographical - cultural conditions are listed below:

Advantages:

- İzmir has a strong human resource with above the average education. As well as residents of İzmir, this human resource also includes a strong diaspora spread out to important centers in Turkey and abroad.
- Being a historical trade center, İzmir has a wide economical base and trade culture.
- İzmir is distinguished Mediterranean city in Turkey, with its quality life style and open-minded cultural structure
- After İstanbul, İzmir is one of the most developed cities in Turkey in terms of transport connections with its airway, motorways and port.

Disadvantages:

- Due its historical development and current economical and social position in Turkey, İzmir is not a primary center of attraction like İstanbul.
- İzmir's performance on innovation infrastructure is relatively weak. In parallel, İzmir falls behind the country average in developing advanced technology sectors.
- The cooperation culture in İzmir is weak. Innovative activities usually evolve as individual attempts.

In this strategy document, instead of creating a Silicon Valley with large investments that will completely transform the framework conditions, analyzing different implementations in regions with

similar conditions and implementing the most successful and suitable for İzmir's ecosystem are aimed.

The analysis of the components of the ecosystem and its stakeholders can be summarized in the following way:

- The tools to detect entrepreneurs in İzmir are extremely limited. İzmir does not have an inclusive local – level business plan competition that would create a great impact. Furthermore, the participation from İzmir to nationwide competitions, which are generally İstanbul based, is highly limited.
- The chambers and associations that gather experienced businessmen or managers, who are potential mentors or investors, actively operate in İzmir. Likewise, the interest of NGOs towards entrepreneurship appears to be on the rise. However, the mechanisms that would link these organizations to entrepreneurs, who would need mentors or investors, are missing.
- The localities or the events that bring entrepreneurs in İzmir are also missing. The total number of entrepreneurs in TEKMER or Embryonix is as low as 27.
- There are certain stakeholders in the local media who are interested in the entrepreneurship. However, the access to the news about this certain topic is highly limited
- Even the potential of angel investors is high; the platforms that would discover and canalize these people do not exist.
- The trainings of KOSGEB about the applied entrepreneurship are highly frequent and widespread. There are also various universities which give courses about entrepreneurship, but it should be stated that these courses are not well established.
- There are various organizations who are interested in the area of entrepreneurship. However, the network and cooperation between these organizations are quite limited. There is an apparent need for a platform which would gather all these organizations together.

In order to analyze the applications in regions with similar conditions to İzmir; selected cities from USA - Seattle (Washington), Houston (Texas), Philadelphia (Pennsylvania), San Diego (California) and Portland (Oregon) - have been studied. These applications are analyzed and strategic objectives are set based on observations of İzmir's entrepreneurship ecosystem and framework conditions. With the implementation of highly effective strategic objectives that can quickly mobilize entrepreneurship ecosystem in İzmir, emergence of successful entrepreneurs is expected. And after these entrepreneurs becoming role models, the ecosystem will be able to self-support and accelerate.

The strategic objectives and goals are listed in the table below.

Strategic Objective	Goal
Amelioration of effective mechanisms for the detection of entrepreneurs	Organize a regional business plan competition in İzmir with a broad participation
	Increase the participation to national competitions
Strengthening the connections within entrepreneurs and between entrepreneurs and mentors	Organize events to bring entrepreneurs, mentors and investors together
	Create an entrepreneurship internet portal
	Turn İZTEKGEB business incubator into a center supplying the common inputs to the entrepreneurs
	Develop business accelerators such as EMBRYONIX
	Develop common workspaces and urban areas where these workspaces are concentrated
Ensuring effective implementation of celebrating entrepreneurship	Identify role model entrepreneurs
	Organize an annual entrepreneurship summit
	Increase awareness on entrepreneurship in local media
Amelioration of funding opportunities for entrepreneurs in İzmir	Carry out angel investor trainings
	Establish angel investor Networks
	Activate a seed fund to support business incubators, business accelerators and angel investor Networks
Improving entrepreneurship trainings	Standardize KOSGEB trainings
	Establish a consortium among universities to collaborate in courses and case studies
Establishing a dynamic setting for mobilizing stakeholders and implementing the strategy of developing entrepreneurial ecosystem	Establish İzmir Entrepreneurship Council
	Visit the ecosystem with the stakeholders
	Establish a mechanism to monitor and assess the entrepreneurship ecosystem

1. AIM, SCOPE AND IMPORTANCE OF LOCAL ENTREPRENEURSHIP ECOSYSTEM DEVELOPMENT STRATEGY

1.1. Scalable startup entrepreneurship

Entrepreneurship can broadly be defined as act of creating economical values through developing new goods, services, processes or markets. Within this definition, entrepreneurship can both be seen as launching a new business or within an existing business.

Global Entrepreneurship Monitor (GEM), the primary source of reference on entrepreneurship, defines entrepreneurship as “any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business.”¹.

This study only focuses on strategies regarding *establishing new businesses with fast growth potential*, described as scalable startup entrepreneurship. There is no international consensus on the definition of scalable startup entrepreneurship. OECD uses the term "gazelle" for enterprises with above the average growth rate and defines gazelles as "all enterprises All enterprises with age up to 5 years with average annualised growth greater than 20% per annum over a three year period and has at least 10 employees at the start of any observation period"². Entrepreneurs with growing businesses at these terms can be called scalable startup entrepreneurs. The definition of scalable startup entrepreneurship is not required to be based on strict numerical standards for two reasons: Firstly, it is hard to come to an agreements on the standards. Secondly, even if there is an agreement, there are no statistical resources open to public to measure the number of scalable startup entrepreneurs. Therefore in this study, a general definition of "entrepreneurs whose businesses grow above the average in a short period" for scalable startup entrepreneurs is taken into account.

Entrepreneurship types³ other than scalable startup entrepreneurship which some are listed below are out of the scope of this strategy:

- Strategies proposed in this study are aimed only for new businesses with fast growth potential. Therefore, establishing businesses that usually come out due to necessity, aiming only to employ small number of people such as the entrepreneur and his/her family, lacking the desire or the potential for fast growth; namely small business entrepreneurship is out of the scope of this study.
- Secondly, the proposed strategies are only relevant to establishing new businesses and their growth. Corporate entrepreneurship activities which take place within existing companies involving these companies establishing new enterprises or purchasing existing enterprises, are out of the scope of this study.
- Thirdly, the proposed strategies do not differentiate between profit oriented enterprises and enterprises with other social goals besides profit. In this respect, social entrepreneurship in

¹GEM (2011)

²OECD (2010)

³Blank, S. (2010)

which goals other than profit are considered as criteria for success, is within the scope of this study only to an extent where profit is considered as a criterion.

This limitation does not mean the above entrepreneurship types are unimportant. The reason for this limitation is the differences in development strategies regarding the scalable startup entrepreneurship and the ones that can be considered within the definitions above.

In the rest of the study, the term entrepreneurship stands for "scalable startup entrepreneurship", unless otherwise noted.

1.2. The scope of entrepreneurship development policy

Within public policies perspective, stages of scalable startup enterprises at which entrepreneurship development policy should focus on has to be decided. These stages that enterprises go through can be sorted in four parts:

- Startup stage: Stage where the business is still in the form of an idea, the entrepreneur intends to establish the business, he/she develops the business plan and founding team is formed
- Early stage: Stage where the product is prepared, prototype is developed, but the final product is not marketed to the customer
- Growth stage: Stage where the product is commercially marketed to customers, enterprise aims to increase revenue
- Advanced stage: Stage where the enterprise has a balance with net profit, the product is well established

Boundaries between these stages show differences over sectors and economies, and there is no international consensus on definitions. However, in order to simplify the analysis process, startup and early stages can be defined as the stage where the enterprise has no revenue; and growth stage can be defined as the stage where the enterprise makes no profit.

The focus of this strategy document is the entrepreneurs at startup, early and growth stages. Sustainance of competitive capacity and survival of these enterprises after reaching advanced stage are regarded as the subject for different policy fields.

A differentiation between small and medium sized enterprise (SME) policies and entrepreneurship policies has to be made in this study. It should be noted that differences between these policies are not well established in academic literature or political documents, domestically or internationally. On the other hand, the fact that Entrepreneurship Development specialization commission being founded besides SME specialization commission as a part of 10. Development Plan by Ministry of Development implies a tendency to differentiate between these policies in 10. Development Plan.

As SME policy focuses on economically important SMEs growth and survival, entrepreneurship policy focuses on emergence of new entrepreneurs, establishing and developing their businesses. Consequently three differences can be listed between entrepreneurship policy and SME policy:

- While entrepreneurship policy focuses on businesses that are either unestablished or new, SME policy focuses on all businesses of given sizes regardless of their age.
- Major focus of entrepreneurship policy is the entrepreneur, while in SME policy it is the business itself. As a result, entrepreneurship policy apply to potential entrepreneurs who do not yet have a business idea or SME owners as long as they have the potential to establish a new business.
- While entrepreneurship policy aims at the growth of businesses, SME policy involves the survival of enterprises of certain size as well.

Some public policies concern enterprises at any stage. Establishment permissions, construction permits, import and export permits, land registration, tax treatments, employment regulations, loan processes, investor protection and bankruptcy can be considered among policy areas regarding doing business.

At this point, difference and relation between entrepreneurship strategy and innovation strategy should be indicated. Majority of scalable startup enterprises emerge depending on innovations made in universities or outside universities. Therefore, it should be noted that innovation strategy and entrepreneur strategy substantially overlap (see Section 6.2). This entrepreneurship strategy document makes use of İzmir Innovation Strategy Document prepared by IZKA as well.

Since entrepreneurship policy is a newly thriving field, strategies aiming at entrepreneurship development can also be seen in documents on innovation. So among the 27 goals stated in İzmir Innovation Strategy, the ones related directly to entrepreneurship are as follows:

- İzmir Technology Development Zone's infrastructure will be improved, establishing specialized Technology Development Centers and business incubators in İzmir will be supported
- Capacity on building projects and entrepreneurship will be enhanced in universities and enterprises.
- Commercialization and patenting of research results will be encouraged in universities.
- Entrepreneur researchers will be supported on commercialization process of innovative ideas.
- Financial resources will be developed and encouraged for use.
- Technological entrepreneurship will be encouraged.

Entrepreneurship strategy document can be considered as an analysis on how to take action in order to accomplish these goals.

1.3. Economical importance of entrepreneurship

Economical impact of scalable startup entrepreneurs who grow their enterprises rapidly is fairly high disproportional to their number. Therefore entrepreneurship development is of high importance in economic development and employment increase.

From analysis of global data collected by Global Entrepreneurship Monitor (GEM), number of fast growing enterprises accounts for 4% of the total, but 40% of the total employment originate from scalable startup entrepreneurs as GEM surveys point out⁴.

In USA, two thirds of the total employment between 1980 and 2005 were provided by enterprises younger than 5 years. Taking into account that in this period enterprises older than 5 years had negative employment increase, essentially all of net employment increase in USA originate from enterprises that are 5 years old or younger⁵.

Unfortunately employment change analysis based on enterprise age and size has not yet been made in Turkey. A useful comparison in showing the effect of scalable startup entrepreneurship on employment is thus: Between 2008-2010 the net average employment per company in Turkey is about 1.5 persons. Consequently, the top 100 participant companies in AllWorld Turkey 25 competition organized by TEPAV, provided employment to 9189 people in the same period; in other words, 91 people per company. Therefore entrepreneurship development contribute to fields such as increasing number and quality of businesses which will probably be in strategic objectives in the upcoming period.

1.4. What kind of an entrepreneurship strategy?

It is observed that entrepreneurship activity is usually centered around a limited geographical area. The best example is Silicon Valley in California, USA, the heart of entrepreneurship on information technologies in particular⁶. Other top notch entrepreneurship centers in USA are Boston and New York. Outside USA Tel-Aviv (Israel) and Singapor are examples of cities with highly developed entrepreneurship.

In all these examples it can be seen that advanced entrepreneurship is centered in metropolitan areas. Several factors account for the close proximity of entrepreneurs⁷:

First of all, existence of common input elements needed by entrepreneurs are only meaningful economically when there is a certain number of entrepreneurs present. Among these inputs are financial resources such as angel investors and venture funds, and providers who support services such as law and accounting for new ventures. Besides, if a new venture fails, there are opportunities of finding employment in a different one, hence there is an increase in labor force willing to work for new enterprises instead of corporate or public companies.

Secondly, interactions between entrepreneurs are highly important in entrepreneurship development. Most entrepreneurs are influenced by ideas from other entrepreneurs and develop the ideas in collabration with other entrepreneurs. Successful entrepreneurs act as natural mentors for new entrepreneurs. In case of spreading the ideas, the role of physical proximity and physical mediums allowing random encounters are of high importance.

⁴ Endeavor (2012)

⁵ Kauffman (2009)

⁶ Saxenian, Anna L. (2001)

⁷ Gleaser (2009)

Thirdly, reaching to a certain level of customers with the new ideas the entrepreneurs have is only possible in metropolitan areas populated by customers open to new ideas. In other words, entrepreneurs are also consumers of each other's products. Hence in the product development stage; the product can be quickly presented to the consumers, tested and evolved according to the consumers' demands.

The goals on "creating a Silicon Valley in our region" is more frequently expressed in discussions on entrepreneurship development both in Turkey and abroad. This goal can have two outcomes: In the first one, there is an approach that states that re-creation of Silicon Valley is impossible, hence entrepreneurship development cannot be achieved everywhere and limited resources of the public should be used somewhere else.

The second outcome is major regional transformations taking place in the form of paradigm shift on entrepreneurship development with the help of large investments. An example is Biology Valley project started in 2004 in Malasia. Three ventures began operating within the same year the technopark built to attract life science entrepreneurs to Malasia with an 8 million squaremeters of physical space opened⁸. It has been seen that in USA, the increase in entrepreneurship activities in cities after the establishment of technoparks is no different than cities with no technoparks⁹.

It should also be noted that the strategies effective in making Silicon Valley an entrepreneurship center were from 30-50 years ago. Strategies on mobilizing entrepreneurship and solving the problems of an existent entrepreneurship ecosystem are different. Hence Silicon Valley does not serve as a model for entrepreneurship development in İzmir.

It is more useful to develop entrepreneurship strategy for İzmir based on best implementation examples other than Silicon Valley. It would be more appropriate to analyze different implementations in places with similar conditions to İzmir and base on the ones that are the most successful and suitable for İzmir. Therefore in the strategy document, cities from USA resembling İzmir in different aspects - Seattle (Washington), Houston (Texas), Philadelphia (Pennsylvania), San Diego (California) and Portland (Oregon) - have been studied and development of proposed strategical priorities are based on the implementations in these cities (Table 1).

Analysis of these implementations guiding this study is based on the ecosystem approach presented in Section 2. According to this approach, regardless of the framework conditions the ecosystem depends on, steps towards assembling the right stakeholders and targeting the critical parts of the ecosystem can have large impact on entrepreneurship development.

A leading example can be Seattle, on materialization of this approach: The major role of large innovation potential of Stanford University in making Silicon Valley an entrepreneurship center cannot be denied. MIT plays a similar role in Boston. In the secondary USA cities studied, Rice University in Houston, University of Pennsylvania in Philadelphia, University of California San Diego in San Diego are at the center of the ecosystem. However, despite the fact that there is no top ranking university in Seattle, the entrepreneurship ecosystem produced global enterprises such as Microsoft, Amazon and Starbucks.

⁸ Lerner, J. (2009)

⁹Walsten, S. (2001)

These successful enterprises from Seattle directly accelerated the ecosystem in the city. Entrepreneurship ecosystems can be mobilized through small number of successful entrepreneurs acting as both role models and leading as mentors and angel investors. This can be called "law of small numbers"¹⁰. In this study, a strategic framework is proposed which aims to produce fast success stories in a short time period and mobilize the ecosystem through leadership of these successful entrepreneurs.

Once mobilized, entrepreneurship ecosystem can operate on its own. Distinct pioneer entrepreneurs support new entrepreneurs as mentors, angel investors and role models, as well as establishing new ventures themselves. In case of İzmir, it can be seen in Table 15 that out of fastest growing entrepreneurs, 38 of them helped their employees in establishing new business. 37 of them plan to establish a new business.

This strategic framework to mobilize İzmir's ecosystem is not only a plan input, but it is expected to act as an İzmir entrepreneurship story. Presenting this story owned up by the public, stake holders and most importantly entrepreneurs to the public opinion can cause İzmir to be an important entrepreneurship center. As an outcome of the planning period, not only İzmir may become a city where only İzmir residents establish businesses, but also a city where entrepreneurs migrate to establish businesses.

In the second part of the strategy document, methodology is presented. In the third part stakeholders in the entrepreneurship ecosystem are introduced. In part four, entrepreneurship policies and goals from important national and international literature is discussed. In part five, current state of entrepreneurship in Turkey and Turkey's international position in the field is summerized. In part six, framework conditions are analyzed. In part seven, İzmir's entrepreneur profile is studied. In part eight, strategic objectives and goals are presented.

¹⁰Isenberg, D. (2012)

Table 1. Comparison of İzmir's Local Entrepreneurship Ecosystem to Selected Cities

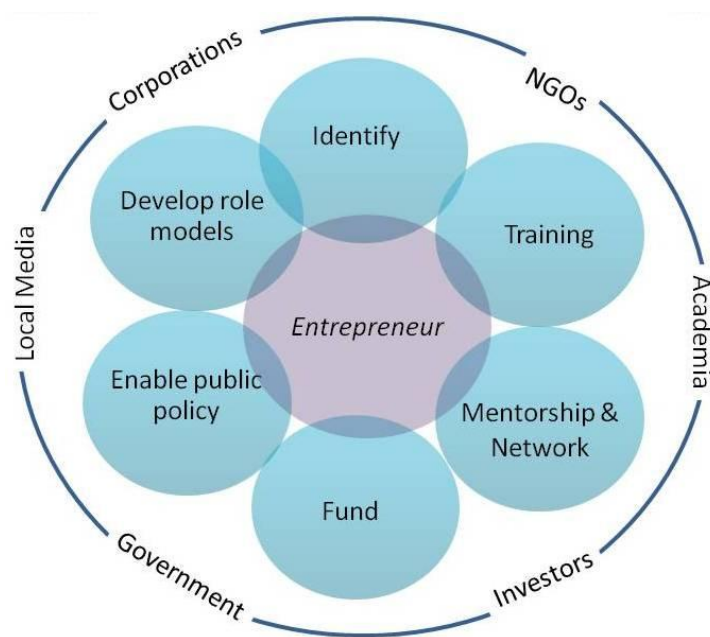
	Izmir	Istanbul	Seattle	Philadelphia	Houston	Portland	San Diego
Similarity to İzmir	-	-	No major research university is present	Sense of belonging	Major harbor city and similar order in size nationally	Open to innovation, modern values	Suitable climate, attractive city
Metropolitan population	3.6 million	13.4 million	3.5 million	6.2 million	6 million	2.2 million	3.1 million
Number of universities	9	43	5	10	5	6	8
Major local angel investor network	-	3	7	8	1	5	11
Number of venture capital funds	0	7	11	9	7	9	10
Leading incubators and business centers	KOSGEB TEKMERS, Embryonix	E-Tohum, Endeavor, Startup Factory, Gate, Inventram	TechStars, Microsoft Kinect, Microsoft Azure, The Bing Fund	University City Science Center, Innovation Philadelphia, Entrepreneur Works	Houston Technology Center	Portland Incubator Experiment, PDX 11, UP Hive	EvoNexus, San Diego Tech Incubator
Local business plan competitions		✓	✓	✓	✓	✓	✓

Source: TÜİK, Koltai&Co., TEPAV calculations

2. METHODOLOGY

Local entrepreneurship ecosystem analysis in this strategy document is built on 6 elements - 6 stakeholders model¹¹. In this scope, elements of the ecosystem and stakeholders with influence on one or more of the elements are divided into 6 categories each among themselves. As simply presented in Figure 1, these elements and stakeholders form a complex network, interacting with each other. Interaction of these 6 elements and 6 stakeholders provide a basis on establishment and growth of businesses.

Figure 1. 6 Element – 6 Stakeholders Model



Source: Koltai & Co.

6 elements 6 stakeholders model is built on the framework conditions forming the infrastructure of entrepreneurship ecosystem:

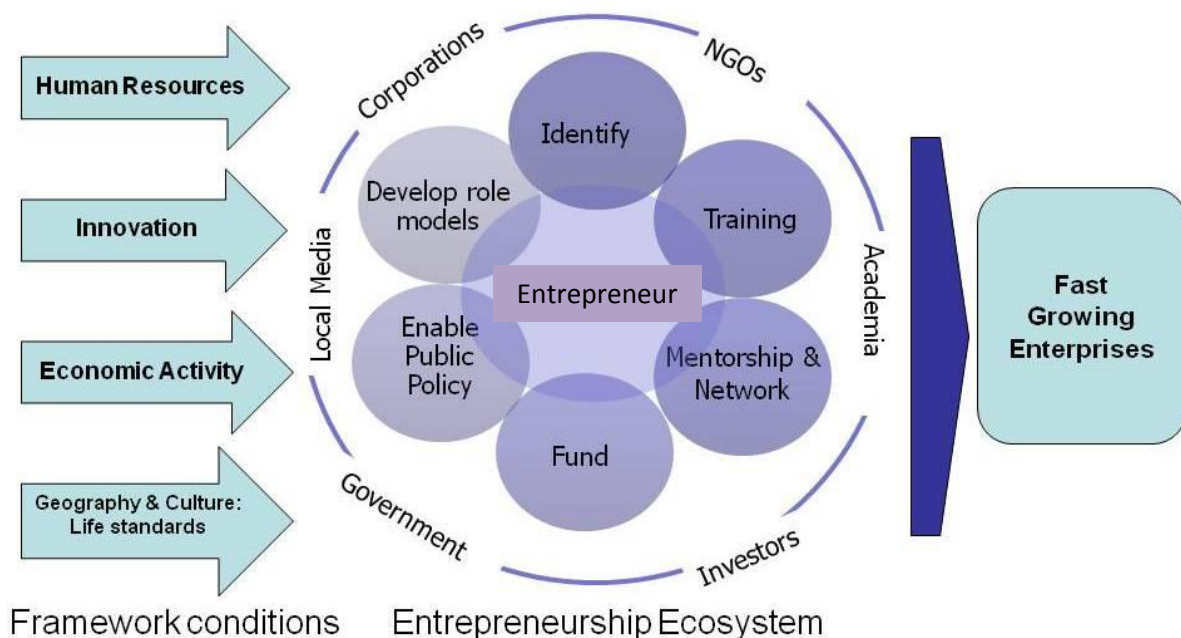
- Human resource: New business ideas usually come from the interaction of well educated individuals. After the establishment of the business, a well trained workforce is needed for growth.
- Innovation infrastructure: Innovation infrastructure is the source of new business ideas. In developed countries majority of the successful fast growing ventures depend on commercialization of products or processes developed in universities. Marketing and organizational innovations, which are nearly as important as product and process innovation but are usually ignored due to difficulties in evaluation, are also part of the entrepreneurship infrastructure¹².

¹¹ Koltai, S. (2012)

¹² OECD (2010)

- Entrepreneurial economic activity: Entrepreneurship development needs an advanced level of economic activity for both in terms of demand elements and finding sectors with opportunities. The economies where the majority of the sectors are open to small businesses with value chain of fast growth have especially more advantage in entrepreneurship than those economies where major sectors are those with critical scales of economy such as iron and steel or natural resources.
- Geographical and cultural factors: Entrepreneurship thrives in cultures where there is a tolerance for new ideas, failure is not condemned, sharing ideas and collaborating is normal. Creative individuals such as intellectuals, artists, engineers with entrepreneurs among them, prefer to live close together in places with these cultural parameters¹³. Positive climate conditions and transport connections also effect this decision of creative individuals. Hence geographical and cultural conditions start a cycle that feeds entrepreneurship.

Figure 2. Entrepreneurship Ecosystem and Implications within Framework Conditions



Source: Koltai & Co., TEPAV

Fast growing businesses emerge as a result of the operation of entrepreneurship ecosystem built on these framework conditions. As noted in Section 1, it is expected of fast growing businesses to have above the average impact on economic growth and employment increase.

Efficient operation of the entrepreneurship ecosystem depends on the strength of framework conditions. However ecosystem can still operate without the perfect assembly of all the framework conditions. The methodology in this strategy document focuses on the ecosystem rather than the conditions and proposed guidelines aim that the ecosystem can operate effectively regardless of the framework conditions. Analysis of framework conditions (Section 6) is carried out so that

¹³ Strangler, D. (2010)

ecosystem's position can be determined and followed up during the dynamical application of the strategies.

2.1 Elements of the Ecosystem

Detecting: In order to be supported by the stakeholders in the ecosystem, the entrepreneurs have to be detected first. This document not only mentions detecting entrepreneurs intending to grow their existing businesses but potential entrepreneurs whose businesses are still in the idea stage or those willing to be entrepreneurs but do not have a business idea. Detecting the entrepreneurs will allow them to be brought together with new mentors, investors and other entrepreneurs. Moreover, these entrepreneurs are the natural target audience for public grants.

The main instruments in detecting the entrepreneurs are business plan competitions. They can be organized locally or nationwide. Introduction processes of business incubators and accelerators, informal entrepreneurship education programs and entrepreneurship programs carried out by major companies can also be used in detecting the entrepreneurs.

Training: Entrepreneurship training supports individuals who have entrepreneurial talents and tendency to take risk from young age, on increasing awareness and gaining experience in developing business plans.

According to the scope, entrepreneurship training has two categories. The first is technical training given to an individual with entrepreneurial character. Technical training may involve administrative subjects such as budget, law; and development of business plans for the sustainability of the venture. The second kind of training is the one where development of such entrepreneurial character in the individual. Improving individuals' creativity, pushing to make them to think outside the box, making them gain courage to take risks and skills to make decisions in uncertain atmosphere all target the entrepreneurial character. One of the best examples is the training program provided by Babson College in USA.

Entrepreneurship training can be provided both in formal education institutes as a part of the curriculum and in informal education area in the form of training classes. The center of focus in formal education are universities which act as a source for many ventures.

Improving connections: One of the most important factors in growing the enterprises rapidly during the startup stage is entrepreneur's connections. In this respect, entrepreneurs should improve their connections with other entrepreneurs, mentors, investors and other stakeholders in the ecosystem.

Interactions between entrepreneurs provide opportunities for exchanging feedback for their ideas from each other, establishing new teams, finding employment for failed entrepreneurs, establishing new businesses or making investments for the entrepreneurs with grown enterprises. The main aspect of entrepreneur - entrepreneur interaction is entrepreneurs working in the same or similar physical spaces.

Entrepreneur - mentor interaction provides extending entrepreneurs' knowledge in order to make quick correct decisions in most uncertain settings in the startup stage. Mentors who are usually senior entrepreneurs or managers help new entrepreneurs by giving them counsel, occasionally

helping them find funding or providing them with new business ideas¹⁴. Mentors may also take part in increasing entrepreneurs' relations with investors, providers and other entrepreneurs¹⁵. Therefore, mentorship is essential in increasing the number of new ventures and ensuring their continuity.

Physical mediums that provide these interactions can be investigated in three categories:

- Business incubators, provide physical space and support services for potential entrepreneurs with a business idea. Entrepreneurs develop their business ideas with the support of mentor network around business incubators. Business incubators are usually situated in universities. Business incubators are mediums where business ideas usually evolve along with R&D activities and the founding team can change, and entrepreneurs may stay here for upto 3-5 years. Business incubators can also provide seed fund support for entrepreneurs. In many sectors, business incubators can host R&D based ventures.
- Business accelerators, unlike business incubators, accept entrepreneurs with a business plan, an existing founding team, who made certain progress in product development, and aim to make their product ready for marketing in short periods of time such as 3-6 months. Business accelerators provide intensive working environments, continuous mentorship and new connections support. Acting as an entrepreneurship bootcamp, business accelerators aim ventures to sufficiently grow to receive venture capital supports in this time period. Business accelerators usually provide seed fund support for entrepreneurs as well. Business accelerators focus on information technologies by nature.
- Common workspaces, unlike business incubators and accelerators aim only to bring entrepreneurs together in a common physical space. Additional activities aimed at entrepreneurs can be organized in these workspaces. The main goal of common workspaces is interactions between entrepreneurs in close proximity contributing to development of business ideas. In foreign examples, common workspaces are usually established by transforming an old industrial complex or an urban area into an entrepreneurship district through intensive promotion and encouragement.

The first two physical spaces above usually demand shares from ventures, and hire their services in exceptional cases. On the other hand, common workspaces usually hire their services.

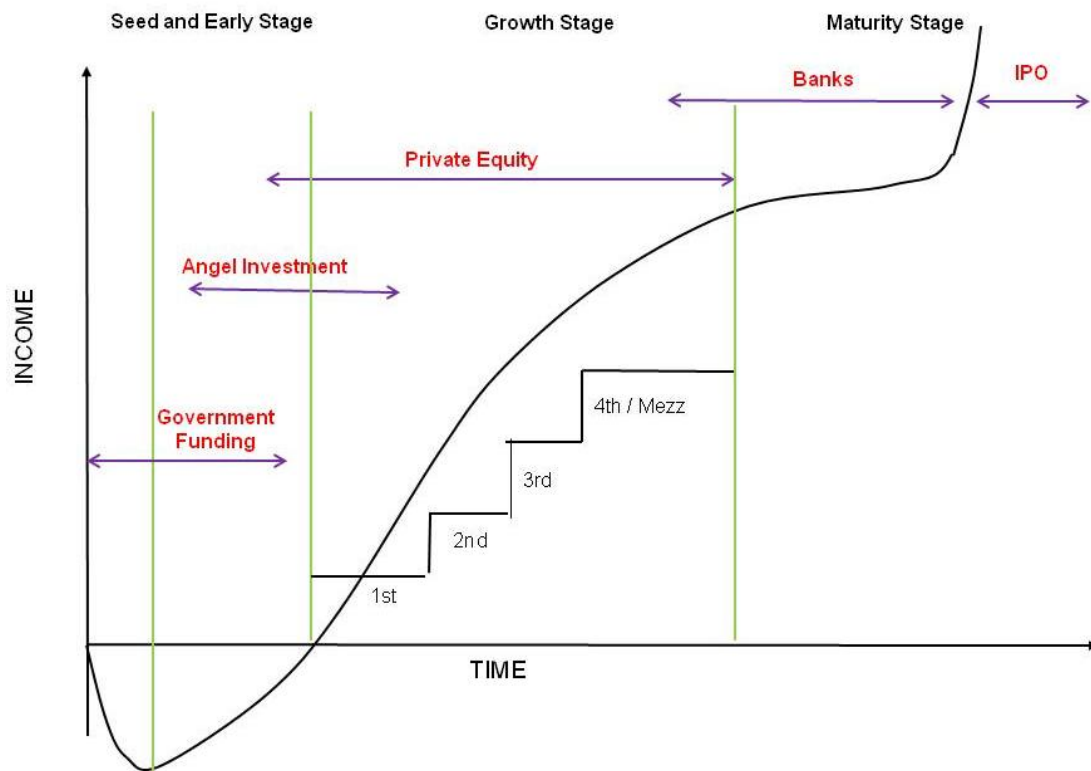
Regular activities and supplementary online portals are means to improve connections other than these common workspaces.

Financing: There are different kind of financing opportunities addressing needs based on the stages the entrepreneurs are in. Figure 3 shows that different investment opportunities may address the needs of entrepreneurs at all stages.

¹⁴ Lonsdale, C. (2011)

¹⁵ Lonsdale, C. (2011)

Figure 3: Financing Sources Based on the Stages of Enterprises



Source: TEPAV researches

Bank loans are usually used by enterprises at advanced stages as financing sources. The main reason is that the companies that currently turn a profit can deduct the interest payments from taxes. On the other hand, enterprises in the startup stage have difficulty in affording guaranty claims of banks, and due to limited income they cannot use the advantage of deducting debts from taxes. Therefore getting investment in exchange for stock is a more favorable option than bank loans.

Another funding resource for advanced stage is public offering. Enterprises can obtain financing through offering shares to public at a certain extent because they earn regular income at this stage. However, public offering is also financing option for enterprises in advanced stage.

Financial resources mainly used by enterprises in startup, early and growth stages are as follows:

- Public financial opportunities: Grants or loans given by various public bodies (Figure 4)
- Angel investor: Natural persons who provide capital as well as personal experience and relation networks to entrepreneurs in exchange for stock shares
- Venture capital: Funds that invest in early stage enterprises in exchange for stock shares, take part in administration, use funds gathered from investors, and return capital and profit to the investors after selling the shares

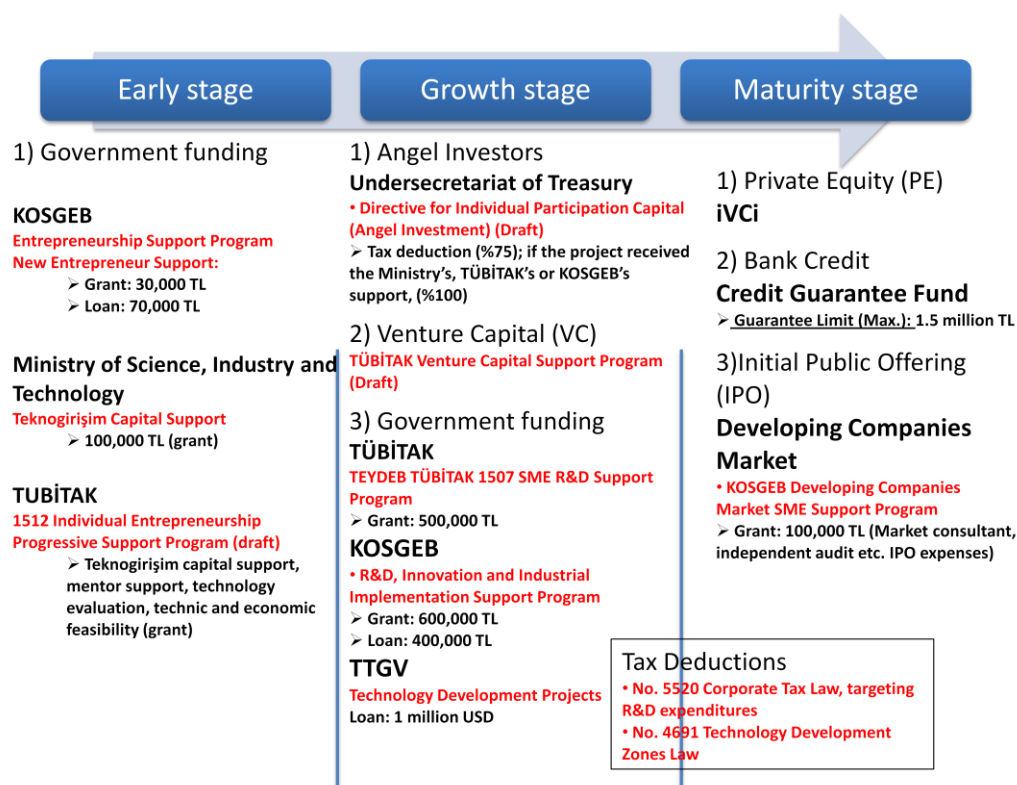
Among these opportunities, it can be said that angel investors are the most critical financial resource in local entrepreneurship ecosystems. Angel investors provide entrepreneurs experience and relation network as well as financing. In other words, angel investors provide "smart money".

Venture capitals usually invest in more advanced stage enterprises with respect to angel investors. Venture capitals focus on sectors such as information technologies, biotechnology, and medical whereas angel investments are spread to a broad spectrum of sectors.

Most importantly, like angel investments, venture capitals also usually invest locally. However, unlike angel investors, venture capitals are not geographically spread out. They are usually located in finance centers or primary entrepreneurship centers. As an example, 60% of venture capital investments in USA take place in Silicon Valley, Boston and New York. Hence venture capitals are not the most common forms of financial resources for fast growing enterprises. Only one fifth of the fast growing enterprises in USA receive venture capital investments¹⁶.

Another opportunity is the public grants and loans. Figure 4 shows the distribution of provided financial support by various public bodies over stages. These supports usually center around early and growth stages. While public support can offer solutions for financial problems of entrepreneurs, they do not provide experience and relation networks as angel investment.

Figure 4: Public financial resources in Turkey



Source: TEPAV, related public bodies

The importance of development of angel investors should be perceived along the lines that venture capitals would not invest outside primary centers. It has been seen that venture capitals consider these investments very carefully and the profit from these investments are higher¹⁷.

¹⁶Feld, B. (2012)

¹⁷Lerner, J. (2010)

Public policies for development of entrepreneurship ecosystem are also critical elements in entrepreneurship development in the region. General framework and scope of entrepreneurship development policies are discussed in section 1.2.

Celebrating of entrepreneurship: Another aspect of entrepreneurship development is making successful entrepreneurs known to public, honoring them and make them become a role model. Entrepreneurship culture is shaped by local characteristics of a region such as environment of trust, openness to collaboration and power distance. As entrepreneurship develops, it becomes a more attractive career choice. In a developed entrepreneurship culture, failure of the entrepreneur is accepted as well as success. In a successful enterprise story, the stages the entrepreneurs go through are as important as the success itself. Media activities, awards like "entrepreneur of the year" and entrepreneurship summits that will receive public attraction can be considered as activities to spread these cultural elements.

2.2. Stakeholders in the Ecosystem

Major companies which are local leading enterprises in private sector, essentially pose as important role models for entrepreneurs. Besides, major companies with entrepreneurial activities can bring out scalable startup entrepreneurs by organizing business plan competitions in their sector or across the region, invest in these entrepreneurs or buy their ventures (corporate venturing). Major companies also carry out their promotional activities by sponsoring events such as entrepreneurship training. While these activities can be treated as a part of corporate social responsibility, the major companies can also be interested in these new entrepreneurs' projects. Tracking new ventures is a strategic activity for major companies in order to keep up on new technological advancements. Therefore major companies can help the development of these enterprises by giving aids such as equipment support. Consequently, major companies are stakeholders with direct impact on almost all elements of the local entrepreneurship ecosystem.

Non-governmental organizations established to produce social benefits in certain areas, can support entrepreneurship with the aims to bring economical independence for some vulnerable groups or contribute to the regional development. In this respect, non-governmental organizations can effect local entrepreneurship ecosystem in many ways. They can have direct impact on local entrepreneurship ecosystem in numerous aspects such as detecting the entrepreneurs, entrepreneur and mentor training, creating networks, celebrating role models, providing entrepreneurs with financial support and lobbying for development of entrepreneurship policies.

Universities play a major role in local entrepreneurship ecosystem, especially in individuals choosing entrepreneurship as a career. Universities can offer the programs, courses or independent training for entrepreneurs aimed at developing skills in this field, developing business ideas and informing them on existing supports for their ventures. Besides, they can act as a bridge in moving from studentship to entrepreneurship by collaborating with business incubators and accelerators. Moreover, universities are at the heart of innovation ecosystem. Researches made in universities are the starting point of most business ideas. Another role universities play can be acting as a prestigious center of attraction for bringing entrepreneurs and stakeholders together for various activities.

Investors are stakeholders providing the vital support for ventures. Along with their obvious function as providing funding for entrepreneurs, they can also act as mentors. Using their experience and connections they can provide essential support to entrepreneurs. By this means, they can help entrepreneurs shape business ideas and business plans, and lead entrepreneurs to areas where they can use their potentials better.

The main impact of **public insitutions** on local entrepreneurship ecosystem is only developing good policies for bringing out scalable startup enterprises. They also support entrepreneurs by means of funding, training and providing connection opportunities with other stakeholders.

There are two important roles that public can play in entrepreneurship ecosystem: One is bringing stakeholders together by using convening power of the public. The second role is providing supports in limited and temporary programs such as tax exemptions for angel investor or business incubator programs in order to mobilize other players at points where the ecosystem needs triggering.

Local media is the most effective stakeholder in encouraging and celebrating entrepreneurship by creating role models from entrepreneurs in the local entrepreneurship ecosystem. Local media helps entrepreneurship gain acclaim by announcing success stories of the local entrepreneurs. It also encourages entrepreneurship by promoting entrepreneur role models. Aside from creating role models, local media can overcome lack of communication between stakeholders by promoting the local entrepreneurial activities. Therefore, local media is essential in creating role models and developing entrepreneurship culture locally.

2.3. Data Analysis and Evaluation

Sources of data used in the study are:

1. Quantitative data sources
 - a. Data on framework conditions obtained from public statistical sources
 - b. Data on entrepreneur profiles obtained from primary sources
2. Qualitative data sources
 - a. Data obtained from stakeholder meetings
 - b. Data obtained from interviews
 - c. Data obtained from other studies on İzmir local development strategy

Stakeholder meetings were held on 11 July 2012 in two groups. The first meeting participants are various entrepreneurs in İzmir, major companies, business incubators, business accelerators, R&D centers supporting entrepreneurs, and local media representatives. In the second meeting the participants were non-governmental organizations, public institutions and universities.

In the next stage, interviews with stakeholders in İstanbul, Ankara and İzmir were made. In the interviews made in İstanbul on 26-27 July 2012, information on entrepreneurship activities in İzmir was obtained from major companies, angel investors and associations interested in entrepreneurship nationwide. In the second round of interviews in İzmir on 6-7 August 2012, several institution activities were discussed and stakeholders previously unreached have been interviewed. On 16th August meetings were held in Ankara with Ministry of development and TÜBİTAK BİDEB entrepreneurship workgroup.

List of stakeholders contacted can be found in Appendix 1.

A report on the example ecosystems in USA is made by the international entrepreneurship ecosystem consulting firm Koltai&Co. Best implementation examples most fitting for İzmir's conditions have been presented after the analysis of the above mentioned data.

Based on the approach explained in this chapter, stakeholder mapping and analyses above, strategic objectives and goals are set.

3. İZMİR ENTREPRENEURSHIP ECOSYSTEM STAKEHOLDERS

As result of stakeholder mapping studies, stakeholders , operating locally and active within İzmir local entrepreneurship ecosystem in one or many of the elements are presented. The stakeholders, the elements they operate in and prominent activities are listed below.

Major companies

Most of the major companies in our country are situated in İstanbul. More than half of the companies listed in Fortune 500 are centered in İstanbul. Number of major companies located in İzmir is limited. Yaşar Holding is one of the oldest and most active private sector establishments in İzmir. All of their efforts in entrepreneurship are limited to activities of Yaşar University. Major companies such as Arkas Holding, CMS in automotive industry, Hugo Boss with its international connection network, TETRAPAK and Philsa can play important role in supporting entrepreneurship in İzmir. Beside these companies it is possible that many other major companies can support entrepreneurship in İzmir.

Also, although located in Manisa, Vestel can also take major part in the ecosystem. Vestel states that it receives quite a number of applications for projects, but could not consider them. Vestel has the potential to support entrepreneurs provided that a program in integrating entrepreneurs to the ecosystem of the company is developed.

Non-Governmental Organizations

Western Anatolia Industry and Business Association Federation (BASİFED): Has indirect effect on celebrating entrepreneurship and improving connection elements. Promotes entrepreneurship activities of many associations within. With Batı-BİNOM project conducted in association with TÜBİTAK, it brought new investors and corporate entrepreneurs together and received Project Development Award from TÜRKONFED for it.

Aegion Region Chamber of Industry (EBSO): Shows indirect effect on improving connections and training elements. It is among the co-founders of Embryonix business incubator and İzmir European Turkish Business Center Network (İzmir ABİGEM).

Aegean Young Businessman Association (EGİAD): Acts actively on detecting, training and improving connections elements. It planned a business plan competition in İzmir locally, as well as angel investor and mentorship training programs. It organized an Entrepreneurship Academy with KOSGEB where Applied Entrepreneurship Training is given.

Aegean Industry and Business Association(ESİAD): Acts actively in improving connections, training and celebrating entrepreneurship elements. Co-founder of Embryonix. It aims to raise awareness on entrepreneurship in İzmir by organizing "entrepreneurship week" activities. Also initiated entrepreneurship training programs given in private training institutions such as Işıkkent Training Campus.

Endeavor: Plays active role in improving connections, detecting and celebrating entrepreneurship. It brought out four scalable startup entrepreneurs in İzmir and promoted them as Endeavor entrepreneurs internationally. It works on improving international connections of these entrepreneurs.

Junior Achievement Education Foundation: Important stakeholder in training and improving connections. Some of the nationwide competitions it organized were held in İzmir. Successful entrepreneurs are sent to Boston, USA.

Young MÜSiAD: Important stakeholder in celebrating entrepreneurship, training, improving connections and detecting aspects. It organizes national entrepreneurship congress annually. Brings out scalable startup entrepreneurs with Best Young Entrepreneur competitions as well as supporting Applied Entrepreneurship Training program. It holds local entrepreneurship clubs and fairs.

İzmir Craftsmen and Tradesmen Chamber Union (İESOB): Stakeholder active in training element. Supported Applied Entrepreneurship Training program organized with KOSGEB.

İzmir Chamber of Commerce: Active stakeholder in improving connections and training. Aside from being co-founder of Embryonix, it also supported Applied Entrepreneurship Training program organized with KOSGEB.

Leading Creative Participants Association (Liyakat): Stakeholder effective in training and detecting elements. Alongside with Entrepreneurship Campus organized with Ege University, "Labor is ready, come and enjoy" project aims young female entrepreneurs receive entrepreneurship training. It also plans to organize a business plan competition with Ege University.

Social Welfare Foundations (SYDV): Entrepreneurs can receive funding from SYDVs within the scope of support given by civilian authority initiatives. It has been learned that funding was received this way for "Bold Entrepreneur Program" in Balçova. Although these funds are used to support small business entrepreneurship, it is possible to use them for scalable startup entrepreneurship.

The Union of Chambers and Commodity Exchanges of Turkey İzmir Young Entrepreneurs Council: Effective in improving connections. It is currently working on assembling all entrepreneurship clubs in İzmir. Nationwide it closely follows the activities of TOBB Young Entrepreneurs Council.

The Union of Chambers and Commodity Exchanges of Turkey İzmir Female Entrepreneurs Council: Effective in improving connections. It is the first female entrepreneur council to conduct the "Female Entrepreneurship e-trade Project" aimed at female entrepreneurs creating sales opportunities with e-trade by an online platform, and supporting these entrepreneurs become widespread and internationalized.

Technology Development Foundation of Turkey (TTGV): Operated in İzmir in detecting, training and celebrating entrepreneurs. Innovative entrepreneurs from İzmir were awarded Technology Awards and Congress. Also, it conducts training programs on sustainable entrepreneurship in the region.

Universities

Dokuz Eylül University: Effective in improving connections and training. Technology Development Center (TEKMER) within provides ample opportunities for entrepreneurs. Alongside Applied Entrepreneurship Training in partnership with KOSGEB, it also provided Technology Based Entrepreneurship Training.

Ege University: Active in improving connections, detecting and training entrepreneurs. It hosts a TEKMER and Ege University Research and Application Center of Science and Technology (EBİLTEM).

It plans to organize a business plan competition with Liyakat Association. It contributed to the organization of İzmir Entrepreneurship Summit in the last two years. It took part in organization of Applied Entrepreneurship Training with KOSGEB and Entrepreneurship Campus with Liyakat Association. It offers elective courses on entrepreneurship for students. It also conducted

Gediz university: Effective in improving connections and training. It signed a protocol with KOSGEB for establishing a TEKMER. It offers elective courses on entrepreneurship for students. It also provided training on business planning with "Create Your Own Brand" project. It also organized Applied Entrepreneurship Training with KOSGEB.

İzmir University: Effective stakeholder in training. Continuous Education Center within offers İZMİRSEM Entrepreneurship Training classes.

İzmir Economy University: Effective stakeholder in improving connections, training and detecting. It hosts Embryonix, the only business accelerator in İzmir. Embryonix participates national business plan competitions in order to promote its entrepreneurs. Besides participating in Applied Entrepreneurship Training program with KOSGEB, it also offers elective courses on entrepreneurship for students.

İzmir Institute of Technology (İYTE): Effective stakeholder in improving connections and training. It hosted techno-entrepreneurship training programs organized by İZTEKGEB as an activity of universities platform. It plans to establish a business incubator under the guidance of İZKA.

Kâtip Celebi University: Effective stakeholder in improving connections and training. A protocol has been signed to establish a TEKMER. It also conducts studies in order for the graduates to gain entrepreneurial boldness.

Yaşar University: Effective stakeholder in improving connections and training. It signed a protocol to establish a TEKMER. It also offers elective courses on entrepreneurship for students.

Investors

There is no venture capital funds established in İzmir. In Turkey, there is very few venture capital funds, all of which are based in İstanbul. Among these are 212, Earlybird and Golden Horn Ventures. Venture capital funds assemble under TOBB Venture Capital Sector Assembly.

Angel investment, which is emphasised in Section 2 in order to develop early-stage entrepreneurship locally, is a newly developing area in Turkey. Galata Business Angels, which is Turkey's first and most active network, made eight investments in 2011 in total. There is less than five active networks in İstanbul. In Ankara METU Business Angels is still trying to organize within technopark and business plan competition of the university and not active yet.

In İzmir there is no active angel investor network. The only attempt on create an angel investor network is efforts on establishment of Aegean Angel Investor Association organized around İzmir Chamber of Commerce and İzmir Technology University. It should be noted that two of the founders of the Turkish division of one of world's leading angel investor networks Keiretsu Forum, which was established in İstanbul in September 2012 are Alphan Manas and Bülent Akgerman, who are businessmen from İzmir. Keiretsu Forum aims to establish an active presence in İzmir.

Public Institutions

KOSGEB İzmir South and North Service Center Directorates: Effective in improving connections and providing funding to entrepreneurs. They are local stakeholders with active roles in distributing KOSGEB grants to the entrepreneurs, along with operating TEKMERs and carrying out Applied Entrepreneurship Training programs.

Municipalities: The leading municipalities in entrepreneurial activities are Konak, Bornova, Karşıyaka and effective over a large region İzmir Metropolitan Municipality. Municipalities are active stakeholders in training and improving connections. Along with the Applied Entrepreneurship Training program with KOSGEB and universities, they also conducted training programs in Youth Assemblies under City Council and helped young entrepreneurs receive internationally valid certificates. Bornova Municipality has finished the feasibility studies with İZKA in order to establish a Business Development Center (İŞGEM).

Local Media

Gözlem Newspaper: Effective in celebrating entrepreneurship. Publishes a supplementary named "Woman In Business" with news mostly concerning female entrepreneurs.

Ege Telgraf Newspaper: Effective in celebrating entrepreneurship. Follows and reports entrepreneurial events and activities in the region frequently.

Yeni Asır Newspaper: Effective in celebrating entrepreneurship. Follows and reports entrepreneurial events and activities in the region frequently.

These local newspapers are operate actively in the entrepreneurship ecosystem. On the other hand, İzmir has other local media organizations that can participate more actively in entrepreneurship ecosystem.

İzmir Development Agency (İZKA)

Since entrepreneurship ecosystem is a local concept and holds an importance in regional development, development agencies are important actors in developing these ecosystems. In this respect, İZKA is important as a collaboration platform for the stakeholders in the ecosystem. İZKA supports act as important means to ecosystem development by maximizing the collaboration between stakeholders and catalysing activities with high impact on the ecosystem.

GENERAL EVALUATION

- İzmir is a place where business associations and chambers which assemble potential mentors and investors actively operate, and non-governmental organization show increasing interest for entrepreneurship.
- A number of universities offer courses on entrepreneurship, although disorganized. Also KOSGEB's entrepreneurship trainings are common.
- Local media includes stakeholders interested in entrepreneurship
- Although numerous institutions are interested in entrepreneurship, communication and collaboration between them are limited. There are two platform that assemble these

institutions. The lack of a platform especially to connect businessman associations and chambers together with entrepreneurs is of notice.

- There is no angel investor network or any other platform to organize investors.
- Since the number of major companies in İzmir is small, the contribution from this stakeholder group is limited.

4. ENTREPRENEURSHIP IN UPPER SCALE STRATEGIES

4.1. Entrepreneurship in International Organization Documents

As previously stated, entrepreneurship is a newly developing policy field. Hence the related policy documents are fairly new. Information on some documents released by international organizations UNCTAD, OECD and World Bank all of which Turkey is a member, are given below.

UNCTAD Entrepreneurship Policy Framework and Implementation Guidance¹⁸ published in 2012, guides policy makers in designing entrepreneurship policies and designating strategies. In the guide it is expressed that as a result of accelerating social and technological progress, policies for increasing economical growth and increasing establishment of new enterprises to create new employment opportunities should be the main elements of development plans. The guide also underlines the importance of designing entrepreneurship policies regarding the country's own needs and conditions.

In the 2010 OECD report " High-Growth Enterprises: What Governments Can Do to Make a Difference"¹⁹, structures of fast growing enterprises and policies in this field in OECD member countries are examined. The report indicates the subjects to be taken in consideration in designing policies for fast growing enterprises. The need to remove the bureaucratic obstacles against development in business environment and to incentivize entrepreneurial attitude in order to increase the number of fast growing enterprises is stressed. The report expresses the importance of training programs where entrepreneurs can remedy their technical, financial or administrative weaknesses. It also indicates that increasing financial opportunities will help mobilize individuals with entrepreneurial passion. It also suggests entrepreneurship policies should include usability of intellectual property as guaranty and supporting innovative and internationalizing activities.

The reports show that among all the OECD members, Turkey has the most SME incentive program. The report states that Turkey has 39 different incentive program for entrepreneurs, 24 of which aiming SMEs. While the importance of KOSGEB support programs emphasized in this respect, it is also noted that procedures for establishing a business has become extremely easy and the time to open a business decreased down to just 1 day. The report also presents hypotheses on the current condition of entrepreneurship ecosystems based on the analyses performed in countries such as Latin America, Canada, Japan, Czech Republic and Italy.

World Bank gathered data to illustrate the entrepreneurship situation in 2010 and made a detailed analysis. As a result of the analysis, investment state and problems in establishing new enterprises in countries are indicated and solutions were proposed²⁰.

4.2. Entrepreneurship in National Strategy Documents

Entrepreneurship was subject to various strategies and goals in the Ninth Development Plan (2007-2013). Among these strategies are making entrepreneurship training widespread, encouraging

¹⁸ UNCTAD (2012)

¹⁹ OECD (2010)

²⁰ WBGES (2010)

entrepreneurship with technology development purposes, incentivizing entrepreneurship and improving means for accessing financial opportunities in rural and underdeveloped regions.

"Specialization Commission for Entrepreneurship Development" is one of the operating Specialization Commissions established within the framework of preparatory work for the Tenth Development Plan (2014-2018). Being the first in this field, the commission will present evaluations based on examinations focusing on implementations of the planning period (2014-2018) regarding the long time period.

Another strategy document on the subject of entrepreneurship is 2011-2014 Turkey Industrial Strategy Document. The three main strategies proposed in this document are increasing the role of enterprises that can constantly develop their skills in the economy; increasing the impact of middle and high technology sectors in production and export; and opting for high added-value products in low technology sectors. The main industry policy priorities related to entrepreneurship to reach these are providing SMEs and entrepreneurs with training and consulting services in order to improve their competitive capacities; increasing productivity of these companies; supporting activities on establishing and developing businesses; and establishing an "Entrepreneur Information System" in order to enable investors to make correct decisions.

2011-2013 SME Strategy and Action Plan where 2011-2014 Turkey Industrial Strategy Document acted as a reference expresses the importance of entrepreneurship in main strategy areas. One of the 5 strategy areas in this document is development and support of entrepreneurship.

Aside from these plan and strategy documents indicating entrepreneurship development as a strategic objective, strategies designed to develop human resource in Turkey also aim to increase the number of entrepreneur individuals. 2011-2016 Science and Technology Human Resource Strategy and Action Plan by TÜBİTAK recognizes making Turkey a center of attraction for qualified human resource and in this respect developing innovative and entrepreneurial mentality as priorities. Turkey Higher Education Strategy prepared by YÖK in 2007 aims to provide entrepreneurship skills as well as business skills in training programs conducted by Applied Higher Education Institutions.

The place of entrepreneurship in the upper scale strategies given above is summarized on Table 2.

Table 2. Entrepreneurship policies in upper scale strategies in Turkey

Related upper scale plan / document / strategies	Axis of development / Strategic goal	Priority	Goal
DPT, Ninth Development Plan Strategy(2007-2013)	Employment Increase	7.2.3. Development of Active Workforce Policies	579. Employment finding services will be provided to more people and the quality of these services will be improved. Active workforce policies will be extended by means of workforce education and vocational training which are primarily entrepreneurship and employment guaranteed programs, vocational consultancy and guidance and training seminars in enterprises. Active workforce programs will be organized based on needs analysis of labor market.
	Strengthening Social Development and Solidarity	7.3.3. Improving Income Distribution, Social Involvement and Fighting Against Poverty	620. Projects aimed at diversifying economical activities for poor communities will be supported. Entrepreneurship will be incentivized especially in rural and underdeveloped regions.
Republic of Turkey Ministry of Science, Industry and Technology, 2011-2014 Turkey Industry Strategy Document	Increase the role of (strong) enterprises that can continuously develop their skills in the economy	Improving Investment and Business Environment	Training and support will be provided for spreading entrepreneurship in industry sector.
		Application, Follow up and Coordination Mechanism	Entrepreneur Information System will be developed
KOSGEB, 2011-2013 SME Strategy and Action Plan	Supporting and development of entrepreneurship	1.1. Spreading the entrepreneurship culture to the whole nation and improving the entrepreneurial environment to an level comparable to developed countries	Increasing the importance of subject of entrepreneurship in education syllabus, Performing activities such as competitions, awards,promotion in order to encourage entrepreneurship, Establishing structures like "Entrepreneurship Councils" in order to increase the collaboration between institutions.
		1.2. Helping the growth of new enterprises by providing workspaces, office	Developing and spreading incubation services and startup stage supports, Providing training, consultancy and guidance for entrepreneurs with new enterprises

		services, training and consultancy to entrepreneurs	
		1.3. Supporting special target groups in overcoming obstacles in business establishment and establishing their businesses	Providing training, consultancy and guidance for special target groups
TÜBİTAK, 2011-2016 Science and Technology Human Resource Strategy and Action Plan	Improving the Science and Technology Human Resource and Sectoral Distribution	1.1. Guiding young people to R&D fields	Adding project oriented science and technology courses to the primary and secondary education syllabus, increasing curiosity, educating creative and entrepreneurial minds
YÖK, Higher Education Strategy	Re-association of College and Vocational School Programs in the Higher Education System of Turkey	Establishing an Applied Higher Education Institution (AHEI) unit	Association of AHEIs with national employment action plans, similarly providing not only business skills but also entrepreneurial skills in education programs of AHEI

4.3. New Implementations in Entrepreneurship by Central Administration in 2012

Entrepreneurship Council

The council established by the Ministry of Science, Industry and Technology primarily aims to develop entrepreneurship ecosystem and spread entrepreneurship. The council consists of 32 institutions including related ministries, public institutions and non-governmental organizations.

Change on TÜBİTAK Act

Some changes have been made to "Act on Establishing Science and Technology Research Institution of Turkey" with no. 278 and date 17/07/2012, with "Amendments on Some Laws and Decree Laws" with no. 6353 on 4 July 2012. In this act, TÜBİTAK is given the duty to establish the communications between all national actors and providing entrepreneurs with the needed means in order to develop entrepreneurship ecosystem.

The institution is highly authorized in increasing entrepreneurship such as in going into a partnership with startup and early stage enterprises, supporting cooperation and clustering activities, organizing fairs, activities and competitions, making financial supports without demanding guaranty, providing

consultance and mentorship services, establishing business incubators and technology centers, establishing domestic and foreign venture capital trusts and participating in them. TÜBİTAK will compile entrepreneurship supports under a package program titled 1512. Secondary legislation related to these activities has not yet been completed.

TÜBİTAK also started a comprehensive study with BİDEB on entrepreneurship training development.

Individual Venture Fund Regulations Draft

According to item 10 of "Individual Pension Savings and Investment System Law and Amendments to Some Laws and Decree Laws" passed on 13/06/2012 with no. 6327 states that natural person angel investors that meet the "individual venture investor" criteria and authorized to obtain a license are entitle to income tax detection to some extent if they invest in newly established businesses.

75% of the funds supplied by the angel investors to partner enterprises will be exempt from taxes. If the related enterprise is supported by the Ministry of Science, Industry and Technology and TÜBİTAK, the all of these funds will be exempt.

Related regulations are in draft form and open for exposure.

4.4. Evaluation

Entrepreneurship development is a new policy field. Therefore, the related documents are also fairly new. Nevertheless, open goals on entrepreneurship have been set in national upper scale strategies. Establishment of a separate specialization comission in the tenth planning period shows the importance given to entrepreneurship in terms of planning.

Establishment of Entrepreneurship Council within Ministry of Science, Industry and Technology in 2012, changes in TÜBİTAK Act giving the institution duties and authority on entrepreneurship and incentives for Individual Venture Investment (angel investment) by law amendments in 2012 all show the importance of entrepreneurship for central administration.

This important position of entrepreneurship development sets a basis for strategies on entrepreneurship development on local level.

5. ENTREPRENEURSHIP LEVEL IN TURKEY AND ITS POSITION IN THE GLOBAL AREA

Comparing Turkey to other countries on scalable startup entrepreneurship is possible by analysis of data gathered worldwide by international institutions and comparing indicators. In this respect the most commonly used analyses and indicators are surveys conducted by Global Entrepreneurship Monitor (GEM) and Global Entrepreneurship and Development Index (GEDI) which the only indexing study comparing countries' entrepreneurial performances.

GEM program started out with 10 countries in 1999 carries out studies on understanding the entrepreneurial potential and performance through conducting annual surveys. The program, with the support of Babson College which is the most active education center on entrepreneurship in USA, extended to 70 countries in 2011²¹. GEM acts with three goals: Measuring the entrepreneurial activity differences between countries; determination of elements for entrepreneurship at appropriate levels; and proposing national policies to enhance entrepreneurship activities. The main distinction of this program is that it gathers information on issues that cannot be reached by official statistics, but should be considered in the analysis of current state of entrepreneurship.

GEM classify entrepreneurship in two categories. These are necessity-driven entrepreneurship and improvement-driven opportunity entrepreneurial activity²². Necessity-driven entrepreneurship means entrepreneurial activities that individual move to because they cannot find any other employment options. Improvement-driven opportunity entrepreneurial activity is entrepreneurial activity that is started in order to take advantage from an emerging opportunity or to make the source of income independent or increase it. In 2011 global GEM report countries are compared in three categories as factor-driven, efficiency-driven and innovation-driven economies²³. In factor-driven economies, necessity-driven entrepreneurship plays more important role than others, and in innovation-driven economies this position is reversed where improvement-driven opportunity entrepreneurial activity has a larger role²⁴. In efficiency-driven economies, both entrepreneurship types can be seen, and this leads to an increase in improvement-driven opportunity entrepreneurial activity as a result of progress in R&D activities.

Turkey is considered to be an efficiency-driven economy. China, Brazil and Russia are also in this category, where entrepreneurship activities increase rapidly. Considering the early stage entrepreneurship in 24 efficiency-driven economies, it can be seen that Turkey has below the average values, holding the 13th place. In this category, China is the leading economy, and Chile has the second place. In these two countries, the early entrepreneurial activities are almost twice as in Turkey.

Figure 5 and 6 compare the entrepreneurial activities and improvement-driven opportunities in efficiency-driven economies. Aside from the efficiency-driven economies, two examples from innovation-driven economies, USA and Sweden were included in the figures in order to present a

²¹ Global Entrepreneurship Monitor (2012)

²² GEM Key Indicators and Definitions, <http://www.gemconsortium.org/docs/download/414>

²³ Kategorilerin detayları için bkz. World Economic Forum (2012)

²⁴ Global Entrepreneurship Monitor (2012)

general view of the world. This comparison shows that Turkey has close to average entrepreneurship and business opportunity level among the countries in the same category. These indicators show that Turkey falls behind USA but is ahead of Sweden.

Figure 5.GEM Total Entrepreneurial Activity Index

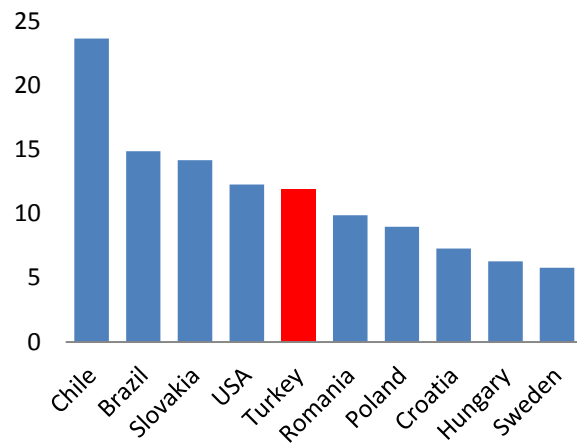
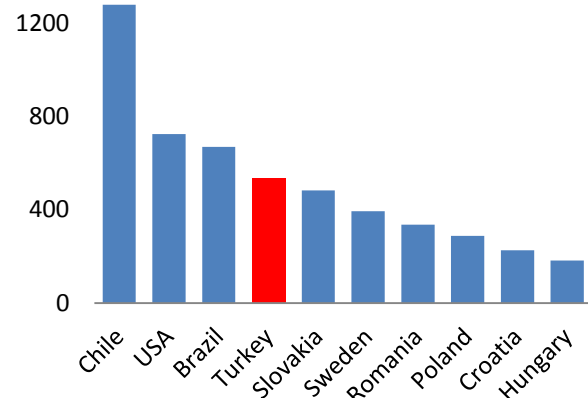


Figure 6.GEM Improvement-driven Opportunity Index



Source: GEM Global Report 2011

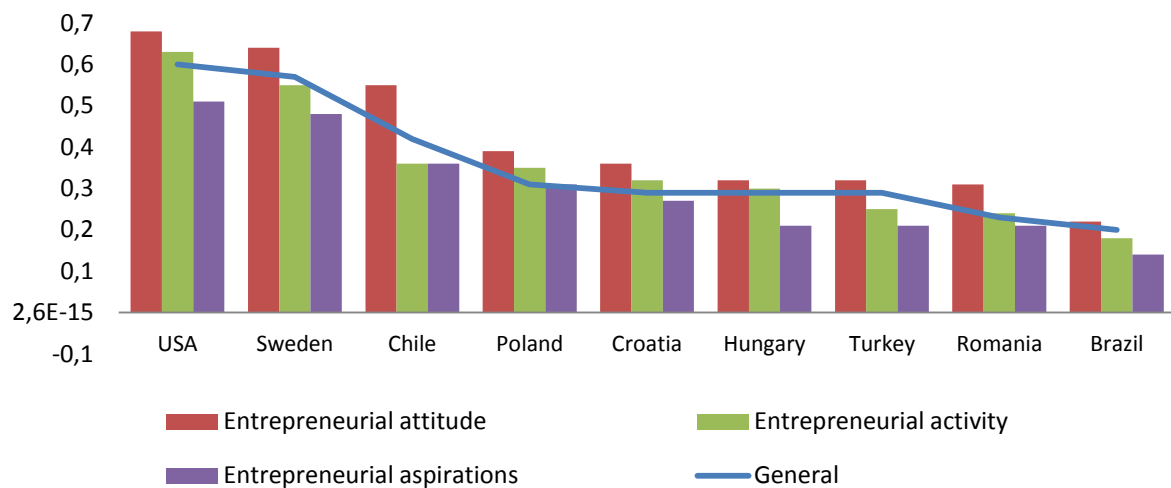
According to the GEM surveys, entrepreneurial opportunity perception in 18-64 age group in Turkey is on average level (32% in Turkey, 35% on average). On the other hand, the fear of failure ratio is 22% which is way below the world average of 38%. In other words, fear of failure in establishing new businesses is below the global average.

GEDI, first published in 2011, compared 71 countries in 2011 and 79 countries in 2012 in entrepreneurial activity performance. Index consists of three sub-indexes as entrepreneur attitude, entrepreneur actions and entrepreneurial passion. The main parameters of these sub-indexes are such as entrepreneurial opportunities, business establishment skills and cultural support. Under "Entrepreneur actions" topics such as opportunity entrepreneurs, technology sector, human resources and competition elements are discussed. "Entrepreneurial passion" takes elements such as innovation, internationalization, venture funds into account. GEM's surveys are utilized in calculating GEDI.

Turkey is in 36th place among 79 countries in GEDI ranking. While it falls behind on entrepreneur attitude and actions with 42nd and 50th place respectively, on the entrepreneurial passion sub-index, it has a higher ranking of 27th.

Looking at the GEDI sub-indexes, it can be seen that most of the developing economies and the two innovation-driven economies are in better position than Turkey in all three sub-indexes (Figure 7).

Figure 7. Comparison of countries according to GEDI sub-indexes



Source: The Global Entrepreneurship and Development Index, 2012

To sum up, it can be said that while Turkey is ahead of many countries on entrepreneurship, there is still more room for improvement. Also there are major differences on entrepreneurship locally within Turkey. Comparison of entrepreneurship and investment activities and interviews with the stakeholders show that entrepreneurship in Turkey is limited to a corridor between İstanbul and Ankara. However, these differences are not visible in the international comparisons explained in this section.

6. ENTREPRENEURSHIP ECOSYSTEM FRAMEWORK CONDITIONS

In this section the framework conditions on which the entrepreneurship ecosystem is built on is discussed. As stated in Section 1, these conditions are categories as such:

- Human resource
- Innovation
- Entrepreneurial economic activity
- Cultural and geographical factors

In analyzing the first three category, comparison to nine other cities with similar characteristics was used. These selected cities are İstanbul, Ankara, Kayseri, Adana, Denizli, Antalya, Bursa, Gaziantep and Tekirdağ. The selection criterias for these cities are size (İstanbul, Ankara, Adana, Bursa), being a port city (Antalya, Tekirdağ) and recently being fast developing centers (Kayseri, Denizli, Gaziantep).

6.1. Human resource

İzmir being the third largest city in Turkey, is definitely a large metropolitan area where entrepreneurship can develop. İzmir also has the third highest urbanization rate in Turkey.

Table 3: Human Resource Indicators for İzmir and Selected Cities

Ratio of Higher Education Graduates to the Adult Population (2000-2011)		Number of Higher Education Graduates (2000-2011)		Ratio of PhD Graduates to the Adult Population (2000-2011)	
Ankara	20%	İstanbul	1.369.808	İstanbul	0,91%
İzmir	15%	Ankara	702.000	Ankara	0,80%
İstanbul	14%	İzmir	436.000	İzmir	0,44%
Antalya	13%	Bursa	215.000	Kayseri	0,30%
Bursa	12%	Antalya	185.000	Adana	0,26%
Adana	11%	Adana	153.000	Denizli	0,25%
Denizli	11%	Kayseri	95.000	Antalya	0,24%
Kayseri	11%	Gaziantep	77.000	Bursa	0,22%
Tekirdağ	10%	Denizli	73.000	Gaziantep	0,20%
Gaziantep	7%	Tekirdağ	62.000	Tekirdağ	0,16%

Source: TÜİK

Regarding human resource, İzmir has the highest qualified young population after İstanbul and Ankara. In 2011, people with a higher education degree constitute 15% of the adult population in İzmir. In this respect, İzmir is in a more favorable position than other cities besides Ankara in qualified human resource (Table 3). Between 2000-2011 436,000 people received higher education

degree in İzmir. This number is 702,000 in Ankara and 1,369,808 in İstanbul. Besides, 0.44% of the adult population in İzmir received PhD degree between 2000-2011. Hence İzmir has the third highest number of PhD graduates after İstanbul and Ankara.

Quality of human resource in İzmir addressing the industrial needs should be examined separately. In İzmir Regional Innovation Strategy, it has been expressed that there is a lack in researchers specialized in modern disciplines due to lack of department diversity.

6.2. Innovation

Table 4: Innovation Indicators for İzmir and Selected Cities

Patent Applications per 10,000 People (2011)		Registered Patents (2011)		Number of Registered Patents per 10,000 People (2011)		Number of companies in TDCs (2011)		TDZ R&D Space(m ²)	
Bursa	2,00	İstanbul	417	İstanbul	0,31	Ankara	548	Ankara	149.229
Tekirdağ	1,40	Ankara	78	Bursa	0,28	İstanbul	242	İstanbul	64.000
İstanbul	1,20	Bursa	74	Tekirdağ	0,18	İzmir	85	Kayseri	13.500
Ankara	0,90	İzmir	31	Ankara	0,16	Antalya	67	Adana	12.000
İzmir	0,60	Tekirdağ	15	Kayseri	0,10	Kayseri	64	Bursa	7.870
Kayseri	0,40	Kayseri	13	İzmir	0,08	Bursa	56	Antalya	4.375
Antalya	0,30	Antalya	8	Denizli	0,05	Denizli	37	Denizli	4.343
Denizli	0,20	Gaziantep	6	Antalya	0,04	Gaziantep	36	Gaziantep	4.250
Gaziantep	0,20	Adana	6	Gaziantep	0,03	Adana	32	İzmir	4.057
Adana	0,20	Denizli	5	Adana	0,03	Tekirdağ	-	Tekirdağ	-

Source: TPE, TDZs

Table 5: Distribution of Researchers Between Sectors in İzmir and Other Major Cities

	İzmir	İstanbul	Ankara
University	5,45%	24,24%	9,09%
Faculty Member	7,39%	21,19%	16,73%
Researchers Registered to ARBİS	8,86%	22,47%	30,1%

Source: İZKA Innovation Strategy Report

Innovation studies in İzmir are below the potential considering the number of patent applications and qualified population ratio. According to the 2011 data from Turkish Patent Institute, İzmir ranks in 5th place after Ankara, İstanbul, Bursa ve Tekirdağ on the number of patent applications per person. While number of patent application per ten thousand people is 0.6, the number of registered patents per ten thousand people is much lower (Table 5). Yet, the number of companies in İzmir Technology Development Zone is 85 occupying a space of 4.057 m² (Table 5). While İzmir performs well on the number of companies, it falls behind on the TDZ space rankings.

R&D infrastructure of private sector is relatively weak in İzmir. Only 15 percent of the companies conduct independent R&D activities. Besides, the contribution of high added-value products to turnover is low²⁵.

İzmir Regional Innovation Strategy set several goals in order to increase R&D and innovation capacity. Among these are improving collaboration between universities, research institutes and institutions; establishing R&D infrastructure primarily in key sectors; increasing the technology and R&D capacities of enterprises; and increasing the number and efficiency of companies in İzmir TDZ²⁶.

In the strategy, it is expressed that İzmir is a center of attraction for universities, factors such as faculties being similar to each other and lack of modern engineering departments slow down innovation development. This situation causes young population with innovation capacity to migrate from İzmir and/or to prevent them to migrate to İzmir. Although new engineering departments (bioengineering and leather engineering²⁷) have been established in İzmir, the number of such departments need to be increased. Collaboration between institutions and universities are limited because the current engineering departments fail to address the innovation needs of the industry. Especially in key sectors (high-tech industries, renewable energy, tourism, logistics and agricultural and agriculture based industries)²⁸ universities and research centers play a major role in establishing the R&D infrastructure.

6.3. Entrepreneurial Economic Activity

Table 6: Entrepreneurial Economic Activity Indicators in İzmir and Selected Cities

Ratio of the Companies with 1-10 Employees to the Total Number of Companies (2011)		Ratio of the New Established Companies to the Total Number of Companies (2011)	
Antalya	87,96%	Ankara	13,10%
Gaziantep	87,22%	İstanbul	9,81%
İzmir	87,03%	Antalya	9,18%
Adana	86,86%	Tekirdağ	8,52%
Kayseri	86,74%	Denizli	7,47%
Denizli	86,14%	Gaziantep	6,96%
İstanbul	85,46%	Adana	7,26%
Ankara	85,27%	Kayseri	5,52%
Tekirdağ	84,47%	İzmir	5,35%
Bursa	84,33%	Bursa	5,18%

Source: SGK Monthly Bulletin December 2011, TOBB Established/Closed Down Companies Statistics

Table 6 shows that SMEs with 10 or less employees hold an important position in İzmir's economic activity. The ratio of SMEs with 10 or less employees constitutes 87% of the total enterprises.

²⁵ İzmir Regional Innovation Strategy (2012)

²⁶ İzmir Regional Innovation Strategy (2012)

²⁷ Ege University Web Site

²⁸ İzmir Region Plan 2010-2013 (2010)

The same table shows that regarding the ratio of companies established in 2011 to the total number of companies, İzmir ranks as 9th. This ratio is 5.35% in İzmir, 13.10% in Ankara and 9.82% in İstanbul.

Table 7: Entrepreneurial Economic Activity Indicators in İzmir and Selected Cities (Continued)

Advanced Technology Quotient (Export Based)	
Ankara	2,73
İstanbul	1,31
Tekirdağ	0,48
Bursa	0,242
İzmir	0,241
Adana	0,19
Antalya	0,10
Gaziantep	0,06
Kayseri	0,03
Denizli	0,03

Source: TÜİK and TEPAV Calculations

"Advanced Technology Quotient"²⁹ is used in order to determine the technological level of production in İzmir. This quotient is calculated as the ratio of the contribution of advanced technology products³⁰ in the city's export to the contribution of advanced technology products in national export. Cities with quotients larger than one are considered to be focused on advanced technology production. Since production data for cities are unavailable, the calculations were made using data on export. With an Advanced Technology Quotient of 0.241 (Table 7), İzmir falls behind Ankara, İstanbul, Tekirdağ and Bursa in focusing on advanced technology production.

Within the scope of entrepreneurial economic activities, clustering in İzmir should also be studied. Clusters formed around an economic activity make entrepreneurship easier by providing immediate inputs, workforce and customers for entrepreneurs. In other words, existence of powerful clusters makes entrepreneurship easier³¹. However, one should not jump to the conclusion that entrepreneurship has development potential only in specific clusters: Entrepreneurship ecosystem includes numerous clusters and aims to develop all the opportunities entrepreneurs can take in powerful and weak clusters. Also, entrepreneurs' operation sectors and clusters are not directly related: It is possible for an entrepreneur in information technologies sector to establish a business providing inputs for organic agriculture or logistics clusters.

On the other hand, it is true that some clusters are less suitable for entrepreneurs than others. In clusters where scale economies are less important and companies are not vertically integrated have

²⁹ Adapted from Milken Institute LQ Calculations. Due to lack of sufficient data, export product groups of cities are divided as technological or non-technological based on statistical code classification and entered in LQ Calculations.

³⁰ Lall, S. (2000)

³¹ Porter, Stern, Delgado (2010)

higher potential for entrepreneurship development. For example, a cluster based on mining is not entrepreneur-friendly due to its scale economy.

Current clusters in İzmir are organic food, medical, machine metal casting, aeronautics and space, processed fruit and vegetable and industrial ventilation, air conditioning and cooling clusters. Clusters with high potentials are vehicle equipment, wedding dress-evening dress, industrial ventilation, air conditioning and cooling, canned food, road haulage and storage services, freight transport and storage and chemicals sectors³².

Table 8 shows the average company sizes in the clusters in İzmir. As seen in the table, there are no major differences between clusters apart from land logistics. There are no definite structures in İzmir to be obstacles in entrepreneurship of clusters with development potentials. In general terms, strengthening these clusters will help in entrepreneurship development.

Table 8. Comparison of Number of Companies and Employees in Sectors with High Clustering Potential in İzmir

		İzmir			Turkey		
NAC E	Sector	Number of Companies	Number of Employees	Average Number of Employees	Number of Companies	Number of Employees	Average Number of Employees
29,3	Vehicle equipment sector	159	4.117	26	1.172	59.887	51
14,13	Wedding dress and night dress sector	1.389	27.069	19	17.728	238.250	13
28,25	Industrial ventilation, air conditioning and cooling equipments	35	638	18	397	5.357	13
10,39	Canned food	107	2.690	25	899	18.700	21
49,3	Road haulage and storage services	2.577	18.813	7	34.021	213.010	6
50,1	Freight transport and storage services	124	1.420	11	1.623	17.810	11
20	Chemicals	400	8.413	21	5.118	79.871	16

Source: TÜİK

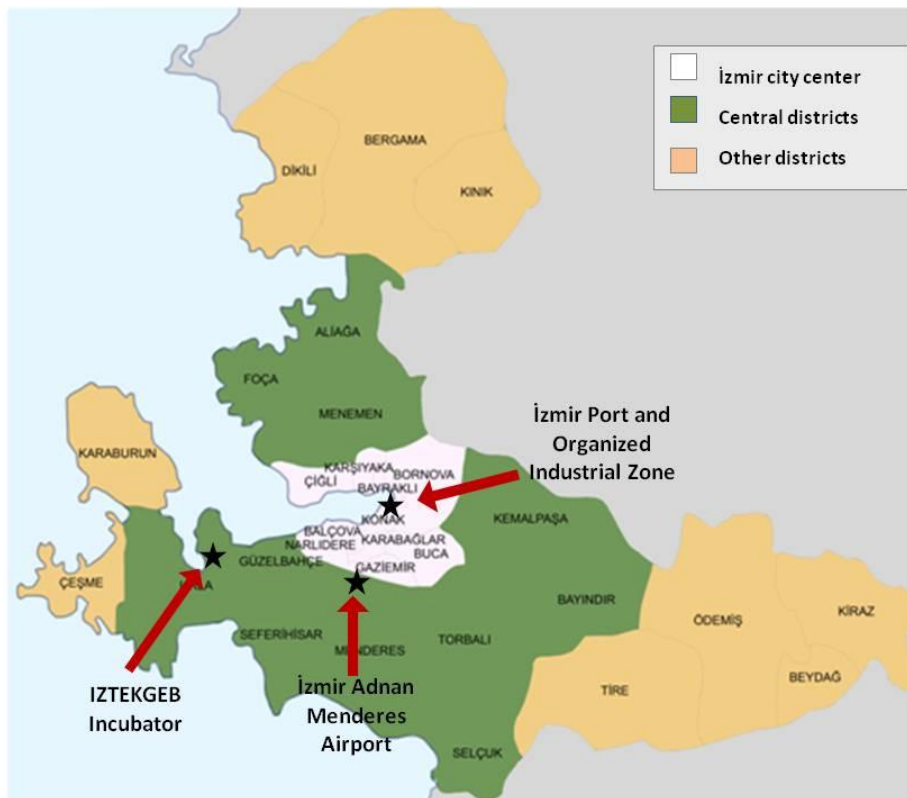
³² www.izmirkumelenme.org

6.4. Geographical and Cultural Factors

Geographical and cultural factors with an impact on entrepreneurship in İzmir can be studied in three aspects. Climate conditions of the region effect entrepreneurship suitability and entrepreneurship culture, and connectivity of the region plays important role on business conditions. Wide spread nature of İzmir city center gives an idea on the active zone entrepreneurial activities can take place.

As a Mediterranean city, İzmir has been an important settlement for centuries. Its port with a wide trade network since the ancient times made İzmir one of the important trade centers in the world. Port of İzmir continued growing to be one of the most important ports in East Mediterranean together with Thessaloniki, Beirut and Alexandria. In this respect İzmir is one of the most important secondary trade centers in East Mediterranean region after İstanbul.

Figure 8. Map of İzmir's counties and central region



Source: İZKA

İzmir region has a temperate climate. This condition enhanced outdoor culture. This outdoor city life helps the development of common living areas. Hence a highly interactive culture suitable for entrepreneurship takes form where random encounters between individuals can increase.

In terms of connectivity, İzmir is a developed center in Turkey after İstanbul. Looking at direct international flights, it can be seen that there are flights to 52 destinations in 23 countries from İzmir³³. 85% of these destinations are in European countries. Besides, İzmir connects to major

³³ İZKA, 2010-2011 departing passenger loadsheet, FIDS unit

Aegean settlements and tourism centers with the regional motorway network. Construction work for İstanbul-İzmir highway is still going on.

Examining the area the city is spread and its transportation facilities, transportation within the city is fairly easy. While this situation offers advantages on business opportunities, it negatively effect the perception of "distance" for people living in city center. In other words, distances that could be considered as close in case of İstanbul can be considered as far in İzmir. This condition highly limits regions outside city center to be center of attraction for entrepreneurial activities.

As stated in Section 6.1, İzmir has the third most qualified young population. Several studies showed that the populations that are open to entrepreneurship and are interactive, are also open to new ideas. A study by Ege University in this field³⁴ shows that individual's internal interest, high performance output of innovation, having positive image effect, creating ideas and determining opportunities are prominent on innovative business behavior in İzmir. It is noted that especially in creating ideas, the individuals show no hesitation in trying new methods and changing processes. As a result, individuality becomes important in the culture. The study also emphasizes that innovation is based more on individuals rather than institutions.

According to a perception research as a part of İzmir City Marketing Strategy Plan, İzmir is perceived primarily as a tourism city³⁵. 83% of the residents say they are happy living in İzmir and the city is regarded as friendly, warm, cultured and modern in Turkey general. İzmir poses as a quality settlement due to its geographical and cultural conditions.

Meetings with stakeholders showed that individual business behavior in İzmir is also valid for activities besides innovation. Educated population with a quality life style and individual business behavior has also a high self esteem. In the meetings, it has been expressed that individual attitude and self esteem has two separate effects on entrepreneurship. Individuality and self esteem helps people to channel to new business ideas and take risks. On the other hand, this attitude can cause lack of cooperation between individuals and as a result lack of trust between individuals conducting businesses. Therefore the dominant individualist structure in İzmir cause relations between stakeholders in the entrepreneurship ecosystem remain weak.

Stakeholder meetings also showed that there is a well educated İzmir diaspora with good sense of belonging spread out within centers in Turkey and abroad. Although look problematic at the beginning, this condition can be seen as an opportunity in both encouraging entrepreneurship against family corporations and networks and resources that this diaspora can provide.

6.5. Evaluation

With the light of the analyses above, advantages and disadvantages of İzmir's entrepreneurship framework conditions can be listed like this:

Advantages:

³⁴Ege University İİBF Department of Administration (2011)

³⁵İzmir City Marketing Strategy Plan (2010)

- İzmir has a strong human resource with above the average education. As well as residents of İzmir, this human resource also includes a strong diaspora spread out to important centers in Turkey and abroad.
- Being a historical trade center, İzmir has a wide economical base and trade culture.
- İzmir is distinguished Mediterranean city in Turkey, with its quality life style and open-minded cultural structure
- After İstanbul, İzmir is one of the most developed cities in Turkey in terms of transport connections with its airway, motorways and port.

Disadvantages:

- Due its historical development and current economical and social position in Turkey, İzmir is not a primary center of attraction like İstanbul.
- İzmir's performance on innovation infrastructure is relatively weak. In parallel, İzmir falls behind the country average in developing advanced technology sectors.
- The cooperation culture in İzmir is weak. Innovative activities usually evolve as individual attempts.

7. İZMİR ENTREPRENEUR PROFILE

Eight sources were used in profiling local entrepreneurs in İzmir:

- TEKMERs
- Embryonix
- Entrepreneur Businessman Promotion and Training Activities Association (MITEF)
- Endeavor
- GEP Turkey business plan competition
- TÜBİTAK Support Program 1507
- Ministry of Science Industry and Technology "Techno-Venture Fund Support"
- AllWorld Turkey 100 competition

İzmir TEKMER Entrepreneurs

Currently there are two TEKMERs in İzmir. These are Ege University and Dokuz Eylül University Technology Centers. Entrepreneurs in these TEKMERs have generally similar characteristics. There are 13 entrepreneurs in Ege University TEKMER and 5 in Dokuz Eylül TEKMER. Looking at the genders, it can be noted that number of female entrepreneurs is far less than male entrepreneurs in Ege University TEKMER and in Dokuz Eylül University TEKMER there are no female entrepreneurs at all.

As Table 9 shows, there are very few entrepreneurs in both TEKMERs with age below 35. Especially in Dokuz Eylül University TEKMER there is no entrepreneur younger than 24. Majority of the entrepreneurs in both TEKMERs are grouped around ages 35-60.

By examining the sector profiles, it can be said that the sectors entrepreneurs operate in are fairly different for each TEKMER (Table 9). While entrepreneurs in Ege University TEKMER mostly operate in food, chemistry and biology sectors, entrepreneurs in Dokuz Eylül University TEKMER are focused on software and information-communication sectors.

Table 9: Profiles of Entrepreneurs in İzmir TEKMERs

	Ege Uni. TEKMER	Dokuz Eylül Uni. TEKMER
Category	Number	Number
Male	12	5
Female	1	0
Below age 24	2	0
Ages between 25-30	3	2
Ages between 31-35	2	0
Ages between 36-45	2	1
Ages between 46-60	2	2
Above age 61	2	0
Machinery	2	0
Food, Chemistry, Biology	4	1

Medicine	1	0
Energy and Environment	0	1
Textile	0	0
Programming, Information, Communication	4	2
Electronics	2	1

Source: KOSGEB İzmir South Service Directorate

EMBRYONIX Entrepreneurs

Entrepreneurs in Embryonix which is both a business accelerator and business incubators usually operate in fast growing sectors in Turkey. There are 9 entrepreneurs within Embryonix. Six of these are in the programming and information-communication sectors which have recently fast growing markets. One entrepreneur is in electronics sector and two are in other sectors.

Entrepreneur profile in Embryonix is younger than TEKMERs. Out of the 9 entrepreneurs, 7 are between ages 25-30, one is younger than 24 and the other one is in the 36-45 age group (Table 10). On the other hand, similarities with the TEKMER entrepreneur profile have been noted. Out of the 9 entrepreneurs 8 of them are male. The education status of the entrepreneurs show that the lowest level of education among them is university degree (Table 10).

As a business accelerator, out of the 9 entrepreneurs that Embryonix hosts, 7 of them have been in business for less than 2 years.

Table 10: Entrepreneur Profile in Embryonix

Number of entrepreneurs	Gender		Age						Education Level				Sector								Age of Business			
	Male	Female	Below 24	Between 25-30	Between 31-35	Between 36-45	Between 46-60	Above 61	High School or less	University	Post-graduate	PhD	Machinery	Food, Chemistry, Biology	Medicine	Energy and Environment	Textile	Programming, Information, Communication	Electronics	Other	Below 1 year	1-2 years	3-5 years	5 years or more
8	1	1	1	7	0	1	0	0	0	6	2	1	0	0	0	0	0	6	0	0	2	0	1	0

Source: Embryonix, September 2012

Entrepreneur Businessman Promotion and Training Activities Association (MITEF)




Competition

Together with MIT Enterprise Forum which is an international institution, MITEF is organizing a competition each year similar to MIT 100k. 3202 people participated in this national business plan competition between 2010-2011. Number of participants from İzmir is 25, only 2 of which are female. This small number of participation to the competition from İzmir implies that entrepreneurs in İzmir do not show enough interest in business plan competitions.

Endeavor Entrepreneurs

Endeavor present several Turkish entrepreneurs each year to an international panel and panel determines the Endeavor entrepreneurs of the year. These selections which are made for 6 years, are highly İstanbul oriented. Out of the 27 companies belonging to 42 selected Endeavor entrepreneurs so far, 23 of them are located in İstanbul and only 4 entrepreneurs are from İzmir. Information related to these entrepreneurs are given in Table 11.

Table 11. Endeavor Entrepreneurs in İzmir

 Sector: Fitness Product/service: Sports centers for women Established in: 2006 Entrepreneur: Bedriye Hülya Age: 48 Education Level: Post-graduate	 Sector: Fashion Product/service: Women's clothing Established in: 2004 Entrepreneur: Tania Eskinazi Yaşı: 35 Eğitim düzeyi: University
 Sector: Food and beverages Product/service: Döner fast-food Established in: 2006 Entrepreneurs: Feridun Tunçer, Levent Yılmaz Ages: 44 Education Levels: University	Steamlab Steamlab Sector: Sterilization Product/service: Food sterilization and processing Established in: 2003 Entrepreneur: Şebnem Karasu Age: 47 Education Level: Post-graduate

Source: Endeavor

Since Endeavor entrepreneurs are usually selected from entrepreneurs at growth or advanced stages, they show a different picture than the other profiles which usually include early stage entrepreneurs. As seen in Table 11, all of the 4 companies are in business for more than 5 years. They all operate on different sectors. These entrepreneurs are in ages between 30-45 today. The fact

that most of them are women is another important point. Out of four Endeavor entrepreneurs three of them are women.

Endeavor entrepreneurs operating in İzmir differ from the İzmir profile regarding their sectors. These entrepreneurs are in fitness, sterilization, fashion and food sectors.

GEP Turkey's Best of the Best Entrepreneurs Business Plan Competition Entrepreneurs

Turkey's Best of the Best Entrepreneurs Business Plan Competition is held in May 2012 by Global Entrepreneurship Program Turkey (GEP Turkey) in coordination with TEPAV. Entrance criteria is being nominated by one of the 29 partner institutions. The partner institutions selected these participants among companies who won previous business plan competitions organized by them or other companies they endorse. Among the 8 companies selected in İzmir, 4 of them were presented to the GEP Turkey committee by İZTEKGEB, 2 of them by İZKA, and the other two by Emtryonix. Selection committee composed of academics, angel investors and entrepreneurs reviewed the companies' application forms and determined 16 finalist in for each early stage and growth stage categories. These selected finalists qualified to make a presentation to the Entrepreneurship Delegation composed of 15 American and 9 Turkish delegates. After the presentation first three finalists in each category were awarded with the prize money and a USA trip where they have the opportunity to meet investors, providers, consultants and related institutes.

A company in renewable energy sector from İzmir entered among the first five in early stage category in Turkey's Best of the Best Entrepreneurs Business Plan Competition. Another company from industrial agriculture sector qualified as one of the 16 finalists in early stage category and made a presentation to Entrepreneurship Delegation. The other participants operate in social platform, informatics and communication technologies, industrial agriculture and mechatronics sectors. All of these companies participated in early stage category. This indicates that the selected best entrepreneurs in İzmir are from sectors that are recently developing fast and innovative. However, there are no companies among them in the growth stage. Another key point is that there are no female entrepreneurs among these companies.

On the overall, of the 153 participant companies in Turkey's Best of the Best Entrepreneurs Business Plan Competition, 82 are in İstanbul, 42 are in Ankara and İzmir has the third most number of companies. Out of the 16 early stage finalists 10 are from İstanbul and 4 are from Ankara. Out of the 16 early stage finalists 10 are from İstanbul and 6 are from Ankara. Most common sectors of the finalists are e-trade, image processing, renewable energy and informatics and communication technologies.

TÜBİTAK 1507 SME R&D Startup Support Program Companies

TÜBİTAK 1507 SME R&D Startup Support Program consists of grants for SMEs to develop new production technologies in order to improve national and international competitive capacity.

Table 12. Distribution of TÜBİTAK 1507 Grants

City	Application	Grant Ratio
İstanbul	38.4%	39.3%
Ankara	17.9%	18.2%

İzmir	6.6%	7.8%
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Source: TÜBİTAK

Largest application and grant ratios belong to the three major cities. İstanbul and Ankara which have more developed entrepreneurship infrastructures and are closer to TÜBİTAK benefitted from these grants more than İzmir.

Most of the companies applying to the support program from İzmir are in industry and manufacturing sectors. Companies that benefitted most are textile, food, metal processing, agriculture and forestry and general purpose machinery manufacturing companies³⁶. Relatively few companies benefitted from the program in vehicle equipment, wedding dress-evening dress, industrial ventilation, air conditioning and cooling, canned food, road haulage and storage services, freight transport and storage and chemicals sectors which are determined to be developing clusters by İZKA "İzmir Clustering Analysis" study. Among the companies in the program, only 15.4% are from these sectors.

Entrepreneurs that Applied for and Received Ministry of Science Industry and Technology "Techno-Venture Fund Support"

The targets for the support program of Ministry of Science Industry and Technology are university students at senior grade, and people who have completed post-graduate or PhD education within the past 5 years. Suitable business plans are selected and supported in transforming them into large scale companies that can create added-value and qualified employment.

Most applications from İzmir are from Dokuz Eylül University with 13 applications in 4 years. After Dokuz Eylül University comes Ege University with 10 applications and then İzmir Institute of Technology (İYTE) with 4 applications³⁷.

³⁶1507 TÜBİTAK SME R&D Startup Support Program Data, TÜBİTAK

³⁷Techno-venture Fund Support Program: 2009-2012 Period Analysis report. Ministry of Science Industry and Technology

Table 13. Entrepreneur Profile in Aegean Techno-entrepreneurship Association

	Gender		Age						Education Level				Sectors								Age of the Business			
Category	Male	Female	Below 24	Between 25-30	Between 31-35	Between 36-45	Between 46-60	Above 61	High school or less	University	Post-graduate	PhD	Machinery	Food, Chemistry, Biology	Medicine	Energy and Environment	Textile	Information, Communication	Electronics	Other	Below 1 year	Between 1-2 years	Between 3-5 years	5 years or more
Number of Entrepreneurs	44	4	0	38	10	0	0	0	0	0	0	0	6	9	0	0	0	8	16	9	18	19	11	0

Source: Aegean Techno-entrepreneurship Association, September 2012

Techno-entrepreneur profile in İzmir is analyzed in detailed using the membership database of Techno-entrepreneurship Association İzmir Branch. Most of the techno-entrepreneurs in Turkey are members of this association. Association has 48 members, 44 of which are male (Table 13). The age characteristics of the members are similar to those of Embryonix, where ages of 38 members are between 25-30 and 10 members are between 31-35³⁸.

It is expressed in the meetings with Techno-entrepreneurship Association İzmir Branch that techno-entrepreneurs in İzmir most commonly operate in electronics sector. 16 members are in this sector while 9 members are in food, chemistry and biology sectors, 8 members in programming, information and communications sector and 6 members in machinery sector.

Table 14. Distribution of Techno-venture Fund Support Among Cities

City	Application	Grant Ratio
Ankara	9,9%	47,9%
İstanbul	4,4%	22,2%
İzmir	0,08%	4,1%

Source: Ministry of Science Industry and Technology

³⁸ Aegean Techno-entrepreneurship Association

İzmir is not one of the prominent cities receiving grants from Techno-venture Fund Support Program (Table 14). The ratio of applications from İzmir is 0.08 which is fairly low. On the other hand, only 4.4% of the companies receiving grants are from İzmir. This ratio is 47.9% in Ankara and 22.2% in İstanbul.

İzmir Companies in AllWorld Turkey 100 List

14 companies from İzmir made it to AllWorld 100 list (Table 15). With this performance, İzmir ranks as third after İstanbul and Ankara. There are 35 companies from İstanbul and 15 from Ankara in the list.

Table 15 shows that 94% of the participant companies are male and the average age is 50. In İzmir male entrepreneurs are more dominant related to Turkey's average.

These entrepreneurs actively pursue new business opportunities, establish new businesses or help their employees establish new businesses. 37% of the entrepreneurs plan on establishing a new business and 38% are helping their employees establish businesses (Table 15).

Venture fund investments are at a lower level. Out of these companies only 13% received venture fund investment (Table 15).

Table 15. İzmir Entrepreneurs in AllWorld Türkiye 100 List

	İzmir	Turkey
Growth (3 year, median)	72%	88%
Employment Increase (3 years, median)	29%	23%
Entrepreneur Age (median)	48	41
Male Entrepreneur Ratio	94%	91%
Entrepreneurs Planning to Establish Another Business	37%	55%
Entrepreneur Helping Employees Establishin Business	38%	38%
Entrepreneurs Received Angel Invesment or Venture Fund	13%	16%
Total number of companies	14	100

Source: AllWorld Turkey 100

National Lists

Table 16. Entrepreneurial Succes Indicator in İzmir and Selected Cities

Fortune 500 Companies (2010)		ISO 500 Companies (2011)	
İstanbul	263	İstanbul	195
Ankara	45	İzmir	71
Bursa	30	Ankara	27
İzmir	27	Bursa	23
Gaziantep	15	Gaziantep	19
Kayseri	12	Adana	12
Denizli	8	Kayseri	12
Antalya	7	Denizli	11
Adana	6	Antalya	3
Tekirdağ (0)	0	Tekirdağ	1

Source: Fortune 500 Turkey, ISO 500

In terms of entrepreneurial succes, İzmir ranks high compared to other cities. Performances of large scale companies should be noted in entrepreneurial succes criteria since these companies can act as a model for small scale companies. In the Fortune 500 there are 27 companies that made it to the list. With this result, İzmir ranks as 4th among the 9 cities in the list (Table 16). On the other hand, İzmir shows a more successful profile in ISO 500 list, with 71 companies it came second after İstanbul.

Another indicator of success for companies is public offerings in İMKB. There are 33 companies in İzmir went public³⁹. In the national ranking, İzmir is second after İstanbul with this number.

Evaluation

The following conclusions were drawn from entrepreneurial profile in İzmir:

- The means to detect entrepreneurs in İzmir are limited
 - Lack of a business plan competition in the region with a broad participation is a major drawback
 - Total number of enterprises in TEKMER and business accelerator programs where entrepreneurs are accepted after elimination is 27 which is quite small.
 - Another means in detecting entrepreneurs is the number of applications to public supports and grants received. In this respect, İzmir falls behind İstanbul and Ankara even though the economical sizes are taken into account.

³⁹İMKB Public Announcement Platform <<http://www.kap.gov.tr/yay/ek/index.aspx>>

- İzmir does not have an inclusive and high impact business plan competition. The meetings with stakeholders showed that awareness on these competitions in the ecosystem is low. Participation to national business plan competitions from İzmir is limited. For example, in the national competition held by MITEF, out of the 3202 participant over 2 years, only 25 are from İzmir.
- Other means in detecting the entrepreneurs are member acceptance mechanisms to business incubators or accelerators. However, the number of these institutions are very few in İzmir. There are two KOSGEB South Service Center Directorate Technology Development Centers (TEKMER) which accept innovative projects on technology that can be commercialized. 18 entrepreneurs make use of these TEKMERs facilities, 13 in Ege University and 5 in Dokuz Eylül University. In Embryonix, there are 9 entrepreneurs.

8. STRATEGIC OBJECTIVES, TARGETING AND RECOMMENDATIONS FOR THE ECOSYSTEM

In this chapter, strategic objectives and targets that would mobilize the ecosystem rapidly are designated in the light of the comments made above regarding the framework, stakeholder and entrepreneur profile of İzmir's entrepreneurial ecosystem.

Human resource, innovation, economic activity and geographical – cultural conditions, which constitute the framework conditions of İzmir's entrepreneurial ecosystem, comprise both advantageous and disadvantageous aspects.

The analysis of the components of the ecosystem and its stakeholders can be summarized in the following way:

- The tools to detect entrepreneurs in İzmir are extremely limited. İzmir does not have an inclusive local – level business plan competition that would create a great impact. Furthermore, the participation from İzmir to nationwide competitions, which are generally İstanbul based, is highly limited.
- The chambers and associations that gather experienced businessmen or managers, who are potential mentors or investors, actively operate in İzmir. Likewise, the interest of NGOs towards entrepreneurship appears to be on the rise. However, the mechanisms that would link these organizations to entrepreneurs, who would need mentors or investors, are missing.
- The localities or the events that bring entrepreneurs in İzmir are also missing. The total number of entrepreneurs in TEKMER or Embryonix is as low as 27.
- There are certain stakeholders in the local media who are interested in the entrepreneurship. However, the access to the news about this certain topic is highly limited
- Even the potential of angel investors is high; the platforms that would discover and canalize these people do not exist.
- The trainings of KOSGEB about the applied entrepreneurship are highly frequent and widespread. There are also various universities which give courses about entrepreneurship, but it should be stated that these courses are not well established.
- There are various organizations who are interested in the area of entrepreneurship. However, the network and cooperation between these organizations are quite limited. There is an apparent need for a platform which would gather all these organizations together.

Strategic objectives and targets which are analyzed in the chapter are summarized in Table number 17. The order in Table 17 reflects also a prioritization at the same time.

Table 17.The Strategic Objectives and Targets towards İzmir’s Entrepreneurial Ecosystem

Strategic Objective	Target
Amelioration of effective mechanisms for the detection of entrepreneurs	Organization of a local competition about business plan with a broad participation
	Increasing the participation to nationwide competitions
Strengthening the connections between the entrepreneurs and mentors as well as between the entrepreneurs.	Organizing several activities that would entrepreneurs, mentors and investors together
	Creating a online portal of entrepreneurship
	Organizing İZTEKGEB incubating center as a center for public input for entrepreneurs
	Developing incubator programs like EMBRYONIX
	Developing common working grounds and localities as well as urban areas that embody these places.
Ensuring effective implementation of celebrating entrepreneurship	Identifying role model entrepreneurs
	Organizing annual entrepreneurship summit.
	Increasing awareness about entrepreneurship in the local media
Amelioration of funding opportunities for entrepreneurs in İzmir	Organizing trainings about “Angel Investors”
	Developing Angel Investors Network
	Operationalizing a seed fund to support an incubator center, an accelerator an Angel Investor Network
Improving entrepreneurship trainings	Standardizing KOSGEB trainings
	Developing a consortium between the universities in order to establish a common curriculum for courses and case studies
Establishing a dynamic setting for mobilizing stakeholders and implementing the strategy of developing entrepreneurial ecosystem	Establishing the Entrepreneurship Council of İzmir
	Organizing ecosystem visits with the stakeholders
	Developing a mechanism to observe and evaluate the entrepreneurship ecosystem

Strategic Objective 1.Developing Mechanisms to Detect Scalable Startup Entrepreneurs

When analyzing the mechanisms to detect effective initiatives during the early period or growth period in İzmir, it can be seen that these mechanisms are insufficient.

One of the major tools to detect scalable startup entrepreneurs is the business plan competition.

There are two targets to concentrate on in order to improve the mechanisms to detect scalable startup entrepreneurs: (1) Organizing local competitions, (2) Increasing the number of participation to nationwide competitions or to other detection mechanisms. Possible action plans or sample applications in order to achieve these goals are stated below. Recommendations regarding the incubator center or accelerators are enumerated in the section “Strategic Objective 2”.

Target 1.1.Organizing a Local Competition about Business Plan in İzmir with a Broad Participation

İzmir does not have an inclusive local – level business plan competition that would create a great impact. There are two new business plan competitions one organized by the cooperation of Ege University and Liyakat Association and the other organized by EGIAD. However both of these two competitions have not yet proven their competencies. .

There are several other benefits or business plan competitions than detecting scalable startup entrepreneurs. These benefits can be enumerated as the bringing together of the entrepreneurs and the mentors, increasing awareness to entrepreneurship on local level and thus encouraging more of talented individuals to become entrepreneurs. In other words, although the business plan competitions are a tool to detect scalable startup entrepreneurs these can also employed as activities to connect the whole ecosystem when well-designed and implemented.

The competitions can target specific segments as well as differentiating according to the stages of initiatives. For example, business plan competitions can be directed towards to the projects that are in the startup phase (project competitions). Some competitions can be organized solely for the entrepreneurs who already have certain goods on the market. The important thing is to be able to organize different competitions for different level of entrepreneurs and rank them accordingly. Organizing competitions that evaluate entrepreneurs who are at the startup phase and more advanced entrepreneurs at the same time would de facto favor the more experienced entrepreneurs.

The principles to design and implement a business plan competition in order to detect scalable startup entrepreneurs can be listed as such:

- The competition should be announced to all target groups effectively thus the enthusiasm about entrepreneurship can be augmented and a wide participation can be maintained.
- The meetings of the entrepreneurs with the right mentors to should be sustained in order to help entrepreneurs especially in refining the business plans.

- The jury of the competition should be composed of competent and interesting names such as investors, experienced entrepreneurs, and directors from major companies. Mentors should not be on the jury, yet jury should also provide feedbacks to the contestants.
- The final day of the competition should be organized as a big event which would attract a great attraction. Special VIP guests should be invited to give speech or give the awards in order to attract also the media's attention.
- The competition process should be simple and transparent. The participants should be clearly informed about the timing of the presentation and the Q&A sessions, about the categories and the scope of the categories and about the possible tools that they would use for their presentations.
- The competitions should be designed in a way that would also include the major companies to the ecosystem. These major companies might sponsor awards and might also support the mentoring and the jury process. It is important that the selected entrepreneurs have also access to the platforms which would be provided by these big companies.

The organization of these kinds of competitions creates some organizational costs. Possible costs consist of the travel costs of the mentors and the members of the jury, cost of the awards, cost of the promotion of the competition and the cost of the location and the administration of the competition. These costs can be met by the sponsorship of major companies or universities or by organizing the competition in cooperation with several NGOs such as business associations.

There are several models to detect scalable startup entrepreneurs on local level. Three of these models are university competitions, sectoral competitions and general competitions.

Model 1. Business Plan Competitions in Universities

Business plan competitions, organized by the universities and which are open to its students or alumni, are a common business plan competition model throughout the world. This model helps novice entrepreneurs that have business ideas and entrepreneurial spirit to obtain necessary information and experience to commercialize their ideas. As well as these competitions provide entrepreneurs a great opportunity to test themselves they also prepare students to their post-graduate lives. This preparation helps students to draw their career plan and find a job thus increases the university's reputation. These competitions are also important for instilling necessary commercial mentality to students and preparing them to see possible reactions to their innovative ideas

These competitions may also be open only to the university's students as well as being open to everyone. For example, in 100k competitions organized by MIT, at least one of the members of the participating group must be from MIT.

Rice University Business Plan Competition

Rice University Business Plan is the world's richest and most well-attended graduate-level competition. Only novice entrepreneurs from Rice University students or graduates are invited to the competition.

The competition is organized by the Rice Technology and Entrepreneurship Association and Graduate School of Business and in 2012 the competition was held for the 12th time. Between the years 2001 and 2012, the money award rose from 10,000 dollars up to 1.3 million dollars and the number of worldwide teams rose from 9 to 42. In 2011, applications to this competition which is sponsored by over 100 big companies increased 25% compared to the previous year.

The arbitration of the competition is effectuated voluntarily by nationwide venture capitalists and investors. Over 250 members of the jury are investors. Over 133 ex-contestants started up their own business and now possess a source of 397 million dollars.

The competition is mainly designed to teach students how to develop a business plan and how to give a speech which would enable them to obtain funds to market their products. The jury evaluates the participants like they evaluate the entrepreneurs in real life. Likewise, the jury lists the participants that they would like invest the most.

Three day long business plan competition consists of three stages:

Stage 1: Practice Round and Elevator Talk

Stage 2: Elimination and Feedback Session

Stage 3: Semi-final, Jury's Evaluation and the Final Round

Model 2. Sectoral Business Plan Competitions

Business Plan competition can be organized by targeting only one sector. These competitions are generally organized by major companies which need creative business ideas. For example, the business plan competitions organized by mobile operators might be organized in order to target entrepreneurs working or which are willing to work in mobile application or informatics sector. Companies which work in pharmaceutical or health sector might be willing to open their business plan competition solely to entrepreneurs who are in the medical sector or who are willing to work in this sector

IBM SmartCamp

SmartCamp is a global program that brings entrepreneurs, investors and experienced mentors together. Especially through IBM's Smart Planet vision, the competition provides support to early-stage entrepreneurs with linear ideas. SmartCamp take "Instrumented" "Intelligent" and "Interconnected" applications into consideration as well as beyond the concept prototype/demo ideas.

Firms selected to SmartCamp obtain direct access to channels like worldwide competent consultants, core capital and risk capital. During mentoring and networking process in SmartCamp entrepreneurs get in touch with investment firms, serial entrepreneurs, academicians, marketing, communication and technology experts. This networking and mentoring processes help participants to accelerate the launching of their businesses. SmartCamp events are sponsored by several universities and firms who are partners of IBM.

From 2010 to present, SmartCamp event has been in 17 locations in each location that the event is realized there have been 5 finalists. These finalists had the opportunity to spend 2 days with 25 worldwide entrepreneurs, investors and area specialists. IBM One of IBM's solution partners provide consulting service to the entrepreneurs selected in the final phase. These entrepreneurs also obtain the chance to participate in local and regional SmartCamp events.

In 2012, in addition to SmartCamp a similar project called KickStart will be initiated. This new project will focus on health and IBM's "Smarter Cities" vision. The finalist of the KickStart event will obtain the right to participate in local SmartCamp events.

Model 3. General Business Plan Competitions

These competitions generally aim to detect scalable startup entrepreneurs in the ecosystem or the entrepreneurs who would be successful in the global scale. These competitions are organized by the support of various firms or enterprises. This kind of competitions ensures the discovery of ambitious entrepreneurs with innovative ideas as well as their meeting with major companies, mentors and investors. In examples like Mass Challenge, the winners of the competition are accepted to accelerator programs in order to progress their business venture more rapidly.

MARKA Business Plan Competition

General business plan competitions can be limited by one specific region. Easter Marmara Development Agency (MARKA)'s project plan contest called "New Business Ideas Project Competitions" can be showed as an example to this case. This competition organized in 2011 aimed to address young entrepreneurs. The competition was only open to early-stage entrepreneurs. This competition can be organized in different regions by not focusing on project but on business plans.

Mass Challenge

Mass Challenge is a non-profit organization which is established “to help early-stage entrepreneurs to win”. It is sponsored by companies such as Russia Venture Company USA. In 2012, Mass Challenge was able to accelerate more early-stage companies than any other organizations. Mass Challenge is different from other business plan competitions that are stated earlier. The early-stage participants of Mass Challenge are analyzed throughout a 2 week long Bootcamp and they are enrolled in a 3 month accelerator program before their presentation. The difference of Mass Challenge from Rice and UCSD competitions is that it is not only open to students. It is also not compulsory to live in Massachusetts to be able to participate in this competition.

A well-attended general business plan competition should be organized in İzmir in order to address the lack of local business plan contests. İzmir does not yet possess the necessary volume to organize university or sectoral business plan competitions. This competition might be organized in collaboration with an experienced institution such as MIDEF, in order to accomplish an appropriate design which would bring mentors, investors and entrepreneurs together. Furthermore, international jury members can also be a part of the competition. Local partners like chambers, business associations and universities should also be included in the process in order to increase inclusiveness. At the beginning this competition can be only open to local entrepreneurs living in İzmir but then can be a nationwide organization as it develops in time.

Target 1.2. Increasing the Participation to National Competitions

Another tool to detect effective local entrepreneurs is nationwide business plan competitions. These competitions are already being organized by several institutions. Currently, in Turkey, tens of entrepreneurship competitions are organized each year. During these last five year business plan competitions, project competitions and specific entrepreneurship competitions directed toward specific sectors gain popularity.

An increase in participation to these competitions from İzmir would attract attention to its potential of scalable startup entrepreneurs. Scalable startup entrepreneurs from İzmir would have the chance to be visible on nation scale by participating to these competitions.

National business plan competitions should be effectively announced thorough university, chambers and business association channels. Likewise these competitions should take place in the local media in order to increase the participation of entrepreneurs from İzmir to these competitions.

Strategic Objective 2. Strengthening the Links between Entrepreneurs as well as between Mentors and Entrepreneurs

The lack of a platform which would bring entrepreneurs and mentors who are composed of experienced businessmen and directors is remarkable. Even if chambers and business associations that bring potential mentors together are active, these institutions lack connection with entrepreneurs. This might be a natural consequence of the lack of detecting entrepreneurs which was mentioned in SP1.

Some of the existing platforms are not well promoted. For example, a major part of the ecosystem was not informed about the activities such as Women Entrepreneurship E-Commerce Project (TOBB İzmir Women Entrepreneurs Committee) or R&D and Technology Days (EBILTEM).

Within this framework five objectives are identified under three main themes:

- Increasing the number of national and local entrepreneurship events organized in İzmir.
- Developing an online portal for a better promotion of current events.
- To allow entrepreneurs physically closer to each other:
 - Activating an incubator center
 - Supporting accelerators who are capable of supporting both as mentors and as a provider of physical space
 - Developing working areas that would allow to work together (office spaces and urban areas where this office spaces are concentrated)

Target 2.1. Organizing Events That Would Bring Entrepreneurs, Mentors and Investors Together

The events that bring entrepreneurs and mentors together are generally organized in İstanbul. These events should also be organized in İzmir.

Organizing the events of nationwide associations like Endeavor or E-Tohum in İzmir would increase İzmir's visibility. E-Tohum has already been organizing an event in İzmir every six months.

Within this frame, another event that can be beneficial for İzmir is the Start-up Weekend. Start-up is a festival which is organized in more 200 cities throughout the world. In this festival candidate entrepreneurs develop a demo of a business idea with their team within 54 hours during the weekend. In 2012, this event was organized in İstanbul by Ozyegin University and in Ankara by TEPAV.

Finally, visits of international entrepreneurs or early-phase entrepreneurship delegations to İzmir would mobilize the ecosystem as well as keeping İzmir in the international entrepreneurship agenda. TEPAV; TOBB AND USA Ministry of Foreign Affairs' delegations visits in May 2012 can be given as examples to this kind (Part 7). Another similar event is called "Geeks on the Plane"⁴⁰. This event is organized by 500 Startups and expected to be realized in İstanbul in November 2012.

IZTEKGEB should host these events in order to set this location as an attractive incubation center thus increases the popularity of this place amongst the entrepreneurs in İzmir.

Target 2.2. Developing an Online Portal for Entrepreneurs

An online portal should be developed in order to enable entrepreneurs of İzmir to promote and announce simultaneous events to other entrepreneurial stakeholders of the ecosystem. This online portal should allow users, as well as website administrators, to provide input in order to track various events in the ecosystem. This portal would also make the new entrepreneurs in the ecosystem visible and make İzmir a center of attraction in the entrepreneurial ecosystem

⁴⁰<http://geeksonaplane.com/destinations/2012-destinations/middle-east-2012/>

All of the current events should be promoted through this portal to enable it to reach to a particular user group. Likewise, the portal should always be up-to-date. IZKA might undertake the responsibility of creating this online portal or it can manage a consortium which constitutes this portal. Recommendations for possible undertakers of creating a portal are stated above:

While commencing to the portal process, a model which would allow users to provide input should be adopted. Such a model would maintain portal's sustainability. "Meetup" online portal, which is initiated in the USA, can be pointed out as a successful example.

Meetup Web Portal

In 2010, this web portal was initiated in New York, USA, in order to gather people, who have the same interest and purposes, from all around the world. This web portal has become the largest local group network. The portal brings different groups from professional world together under various themes such as technology, game, music and even religion. Users can also start up their own groups under one of these various themes.

Meetup, brings people having same purposes together, thus creates a certain level of mobilization and synergy amongst local communities. Portal has 10.8 million visitors per month and provides service to 11.1 million members.

To reach the portal: www.meetup.com

This portal should be well promoted to maintain a certain level of use by entrepreneurs and by the stakeholders of entrepreneurial ecosystem.

In addition to meet-up model, this portal might also have certain other features:

- A new kind of membership where new entrepreneurs may present their products in the forum.
- Announcements and job postings about entrepreneurial companies.
- International, national and local news, events and publication about entrepreneurship

Consortium might also help entrepreneurs of İzmir by constituting a directory that shows all kinds of supports and aids for entrepreneurship. This directory should show available technical, operational, international supports. This directory would help entrepreneurs to find answers to their questions.

A similar effort was executed by a consortium established in Philadelphia, USA. The activities of this consortium can be examined through their online portal. The consortium also provides a Directory of Entrepreneur Resources⁴¹.

⁴¹<http://www.innovationphiladelphia.com/docs/Publications/GreaterPhiladelphiaEntrepreneursResourceGuide.pdf>

Innovation Philadelphia:

Innovation Philadelphia (IP) is a non-profit organization that works for economic development of 11 cities in, southeast Pennsylvania, south New Jersey and Delaware. IP works for turning Philadelphia into a regional attraction center for national leaders. IP was founded by the help of major businessmen, academicians and municipality staff. IP has also been a pioneer in attracting young experts, who is important for maintaining labor force between the ages 25-34 as well boosting the economic growth.

IP was founded in 2001 by academicians and businessmen aiming to help Philadelphia to progress in technology and economy. The organization operates through "Innovationphiladelphia.com" and in 2006 it implemented a new strategy that aimed to expand in creative markets such as web and graphic design, eco-friendly technologies and software development.

Innovation Philadelphia is different than other American organizations by its investments in "creative economy". It is also superior to other organizations in terms of resources and provided services.

Target 2.3. Developing IZTEKGEB, the incubation center, as a center for entrepreneurs to provide common entries

Developing an incubation center in İzmir Technology Development Zone (IZTEKGEB) is a project supported. Members of this incubation center will be selected through special contest and eliminations. The members will not pay rent for 3 years and the center will provide them mentoring service as well as free electricity, water and internet services..

The Incubation Center is established in Urla inside İzmir Institute of Technology which is the only technology development zone of İzmir. In this respect, members will have the opportunity to interact with the academic environment as well as with other entrepreneurs. Entrepreneurs will also have the opportunity to work in the clean and calm atmosphere of Urla. However, Urla is 30 minutes away from the city center by car. This might engender a psychological distance for the entrepreneurs thus precautions should be taken to overcome this possible problem. .

First step would be to organize several events in this incubation center, in Urla. In this way, entrepreneurs might get accustomed to this new center. In this respect IZKA should organize the events that it supports in this center. Besides entrepreneurship events, activities about technological development, clustering and commerce would also be useful to attract attention. Especially, networking-oriented activities, which include local entrepreneurial ecosystem's stakeholders, might contribute entrepreneurs' business. Stakeholders who are already active in many different areas of entrepreneurship-oriented areas might facilitate reaching mentors, other entrepreneurs and investors.

Another factor that will make the center appealing for the entrepreneurs is that it provides several different facilities. Providing a comfortable and convenient working atmosphere is crucial for the center. The center would also be used outside the office hours and can be a location for eating, resting and recreation. This should increase the productivity of the entrepreneurs. Interacting outside the office hours would also improve the connection between the entrepreneurs. These

facilities should improve the quality of entrepreneurs' lives and help them to reach their potentials. Possible examples for these kinds of facilities are given in Target 2.5.

IZTEKGEB should have a food court serving every hour of the day as well as a sports center. These facilities would compensate the fact that this incubation center is relatively away from the center. On the other hand, transportation to the city center should be frequent and transportation facilities should be available even after the office hours.

Target 2.4. Developing accelerators like EMBRYONIX

Taking İzmir's entrepreneurship potential into consideration, it would be reasonable to indicate that the accelerators and incubator centers are not substitute to each other but are complementary.

Therefore, developing accelerators would also be beneficial for İzmir

Embryonix inside İzmir Economy University serves as a successful accelerator. Embryonix is currently developing mentoring services in collaboration with EGIAD and İzmir Economy University. Embryonix is the first name that comes up to mind on the national level while talking about entrepreneurship in İzmir.

On the other hand, there are several limitations for Embryonix. First of all the physical capacity of this accelerator limits it to augment the number of entrepreneurs that it welcomes. Secondly, Embryonix does not acquire a necessary seed funding to support the entrepreneurs financially. Recommendations about seed funding are presented in Strategic Objective 3.

Embryonix's connection with other universities in İzmir should be improved. Collaboration with these universities would enable them to create a similar accelerator.

Y-Combinator

Y Combinator program started in 2005 and it serves for startup firms. Other than providing core capital for firms, it contributes to the process while implementing the ideas and meeting with the investors. The program provides approximately 18 000 US dollars to 80 startup firms twice a year. Y Combinator program concentrates mainly on web and mobile applications and it provided core capitals to firms such as Scribd and Dropbox.

Y Combinator funds the firms in groups twice a year (January – March period and July – August period). Y Combinator program expects the participants to fill in an application form instead of giving a presentation or business plan. Firms which are selected to the program move up to the Silicon Valley for 3 months. They conduct an intensive study over their business plans in collaboration with the Y Combinator. Throughout the process weekly dinners are organized where important journalists, investors, bankers and senior executive give speeches. At the end of this process a demo day is organized where the firms give presentations of their products. Y Combinator has a great network of graduates of the program therefore continues to support the firms after the demo day.

Target 2.5. Developing common working grounds and localities as well as urban areas that embody these places

Common workspaces are easier to establish than incubator centers or accelerators, thus presents a great opportunity to create spaces for entrepreneurs. Having a place to get together with other entrepreneurs might enable startup entrepreneurs to shape their business plans in more creative and innovative ways.

There are no such physical spaces that concentrate on startup entrepreneurs in İzmir. Developing these kinds of centers in the city center should be a strategic objective. Urban transformation near the port in the city center can be a great opportunity for İzmir in the near future. A joint project might be implemented in collaboration with the municipality in order to transform some of this area to an entrepreneurship district. A similar project was pursued in Boston and as a Boston Innovation District was founded. Here are some basic elements of this transformation:

- Few of the buildings should serve a common workspace for entrepreneurs. These workspaces will ensure the visits of several entrepreneurs to the region.
- An agenda and a joint calendar should be set in this common workspace.
- The area should be connected with other parts of İzmir by various ways of transportation. There should also be eating/drinking facilities in the region and these facilities should be open all hours.
- The idea of “Entrepreneurship District” should be embraced by senior executives and should be reflected to the public by using the media.

Boston Innovation District

Boston Innovation District is founded by the support of the municipality, on the east coast of the USA in Boston state. It brings entrepreneurs together under three principles: work, live and have fun. The area does not have a well established infrastructure so the participants can easily apply their green energy, transportation and infrastructure projects. The urban lab of the projects covers an area of 4000 acres. The area is a waterfront formerly used by industrial associations.

Work, live, have fun principles are based on creating a common workspace where entrepreneurs can meet all their needs. The aim is also fostering the innovative ideas in the region and forming innovative clusters. The ecosystem in the region shelters both big and small enterprises this incites ventures to be more creative and productive. As a result employment rate increases and this attracts a brain drain from nearby regions.

As a result of the principal of “Live” several facilities have been established in the district. These facilities provide flexible housing opportunities for entrepreneurs who have to work all night long in the laboratories and to those who have to travel a lot for their business.

“Have Fun” principal focus on creating socialization options for the entrepreneurs in the district. The municipality in Boston has upgraded the infrastructure and transportation options in the region for this purpose. Restaurants, night clubs and recreational facilities are built in the region to enable entrepreneurs make their business development process more efficient.

Packard Place

Located in the state of North Carolina and hosted by the city of Charlotte, Packard Place is founded towards the end of year 2010. At first this place was used as a car showroom but then transformed into a common workspace area that obtained a Leadership in Energy and Environmental Design certificate (LEED certification). There are two incubation centers inside the place and these centers focus on energy and social entrepreneurship. Common space called the Garage has been frequented by many entrepreneurs and mentor groups. The restoration of the whole building was realized by using a low-interest loan which is given as a part American Recovery and Reinvestment Act program.

Packard Place in Charlotte is the center of banking and energy sectors and has becoming also a center for early stage innovative energy initiatives. The entrepreneurs of this center have been representatives of growing centers in Charlotte such as energy, social entrepreneurship, product design and product development.

The common space called Garage provides furniture, free Wi-Fi and free coffee for the entrepreneurs and the groups who come up with applicable creative ideas are exempt from rents for a month. Garage follows a flexible policy concerning the rents: it does not require deposit, insurance or personal guarantee.

Ankara Development Agency - İşkalesi

This agency was established in June in order to create a workspace mainly for IT sector, digital and social media entrepreneurs, self-employed workers and students.

Ankara Development Agency is founded by a grant that was given for projects in the IT sector. It provides a workspace with a capacity of 50-60 people to its members. It also provides conference rooms, meeting areas, training room and locker facilities. There are about 1800 shared work spaces all around the world but in Turkey there are only two. IT and Entrepreneurship firms and NGOs operating in İşkalesi can use this place for also organizing their trainings and various other events.

İşkalesi's main mission is to create a flexible workspace and provide basic services for members for enabling them to only focus on improving in their field of activities. Monthly talks are also organized in order to connect members better and to meet them with the experts outside the center

Strategic Objective 3. Ensuring Effective Implementation of Celebrating Entrepreneurship

In İzmir, there are several local media outlets in İzmir that promote the supports and events concerning the entrepreneurship. Especially Yeni Asır, Gözlem and Ege Telgraf's appetite for news is remarkable.

However, interviews with stakeholders point out that in İzmir there isn't a successful example that was able to expand rapidly and that was able to be a regional or national role model. Nevertheless, there have been some successful initiatives. However, these examples are not systematically noted and promoted, thus they are not embraced by the opinion leaders. Local media experiences several problems in reaching entrepreneurs and to their stories.

On the other hand there are some entrepreneurs who were born İzmir and had significant success across the country. However they had started up their businesses outside İzmir and their success gives a wrong message to the entrepreneurs of İzmir. Stories of entrepreneurs who had achieved success by staying in İzmir should be accentuated in the media and those entrepreneurs should be set as a role model for the newcomers.

Target 3.1. Identifying Role Model Entrepreneurs

A way to identify and honor role models in İzmir is giving awards like "The Entrepreneur of the Year" or "The Woman Entrepreneur of the Year". These awards can be given annually in the Entrepreneurship Summit.

In addition, cooperation with the national institutions, that reveal entrepreneurs in İzmir, should be intensified. For example, the cooperation with Endeavor should be augmented in order to raise the awareness about the entrepreneurs in İzmir

Entrepreneur of the Year award should be organized by the participation of successful entrepreneurs. These kinds of awards and contests should have objective criteria. For example, a contest similar to AllWorld 25 can be set in İzmir in order to identify 25 most successful entrepreneurs of the year. Cooperation with the chamber, business associations, technology development zone and organized industrial zones are essential for an effective promotion of this contest.

Target 3.2.Organizing an Annual Entrepreneurship Summit

Organizing an extensive summit that would bring all the stakeholders of the local entrepreneurial ecosystem is crucial for augmenting the network and connections on local level. Celebrating the entrepreneurship is important in optimizing the effective direction of the summit.

Rotaract Club, JCI and Ege University organized the İzmir Entrepreneurship Summit both in 2011 and 2012. There was a fee for attending the Summit so the percentage of attendance by the stakeholders was relatively low.

The following points should be considered while organizing the İzmir Entrepreneurship Summit in collaboration with the Governorate, Metropolitan Municipality, Chambers and Universities:

- The involvement of the Protocol should be maintained for increasing media's interest to the summit.
- The participation of all the stakeholders in the ecosystem should be maintained. These stakeholders can contribute to the summit in various ways, if needed.
- Nationwide leader - stakeholders in the area of entrepreneurship should be invited to the summit.
- Organizing trainings and "speed-networking", "speed-mentoring" events to attract more attention of the entrepreneurs.
- The awards to successful entrepreneurs can be given in this summit

Target 3.3.Raising Awareness on Entrepreneurship in the Local Media

Entrepreneurship-themed meetings that would bring journalist together are crucial for celebration entrepreneurship in İzmir. Currently there are various local media institutions who publish stories of successful entrepreneurs in İzmir. These media institutions can be invited to lunch where they can interact with an international or national media figure that is specialized in entrepreneurship issues. Besides journalists, role model entrepreneurs can also attend to these meetings. .

GEP Entrepreneurial Journalism Workshops

Entrepreneurial Journalism Workshops were organized in Turkey on 24 March 2012 and on 27 May 2012 within the scope of Global Entrepreneurship Program. Boston Globe's technology writer Scott Kirsner was the invitee of the first workshop and Inc Magazine writer Donna Fenn of the second. Workshops were moderated by Dünya Newspaper's editor in chief Hakan Güldağ.

Comparative assessments were made between entrepreneurship journalism in Turkey and in the USA. The workshop had several discussion topics like the perception of entrepreneurship by the public opinion, the relation between the journalists and the entrepreneurs etc. Entrepreneurial Journalism Workshops have been a pioneer in presenting Turkey's status concerning entrepreneurial activities.

Journalist meetings can be the events where İzmir's preferential sectors, clusters and roles models are addressed. Likewise, sectoral success stories can be underlined in these vents. These meetings should be realized on a quarterly basis in order to keep journalists' interests alive and different participants should be invited.

Strategic Objective 4.Improving Financing Possibilities for Entrepreneurs in İzmir

There is a great potential of angel investors in İzmir. Yet, there has not been mobility in being an actual angel investor. There is an evident lack of an active angel investor network.

İzmir's angel investor potential should definitely be activated. Major problem against creating angel investors is the deal flow. As a solution detecting entrepreneurs would also help angel investors to mobilize

There are three strategic objectives for improving angel investment in İzmir

- Organizing trainings for raising awareness about angel investment
- Developing angel investment networks
- Activating a local seed fund which would also support angel investors.

Target 4.1. Organizing Angel Investor Trainings

Angel Investment Trainings aim informing potential angel investors as well as improving the interaction between them. Angel investor training consists of various sessions about preparing and negotiating an agreement, being a leader investor and being a member of board of directors after the investment. The trainings can be given by experienced angel investors instead of academicians in order to attract more attention and affectivity to the trainings.

Angel investor trainings can be given without having an angel investor network. Angel investors gathering around these trainings would start up new networks.

Trainings should be given in collaboration with national and international organizations. Benefiting from experiences of national associations like Galata Business Angels is crucial. As angel investment is so new in Turkey, collaborating with international organizations would also be more than appropriate.

Target 4.2. Developing Angel Investor Networks

Angel investors operate usually via networks. This kind of operating allows these investors to distribute risk, diversify experience and share due diligence cost out. Likewise, it becomes easier for entrepreneurs to reach to these angel investors. Finally, the newly introduced incentives for angel investors provide special benefits for licensed angel investor networks.

One of the major deficiencies of entrepreneurial ecosystem in İzmir is the lack of angel investor network.

The operating system and the design of the angel investment network are crucial for the growth of entrepreneurs. There are two models of angel investment systems⁴²:

- a) **Member-Oriented Angel Investment Network:** Angel investors are involved at all stages of investment support. They only get assistance when communicating with the members, meeting and transferring knowledge.
- b) **Director-Oriented Angel Investment Network:** The director sets his team of angel investors according to their experiences. Here, the director angel investor arranges all meetings and negotiations and trains entrepreneurs to give presentation to other angel investors. Moreover, the director regulates the relations between the entrepreneurs and gives them advices if needed.

Table 18. Advantages and Disadvantages of Member and Director Oriented Angel Investment Network

Member-Oriented	Director-Oriented
Advantages	Advantages
<ul style="list-style-type: none">• Effective inter-member communication• Displaying the operations to the members	<ul style="list-style-type: none">• Professional angel investors• Supervision of angel investors• Regular communication between the angel investors

⁴²Preston, Susan L. (2004)

<ul style="list-style-type: none"> • Intake of members determined by the members • Practice opportunity for the members 	
Disadvantages	Disadvantages
<ul style="list-style-type: none"> • Infectivity of the volunteering members • Inconsistent Customer and Investment Objectives 	<ul style="list-style-type: none"> • The cost of professional consulting, office space and administrative expenses.

Table 19. Examples of Member-Oriented and Director-Oriented Networks from All Around the World

Member-Oriented	Director-Oriented
<u>Delaware Crossing Investor Group (Doylestown, PA & Princeton, New Jersey)⁴³:</u> <ul style="list-style-type: none"> • Over 40 members • Members are active in various regions • Members are experienced in different sectors • Communication between the members is effective. • Trainings for members about finance and investment • Closer relations with entrepreneurs and investors in Greater Philadelphia region 	<u>RobinHoodVentures (Greater Philadelphia)⁴⁴:</u> <ul style="list-style-type: none"> • Director possesses a board of directors • Board of directors consist of experienced CEOs, CFOs, angel investors and consultants • Members are grouped in certain sectors • Members are expected to be accredited, to use their own budgets and to have a certain experience and a reference
<u>Puget Sound Venture Capital⁴⁵:</u> <ul style="list-style-type: none"> • Does not have a common pool of funds • The purpose is to form a forum that brings angel investors together • Number of members cannot exceed 50 • Institutions and organizations can also be members • Monthly joint meetings • Members must have net assets worth 1 million dollars and must be experienced in venture capital investing • Member institutions and organizations should meet certain standards • Potential investors can also attend meetings 	<u>Innovation Philadelphia (Philadelphia)⁴⁶:</u> <ul style="list-style-type: none"> • Has a network which is present in 11 different cities • Certain members of the Board of directors have CEO and Chairman background

Director-oriented network model seems to be more apt during the early phases of the establishment of the ecosystem. However, forming director-oriented networks costs more than member-oriented

⁴³Delaware Crossing Investor Group Website.<<http://www.delawarecrossing.org/>>

⁴⁴Robin Hood Ventures Website.<<http://www.robinhoodventures.com/board-of-directors.page>>

⁴⁵Puget Sound Venture Club Website.<<http://www.pugetsoundvc.com/index.asp>>

⁴⁶Innovation Philadelphia Website. <<http://www.innovationphiladelphia.com/default.aspx>>

ones. Member-oriented angel investment network can be founded by the help of business associations and chambers.

Target 4.3. Operationalizing a Seed Fund for Supporting the Incubation Center, Accelerator and the Angel Investor Network

In every entrepreneurial ecosystem around the world, there is a source of public financing to trigger financial developments in the system. Financing can be in the form of soft credit like in USA's SBIR or in the form of startup entrepreneurship capital like in Israel's YOZMA or in the form of angel investment fund as seen in Scotland's SCF and New Zealand's NZVIF⁴⁷.

Public financing's main purpose is to trigger other private sources. Program should enlarge its financing pool by the help of the triggering public finance.

There are several initiatives on national level: Undersecretariat of Treasury is in talks with the European Investment Fund for establishing an angel investor co-investment instrument; ministry of development is working for setting a startup venture financing center. However, a seed fund established in İzmir would increase İzmir's prestige and help local actors to develop effectively.

IZKA will help the ventures accepted to the incubator center inside IZTEKGEB and to Embyronix. The support should be given after a thorough evaluation in order to increase the credibility of the program.

This seed fund can be used as a grant or as an investment. Grant would be easier to apply because it is already in the legislation of regional development agency. As grants are non-refundable new sources should be found in order to maintain the continuation of the program. Investment would be more preferable because it provides a risk-sharing. However, regional development agencies' legislations do not allow investments. This method can be used via business associations, chambers or universities which are partners of the incubation center or the accelerator.

Strategic Objective 5. Improving Entrepreneurship Trainings

Entrepreneurship trainings are a must for the ecosystem. Current entrepreneurship trainings can be divided into two according to their groups. KOSGEB's trainings in İzmir Dokuz Eylül, Ege, İzmir Economy and Gediz University target general entrepreneurs. . TUBITAK has also planned a training program as a part of "1512 Individual Entrepreneurship Progressive Support Program" in which it gives administrative, technical and commercial supports.

⁴⁷OECD (2011)

University courses or projects about entrepreneurship are of a different nature than entrepreneurship trainings. In stakeholders' meetings it is stated that there are entrepreneurship courses in Ege, Yasar and İzmir Economy universities which are open to public.

Babson College Training Programs and Applications

Arthur M. Blank Entrepreneurship Center⁴⁸:

- A center solely focused on the development of the entrepreneurship
- Has global research facilities like GEM and STEP
- Has John E. And Alice L. Butler Accelerator Centers where students can prepare business plans
- Offers customized programs

Successful Transgenerational Entrepreneurial Practices (STEP)⁴⁹:

- An applied research program on a global scale
- Provides life-long support to entrepreneurial families
- Conducts research to provide several solutions to occurring problems
- 43 university, more than 100 family, more than 200 scientist and 94 cases are evaluated
- 12 regional summits

The John E. and Alice L. Butler Venture Accelerator⁵⁰:

- Supporting student initiative until they realize their business plan
- Providing entrepreneurs effective ways of communication
- Providing incubator centers for the firms to support their development
- Providing consulting services and office space
- Business plan competition for the university's graduates. (B.E.T.A Challenge)
- Sharing with Babson College, Olin Engineering and Wellesley College students
- Help summer school program, graduate program, Olin Engineering and Wellesley College students to develop and present business plans

There are several other trainings than KOSGEB trainings. These trainings are given by NGOs, or private education institutions. For example, Liyakat Foundation started a project called "Entrepreneurship Campus in Ege. This project aims training potential young entrepreneur in expressing themselves and producing creative business plans. Other purpose of this program is to teach entrepreneurs how to prepare a business plan and acquire them with the habit of life-long learning. .

⁴⁸Babson College Arthur M. Blank Web Site. <<http://www.babson.edu/Academics/centers/blank-center/Pages/home.aspx>>

⁴⁹Babson College STEP Web Site. <<http://www.babson.edu/Academics/centers/blank-center/global-research/step/Pages/home.aspx>>

⁵⁰Babson College The John E. and Alice L. Butler Venture Accelerator Web Site. <<http://www.babson.edu/Academics/centers/blank-center/venture-accelerator/Pages/resource-center.aspx>>

Involving in entrepreneurship trainings at an early age helps people to develop an entrepreneurial character faster. So these trainings can also be planned for younger audiences. For example, in İşikkent Campus in May 2011, training was given to high school students. 150 high school students from all around the country competed with their creative ideas. This competition helped these students to develop independent creative thinking and risk taking which are essential for implementing entrepreneurial character.

Developing entrepreneurship trainings at primary and secondary levels should be a national priority. TÜBİTAK and BİDEB are currently working to improve entrepreneurship trainings at universities. These initiatives should be taken into consideration while developing an entrepreneurship education in İzmir.

Target 5.1 Standard Harmonization of KOSGEB Trainings

KOSGEB trainings aim establishing successful businesses by generalizing entrepreneurship culture and its concepts. These trainings attained to a large audience. However, different trainers give these trainings in different regions and this causes a differentiation in the application of the programs. Likewise, these trainings are given by academicians instead of experienced entrepreneurs so a mentor-entrepreneur relation cannot be established.

In order to provide the same degree of benefit through KOSGEB Applied Entrepreneurship Trainings,

- Trainings should be standardized
- Trainers should follow a standard procedure
- Content of the Trainings should be mentioned in details
- Encouraging the development of mentor-entrepreneur relationships

The application of KOSGEB training by the local ecosystem stakeholders would improve previously mentioned relationships. KOSGEB training given by EGIAD in 2011, in the frame of “Entrepreneur Academy” event can be given as an example to this kind.

Target 5.2. Developing a Consortium between the Universities in order to establish a Common Curriculum for Courses and Case Studies

In order to improve entrepreneurial trainings in İzmir is to establish a consortium between the universities which would allow them to create joint training programs.

Another important step forward would be forming an entrepreneurship curriculum with the help of successful entrepreneurs from İzmir and from all around the country. 44 hour long entrepreneurship courses can consist of speeches and workshops. These courses can be given in the universities which are part of the consortium or in the common workspaces that are planning to be established. The critical issue at this subject is that the universities should accept these courses as a part of their curriculum and should count them as courses that provide necessary credits to graduate. TÜBİTAK and BİDEB are also working on developing an entrepreneurial curriculum and within this frame public institutions which would give entrepreneurship courses are expected to be supported as a part of the program no 1007.

Cases studies of these courses can be selected from İzmir. Consortium of universities should watch the works of TUBITAK and BİDEB in this area and should ask for their help in developing case studies that would be used in the curriculum.

Stockholm Entrepreneurship Institute

About

In 1990s, Royal Institute of Technology, Stockholm School of Economics and Karolinska Institutet prepared a curriculum together. In 1999, Stockholm Entrepreneurship Institute has become an independent establishment. This institute includes universities of 5 different disciplines thus its curriculum provides an education which promotes creative thinking and entrepreneurship. This institution is a non-profit organization which focuses more on practice than theory. The members of the board of directors are from universities and industrial organizations. 40 academicians, 160 guest speakers and mentors are actively working for the institute.

Applied Activities

Workshops: Students of all member universities can participate.

Competitions: Teams are sent to global scale competitions. Hence, they can gain experience, test their abilities and meet with entrepreneur networks. Likewise they can promote themselves via the media.

Activities: Latest entrepreneurship trends are presented and young entrepreneurs are met with professionals, academicians and other young entrepreneurs.

Seminars: Stories of successful entrepreneurs are shared with the young ones. These seminars are open to all SSES students and graduates.

Education

Basic Courses: 4 stage entrepreneurship education

Selective Courses: Offers the opportunity to specialize in a sector. Everyone can participate.

Practice: Entrepreneurs gain experience in problem solving, funding and negotiating

Special Programs: Graduate programs of the Institute: improving creativity in entrepreneurship, bio-entrepreneurship, innovation and fine arts.

Strategic Objective 6. Establishing a Dynamic Setting for Mobilizing Stakeholders and Implementing the Strategy of Developing Entrepreneurial Ecosystem

Possible ways of contribution by the stakeholders are given in table 20. There are three main targets recommended below in order to bring stakeholders together for a collaboration and for an evaluation of the progress.

Table 20. Strategic Objectives that can be given by Stakeholders of Local Entrepreneurial Ecosystem

	Major companies	Universities	Investors	NGOs	Public Institutions	Local Media
Developing detection mechanisms	X	X		X	X	
Improving connections	X	X	X	X	X	X
Ensuring an effective celebration of entrepreneurship	X			X	X	X
Improving finance opportunities for entrepreneurs	X		X		X	
Developing entrepreneurship trainings		X		X	X	

Target 6.1 Establishment of İzmir Entrepreneurship Council

İzmir Entrepreneurship Council which includes all the stakeholder of ecosystem in İzmir should be established. This council would assure periodic meetings of the stakeholders, thus allowing stakeholders to evaluate progress and realization of the projects. This council would also allow stakeholders to take decisions in a more collaborative way.

İzmir Entrepreneurship Council would be the local version of National Entrepreneurship Council which is founded in January 2012 and which operates as a part of the Ministry of Industry and Technology. Establishing such a council would once again highlight İzmir's pioneer characteristic.

All stakeholders should be represented in İzmir Entrepreneurship Council. İZKA can lead the council during the early periods but as the council develops members can choose their own chairman.

Council should operate in a professional way and should not prefer volunteer works.

İZKA can be the convener of the ecosystem. At this point, the difference between coordinator and convener should be underlined. İZKA should not be responsible for role sharing but should ensure collaboration inside the platform.

İZKA should not intervene directly to the ecosystem; it should always collaborate with the stakeholders. İZKA can find appropriate stakeholder to distribute its tools to support them in improving the projects. These kinds of support are catalytic and crucial for the ecosystem.

Target 6.2.Organizing Ecosystem Visits with the Stakeholders

A trip to the USA together with the stakeholders of the ecosystem is suggested and this trip can be realized by the leadership of İZKA. This trip should include İZKA members, governor's office, metropolitan university, chambers, business associations and universities. During this trip meetings with local development agencies, investor groups, municipalities and universities of the visited area should be arranged. IT would also be beneficial to observe an entrepreneurship festival or competition.

This trip will help İzmir to achieve its goals by improving the cooperation between the stakeholders and allow these stakeholders to attain first hand observations and analysis.

Target 6.3. Developing a mechanism to observe and evaluate the entrepreneurship ecosystem

Entrepreneurship certificate and GEM İzmir are necessary for monitoring and evaluation. These two initiatives are important in order to evaluate the improvements and developments concerning the strategic planning. Mobilization of an ecosystem is a long process so the monitoring and evaluating can be done annually.

Entrepreneurship Strategy Performance Indicators: Table 21 presents an example of a comparative data collection through Entrepreneurship Strategy Performance Indicators. These data and indicators help to determine İzmir's progress in entrepreneurship.

Table 21. Entrepreneurship Strategy Performance Indicators Draft

Data	Source	Currently accessible?
HUMAN SOURCE		
Population (2011)	TÜİK	Yes
Proportion of graduates to the whole population (2000-2011)	TÜİK	Yes
Population of graduates (2000-2011)	TÜİK	Yes
Population of doctoral graduates (2000-2011)	TÜİK	Yes
INNOVATION		
Application for a patent per 10,000 people(2011)	TPE	Yes
Patent registrations per 10,000 people (2011)	TPE	Yes
Number of companies in TDZs	All TDZs	Yes
TDZ R&D Space (m ²)	All TDZs	Yes
Public Financial Support to Entrepreneurs	TÜBİTAK, Ministry of Science, Industry and	Yes

	Technology, KOSGEB	
ENTREPRENEUR ECONOMIC ACTIVITY		
Ratio of Companies with 1-10 employees to the Total number of Companies(2011)	SGK	Yes
Ratio of 1-10 of Companies with 1-10 employees to the whole population (2011)	SGK, TÜİK	Yes
Number of New Firms and Trade Proc. (2011)	TOBB	Yes
Ratio of New Firms to all Firms (2011)	TOBB, SGK	Yes
Coefficient of Advanced Technology (Export-based)	TÜİK	Yes
Ratio of Business Substitutions to the Total Labor Force	İŞKUR	No
Ratio of Companies with more than 20% growth rate in three of the last five years to the total number of companies	TÜİK	No
Number of employees of the Companies with more than 20% growth rate in three of the last five years	SGK	No
LEVEL OF SUCCESS		
Ratio of Companies with more than 20% turnover in three of the last five years to the total number of companies.	TÜİK	No
Ratio of Companies increasing their employment rate by more than 10% in the three of last five years to the total number of companies	SGK	No
Number of Licensed Angel Investor	Undersecretariat of Treasury	No
Amount of Angel Investment	Undersecretariat of Treasury	No
Number of Fortune 500 Firms (2010)	Fortune 500	Yes
Number of ISO 500 Firms (2011)	ISO 500	Yes
Number of AllWorld Turkey 100 Firms (2010)	AllWorldTurkey 100	Yes
Number of Publicly Opened Firms	KAP	Yes

Global Entrepreneurship Monitor (GEM) İzmir: GEM evaluates the tendency of entrepreneurship in a region and the number of people who shed this tendency to action. GEM also analyzes the characteristics and problems of these people. GEM is composed of two surveys, one applied to experts and the other to the population.

GEM is realized in collaboration with a consortium which is led by Babson College and with local operators. The results can be only obtained o national level in Turkey due to small sample size.

The application of GEM on local level will allow collecting information about local entrepreneurship tendencies. Ideally possibility of surveys conducted at NUTS level will allow comparisons between the regions. Such an application can be realized by forming a consortium which is composed of universities and ministries. However, if İzmir can lead in this field, GEM applications will allow follow up on tendencies in İzmir and comparison to the national average.

As a result of monitoring and evaluation studies annual reports can be published. This report can be named as “Entrepreneurship in İzmir” and it can be declared during the Summit of Annual Entrepreneurship.

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APPENDIX 1. Stakeholder Meetings and Interviews

Appendix 1.1. Stakeholder Meetings

First Meeting Participants

NAME	INSTITUTION
Bülent Akgerman	AKG Group/ESİAD
Murat Akdağ	BLM Mekatronik
Emre Demiray	Demiray Telekom
Ünal Rıza Yaman	E.Ü.EBİLTEM
Gamze Mat	Edapbil
Buğra Tokmakoglu	Ege Telgraf Newspaper
Taylan Demirkaya	Embryonix
İdris Özçelik	Erik Bilişim
Güliz Küçük	Entrepreneur
Murat Sertel	Entrepreneur
Ali Sezgin Armağan	Entrepreneur
Kayahan Dede	İzmir Institute of Technology
Ahmet Kaplan	Star
Metin Nil	Vestel
Murat Ervin	Yenigün Newspaper

Second Meeting Participants

NAME	INSTITUTION
Esra Tekmen Kavcıoğlu	Balçova District Governorship
Av. Nilhan A. Tunç	BASİFED (General Coordinator)
Dr. Canan Arıkbay	BSTB İzmir City Directorate
Berkay Eskinazi	EBSO Y.K. Liyakat Association
Emre Çoğulu	Aegean Region Chamber of Industry
Cenk Öztap	Aegean Young Businessman Association
Jülide Kesken	Ege University
Taylan Demirkaya	Embryonix /İzmir Economy University
Yunus Özsu	Gediz University
Emre Koç	İESOB
A. Nuri Başoğlu	İYTE/Bosphorus University
Onur Önder	İzmir Metropolitan Municipality İzmir Craftsmen and Tradesmen Chambers Union
Özgür Kirik	İzmir Young Entrepreneur Council
Serkan Acar	İzmir YoungMÜSİAD
İsmail Çiftçioğlu	İzmir Katip Çelebi University
Duygu Sever	İzmir Katip Çelebi University
Oya Kudret	İzmir Katip Çelebi University
Zerife Peker	İzmir Katip Çelebi University

Fulya Yemiřçi	İzmir Commodity Exchange
Melih Akdoğan	İzmir University Department of Administration
Ceyda Sarıca	Karşıyaka Municipality
Mustafa Çanakçı	KOSGEB
	KOSGEB İZMİR NORTH Services Center
Enver Çakın	Directorate
Seza Yorulmaz	TOBB Female Entrepreneur Council President
Çağrı Bulut	Yaşar University

Appendix 1.2. Interviews

İstanbul Interviews

NAME	INSTITUTION
Didem Altop	Endeavor
Büke Çuhadar	Endeavor
Engür Rutkay	Endeavor
Elbruz Yılmaz	Galata Business Angels
İhsan Elgin	Startup Factory
Aslı Gözören	Keiretsu Forum
Alphan Manas	Angel Investor
Selçuk Kiper	MITEF
Aladdin Alpay	Turkcell

Ankara Interviews

NAME	INSTITUTION
Serkan Valandova	Ministry of Development
Mustafa Işık	Ministry of Development
Nikolay Viskuşenko	Techno-entrepreneurship Association
Ümit Özlale	TUBİTAK BİDEB Entrepreneurship Workgroup

İzmir Interview

NAME	INSTITUTION
Levent Arslan	KOSGEB Ege University TEKMER
Mustafa Bintaş	MuBiTek
Birol Yılmaz	İZTO
Temel Aycan Şen	EGİAD
Cenk Öztap	EGİAD
Ender Yorgancılar	EBSO
Emre Çoğulu	EBSO
Serkan Acar	İzmir TOBB Young Entrepreneur Council