CONNECT & CREATE

Guide for Mapping the Entrepreneurial Ecosystem

german cooperation
DEUTSCHE ZUSAMMENARBEIT

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1

INTRODUCTION

1 Introduction

What is the relevance of the entrepreneurial ecosystem for development cooperation?

In recent years, the role of entrepreneurs and micro, small and medium-sized enterprises (MSMEs) has steadily gained importance in development cooperation. Being one of the driving forces for job creation, business innovation and green and inclusive growth, development cooperation seeks ways to support entrepreneurs and MSMEs in developing and emerging countries. In the majority of those countries, MSMEs account for a large share of the national economic activity. In the light of this, MSMEs play a leading role in meeting the economic dimension of the Sustainable Development Goals (SDGs) launched by the United Nations in 2015.[1] In order to develop efficient supporting measures, it is essential to gain a holistic understanding of the environment in which entrepreneurs and MSMEs operate; the so-called entrepreneurial ecosystem. The Organisation for Economic Co-operation and Development (OECD) highlights the need to strengthen the entrepreneurial ecosystem, stating: "Today there is an increasing consensus that the successful launch and growth of new ventures not only depends on the behaviour, skills and resources of entrepreneurs but also on their interactions with other stakeholders and the way these interactions are orchestrated. Support for entrepreneurs is thus moving towards supporting ecosystems, rather than just supporting individual entrepreneurs."[2]

1 Promoting inclusive and sustainable economic growth, employment, and decent work for all (SDG 8). Promoting sustainable industrialisation and fostering innovation (SDG 9).
2 OECD (2013) Entrepreneurial Ecosystems and growth-oriented entrepreneurship.

What is the purpose of this guide?

This guide will lead you through the process of observing, analysing and visualising the entrepreneurial ecosystem – meaning the entrepreneurs' environment including the surrounding institutions, players and prevailing culture – a process referred to as 'mapping'. This guide intends to assist you in selecting the tools best suited to the context in question, in adapting them to your needs and in applying them to mapping the Entrepreneurial Ecosystem in the region relevant to you. Mapping provides a snapshot of the situation, exploring and identifying positive dynamics and potential, allowing you to design effective interventions to stimulate entrepreneurship.

A flexible approach should be taken in applying this guide, always adapting it to the specific context and objectives of the mapping. If, for example, your goal is to generate a brief overview of the ecosystem in order to help identify potential interventions, this could be achieved relatively quickly, within three to four weeks. If however the objective is to carry out the mapping as a participatory process, together with entrepreneurs and players from the local ecosystem, more time may be required. Of course, issues such as geographical scope and data availability, etc. also play an important role when defining the timeframe required for mapping.

This guide offers a definition for the term 'entrepreneurial ecosystem' that is especially relevant and applicable in the context of developing and emerging markets and the development of growth-oriented MSMEs[3] see Chapter 2. According to this definition, the entrepreneurial ecosystem consists of **three levels: [1] entrepreneurial culture , [2] players that are interacting with one another, and [3] the business environment and investment climate** towards entrepreneurial activity. This 'three-levels approach' will assist you in maintaining an overview and in clustering the information in a useful and simple way.

This guide aims to be a **practical toolkit**. It therefore builds upon and combines existing instruments and approaches, such as the business environment and investment climate analysis or the Aspen Network of Development Entrepreneurs' (ANDE) *Entrepreneurial Ecosystem Diagnostic Toolkit'*[4]. It acknowledges new trends in research, such as the focus on behavioural

3 Growth-oriented MSMEs can also be understood as 'small and growing businesses', which the Aspen Network of Development Entrepreneurs defines as commercially viable businesses with five to 250 employees that have significant potential, and ambition, for growth.
4 Aspen Network of Development Entrepreneurs, Entrepreneurial Ecosystem Diagnostic Toolkit, 2013.

insights and culture as influencing factors for entrepreneurial activity. Each mapping exercise ends with the identification of entry points for interventions. A complementary "Guide for Strengthening Entrepreneurial Ecosystems" has been published in 2021 (January). This second guide lays out principles and examples for strengthening ecosystems and their three pillars.

How is this guide structured?

After presenting a definition of the entrepreneurial ecosystem, this guide follows five consecutive steps in mapping it see Chapter 3:

1. research design
2. data collection
3. data analysis
4. data validation
5. from mapping to activity.

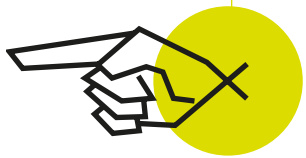
For each of these steps, this guide describes a specific approach for the mapping exercise and offers **practical tools**, such as a list of indicators, information on data sources and sample questions for structured interviews. The tools were developed in line with the three-lelvels approach: entrepreneurial culture; interacting players; business environment and investment climate. In addition, in some steps the guide offers practical examples for how the tools can be used or how the specific step can be conducted. Based on your needs and the contexts in which you operate, you may wish to adjust the tools or only apply some of them. This guide allows for this flexibility.

Furthermore, this guide puts a special focus on the fields of **female entrepreneurship, green and inclusive entrepreneurship as well as digital entrepreneurship and entrepreneurship in fragile contexts** which are especially relevant for development cooperation as they have a profound potential to contribute to the SDGs.[5]

5 For example: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life (SDG 5). Encourage companies [...] to adopt sustainable practices and to integrate sustainability information into their reporting cycle (SDG 12.6.).

Wherever possible and necessary, this guide provides tailored information and guidance for these four areas of the entrepreneurial sphere (additional information in info boxes is marked with appropriate colours and icons):

- green and inclusive entrepreneurship
- female entrepreneurship
- entrepreneurship in fragile contexts
- digital entrepreneurship



Who is this guide for?

This guide is explicitly aimed at those who are implementing development programmes which are operating in, or intend to conduct activities in, the field of entrepreneurship and the promotion of growth-oriented MSMEs. These can be programmes from a range of areas, such as agriculture, biodiversity, information and communications technology (ICT) or energy. The **main target group though is those working on private sector development (PSD) programmes**. This guide is written as a practical toolkit for GIZ staff, but it can also be used by other development agencies that engage in entrepreneurship support. Likewise, it can serve as a tool for any local ecosystem support organisation which wants to engage in this activity, with or without donor support.
As of the time of updating this guide in 2020, it had already been used by more than 10 projects. The feedback generated from this use has been analysed and integrated into this updated version. Users are therefore explicitly encouraged to share their experience of using this guide with the authors, who will continue to issue updated versions see Chapter 4.[6]

6 Experiences and feedbacks on this guide can be addressed to private.sector@giz.de. Feel free to contact us for sharing further tools and examples.

2

DEFINING THE ENTREPRENEURIAL ECOSYSTEM

2 Defining the entrepreneurial ecosystem

The concept 'entrepreneurial ecosystem' consists of two terms. The first term **'entrepreneurial'** refers to MSMEs mostly in their starting and/or scaling phase. Entrepreneurship is often understood as a driver of innovation and productivity and as an engine for sustainable economic growth. In the classic sense, entrepreneurs are people who start businesses, hire labour, mobilise resources and ensure that their operational business keeps running. The OECD–Eurostat Entrepreneurship Indicators Programme's conceptual definition of entrepreneurs is as follows:

Entrepreneurs are those persons (business owners) who seek to generate value, through the creation or expansion of economic activity, by identifying and exploring new products, processes or markets.[7]

In the context of development cooperation, it is important to acknowledge the distinction between the so-called 'necessity-driven entrepreneurs' and the 'improvement-driven entrepreneurs' (also called 'opportunity-driven').[8] You can use this guide for both groups, depending on the target group you select for your mapping see Chapter 3 ›Step 1 ›Target group. In natural sciences, 'ecosystems' are generally defined as a system, or a group of interconnected levels, formed by the interaction of a community of organisms with their environment. Like biological ecosystems, an entrepreneurial ecosystem consists of different levels, which can be individuals, groups, organisations and institutions that form a community by interacting with one another, but also environmental determinants that have an influence on how these players work and interconnect; in entrepreneurial ecosystems, these can be laws and policies or cultural norms. Ecosystems strongly influence the likelihood of enterprises thriving and growing, as they can allow for a faster and more efficient flow of resources, knowledge and information between the different players within the system. Experience shows that ecosystems are rooted locally, often on a city-level, but that an openness to and exchange with other ecosystems are crucial in allowing an inflow of talent, information, knowledge and resources.

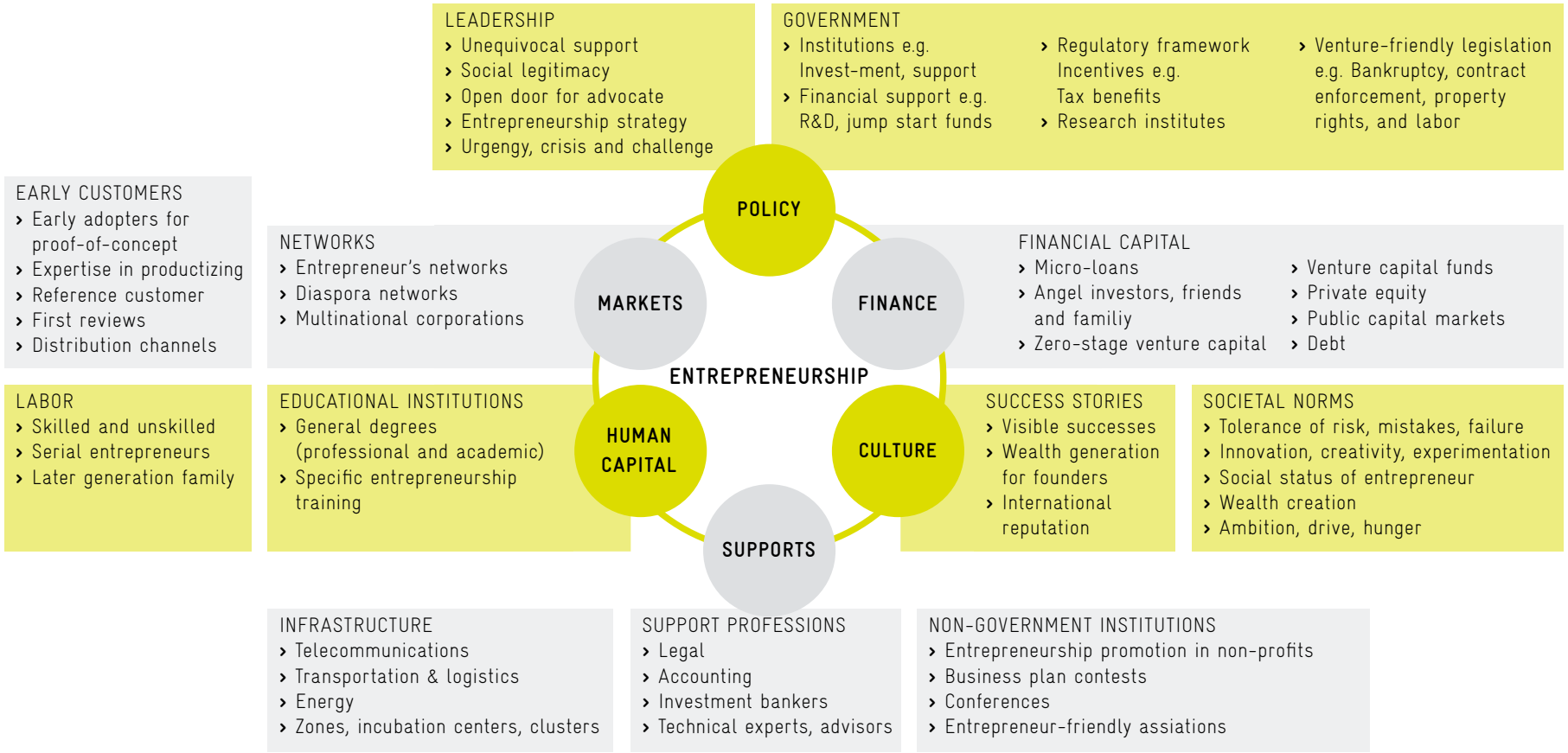
Neither biological nor entrepreneurial ecosystems can be created, designed or built by an outside player. While this makes the term 'entrepreneurial ecosystem' hard to grasp it does underline that entrepreneurship support programmes operate in complex and highly dynamic environments. For this reason, it is particularly important to take sufficient time to analyse and understand the ecosystem before designing interventions to support it.

7 Organisation for Economic Co-operation and Development, Entrepreneurship at a Glance 2012, OECD, Paris, 2012.
8 Global Entrepreneurship Monitor. Available at: http://gemconsortium.org/

2.1. The levels of an entrepreneurial ecosystem

There are numerous definitions of what the entrepreneurial ecosystem is and how it functions. One of the most frequently used models was developed by Daniel Isenberg.[9] According to him, the entrepreneurial ecosystem consists of six domains: policy, finance, markets, human capital, support and culture.

FIGURE 1: Isenberg's model of an entrepreneurial ecosystem



(Source: Innovation America)

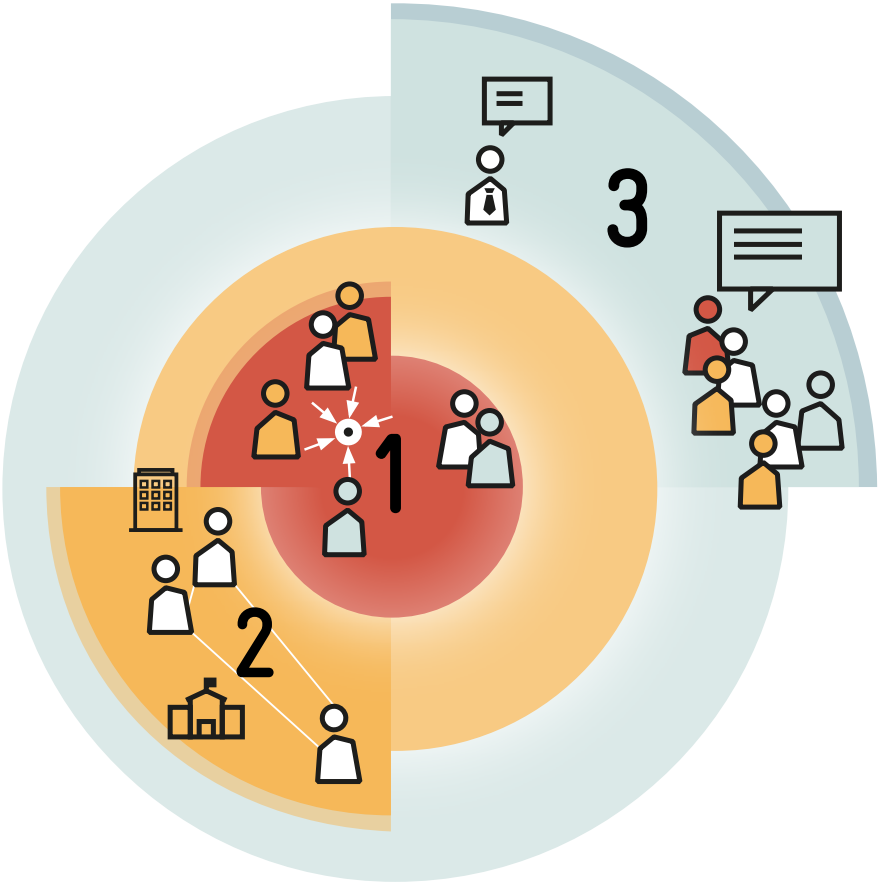
Isenberg emphasises that every entrepreneurial ecosystem is unique as it developes under ideosyncratic circumstances. 'They are geographically bounded but not confined to a specific geographical scale'[10], which means that they can refer to a nation or be limited to smaller geographical areas, e. g. cities. In addition, there are examples of industry-specific ecosystems, but also ones that span various industries.

In this guide and for the purpose of mapping, the entrepreneurial ecosystem is defined as a product of **three levels**:

1. Its entrepreneurial culture
2. its interacting players;
3. it's business environment and investment climate.

Using this three-levels approach, this guide focuses on the most relevant aspects of an ecosystem that can be tackled by PSD interventions, takes up the recent trend of emphasising the importance of culture and attitudes (also in economic research, e. g. behavioural economics) and builds upon existing approaches, such as the business climate surveys. In addition to these three levels, this guide uses Isenberg's domains to categorise the players of an entrepreneurial ecosystem. You will find a short description of each of the levels in the following sections.

FIGURE 2: The three levels of an Entreprenereurial Ecosystem



Entrepreneurs constitute the heart and motor of an ecosystem. They are the main users of ecosystem functions; they contribute

9 Isenberg, D., The entrepreneurship ecosystem strategy as a new paradigm for economic policy: principles for cultivating entrepreneurship, Babson Entrepreneurship Ecosystem Project, Babson College, Babson Park, MA, 2011.
10 OECD, Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship, OECD, Paris, 2014.

to it by sharing information and lessons learned and acting as peers and role models for other entrepreneurs. Often they are also the main drivers of the development of ecosystems, bringing people and players together, drawing in new players, and lobbying for policy reform.

ENTREPRENEURIAL CULTURE

The culture of a society has a large impact on the entrepreneurial ecosystem. It affects individuals' attitudes towards entrepreneurship and therefore the likelihood of becoming an entrepreneur. In development cooperation, it is increasingly recognised that culture and attitude, alongside social protection schemes, are important factors that determine a country's level of entrepreneurship. Economic research has moved away from the neoclassical thinking that only inputs, such as labour, land and capital, determine the success of an economic system, but increasingly emphasises the role of human beings as decisive determinants of economic performance.[11] This is why this guide focuses on the entrepreneurial culture and attitudes as the third level. Some of the relevant questions to pose when assessing how open a society is to entrepreneurship include:

- Is the society open to entrepreneurship-related characteristics such as networks, collaboration, sharing of knowledge, experiences and resources?
- Is starting a new business a desirable career choice?
- Does the media promote entrepreneurship through stories of new and successful businesses?
- Are MSMEs with experience of failure judged by society?
- Conversely, do successful entrepreneurs have a high level of status and respect?

The Global Entrepreneurship Monitor (GEM), which has evolved into a central reference in entrepreneurship studies globally, provides information on these questions.[12] GEM collects primary data on entrepreneurial attitudes through interviews with a minimum of 2,000 adults and around 30 expert interviews in each country. It is therefore a unique source of primary data on the entrepreneurial culture and attitudes in a country. If GEM does not provide recent data for the country of interest, you can conduct your own interviews with colleagues and ecosystem players to collect answers to the above-mentioned questions (see Chapter 3 › Step II).

11 Hwang, V. W., The Rainforest: How 'Chicago Thinking' Explains Silicon Valley, The University of Chicago Law School, Chicago, 2012.

12 Since 1999, a consortium of universities has conducted the annual GEM reports. GEM has representatives – commonly academic or research institutes – in each country. These 'national teams' are responsible for the local data collection and for reporting the findings. In 2017, the GEM report covered 65 economies worldwide. The whole project is overseen by the UK-based Global Entrepreneurship Research Association. For more information, see http://www.gemconsortium.org/

Culture can be assessed by considering different dimensions. Geert Hofstede's renowned cultural dimensions have been expanded upon by the large empirical study conducted by the GLOBE group offering seven cultural dimensions to describe national culture and intercultural differences.[13] A study examining intercultural dimensions of entrepreneurship finds that "the most positive influence on entrepreneurship have such values as: long term orientation, low power distance, individualism, human orientation, performance orientation, future orientation, and low uncertainty avoidance."[14]

Additional explanatory value for understanding the culture behind an entrepreneurial ecosystem is provided by examining the social capital; meaning the level of collaboration, cooperation, trust, reciprocity and emphasis placed on the common good.[15]

The World Values Survey is a comprehensive survey which monitors values, attitudes, and beliefs towards many aspects of life. It covers nearly 100 countries and topics such as women in business or attitudes towards technological change.[16]

INTERACTING PLAYERS

An entrepreneurial ecosystem provides a stage for a variety of players that influence the conduciveness of a place towards entrepreneurship by different means. This is why many ecosystem mapping approaches look at the players and their roles within the ecosystem. It is important to know which players either constrain or foster entrepreneurial activity and whether there are any relevant players which would support the purpose of the ecosystem but which are lacking.

The players can be (1) **individuals**, such as business founders or investors; (2) **organisations**, meaning a unit of people set up and managed to achieve specific goals or serve certain purposes (e. g. companies, government entities, universities, banks and other financial support providers, media, research centres, social society foundations, donor organisations); or (3) **institutions**, which are – in a sociological sense – longstanding and have stable patterns of behaviour which guide humans (e. g. values, family and religion)[17]. These players have different roles and act like articulators, enablers, linkers, knowledge generators and promoters.[18]

13 Individual country data on the seven different dimensions can be found here: globeproject.com
14 Radziszewska (2014). Intercultural dimensions of entrepreneurship.
15 Kauffmann Foundation. Entrepreneurial Ecosystem Building Playbook 3.0: www.kauffman.org
16 World Value Survey
17 Sociology Guide, Social Institutions [web page], 2017. Available at: http://www.sociologyguide.com/basic-concepts/Social-Institutions.php
18 Roles, Values and Social Dynamics: A new model to describe and understand entrepreneurial ecosystems, Marcelo S. Tedesco, MIT D-Lab (2019). P. 17. Available at: https://d-lab.mit.edu/

Rather than merely finding out whether all types of players are present in an ecosystem and whether they engage, enable or hinder entrepreneurs, you should aim to analyse **their capacities and their interconnectedness**. Whereas some individuals and organisations are interconnected through collaboration, mutual support or other relationships, others solely coexist or are unaware of each other's existence.

Collaboration among the different players depends on various factors, including:

- **benefits:** all cooperating partners expect a benefit for themselves;
- **transaction costs:** the results achieved by the cooperation cover the associated costs;
- **synergy:** the cooperation partners are able to create new potential for all by using their individual strengths.[19]

The rate of entrepreneurial success is higher in dense networks with a high level of connectivity and trust between the different players. This reflects the fact that such networks allow a faster flow of talent, information, knowledge and resources – thus enabling entrepreneurs to quickly find what they need. This results in a well-organised community of entrepreneurial players working together.[20]

There are various visualisation methods that can be used to assess the entrepreneurial ecosystem's players' level, for example their geographical distribution or mapping them according to the different stages of a business. Yet another point to keep in mind when observing the players' level, is that an player's role and importance can change over time.

19 Gesellschaft für Internationale Zusammenarbeit (GIZ), Cooperation Management for Practitioners – Managing Social Change with Capacity WORKS, GIZ, Eschborn, 2014.
20 Swisscontact, Understanding entrepreneurial ecosystems through social network analysis (SNA), Sept. 2019.

MEASURING DYNAMICS IN ECOSYSTEMS

„Methods of social networks analysis present a further approach for how to analyse the relationship between ecosystem actors and to draw conclusions about an ecosystems' effectiveness. Inspired by previous assessment models for measuring entrepreneurial ecosystems (e.g. Kauffman Foundations, Startup Genome), recent work by SwissContact, Credit Suisse and the Amarin Financial Group looks at the following four ecosystem indicators:

- **Density**: How dense is the ecosystem network? How well are the ecosystem players connected, both horizontally (e.g. incubators with incubators) and vertically (incubators with accelerators, financial players and business networks etc.)?
- **Fluidity**: How are the services offered by Ecosystem Support Organisations (ESOs) accessed by entrepreneurs? How inclusive is the ecosystem across the various types of entrepreneurs?
- **Diversity:** How diverse are the services offered by ESOs? Are all-important services available and are there signs of specialisation among ESOs?
- **Collaboration**: How much collaboration exists between the various ESOs? Do ESOs embrace coopetition or do they prefer to offer all types of support service on their own?"

(Source: Swiss Contacht)

3 BUSINESS ENVIRONMENT AND INVESTMENT CLIMATE

The business environment, as the Donor Committee for Enterprise Development (DCED) defines it, is 'a complex of policy, legal, institutional and regulatory conditions that govern business activity. It […] includes the administration and enforcement mechanism established to implement government policy, as well as the institutional arrangements that influence the way key players operate (e.g. government agencies)'[21].

Functional areas of business environment reforms include:

- simplifying **business registration** and licensing procedures
- improving **tax policies** and administration
- enabling better **access to finance**
- improving **labour laws and administration**
- improving the **overall quality of regulatory governance**
- improving **land titles**, registers and administration
- simplifying and speeding up **access to commercial courts** and to alternative dispute-resolution mechanisms
- broadening **public-private dialogue**
- improving access to **market information.**

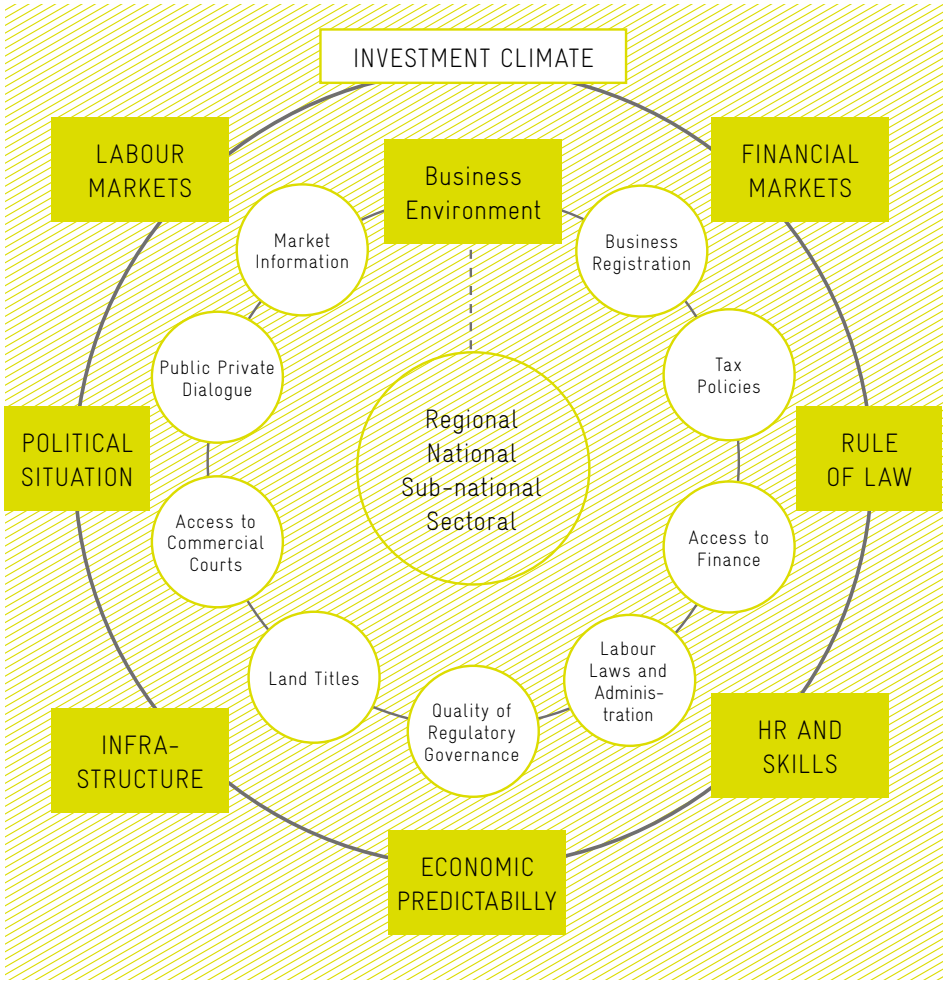
21 Donor Committee for Enterprise Development, Supporting Business Environment Reforms – Practical Guidance for Development Agencies, 2008.

The business environment is a sub-set of the **investment climate**, which takes a broader view of a country's competitiveness. There are various domains that feed into the investment climate, including:

- **financial markets**, which include access to finance, financial regulations, etc.;
- the **rule of law**, meaning legal rights which can, for instance, inhibit corruption or regulate the business registration process;
- **human resources (HR) and skills**, e. g. the technical and vocational education and skills of the players, etc.;
- **economic predictability**, meaning the overall macroeconomic stability and growth path;
- **infrastructure**, meaning the technical structures, e. g. roads, telecommunication, energy, etc.;
- the **political situation**, which ensures planning security and increases risk tolerance among MSMEs; and
- labour markets, meaning the availability of skilled workers and sufficient matchmaking between the supply of and demand for work.

Both the business environment and the investment climate influence an entrepreneurial ecosystem and have to be taken into account in its analysis. Depending on the focus of your work, you may find that the business environment is the easier of the two to tackle. Nonetheless, the mapping should also take a close look at the most relevant investment climate

FIGURE 3: The business and investment climate according to the DCED



(Source: Ibid.)

components – these being the ones that could be targeted with interventions. These could include **economic predictability**, the **political situation** and **labour market**. You can assess the business environment and investment climate on various levels – on the regional[22], national, sub-national, and sectoral level. To date, most analyses and reports mainly focus on the national level. Only a few analyses focus on cities. However, this is changing, as more and more cities are starting to promote themselves as 'entrepreneurial hubs'. When mapping entrepreneurial ecosystems these cities/hubs, e.g. Bangalore, Berlin, Nairobi or Accra, are very valuable additions to national analyses.

The *Doing Business Report* (DBR) published annually by the World Bank, is one of the most established benchmark reports focusing on the business environment on a country level. Its basis is a set of indicators that measure the costs that derive from regulation, such as starting a business (measured in the number of days and number of procedures) or dealing with bankruptcy. The data the DBR provides on a country level is useful when it comes to assessing this level of a country's ecosystem.

A well-known benchmark report, the World Economic Forum's (WEF) *Competitiveness Report*, not only takes into account existing policy, rules and regulations, but also other factors that influence a country's competitiveness such as the macroeconomic environment (inflation, government debt, government budget balance), the market size or health and primary education. Therefore, it is a suitable source to use when analysing the broader investment climate.

Classic business climate surveys often neglect to take a closer look at which player is doing what, which capacities they possess, and how they interact with each other. However, this is an important aspect to consider in order to fully understand the entrepreneurial ecosystem. This guide therefore takes up this issue under the heading 'interacting players', the second of the three levels.

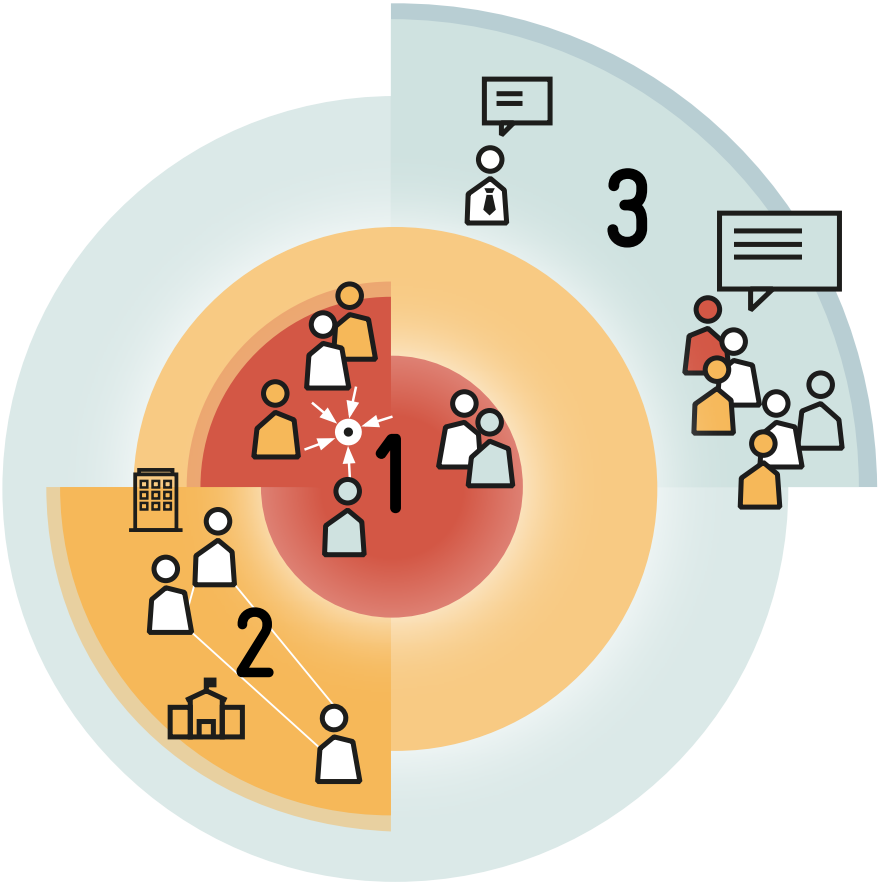
22 In this guide, the term 'regional' refers to a sub-national, geographical region (e.g. the 12 governorates of Jordan), not a supranational geographical region (e.g. sub-Saharan Africa).

ASSEMBLING THE THREE LEVELS

The three levels **(1) entrepreneurial culture**, **(2) the interacting players**, and **(3) business environment and investment climate** form the entrepreneurial ecosystem. As Figure 3 illustrates, the business environment and investment climate form the legal, administrative and regulatory framework in which the players (individuals, organisations and institutions) interact with each other. There is a constant interplay between the business environment and investment climate and the players, which determines both the exact framework's design as well as the players' interactions; therefore, all players are mutually dependent. The third component, culture and attitudes, constantly resonates with the business environment and investment climate and the players' interaction.

As you will see when conducting your ecosystem mapping, there are overlaps between these three levels. Looking at the ecosystem from these different angles will help you discover the main challenges that entrepreneurs face and the potential entry points for interventions. It will also simplify the process of sorting and categorising information, as during the desk research phase you might run the risk of getting lost in the plethora of data. For each of the levels, there are different approaches to collecting and analysing data (see Chapter 3 › Step II and Chapter 3 › Step III).

FIGURE 4: The three levels of an Entreprenereurial Ecosystem



2.2. The functioning of an entrepreneurial ecosystem

When mapping the entrepreneurial ecosystem, you will concentrate on the factors that influence the conduciveness of a given context towards entrepreneurial activity, such as the existence of support schemes for entrepreneurs or the attractiveness of entrepreneurship as a career choice. These factors are the **determinants of an entrepreneurial ecosystem**. If you want to look into the actual performance of an ecosystem or the impact it has, you need to focus on a different set of determinants such as:

- birth and death/survival rate of new businesses
- entrepreneurial activity among the population
- the growth rate of young businesses
- jobs created by new businesses
- value created by entrepreneurs from within the society
- exports by new businesses
- investments secured by new businesses (loans and equity).

Other aspects that are equally important for measuring the vibrancy of an ecosystem are more difficult to measure, such as the openness and inclusiveness of a system or its diversity.

As ecosystems are complex and evolve over time, it is very difficult to establish direct causal relationships between measures aimed at strengthening the ecosystem and their effects on entrepreneurship and value creation.

Useful data sources can be the national level statistics or the OECD's publication *Entrepreneurship at a Glance*[23]. However, many relevant entrepreneurial activities most likely take place in the informal sector. Hence, data availability is limited and qualitative judgements by experts need be taken into account.

23 Organisation for Economic Co-operation and Development, Entrepreneurship at a Glance 2012, OECD, Paris, 2012.

3

FIVE STEPS FOR MAPPING THE ENTREPRENEURIAL ECOSYSTEM

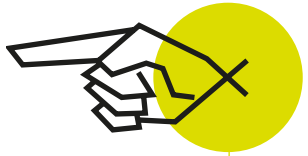
3 Five steps for mapping the entrepreneurial ecosystem

The process of observing, analysing and visualising the entrepreneurial ecosystem in a given context is 'mapping'. By mapping, you can take a closer look at each of the levels (entrepreneurial culture, interacting players, business environment and investment climate, players, culture and attitudes), grasp their specific characteristics (e. g. cultural traits, business laws, supportive institutions and cultural traits) and assesses their role and function as well as the interplay within an entrepreneurial ecosystem. This eventually allows you to uncover gaps and constraints that newly designed PSD interventions should focus on.

In this section, each step is presented by describing its objective and suggesting a process by which it can be carried out. In addition, all steps contain a number of tools that you might want to use when conducting your mapping. Whenever applicable, the guide contains special advice on green, digital, inclusive and female entrepreneurship as well as entrepreneurship in fragile contexts.

Five steps

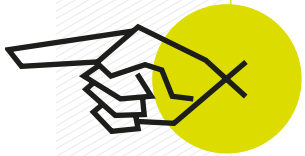
Step I Research design
Step II Data collection
Step III Data analysis
Step IV Data validation
Step V From mapping to activity



green and inclusive entrepreneurship | female entrepreneurship | entrepreneurship in fragile contexts | digital entrepreneurship

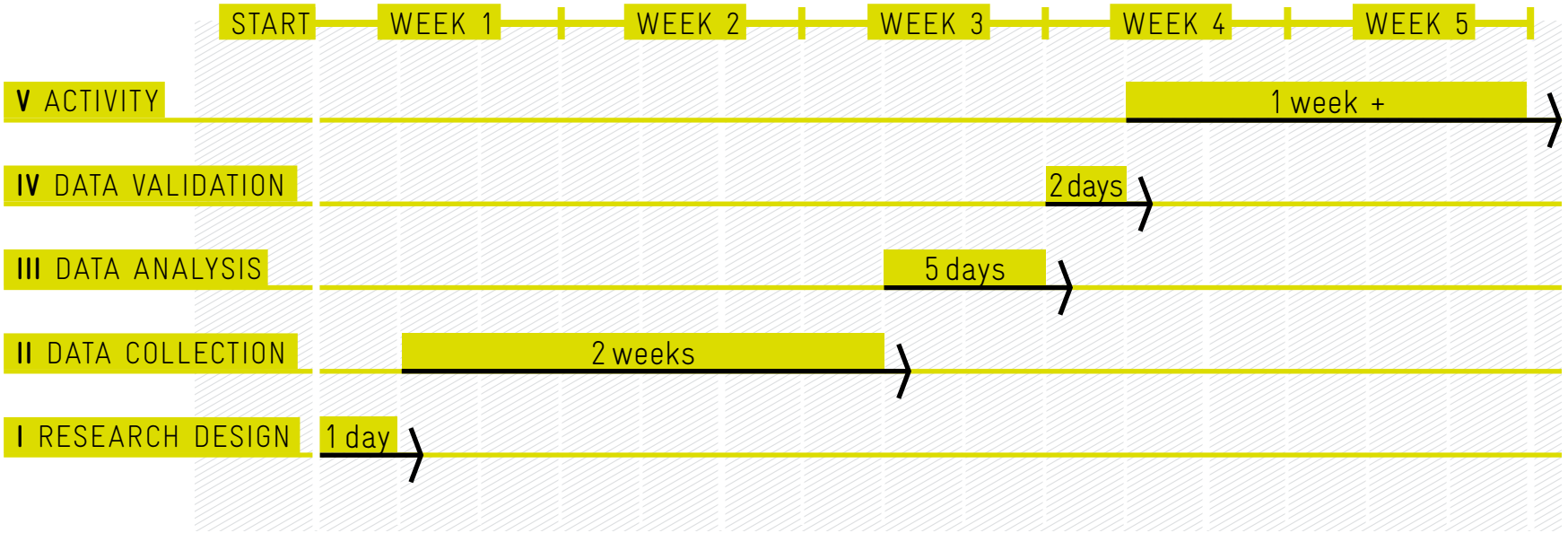
TABLE 1: Overview of tools and examples

STEP	TOOLS AND EXAMPLES
STEP I **RESEARCH DESIGN**	› **Example 1**: Work plan for data collection › **Example 2**: Research design summary
STEP II **DATA COLLECTION**	› **Tool 1**: Overview of benchmark reports › **Tool 2**: Tips on conducting interviews › **Tool 3**: Table of indicators and data sources › **Tool 4**: List of players in an entrepreneurial ecosystem › **Tool 5**: Guideline questions for structured interviews › **Tool 6**: Agenda for focus group discussions › **Tool 7**: Relationships between specific players
STEP III **DATA ANALYSIS**	› **Tool 8**: Visualisation according to player category › **Tool 9**: Ecosystem visualisation in a players map › **Tool 10**: Abstract ecosystem visualisation › **Tool 11**: Service providers as distributed per region › **Tool 12**: Service providers according to business phases › **Tool 13**: Entrepreneurial Ecosystem Canvas › **Tool 14**: Online community directory › **Example 3**: Bar charts for country comparison › **Example 4**: Summary of hypotheses
STEP IV **DATA VALIDATION**	› **Tool 15**: Checklist for validation workshop › **Example 5**: Presenting the hypotheses
STEP V **FROM MAPPING TO ACTIVITY**	› **Example 6**: From challenges, to goals, to possible interventions › **Tool 16**: European Commission's Small Business Act (SBA) principles › **Tool 17**: Performance indicators



The time and effort required for a mapping exercise depends on its scope and context; therefore, it is not advisable to provide a universal, detailed timeline. The following timeline can be used for your orientation and planning:

FIGURE 5: Entrepreneurial ecosystem mapping timeline



Step I: Research design – What and how to map?

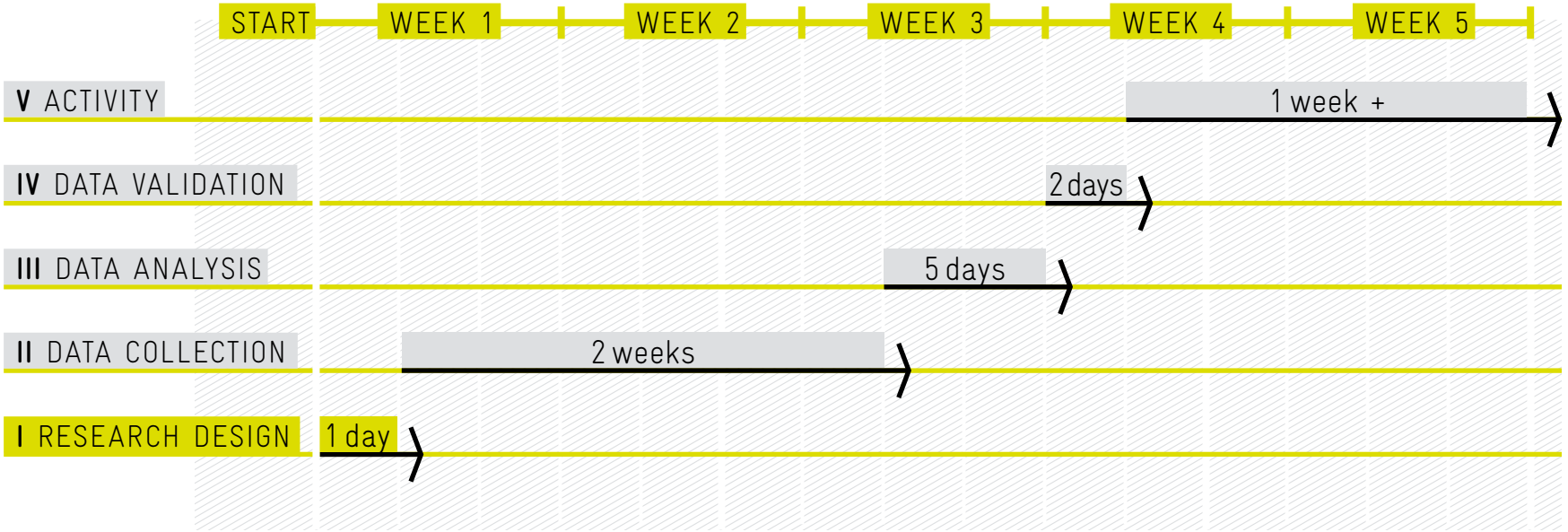
SHORT DESCRIPTION

Research design is the operational framework of the mapping process. If you conduct the mapping together with partners, it is helpful to invest time in discussing the research design to ensure the mapping provides the expected results. In general, a research design comprises six components:

1. scope of the mapping
2. target group
3. research question
4. methods of data collection
5. comparative values
6. expected results

GOAL	Create a clear roadmap for the mapping process.
ESTIMATED TIME	One day
TOOLS AND EXAMPLES	**Example 1**: Work plan for data collection **Example 2**: Examplary research design
WHAT COULD GO WRONG?	Diverging expectations from different partners regarding the final output of the mapping.

FIGURE 6: Timeline – Step I



The first step of the mapping process is to elaborate and agree on a research design that clearly defines all the steps to be taken throughout the mapping process. A well-prepared and comprehensive research design is essential in ensuring that the mapping runs smoothly and in a timely manner. Ideally, the design should provide sufficient detail and instructions that anyone at any time could repeat your mapping in the given context.

It is advised to conduct the mapping in **cooperation with partners** for several reasons: Firstly, partners can contribute additional capacities such as skills, know-how, knowledge of informal institutions, culture and attitudes which is rarely written down, valuable networking connections and funding. Secondly, partners might have their own interest in the mapping and can therefore be a driver in bringing the mapping project forward and extending its reach. Thirdly, partners can take over and continue the mapping when the programme's term ends. Potential partners could be, for instance:

- government bodies
- universities and research institutions
- business services providers
- development agencies
- established enterprises
- banks and other investors.

If you decide to implement the mapping with partners, you should include them right from the beginning and discuss the research design with them in a meeting or a short workshop. This way, you can ensure effective resource planning and a clear understanding of the expected outcomes. In the following sections, you will find information on which aspects you will have to consider when developing your research design framework.

SCOPE OF THE MAPPING

In carrying out the mapping exercise, you will observe the entrepreneurship scene in a given context. This context needs to be refined according to your research interest. The most common context is a country. However, it is also possible to choose different or additional criteria, such as those listed below.

- **Geographical focus:** You can map a specific region or even a city. Just be aware that in many cases data are only available on a country level.
- **Sector-specific focus:** For example, a specific business sector such as ICT or agriculture.
- **Thematic focus:** You can also choose to focus the mapping on a topic; examples include green and inclusive business, female entrepreneurship, entrepreneurship in the digital space and entrepreneurship in fragile contexts.

The scope will determine the time and resources you will need for the mapping exercise. Therefore, it is difficult for this guide to provide specific details regarding the time required and the overall costs.

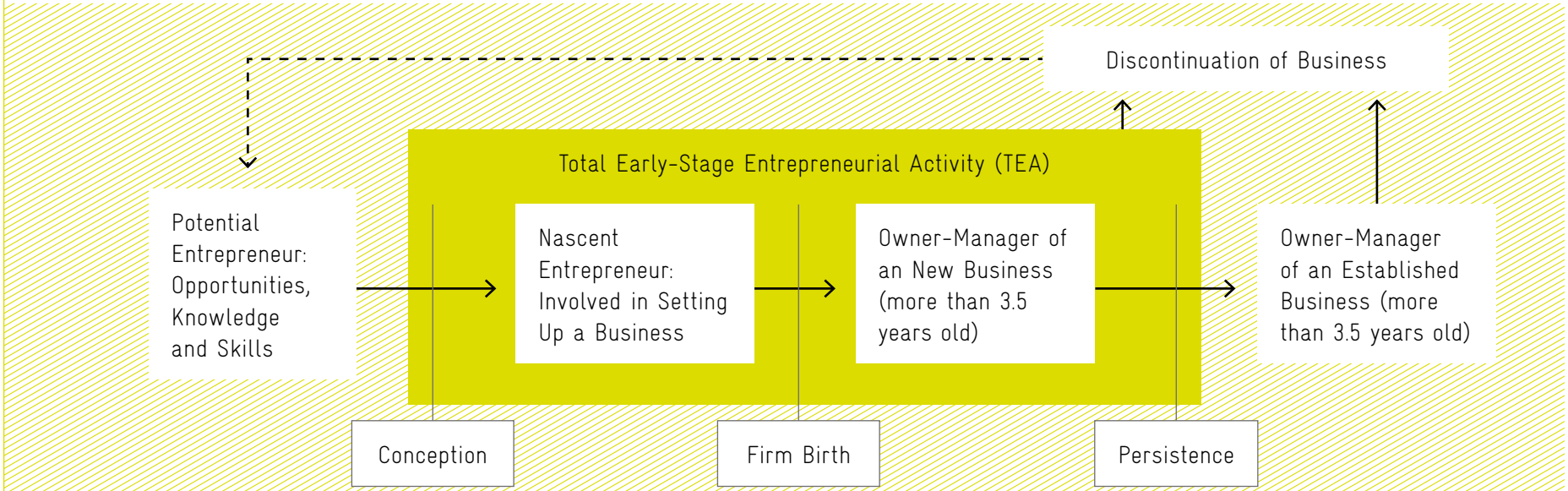
TARGET GROUP

When defining the target group, you specify who you want to observe in the entrepreneurship scene. The term 'entrepreneur' or 'entrepreneurship' can cover a wide range of people and types of businesses. To avoid misunderstandings and to keep a clear focus it is important to define and agree on a definition with all the parties involved in the mapping. Be clear about what type of entrepreneurship you mean by looking at business development phases (e. g. the start-up or scaling phase) or the business motivations (e. g. opportunity or necessity-driven entrepreneurs). This will also depend on your programme's overall objective. For example, if your programme aims to create income opportunities for young people, you might focus on youth entrepreneurship.

You can also build on existing definitions and concepts. For example, GEM counts all business activities that have been operating for less than 3.5 years for its index *Total Early-Stage Entrepreneurial Activity* (TEA)[24].

24 Global Entrepreneurship Research Association, GEM Global Report 2016/17, 2017, p. 15.

FIGURE 7: GEM definition of total early-stage entrepreneurial activity



(Source: Illustration adapted from: Ibid.)

RESEARCH QUESTION

The research question sets the tone for your whole mapping endeavour. The most basic question you could ask is 'What does the entrepreneurial ecosystem look like?' If desired, you can be more precise and focus only on the constraints or only on the opportunities for entrepreneurs; most commonly the constraints for entrepreneurs will be at the centre of attention, as these are the entry points for the interventions you are planning. When posing your research question try to keep the factors below in mind.

- **Relevance:** Who might be interested in the topic besides you? Has the question been answered before?
- **Feasibility:** Given your time and resources, is the scope of your question manageable? You might want to adjust the scope of your research according to your resources.
- **Clarity and simplicity:** Try to formulate the question as simply as possible to avoid confusion and additional work.

METHODS OF DATA COLLECTION

After defining what you would like to look at, you will need to decide on the methods that you will use to gather the necessary information for your ecosystem assessment. Typically, the information you gather will come from various sources. Following this guide's methodology, it is suggested that you use multiple means of data collection in a sequenced approach in order to produce the most comprehensive results.

The desk research phase is rather standard procedure see Chapter 3 › Step III › Entrepreneurial culture and attitude. But when it comes to collecting primary data, the methods of data collection become more diverse. In general, you will need to allow for at least one week of primary data collection (focus groups, surveys and interviews, etc.) to be able to gather sufficient information for a meaningful analysis. The level of the ecosystem for which you will rely most heavily on primary data will be 'entrepreneurial culture', as there is little data to be found on this topic in international benchmark reports. However, you will never have enough time to collect all the information you would like, as the entrepreneurial ecosystem is so complex.

Once you have decided on the methods of data collection, you need to prepare a work plan (see Example 1). You can use it to inform all your partners about the next steps.

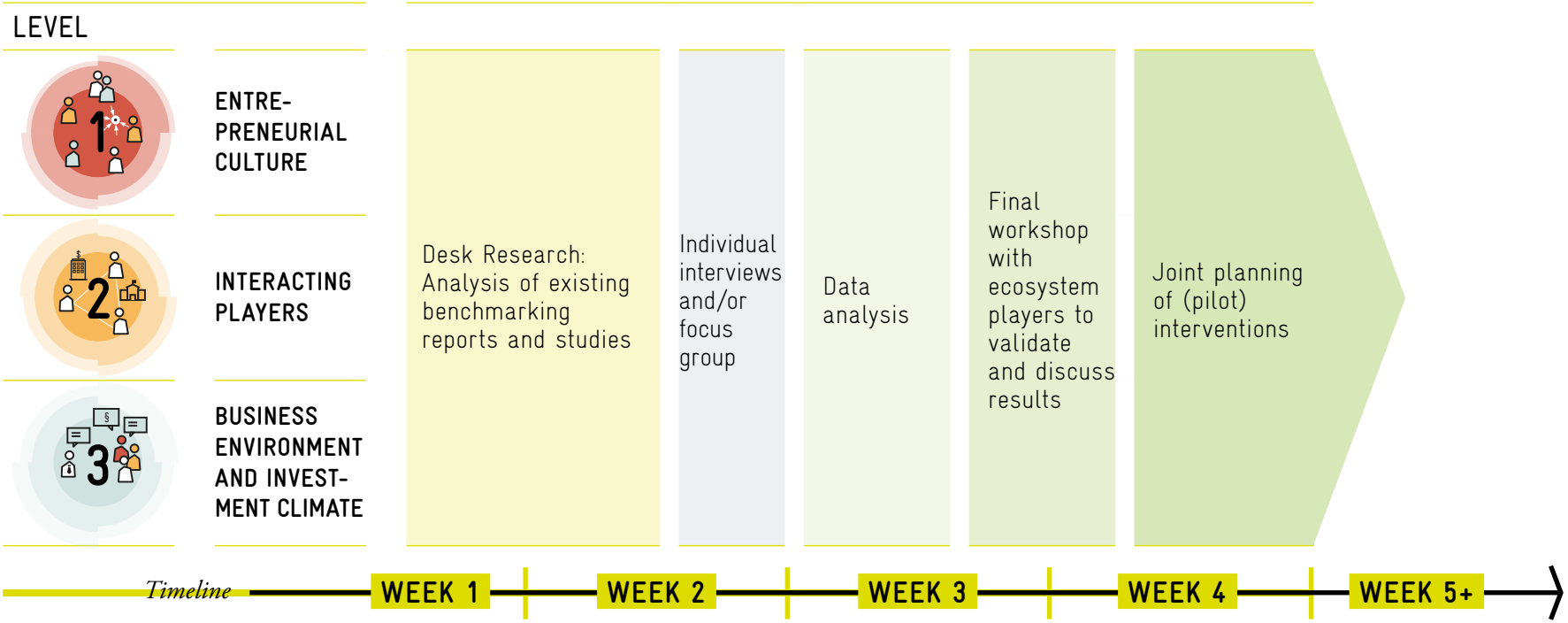
COMPARATIVE VALUES

To assess the state of entrepreneurship in your desired context you will need to compare it with something. A comparison allows you to put things into perspective and to assess indicators in a realistic manner. Hence, you need to consult comparative values to come to sound and informative results. The most common and most obvious comparison is between countries. However, you can also choose other criteria such as:

- the size of the economy
- geographical proximity
- the structure of the economy
- trading partners or major competitors
- the best performing states.

If you choose other countries as comparative values, you should stick to the same country selection for comparison throughout the entire mapping and be clear about the selection criteria you have used. An effective way of selecting your country sample for comparison is by discussing it with your local partners in a kick-off workshop. Your local partners will know with whom they compete or to which good-practice examples to refer. Another interesting approach is a comparison of a given context over time, which reveals how the ecosystem has developed. For this longitudinal proceeding, clear research design is especially important, as detailed instructions are needed to repeatedly observe the variables over time.

EXAMPLE 1: Work plan for data collection



EXPECTED RESULTS

Part of the research design is agreeing on the format of the results and what you will use them for. The findings of the mapping should serve as a basis for designing future interventions and other activities that aim to stimulate entrepreneurship. Other expected results could be additional products such as a map of the ecosystem's players. Make sure that everyone involved in the mapping process shares the same understanding as regards to the outcome and the use of the outcome.

The final report should depict positive dynamics and potential within an existing ecosystem and derive answers to the

questions of where and how an player within the ecosystem should intervene. It is not the aim of the mapping and the outcome of the mapping process to point out deficits. Rather the aim is to portray best practices and positive examples of activities within an ecosystem. The final report should also highlight the perspectives of the entrepreneurs and the potential and barriers they perceive and experience within the given ecosystem.

EXAMPLE 2: Examplary research design

Scope of mapping	› Geographic: capital city › Topic: green and inclusive business models › Business phase: starting and scaling up
Research question	› What are supportive structures and constraints for entrepreneurs who follow a green and inclusive business model in the capital
Target group	Entrepreneurs and small and growing businesses › with green and inclusive business models › who are located in the capital › with growth ambitions
Comparative values	› Other big cities in the same country › Other capital cities in the same region › Capital cities of other countries
Expected Results	› Overview of the entrepreneurial status-quo & support structures › Indication of where additional efforts in terms of development cooperation are needed and how future project activities should be designed
Methods of data collection	› Quantitative: Benchmark reports, local statistic offices › Qualitative: semi structured interviews

Step II: Data collection

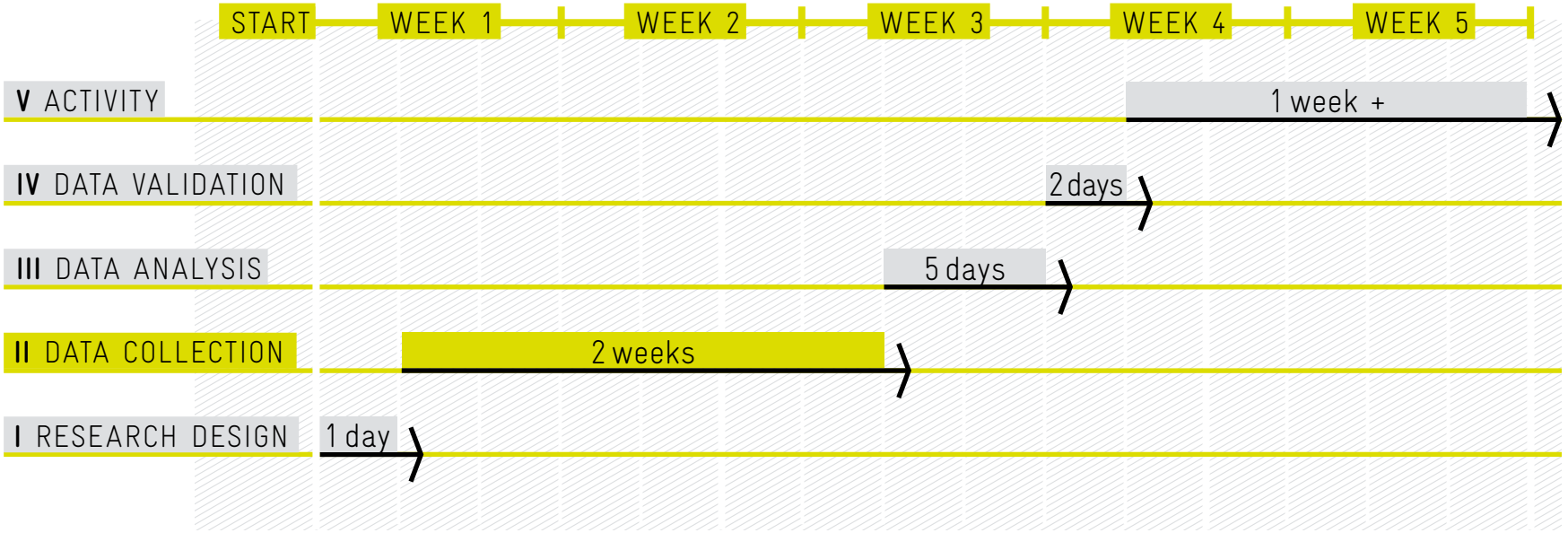
SHORT DESCRIPTION

Data collection can be divided into a first phase and secondary phase. The first phase consists of desk research and the use of secondary data and the second phase consists of collecting primary data 'on the ground'. The three-level approach (entrepreneurial culture, players, business environment and investment climate) will help you to manage the large amount of information and to collect only relevant information.

It is recommended that you use both qualitative and quantitative data in order to get the most accurate and complete results. Interviews and focus group discussions are necessary to collect first-hand information. Furthermore, we recommend using recent data and those from trustworthy sources to ensure the accuracy and the relevance of the findings; this is especially important if the mapping will serve as a basis for designing development cooperation interventions.

GOAL	Gather useful information for the data analysis
ESTIMATED TIME	Around two weeks for desk research and primary data collection
TOOLS AND EXAMPLES	**Tool 1**: Overview of benchmark reports **Tool 2**: Tips on conducting interviews **Tool 3**: Table of indicators and data sources **Tool 4**: List of players in an entrepreneurial ecosystem **Tool 5**: Guideline questions for structured interviews **Tool 6**: Agenda for focus group discussions **Tool 7**: Relationships between specific players
WHAT COULD GO WRONG?	Getting lost in the large amount of information or not finding any relevant data in the relevant international reports.

FIGURE 8: Timeline – Step II



SECONDARY DATA COLLECTION: DESK RESEARCH

As a general rule, it is recommended that you begin with a desk research phase and collecting secondary data. Start with the broader picture and then dig deeper into the details of an ecosystem. If you perform the mapping in a country you are not familiar with, take your time to look at the overall economic situation of the country (e.g. growth rate, trade balance, private and government consumption, investments and savings, share of sectors, total unemployment rate, number of enterprises in relation to the size of country). Especially for the next steps of your mapping, it is important to know about the structure of the economy. A helpful source of data could be the Economist Intelligence Unit (EIU) *Country Reports*.[25]

Moreover, economic benchmark reports such as the DBR or the GEM can serve as sources for quantitative data and country comparison. They are a suitable starting point to gain an understanding of the investment and business environment. If you are looking for more detailed information, you could consult the country's national statistics bureau or country reports prepared by international organisations or donors.

25 The Economist Intelligence Unit. Available at: http://www.eiu.com/home.aspx.

TOOL 1: Overview of benchmark reports

This tool provides a list of suggested benchmark reports including short descriptions you can use during the desk research phase. Make sure that you understand the scope and the methodology of the reports you use, as especially composite indices can lead to misjudgements. Below is an extract – the complete list can be found in the Annex, Tool 1.

DOING BUSINESS REPORT – WORLD BANK

Aim	Measuring business regulations that enforce/constrain business activities ('cost of doing business')
Methodology	Survey consisting of a questionnaire which asks about regulations in the following areas: - starting a business - dealing with construction permits - obtaining electricity - registering property - securing credit - protecting minority investors - paying taxes - trading across borders - enforcing contracts - resolving insolvency - labour market regulation.
Countries	190 economies (2017)
Frequency	Annually
Level	National and sub-national for some countries
Pros	Very comprehensive dataset, large reach, high frequency, well-established, full datasets available. Clear focus on business regulation. Covers areas relevant for entrepreneurship such as registration and bankruptcy.
Cons	Considers market liberation as unconditionally desirable – the more liberal the higher the ranking; does not fully support a social market economy – e.g. strict dismissal protection = lower ranking
Link	→ www.doingbusiness.org

Depending on the previously defined mapping scope, you could also use sectoral benchmark reports, such as the WEF's *Travel and Tourism Competitiveness Report*[26] or the *Global Information and Technology Report*[27].

In this phase, the biggest challenge is to not get lost in the huge amount of information, indicators and comparisons. It might help you to keep in mind the three-levels approach of the ecosystem (entrepreneurial culture, interacting players, business environment and investment climate) in order to stay on track. To focus on indicators that are most relevant for entrepreneurs, this guide provides the tool 'Table of indicators and data sources' see Annex ›Tool 3. For a good general overview, you can also use a scorecard see Chapter 3 ›Step III ›Analysis – Entrepreneurial culture and attitude in which you display the collected data from benchmark reports.

The data collected during the desk research phase will help you to prepare for the second phase, primary data collection. You will be able to identify possible barriers and opportunities for entrepreneurs within the three levels of the ecosystem, which you can discuss with your interview partners (or focus groups) to verify the information. If you discover information gaps, these are the areas you will have to focus on during your interviews.

PRIMARY DATA COLLECTION: SURVEY, FOCUS GROUP DISCUSSION OR INTERVIEWS?

Primary data collection complements the findings from the desk research and secondary data. A survey, semi-structured interviews or focus group discussions can be used to collect primary data on the perception of ecosystem players regarding the conduciveness of an entrepreneurial ecosystem. A survey could follow a period of intensive desk research in order to validate some preliminary findings and potentially assist in the selection of interview partners. Interviews, on the other hand, open up the possibility to dig deeper and identify gaps in the information available from reports and statistics and can focus on collecting missing information that is relevant for the ecosystem analysis. Besides the aspect of data collection, the direct communication with interview partners can support collaboration during future interventions.

When choosing the appropriate method of data collection, you need to carefully consider what information you would like to collect, as well as your available resources (time and budget). The description below provides an overview of which method best suits which circumstances.

26 World Economic Forum, The Travel and Tourism Competitiveness Report 2017, WEF, Geneva, 2017.
27 World Economic Forum, The Global Information and Technology Report 2016, WEF, Geneva, 2016.

TOOL 2: Tips on conducting interviews

1. FIND YOUR INTERVIEW PARTNERS

› Identify key informants who are explicitly important for the ecosystem. Do some quick online research and/or ask colleagues who are familiar with the local entrepreneurial scene. You can also ask your interview partners who else they think you should talk to ('snowballing').
› Ideally, you will interview at least one member of each category of player (see Tool 4 for list of categories). Based on the preliminary desk research results you should have an impression of which actors play a role in the local entrepreneurial ecosystem, in each category. Depending on your research question and research design, you might not need to speak to representatives from every category mentioned.

2. SCHEDULING THE INTERVIEWS

› **How long?** Keep the interview time to a maximum of 60 minutes.
› **When?** Schedule the interviews a reasonable time in advance and ideally at a time of the interviewees' convenience. Depending on the local culture, short-notice availability might be a problem; in other cultures, it is common to only operate at short-notice.
› **How many?** Make sure that you plan enough time for each interview, considering also the time you need to travel from one place to another (traffic might be a problem) and the time for preparation and follow-up. As a rule of thumb, a maximum of four interviews per day is a realistic aim.
› **Where?** Choose a place that is comfortable for the interviewee. This might be their office, a coffee shop, their home or a co-working space, etc. Keep in mind that observing the location might reveal some extra information about the interviewees. If possible, you can also invite the interviewees to your workplace, which saves time and resources.

3. CONDUCTING THE INTERVIEWS

› **Introduction:** Introduce yourself and your endeavour and let the interviewee know how long the conversation will take. You can use an overview slide, summarising the aim and the research design.
› **Confidentiality:** Explain the level of confidentiality i.e. will you record the interview, take notes, or translate it? Make sure the interviewees are fully informed about what will happen with the information they provide.
› **Timing:** As time is limited, it might not be possible to ask all your questions; instead try to focus on the key aspects the interviewee is well informed about.
› **Questions:** You should try to ask open-ended questions (How? Why? What? In your opinion, etc.) that encourage lengthy and descriptive answers and avoid leading questions and those which have a strong positive or negative association. If the interviewee does not give descriptive answers, prepare more precise sub-questions for things you are particularly interested in. Make sure, that you and the interviewee share a common understanding of the topics and questions. You may have to adapt your questions accordingly or provide a short insight into a topic. For example, some may have a very different understanding of the word "ecosystem", to you.
› **Ending:** Encourage the interviewee to ask questions and leave time for this. Repeat in brief what you will use the information for, and which information was especially relevant. Check again that you have all the personal information you need including their contact details.
› **After the interview:** Review the interview responses and make additional notes if needed.

For more information:
Oxfam GB, Conducting semi-structured interviews, 2019.

Semi-structured interviews

A semi-structured interview is an interview method that is halfway between a quantitative survey and an unstructured conversation. It is used to gather focused and qualitative textual data. Semi-structured interviews are carried out by an interviewer with the help of a questionnaire with open questions. When the interviewee introduces interesting points, the interviewer has the possibility to ask additional questions and record more detailed answers. Semi-structured interviews are particularly useful for collecting information on people's opinions or experiences, which makes them especially useful in mapping exercises.[28]

As regards the players that constitute an entrepreneurial ecosystem, you can cluster them into different (sub-) categories, following Isenberg's definition of an ecosystem (see also ANDE's *Entrepreneurial Ecosystem Diagnostic Toolkit*[29]). When planning your interviews, you can use these categories and may specify them to make sure that you gather information from the different types of players to capture the various perspectives. Depending on your research design, you might not need to speak to representatives from every category. In line with the overall structure, this guide provides the **tool 'Guideline questions for structured interviews'** see Annex › Tool 5 for the three levels (entrepreneurial culture; interacting players; business environment and investment climate) with a selection of sample questions. As you will most likely have limited time for each interview, you will need to decide on either a focus area in which the desk research has yielded little or contradictory results, or the most relevant questions for each area. During the desk research phase, you will already have identified some key challenges and opportunities that entrepreneurs face in the ecosystem. You should concentrate on these and adapt your interview questions accordingly.

Focus group discussions

A focus group discussion consists of gathering a small group of people for a structured and moderated discussion to collect in-depth information (qualitative data) on a specific topic. The purpose can be to collect information on people's opinions, beliefs, attitudes, motivations and perceptions or identify needs and test ideas. The **advantages** of focus group discussions are that they allow a range of opinions to be shared on a topic and thereby explain phenomena that a survey or interview might not uncover.[30] They are a method for gathering information with a fast, flexible and economical approach:

28 For more information on semi-structured interviews, see tools4dev, How to do semi-structured interviews, 2014.
29 Aspen Network of Development Entrepreneurs, Entrepreneurial Ecosystem Diagnostic Toolkit, 2013.
30 For more information on Focus Group Discussions, see Overseas Development Institute, Research and Policy in Development – Focus Group Discussions.

TOOL 3: Table of indicators and data sources

see Annex › Tool 3

TOOL 4: List of actors in an entrepreneurial **ecosystem**

While identifying the different actors it is worth looking at the total number of actor groups (hard facts) and also at the intensity of collaboration.

Depending on the focus of your mapping (e. g. female entrepreneurship, green businesses, digital ecosystems or entrepreneurship in fragile contexts) the players will need to be viewed through this specific lens providing answers to the question: Which players hold a role for this thematic focus?

TABLE 2: Ecosystem Players

PLAYERS IN AN ENTREPRENEURIAL ECOSYSTEM – CATEGORIES

Finance	Support	Policy	Markets	Human Capital	Media
› Banks	› Incubators	› National/ regional/ state government	› Domestic/ international corporation	› Universities	› TV
› Microfinance institutions	› Accelerators	› Local government/ administration	› Entrepreneurs' networks	› Market-driven research institutes	› Social media
› Financial technology enterprises (including crowd-funding platforms)	› Industry associations/ networks	› Regulators	› Diaspora networks	› Technical training institutes	› Blogs
› Cooperative financial institutions	› Business services providers (including legal and accounting services)	› Government agencies	› Marketing platforms (including e-commerce, advertisement, online platforms and trade fairs) and other distribution channels	› Schools	› Podcasts
› Development finance institutions	› Mentors	› Central bank	› Consumers	› Research centres	› Role models
› Venture capital funds	› Business plan contests and conferences	› Public–private dialogue (PPD) mechanism			
› Equity investors	› Co-working spaces				
› Public capital market	› Donor organisations				
› Angel investors	› GSM providers				
› Corporations	› Broadband providers				
› Foundations	› Cybersecurity partners				
	› Civil society foundations				

GREEN AND INCLUSIVE ENTREPRENEURSHIP					
› Impact investors › Crowdfunding platforms › Government programmes for GIB (grants)	› Social and ecological business services providers › Civil society organisations › Donor programmes	› GIB-specific PPD mechanism	› Standards and certification systems › (Online) marketplaces for sustainable products	› Leadership programmes for entrepreneurs with GIB models	› Social media network for GIBs › Green and inclusive entrepreneur role models
FEMALE ENTREPRENEURSHIP					
› Venture fund for women-led businesses › Microfund for women › Government programmes for WEE (grants)	› Women entrepreneurs organisation › National association of female business owners › Donor programmes	› WEE-specific PPD mechanism	–	› Leadership programmes for women	› Social media network for women entrepreneurs › Female entrepreneur role models

they can be useful for collecting information from entrepreneurs and for covering different sectors, sizes and development stages. As you will have limited time for interviews, focus groups enable you to gain the viewpoints from many different types of entrepreneurs, which you might otherwise not be able to get. Focus groups can also be of particular value for the area 'players' as they reveal information about relationships and means of communication and collaboration. However, focus group discussions also have some **limitations**: not everyone shares information as openly in a group as they would in a one-to-one interview situation. To tackle this problem, focus group discussions can be combined with other data collection methods, such as semi-structured interviews.

One way of **setting up a focus group** is by category of player (e. g. entrepreneurs, service providers, etc.) or by defining a key challenge you would like to gather information about. In any case, the first step is to clearly formulate a problem statement or a hypothesis that you would like to put up for discussion Take your time to prepare your questions and sub-questions thoroughly, as unclear or biased questions can decrease the quality of responses and data. This will also help to identify the right people to invite. Generally, the number of participants should be between four and 12 in order to have a dynamic discussion. When selecting the participants, you should consider certain criteria, such as gender and age. Consider that women might participate in a different way in a mixed-gender group than they would in a women-only group. It is the moderator's role to ensure that active participants do not overpower reserved participants during the discussion.

Altogether, a focus group discussion should not take more than two hours. The discussion must be documented thoroughly, so you should have at least two people running the focus group discussion: a moderator and an assistant for the documentation.

Surveys

Surveys allow us to collect information from a large group and are mostly used to collect data on the entrepreneurs' perception of the entrepreneurial ecosystem. A quantitative survey involves asking a large number of people the same series of questions in order to obtain statistically robust data on a specific topic. Qualitative surveys focus mostly on a smaller sample and can be adapted in a way that the answers deliver specific information on certain topics. Although it is a relatively time-consuming method of data collection it can be adapted individually and often provides more in-depth insights regarding the research question.

Two of the most comprehensive surveys focusing on entrepreneurship are the GEM's Adult Population Survey

TOOL 5: Guideline questions for structured interviews

see Annex

TOOL 6: Agenda for focus group discussions

WHAT TO PREPARE?

- Formulate questions or hypotheses:
- simple and short
- clear wording
- open questions (to avoid 'yes' or 'no' answers)
- unbiased.
- Find moderator and assistant for documentation
- Keep the logistics simple: find a venue, arrange equipment (laptop, flip chart, etc.)

AGENDA

Plan around two hours for a focus group discussion.

1. Welcome the group and introduce the moderator (and assistant)
2. Explain the background (purpose, topic, why participants were chosen)
3. Set the ground rules (e.g. will the discussion be recorded)
4. Pose the opening question
5. Sequentially introduce further sub-questions to the group
6. Pose the exit question
7. Summarise results and thank the participants

(APS)[31] and the World Bank's Enterprise Survey[32]. The GEM's APS is conducted on an annual basis but is not available for all countries. The World Bank Enterprise Surveys are available for around 135 countries, but not are conducted with a high frequency. The advantage of these two surveys is that you can compare the country of interest with others using exactly the same indicators – a helpful exercise when it comes to analysing and interpreting the data. During the desk research phase, you will therefore be able to use results from existing surveys to benchmark your data.

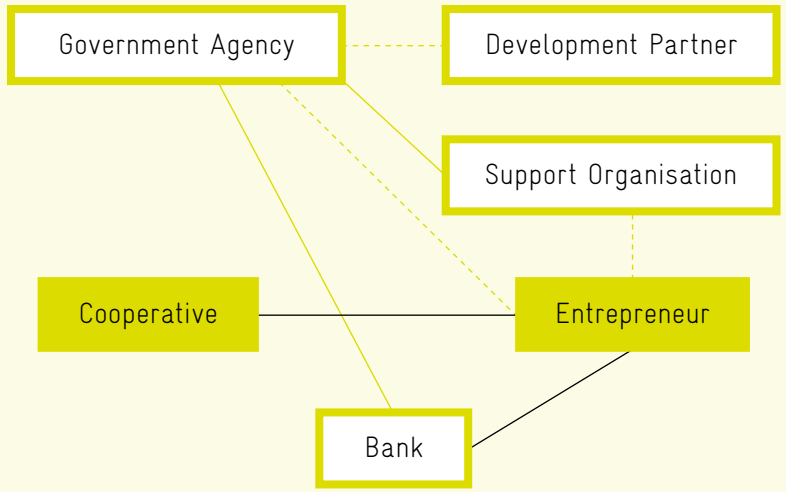
If you decide to conduct a survey yourself, the APS and the Enterprise Surveys are good examples to follow regarding the overall methodology (sampling and data analysis etc.). You can also find a detailed description on how to run an ecosystem survey in the *ANDE Entrepreneurial Ecosystem Diagnostic Toolkit*.

31 Available at: https://www.gemconsortium.org/reports/latest-global-report
32 World Bank, Enterprise Surveys – What Businesses Experience, 2017. Available at: http://www.enterprisesurveys.org/.

TOOL 7: Relationships between specific players

Visualisations can also depict the intensity of collaboration between different groups of players and how relevant certain players are perceived to be by other ecosystem players. The basis for these visualisations can be a collaborative effort during a workshop. A second method for collecting this information is through surveys.

Interviews and focus group discussions can be used to map the relationship between specific players. The conversations can be used to ask the interviewees about their perspective of the relationship between specific players in the ecosystem and draw them together. Different lines for linking the players symbolise different levels of relationship between them.



Relationships marked by tension, conflicting interests or other forms of conflict.

Information exchange; weak or onformal relationships.

Coordination: regular information exchange, coordinating activities.

Co-production: close relationships in terms of information exchange, frequency of contact, overlap of interests, mutual trust etc.

Step III: Data analysis

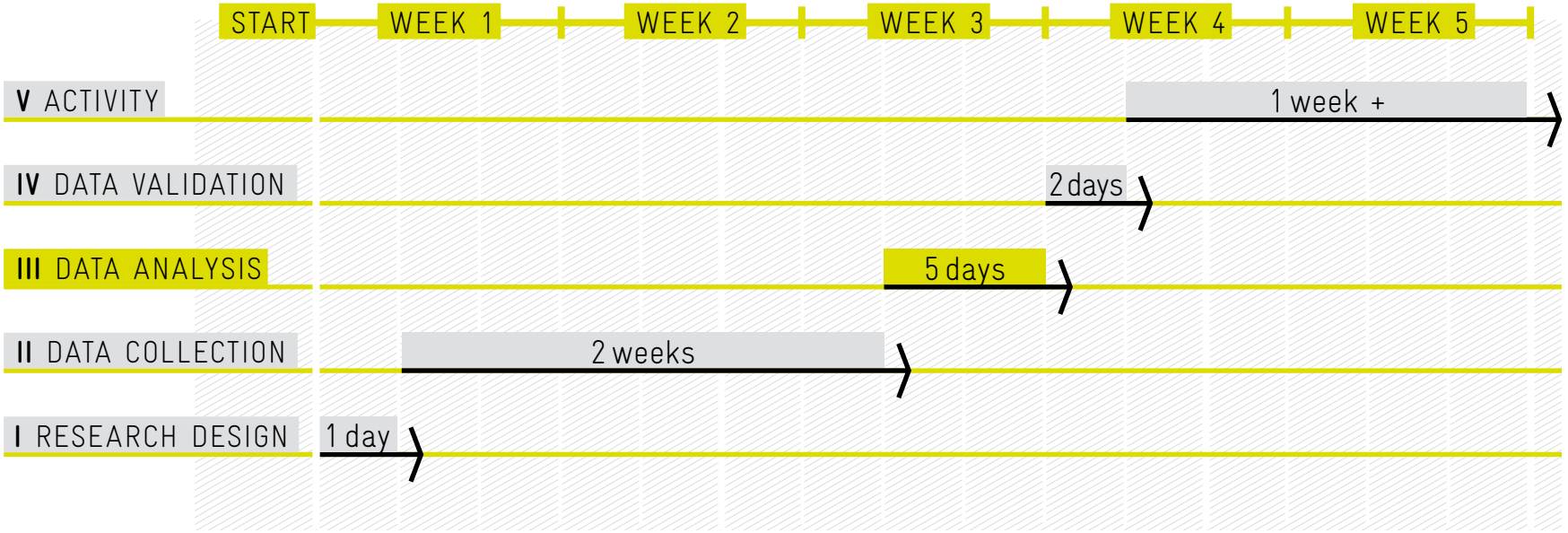
SHORT DESCRIPTION

After collecting the data, it can be organised and interpreted in the light of the previously defined research focus and questions. Data analysis can also entail cleaning the data. It is suggested to analyse and clean data, step by step, for each of the levels of the entrepreneurial ecosystem.

After carrying out the data analysis one should have a good idea of what the ecosystem looks like, its strengths and weaknesses and how the levels are interconnected. Furthermore, efficient support structures as well as gaps and constraints in the ecosystem can be identified. Based on this information and as part of the analysis, the ecosystem can be visualised using a variety of approaches.

GOAL	Use the data to formulate hypotheses about the ecosystem and as a basis for decision-making.
ESTIMATED TIME	Five days
TOOLS AND EXAMPLES	**Tools 8–14**: Visualisation of the players' dimensions (various) **Example 3**: Bar charts for country comparison **Example 4**: Summary of hypotheses
WHAT COULD GO WRONG?	You might realise that important information is missing for your analysis.

FIGURE 9: Timeline – Step III



ANALYSIS – ENTREPRENEURIAL CULTURE AND ATTITUDES

Concerning the level 'entrepreneurial culture and attitudes', you will have to analyse both qualitative primary data collected through interviews, and secondary data as provided by reports such as the GEM.

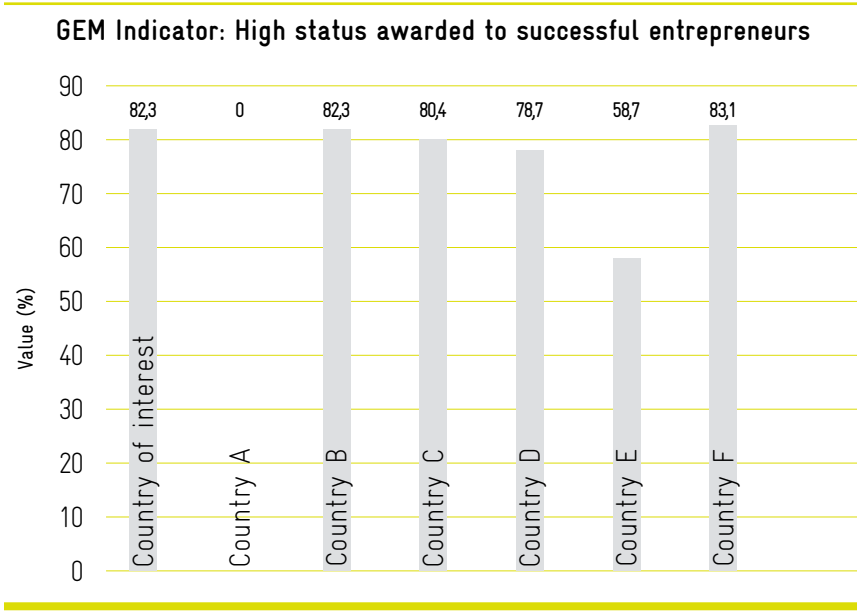
For the hard data, a useful perspective for the analysis is the country comparison, as this type of analysis will help you to identify the cultural specificities regarding entrepreneurship. One of the simplest ways of visualising such a country comparison is by using bar charts.

Ecosystem visualisation according to player categories

The most basic visualisation of ecosystem players is to cluster them according to the domains as defined by Isenberg (finance, support, policy, markets, media, human capital, see Chapter 2.1. › Interacting players). Use bubbles

in one colour for each category and then connect them to boxes in another colour listing the players' names. This will allow you to quickly gain an overview of the number of players per category and make it easy to grasp whether any players have been forgotten. However, there is no qualitative level to this visualisation, i. e. having a large number of players for one category does not necessarily mean that the market is saturated or that the services are of good quality.

EXAMPLE 3: Bar charts for country comparison



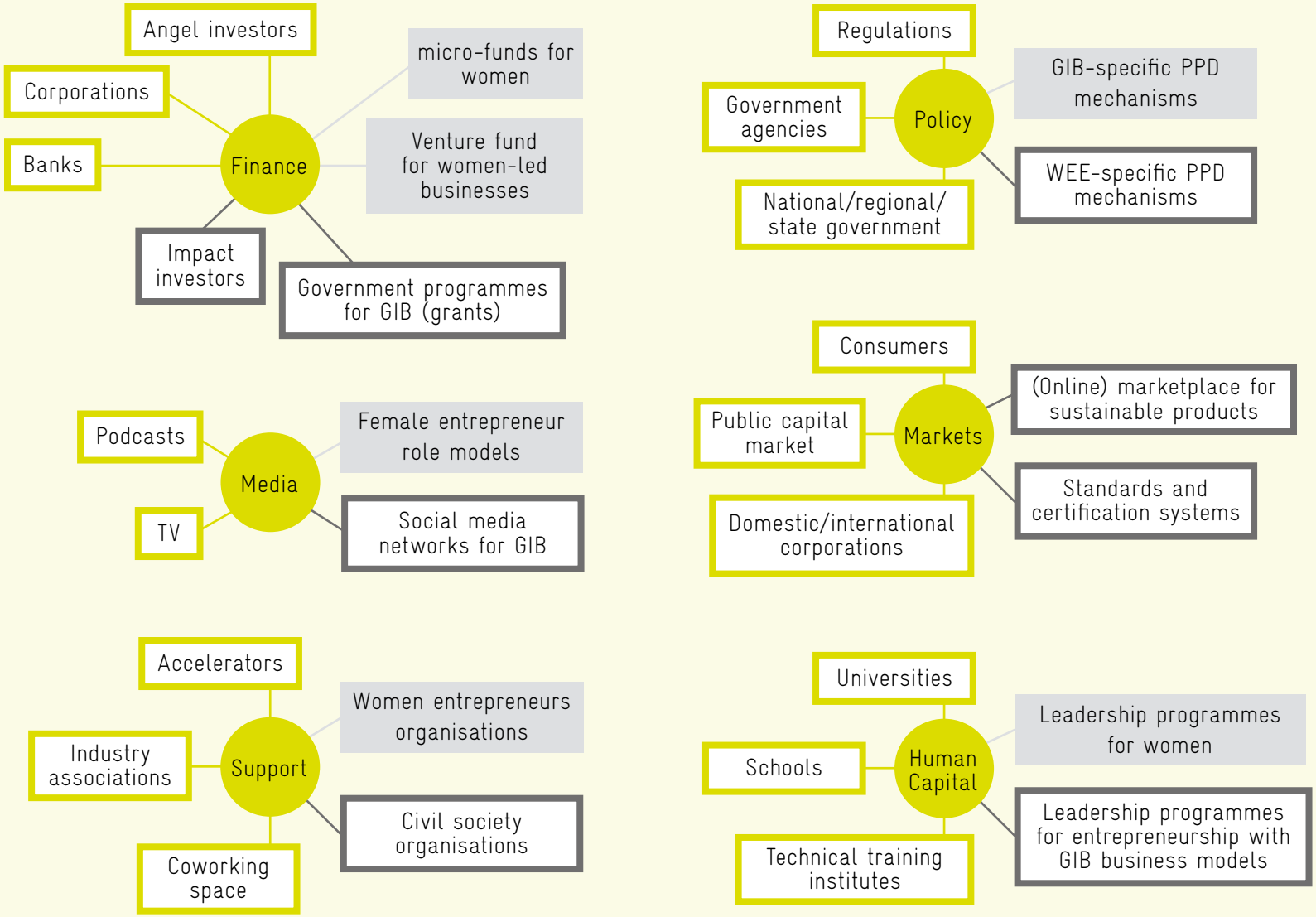
ANALYSIS – PLAYERS

Data on players can best be analysed and interpreted through visualisations. Depending on the scope and the focus of your mapping, there are various ways to present the findings. In this section, we present a number of common visualisation examples and outline the pros and cons for each example.

Ecosystem visualisation according to player categories

The most basic visualisation of ecosystem players is to cluster them according to the domains as defined by Isenberg (finance, support, policy, markets, media, human capital, see Chapter 2.1. › Interacting players). Use bubbles in one colour for each category and then connect them to boxes in another colour listing the players' names. This will allow you to quickly gain an overview of the number of players per category and make it easy to grasp whether any players have been forgotten. However, there is no qualitative level to this visualisation, i.e. having a large number of players for one category does not necessarily mean that the market is saturated or that the services are of good quality.

TOOL 8: Visualisation according to player category



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→ **GOAL:**
Get an overview of the number of players that can be found in the different ecosystem domains

PROS	CONS
› Quick overview of all ecosystem players at one glance › Good starting point for a more detailed analysis	› Has no qualitative level › Can get messy for very vibrant ecosystems › Does not include the interconnectedness of players

Ecosystem visualisation in a stakeholder map

A stakeholder map can also be used to visualise the ecosystem. It enables the observer to get an overview of the most essential players. To do so, we will order the ecosystem players according to whether they are primary or secondary stakeholders for the target group which we have defined for our mapping, for example small and growing businesses or women entrepreneurs. Of course, this will entail filtering the overall list of players so that you only list the most important ones. If you want to go one level further, you can also include additional information in this visualisation, such as the level of cooperation between the players.[33]

Abstract ecosystem visualisation

An abstract ecosystem visualisation builds on the two methods described above. It allows you to combine an overview of ecosystem players and their capacities with their connections to each other. Following this method, bubbles are used to represent actor categories where their relative size indicates the number of players for each category. You may use colour to highlight whether you deem interventions, such as capacity development, necessary for each player (e. g. from red to green). In short text boxes, you can indicate the main strengths and weaknesses for each actor category. B You can also indicate the intensity of collaboration between player categories (from co-production or coordination to simple information exchange). Please note that it is also possible to focus only on specific player categories according to the likely project focus, for example. The information collected in Tool 10, mapping out the relationship between specific players, can be included here.

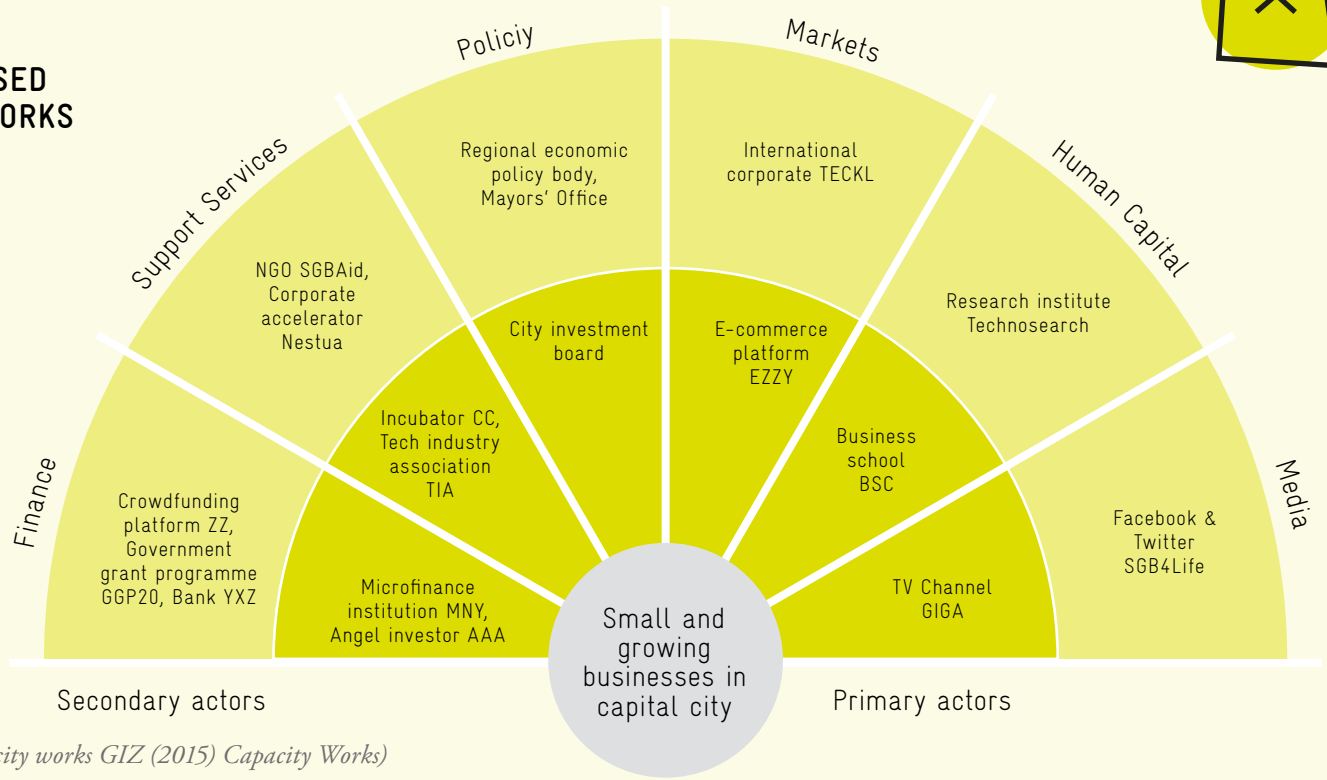
Service providers according to region

If you would like to visualise the range of service providers for your target group that are present in the ecosystem, you can rely on a representation according to geographical entities, for example regions or cities. It is easy to do as you only need a map of the geographical unit under analysis and an indication of the numbers of service providers for each sub-unit. This will allow you to compare aggregate numbers, for example,

33 Capacity WORKS provides more information on this. GIZ (2015) Capacity Works; See p. 131.

TOOL 9: Ecosystem visualisation in a players map

ECOSYSTEM BASED ON CAPACITY WORKS



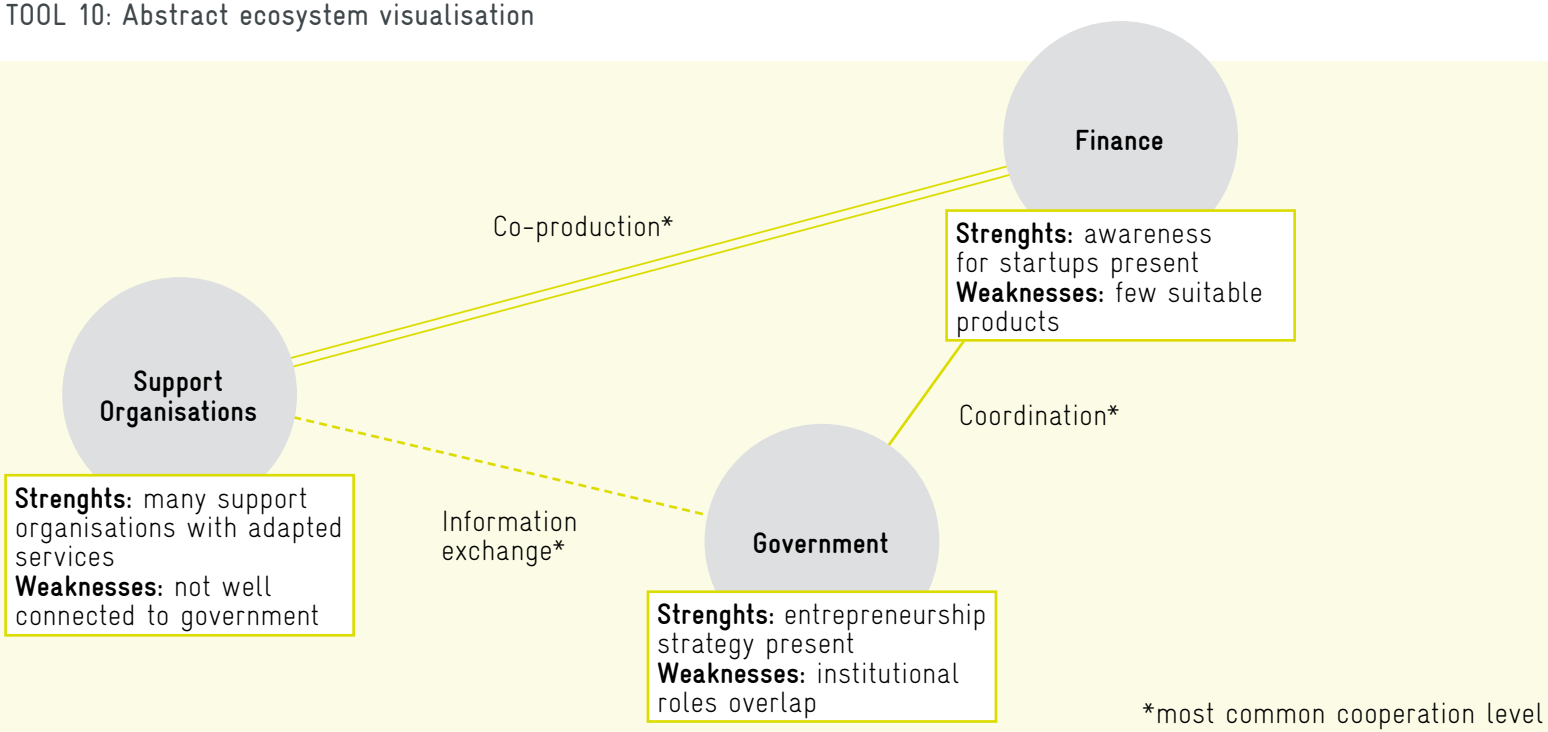
(Source: based on capacity works GIZ (2015) Capacity Works)

→ GOAL:

Display an overview of and the cooperation between the players.

PROS	CONS
› Gives an overview of the most relevant players in each category	› List of players might require a lot of filtering
› Has qualitative levels in the visualisation	› Logic might be more difficult to grasp for people who are not familiar with Capacity WORKS
› Possible to include more information, such as cooperation level, etc.	› Abstract ecosystem visualisation

TOOL 10: Abstract ecosystem visualisation



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→ **GOAL:**

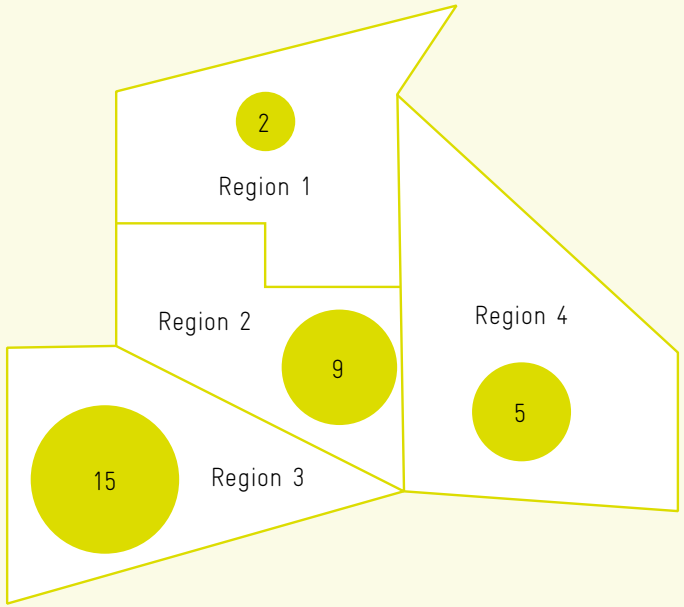
Focus on and visualise the interconnectedness of players and their capacities.

PROS	CONS
› Includes qualitative judgments › Strengths and weaknesses for each player category are displayed › Includes information on how the different player categories are interconnected	› Provides aggregate information only, no details on individual players › If too much information is included, the visualisation may become difficult to understand › Some qualitative judgments may not be suitable for sharing with ecosystem players due to sensitivities

between different regions or cities and to help you see where support is most needed. You can do this visualisation exercise for whichever type of service provider or support structure you like, for example financial service providers or business development services.

TOOL 11: Service providers as distributed per region

SERVICE PROVIDERS AS DISTRIBUTED PER REGION

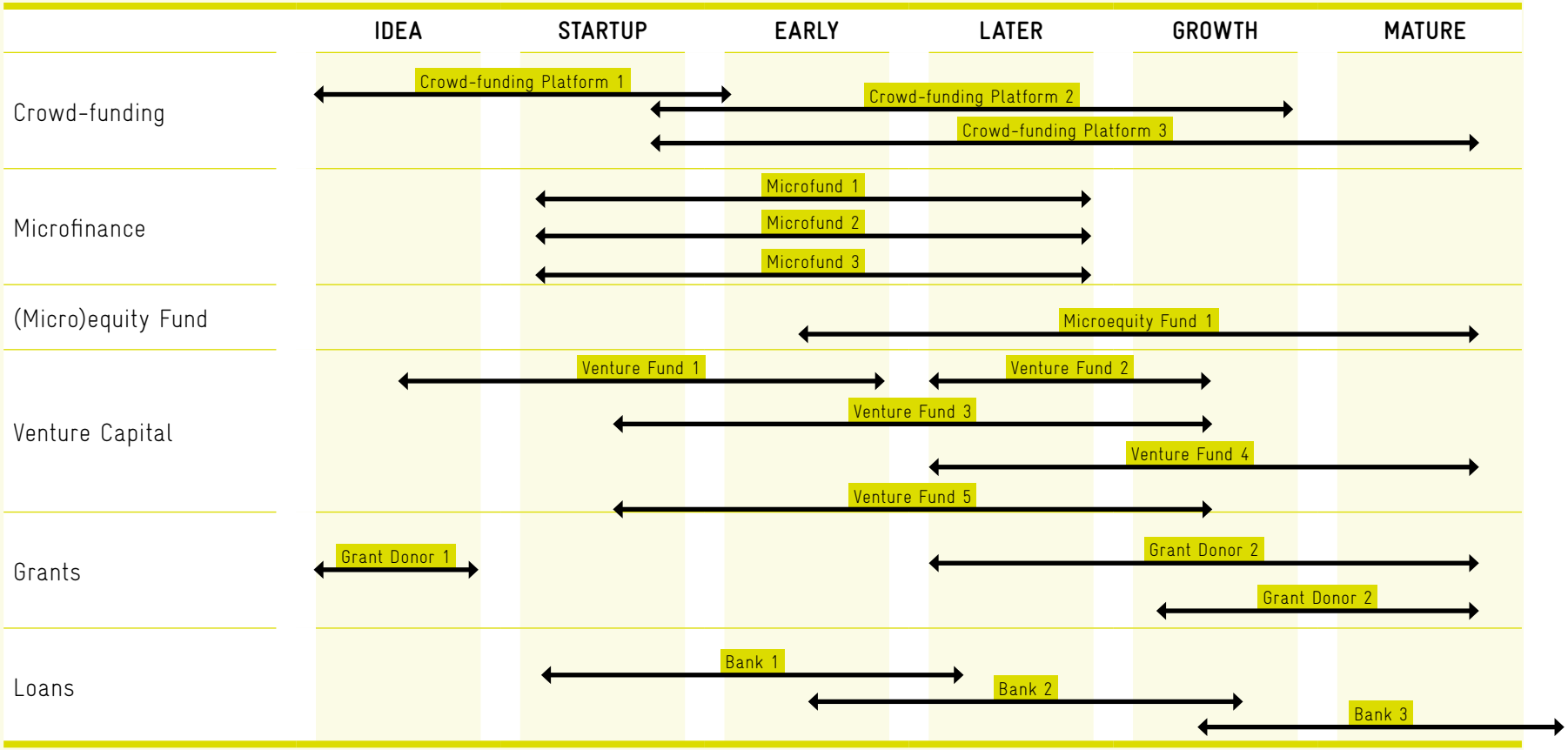


→ GOAL:
Visualise the geographical distribution and identify 'regional' gaps in the ecosystem.

PROS	CONS
› Shows regional disparities in number of service providers	› Only captures a small amount of information and has no qualitative level
› Map can be enriched with other geographical data, e.g. population density and infrastructure	› Only relevant if the geographical unit of analysis is large enough to include sub-units
› Makes it possible to analyse whether support is needed in specific regions	› Only relevant for categories of service providers with a sufficient number of actors

TOOL 12: Service providers according to business phases

EXAMPLE: FINANCIAL SERVICE PROVIDERS ACCORDING TO BUSINESS PHASES



→ GOAL:

Identify gaps in the ecosystem according to the different phases of entrepreneurial activity based on a business-centric view.

PROS	CONS
› Categories can be defined in a flexible manner, e.g. very detailed sub-categories of players/service providers can be mapped	› Gets messy if too many programmes exist › Has no qualitative level as regards the players' capacities › Can only be used for the categories 'service providers'

Service providers according to business phase

Similar to the method described above, you can also map service providers according to the business phases their services cater for, i.e. idea phase, start-up phase, early stage, later stage, growth stage and mature stage. To do this, you set up a table with the business phases listed horizontally across the top and the sub-types of service providers listed vertically on the left. Then you plot service providers along the horizontal axis for each actor. The advantage is that you create a business-centric visualisation of the range of service providers in the ecosystem.

Entrepreneurial ecosystem canvas

The canvas serves as a tool for collecting and visualising existing information about an ecosystem to get an overall impression and to define fields of action that should be supported. The tool can be used throughout the mapping process: it serves as an overview for the consultants and partners but can also be used in a joint workshop involving various ecosystem actors from the regional entrepreneurship community to discuss the levels of the entrepreneurial ecosystem.

TOOL 13: Entrepreneurial ecosystem canvas

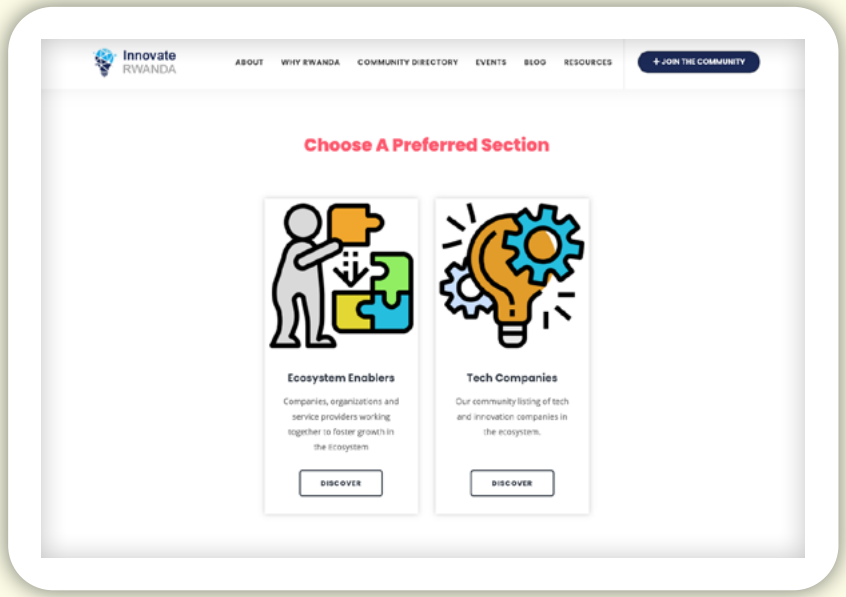
Ideally the canvas should be printed as an A1-sized poster – the poster is available as a PDF on RKW's website.

Use sticky-notes for writing down descriptions, insights and ideas that can be easily added or removed. This provides flexibility and the possibility for ongoing adaptation over the course of the analysis of the region and the development of support activities. Three different colours are helpful to clarify strengths, weaknesses and opportunities.

(Source: RKW Kompetenzzentrum (2019) Gründerökosysteme gestalten.)

TOOL 14: Online community directory

To keep the findings of your mapping exercise up-to-date, to make interactions within the ecosystem easier, and to facilitate new entries to the ecosystem, you may want to create an online platform that features all the ecosystem players and entrepreneurs. This is best done through a local partner who will ensure the sustainability of this registry and that the information is updated, i.e. "redundant" entries are deleted, and new actors and ventures are added to the ecosystem as well as updating changes in addresses, etc.



(Source: www.innovaterwanda.rw)

For example, Innovate Rwanda has created an online platform where ecosystem support organisations as well as tech firms can be listed to make the findings of their mapping activity open to all ecosystem players and foster connection and exchange within the ecosystem.

Innovate Rwanda's website is an open source website. The code can easily be used for other websites and does not require you to develop code from scratch. There are also many other open-source solutions that make the development of such a platform inexpensive. Maybe you already have a website and a community directory would be a very valuable extension.

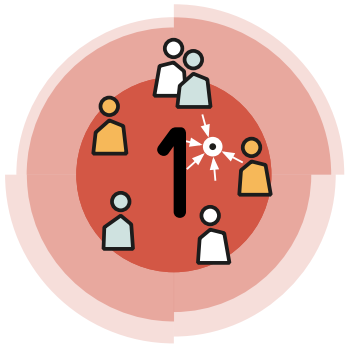
ANALYSIS – SUMMARY OF OBSERVATIONS

An easy way to capture the essential information from the hard as well as the soft data analysis is by formulating hypotheses and clustering them according to the three-levels approach (entrepreneurial culture, interacting players, business environment and investment climate). Such a list can be very helpful in the next step, the data validation. Below is an example of such a summary with example hypotheses. (In Example 4)

EXAMPLE 4: Summary of hypotheses

3

ENTREPRENEURIAL CULTURE AND ATTITUDES



- Public sector jobs are considered safer and more prestigious, but entrepreneurship as a desirable career choice ranks relatively highly.
- High status of entrepreneurs in society has decreased over the past few years.
- Media attention is high and due to competitions, in particular, for entrepreneurs there are also quite a few role models to be found in society.
- The fear of failure prevents many from starting their own business.
- The concept of a social enterprise is not widely known and the role of businesses in delivering public goods/services is perceived as difficult.
- The role of women as entrepreneurs in society remains unclear, as only a very low percentage of the female population engages in entrepreneurial activity.
- Structural inequalities restrict access to economic opportunities for marginalised groups. Belonging to a certain ethnicity, caste or religion has a strong impact on the chances of a person starting and running a successful business.
- Weak social cohesion points toward a rather low level of trust among the population, which can hinder business cooperation.
- There is a lack of trust in the positive impact digital solutions and technological development can have.

INTERACTING PLAYERS

- Entrepreneurs are overwhelmed by the complexity and fragmentation of the range of business development services and training options.
- No clear alignment between donors and support organisations.
- Support organisations mainly cover the capital city, no support in the regions.
- Lack of skilled asset managers prevents an increase in equity finance.
- Business angels are present but became more risk averse.
- No connection to the international/regional impact investing scene.
- Women entrepreneurs organisation lacks experience in advocacy work and is not well connected to other business services providers.
- Entrepreneurs from a certain ethnic group are systematically excluded from support organisations and financing options.
- Business development services lacking for tech and digital start-ups.

BUSINESS ENVIRONMENT AND INVESTMENT CLIMATE

- No national strategy for entrepreneurship in place or not known to the players in the entrepreneurial ecosystem.
- Business registration is a constraint to entrepreneurs, as regulation requires a business to own a physical space in order to register.
- For young firms, tax administration is a severe obstacle.
- There is no formal PPD mechanism in place and entrepreneurs lack a channel for communicating with the public sector.
- No regulatory framework for crowd funding is in place.
- Informality rate in women-led businesses is particularly high.
- Government structures and laws are undermined by informal groups and power dynamics.
- Lacking rule of law online, e.g. on data rights.

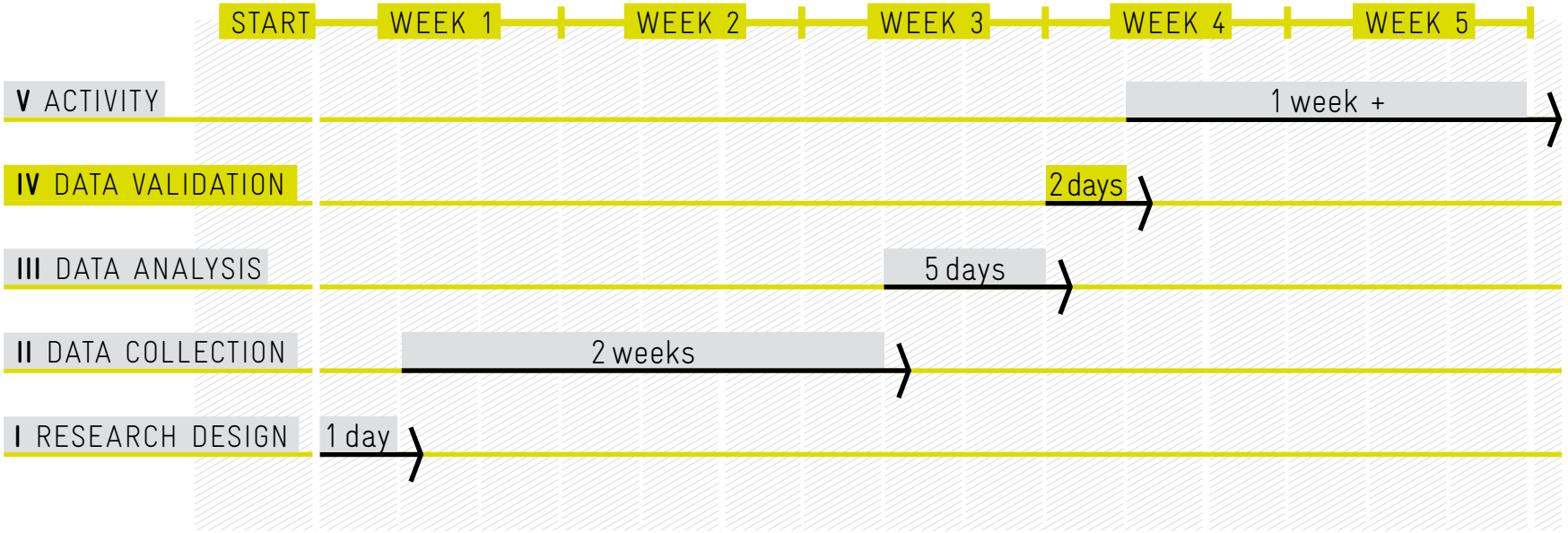
Step IV: Data validation

SHORT DESCRIPTION

Before taking action and using the mapping for project planning or publishing, it is recommended that you have the work reviewed by ecosystem players. This can help to reveal possible mistakes and to verify the findings. By engaging ecosystem players and partners in this review and validation, you will also foster exchange between the various players, which is one of the first steps towards strengthening the ecosystem. You can either ask players to review the work individually or you can organise a peer review workshop. The advantage of a workshop is that feedback is communicated without a time delay and communication between different ecosystem players is established.

GOAL	Get the results verified and/or falsified by other experts.
ESTIMATED TIME	Two days
TOOLS AND EXAMPLES	**Tool 15**: Checklist for validation workshop **Example 5**: Presenting the hypothesis
WHAT COULD GO WRONG?	You might need to be very diplomatic when presenting your results, as they can draw attention to shortcomings or a lack of capacity of specific actors from the ecosystem who might not like to have this highlighted.

FIGURE 10: Timeline- Step IV



After you have analysed the data and formulated hypotheses as regards the entrepreneurial ecosystem and the main research question, you need to share your findings to promote a common understanding among ecosystem actors. In general, there are two main ways of getting the data validated and strengthening an action oriented discussion: either by (1) sharing your conclusions **in writing** with colleagues, partners and ecosystem players and asking for comments, or (2) by presenting your preliminary findings to colleagues, partners and ecosystem players **at a workshop**. Choosing the right method is often a question of time and resources. If you have discovered a lack of collaboration and exchange, the mapping process may serve as a starting point to initiate a process of dialogue. Your role might be to serve as facilitator and the mapping results might serve as initial input for an in-depth discussion.

SEEKING VALIDATION AND DIALOGUE IN WRITING

How should the information be prepared for validation?
Make sure that you present your findings in a clear and compelling way. Instead of presenting them in a long report, you might opt for summing up your main hypotheses about the ecosystem using PowerPoint slides. You should structure the findings to align with the three levels that you used for the data

collection (entrepreneurial culture, interacting players, business environment and investment climate).

To whom should it be sent?

The people you will request written feedback from should include individuals and organisations from all the groups of actors within the ecosystem. Most probably, you will send your results to all the individuals and organisations that have taken the time to be interviewed.

What should be done with the feedback?

The feedback you will get on the hypotheses is essential, as you will use it in the next step to co-design interventions and to make decisions about the most urgent interventions to support the ecosystem. As you will have asked many different people, you might end up with conflicting viewpoints. For example, entrepreneurs might feel that the regulatory burden is particularly high for small businesses whereas the government representative emphasises the government's success in reducing red tape. This is a common phenomenon within an ecosystem and shows the need for ecosystem strengthening activities, such as a third-party assessment and deepened public-private dialogue.

EXAMPLE 5: Presenting the hypotheses

HYPOTHESES – ELEMENT: PLAYERS

Hypothesis 1

There is currently a **confusing range of non-financial services** for entrepreneurs. There are unused synergies and room for collaboration and peer-learning between different actors.

Hypothesis 2

The **regional dimension**: Ecosystem revolves around the capital, less for entrepreneurs in the provinces and especially rural areas. Services need to be extended.

Hypothesis 3

The **international dimension**: There are already links to the international community, but these links could be strengthened (international competitions access to finance).

Hypothesis 4

There might be a oversupply as regards support to entrepreneurs **in a very early stage** but less support whenit comes to the next stages. Need to create "graduation programm" for financial and non-financial services.

DATA VALIDATION WORKSHOP

An action oriented discussion is at the heart of this mapping exercise: the results have to be discussed with a group of ecosystem players and partners to develop a joint understanding of the strengths and weaknesses within the ecosystem as well as the potential for interventions. This in itself is already an ecosystem-strengthening activity. It helps to foster communication and trust among players. Furthermore, a joint understanding is vital when defining interventions later on. This ensures that all interventions are needs-based and demand-oriented. The implementation of activities ought to be done in partnership with ecosystem actors.

Holding a validation workshop is the most thorough method to check whether your hypotheses are correct and to facilitate a dialogue among ecosystem actors. The typical components and structure of a validation workshop are as follows:

- a short presentation of your research design including your research focus/question and data sources
- a clear, simple and compelling presentation of the key findings (hypotheses)
- a discussion about hypotheses with and between attendees
- a preliminary analysis of the findings and assessments, and setting the focus (ranking identified gaps and challenges)
- summarising and proposing possible next steps.

Who should be invited?

Most probably, your invitation list will include the individuals and organisations that you interviewed. You should also invite those interview partners that you contacted but who did not have time for an interview. The workshop is an opportunity for them to nevertheless contribute to the mapping. Make sure that you gather different opinions by inviting a broad range of ecosystem players and be sure that minority groups are present and think about including them adequately in the discussion during the workshop.

What are the benefits of a workshop?

Firstly, a workshop provides a forum for instant feedback and the opportunity to discuss the findings in person and thus to eliminate possible uncertainties. This way lengthy feedback loops can be avoided.

The workshop also provides an opportunity for participants to make amendments or adjustment to your report. When discussing the findings, you will naturally talk about the findings' implications for the ecosystem. At this point, you can ask participants to rate the identified challenges according to their importance and the possibilities to overcome the barrier that prevents entrepreneurship from flourishing. Consequently, the workshop can also provide impetus for potential interventions, which you will design in the subsequent step (see Chapter 3 › Step V).

Another advantage is that various ecosystem players have the chance to meet each other in person; therefore, a workshop holds networking opportunities – not only for the members but also for you. This way you will provide an opportunity for exchange and maybe even set the basis for future collaboration and strengthen the ecosystem. You should, however, keep in mind that within a group there are hierarchies and other structures (gender, age, etc.) that can influence the way that individuals participate in a group discussion. It is the facilitator's role to ensure that all the participants get the chance to express their opinions.

TOOL 15: Checklist for validation workshop

WHAT NEEDS TO BE PREPARED?

Presentation including:

- a brief introduction of speakers
- the agenda
- the workshop objectives
- a reminder of the research design
- a reminder of the interview questions and research focus
- testing and validating hypotheses
- the activities ahead and next steps
- discussion questions.

Workshop event

- Logistics:
  - venue
  - room set-up
  - catering.
- Required supplies, equipment and materials, including:
  - laptop, hard copies of presentation and agenda, projector, name tags, flipchart, speakers, workshop evaluation sheet
  - translation services if necessary.
- Timely invitation of participants

Step V: From mapping to activity

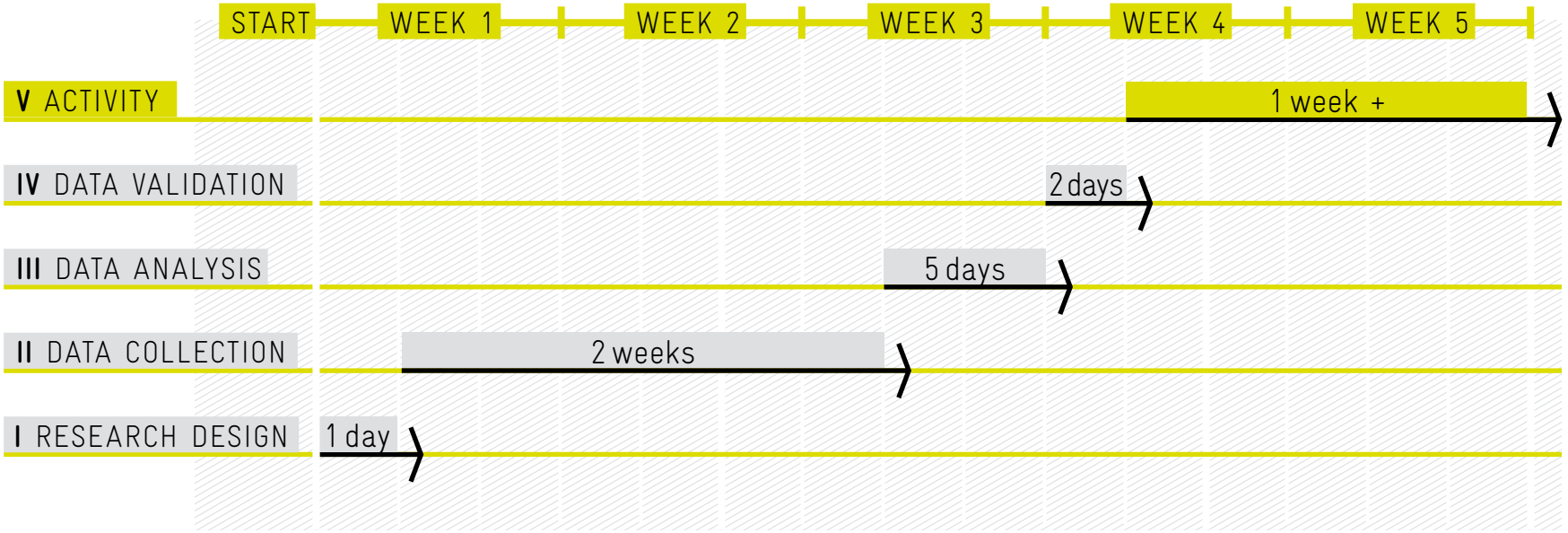
SHORT DESCRIPTION

The outcome of the mapping exercise can be used in various ways, including:

1. as a starting point for better collaboration in the mapped ecosystem;
2. as a basis for the development of a strategy to promote entrepreneurship;
3. to design interventions; or
4. to monitor changes in the entrepreneurial landscape, as mapping an entrepreneurial ecosystem over time allows you to track its development and predict future trends and anticipate changes.

GOAL	Make use of the mapping results to improve the entrepreneurial ecosystem.
ESTIMATED TIME	One week (+), to take the step from mapping to activity.
TOOLS AND EXAMPLES	**Tool 16**: European Commission's Small Business Act (SBA) principles **Tool 17**: Performance indicators **Example 6**: From challenges, to goals, to possible interventions
WHAT COULD GO WRONG?	The results need to be 'internalised', especially when the mapping has been done by external experts.

FIGURE 11: Timeline – Step V



Once you have the results of the ecosystem mapping, you might think you have reached your goal. Quite the opposite is the case – now the real work starts. There are various ways in which you can make use of the results.

DESIGN INTERVENTIONS

The main reason for mapping the ecosystem is that you would like to identify entry points for interventions. So how do we get from observations and hypotheses to actual interventions? The easiest way is to take up the challenges that you identified by validating or falsifying your hypotheses, based on the three-levels approach (entrepreneurial culture, interacting players, business environment and investment climate) and formulate goals. For each of the goals there can be different interventions that might contribute to reaching it. As a first step, you should collect your ideas for possible interventions and capture them in a table, creating an overview. As a second step, it may prove helpful to then categorise the potential interventions as short, medium or long-term interventions. This could make the prioritisation and planning of activities easier. As a next step, conceptualise your prioritised interventions.

EXAMPLE 6: **From challenges, to goals, to possible interventions**

ENTREPRENEURIAL CULTURE

CHALLENGE	GOAL	POSSIBLE INTERVENTIONS
Out of fear of failure, many people refrain from starting their own business.	Introduce a 'second chance' mentality.	› Support local organisations in setting up events where entrepreneurs share their experience of failure › Conduct an information campaign
The concept of green and inclusive business is not well-known in society.	Increase awareness of green and inclusive business models in society.	› Organise an ideas competition for green and inclusive business models › Publish articles in the media on green and inclusive businesses
Starting your own business is not perceived as a good career choice for women.	Raise awareness and attractiveness of entrepreneurial career for women.	› Develop and implement entrepreneurship training for female university students › Identify role models
There is a lack of trust in digital solutions and in their use.	Build trust within the society in digital and technological innovations and developments.	› Share use-cases for how digital tools help society and inclusive technologies › Get ecosystem actors engages with inclusive and new technologies firsthand; organise a trial of solutions

INTERACTING PLAYERS

CHALLENGE	GOAL	POSSIBLE INTERVENTIONS
No financial services provided to entrepreneurs in the growth phase.	Improve access to finance for entrepreneurs in the growth stage.	› Conduct a detailed gap assessment › Build up advisory services on international financing sources
No business development services available in the region.	Improve access to business advisory services in the region.	› Build up remote advisory services › Support business organisations setting up offices in the region
No advocacy for green and inclusive entrepreneurs.	Ensure legal and regulatory barriers are communicated to the government.	› Develop the capacities of an organisation that assumes the role of advocate for green and inclusive business › Set up a green and inclusive business roundtable
No association for women-led businesses.	Set up an association for women-led businesses.	› Support the organisational development › Conduct training for employees of the association
There is a market need, but the users are not sufficiently trained to receive digital products/services.	Evaluate the users' capacities and skills to access and use the products/services.	› Offer training courses for users online and offline › Work with civil society groups to support training

BUSINESS ENVIRONMENT AND INVESTMENT CLIMATE

CHALLENGE	GOAL	POSSIBLE INTERVENTIONS
For young firms, tax administration is a severe obstacle.	Reduce administrative costs for start-ups and SMEs when paying taxes.	› Introduce the EU's Small Business Act for Europe principles (see Tool 16) › Introduce electronic services for taxpayers
There are no insolvency laws or procedures in place.	Enhance the procedures for bankruptcy and resolving insolvency.	› Collect international good-practice › examples as regards to entre-preneurial-friendly bankruptcy laws › Provide assistance in elaborating the resolution plan and settlement agreements in bankruptcy cases
No legal form for social enterprises.	Introduce a legal form for social enterprises.	› Provide policy advice on legal form to the Ministry › Conduct a stakeholder roundtable on legal forms
Informality rate in women-led businesses is particularly high.	Increase formalisation rate of women-led or women-owned businesses.	› Conduct an information campaign › Set up support scheme for women-led businesses (pull-factor for formalisation)
Not enough, or inadequate ICT providers that can help establish the required ICT infrastructure.	Improve ICT infrastructure	› Engage in PPD to encourage ICT providers to cover new areas › Explore different options/workarounds to work with existing infrastructure

The design and prioritisation – as well as implementation – should always be done in close collaboration with your partners within an ecosystem to continuously improve collaboration, trust and interaction among all the actors.

To decide on which interventions to implement, you will have to consider the available resources as well as the time you have for implementation. This applies for your own resources as well as all available resources within the ecosystem. Pooling resources with various players will improve the scale and impact of interventions. You can use this overview to discuss the possible interventions with your partners during a workshop.

STRATEGY FOR ENTREPRENEURSHIP PROMOTION

Your mapping of the entrepreneurial ecosystem may also serve as the starting point for the development of an entrepreneurship strategy. A strategy sets out the vision of what the ecosystem should look like in the future and defines the measures to employ to get there. Two main success factors are that the strategy is 1) built on reliable information and 2) developed in collaboration with the whole set of ecosystem players.

There are a number of examples of **entrepreneurship strategies, from developed as well as developing countries**. Examples from European countries are the National Policy Statement on Entrepreneurship in Ireland 2014 or the Norwegian Government Entrepreneurship Plan. Examples from developing countries are the Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises in South Africa or the National Entrepreneurship and Innovation Plan in Ghana.

For **green and inclusive entrepreneurship promotion**, there might even be separate strategies at a national level. Green entrepreneurship promotion is in some cases also taken up as part of a country's green growth strategy (see, for example, the Green Growth Strategy for Chile). The same holds for **female entrepreneurship**, for example the Strategy of Women Entrepreneurship Development in the Republic of Croatia.

Another helpful framework for strategy development is the Small Business Act for Europe and its ten principles. These principles cover the three levels (business environment and investment climate, actors, culture and attitudes) and can serve as basis for a strategy outline. In addition, the European Commission's Entrepreneurship 2020 Action Plan can serve as good-practice example.

TOOL 16: European Commission's Small Business Act (SBA) principles

SBA 10 PRINCIPLES:

Principle 1
Create an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded

Principle 2
Ensure that honest entrepreneurs who have faced bankruptcy quickly get a second chance

Principle 3
Design rules according to the 'Think Small First' principle

Principle 4
Make public administrations responsive to SME needs

Principle 5
Adapt public policy tools to SME needs: facilitate SME participation in public procurement and better use state aid possibilities for SMEs

Principle 6
Facilitate SME access to finance and develop a legal and business environment supportive to timely payments in commercial transactions

Principle 7
Help SMEs to benefit more from the opportunities offered by the Single Market

Principle 8
Promote the upgrading of skills in SMEs and all forms of innovation

Principle 9
Enable SMEs to turn environmental challenges into opportunities

Principle 10
Encourage and support SMEs to benefit from the growth of markets

see European Commission, Small Business Act

MONITOR CHANGES IN THE ECOSYSTEM

The ecosystem mapping exercise can also serve as a baseline for monitoring future changes in the ecosystem. One simple way to monitor change is to use the selected indicators (see Chapter 3 › Step II) and update the tables every year. These indicators, however, are focused on the ecosystem determinants. Indicators that better serve the purpose of monitoring the ecosystem are the performance indicators that focus on the business demographics, the business development and efficiency as well as innovation and competitiveness.

TOOL 17: Performance indicators

EXAMPLES OF PERFORMANCE INDICATORS

Business demographics	› Trend of enterprise start-up rate › Trend of enterprise failure rate › Enterprises surviving a five-year period
Business development	› Jobs created by start-ups in relation to national employment figures › No. of high-growth enterprises by economic sector
Innovation	› Turnover from e-commerce › Sales of new-to-market and new-to-firm innovations
Competitiveness	› Direct foreign investment › Exports

4

OUTLOOK AND FUTURE OF THIS GUIDE

4 Outlook and future of this guide

This *Guide for Mapping the Entrepreneurial Ecosystem* aims to serve as a helpful tool in the endeavour of conducting ecosystem mapping. It is seen as a living document that is to be updated based on the experience gained from projects.

The guide is seen as a work in progress and the Sector Project Sustainable Economic Policy and Private Sector Development would like to explicitly encourage you to share your suggestions for changes or ideas for additional tools. All ideas and comments are extremely welcome. It is our aim to collect mapping examples from different countries and facilitate the sharing of experience between colleagues.

If you have questions or suggestions, please contact us using the following email address: private.sector@giz.de

5

LISTINGS

List of abbreviations and acronyms

APS	Adult population survey
ANDE	Aspen Network of Development Entrepreneurs
BEEPS	Business Environment and Enterprise Performance Survey
BMZ	Federal Ministry for Economic Cooperation and Development
DBR	Doing Business Report
DCED	Donor Committee for Enterprise Development
DMS	Document management system
EIU	Economist Intelligence Unit
ESO	Ecosystem support organisation
FCAS	Fragile and conflict affected states
GDP	Gross domestic product
GEDI	Global Entrepreneur Development Institute
GEM	Global Entrepreneurship Monitor
GIB	Green and inclusive business
GIGA	German Institute for Global and Area Studies
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GSM	Global System for Mobile Communications
HR	Human resources
ICT	Information and communications technology
MENA	Middle East and North Africa

MSME	Micro, small and medium-sized enterprises
NES	National expert survey
OECD	Organisation for Economic Co-operation and Development
PPD	Public–private dialogue
PSA	Peace and conflict assessment
PSD	Private sector development
SBA	Small Business Act
SDG	Sustainable Development Goals
TEA	Total early-stage entrepreneurial activity
WEE	Women's economic empowerment
WEF	World Economic Forum

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List of examples
List of tools

Literature

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6

ANNEX

Tools

TOOL 1: Overview of benchmark reports

DOING BUSINESS REPORT – WORLD BANK

Aim	Measuring business regulations, which enforce/constrain business activities ('cost of doing business'
Methodology	Survey consisting of a questionnaire which asks about regulations in the following areas: - starting a business - dealing with construction permits - obtaining electricity - registering property - securing credit - protecting minority investors - paying taxes - trading across borders - enforcing contracts - resolving insolvency - labour market regulation.
Countries	190 economies (2017)
Frequency	Annually
Level	National and sub-national for some countries
Pros	Very comprehensive dataset, large reach, high frequency, well-established, full datasets available. Clear focus on business regulation. Covers areas relevant for entrepreneurship such as registration and bankruptcy.
Cons	Considers market liberation as unconditionally desirable – the more liberal the higher the ranking; does not fully support a social market economy – e.g. strict dismissal protection = lower ranking
Link	→ www.doingbusiness.org

GLOBAL ENTREPRENEURSHIP MONITOR – GLOBAL ENTREPRENEURSHIP RESEARCH ASSOCIATION

Aim	› Tracking rates of entrepreneurship across multiple phases › Assessing entrepreneurs' characteristics, motivations and ambitions and societies' attitudes towards entrepreneurial activities › Enhancing the understanding of the entrepreneurial phenomenon
Methodology	GEM collects primary data through an APS of at least 2,000 randomly selected adults in each economy and through a NES interviewing around 40 national experts.
Example	The PSD programme in Georgia has facilitated the inclusion of Georgia in the GEM report. For more information please contact: rati.anjaparidze@giz.de
Countries	65 economies (2017)
Frequency	Global GEM report: annually National reports: varying Specific topic reports: varying
Level	National
Pros	GEM works with primary data collection and covers areas that are not covered by any other benchmark reports, such as the entrepreneurial intention of a selected society. Clear focus on entrepreneurship. GEM is used as data source for other global indices (such as GEDI).
Cons	GEM works with national teams that prepare the national reports. The quality of the national reports varies. The coverage changes frequently as some national teams drop out or others just recently started collecting data for their country.
Link	→ www.gemconsortium.org/report

ENTREPRENEURSHIP AT A GLANCE – OECD

Aim	Informing policy design through the development of policy-relevant indicators is at the core of the OECD–Eurostat Entrepreneurship Indicators Programme, and much attention is paid to responding to information needs.
Methodology	Entrepreneurship at a Glance is based on the OECD Structural Business Statistics, the OECD Business Demography Indicators and the Timely Indicators of Entrepreneurship databases. It features an opening section on recent trends in entrepreneurship, discussing new data on enterprise creations and exits, bankruptcies and self-employment.
Countries	OECD member states (except Greece and Ireland) and 12 additional countries
Frequency	Annually
Level	National
Pros	Clear focus on entrepreneurship. Data from national statistical departments. Very reliable source.
Cons	The indicators do mostly cover performance indicators (birth rate, death rate), less so the determinants of an entrepreneurial ecosystem.
Link	→ http://www.oecd.org/std/business-stats/entrepreneurship-at-a-glance-22266941.htm

THE GLOBAL INNOVATION INDEX – CORNELL, SC JOHNSON COLLEGE OF BUSINESS; INSEAD; WIPO

Aim	› Capturing the multi-dimensional facets of innovation › Measuring factors which influence it and the impacts of entrepreneurship on the economy › Measuring and understanding which economies and regions respond best to the challenges of innovation
Methodology	Indicators computed by national statistical offices; some indicators are established components of regular data collection. **Indicators in seven pillars:** **1.** Institutions **2.** HR and research **3.** Infrastructure **4.** Market sophistication **5.** Business sophistication **6.** Knowledge and technology outputs **7.** Creative outputs
Methodology	Each pillar is divided into three sub-pillars, and each sub-pillar is composed of two to five individual indicators. Hard data from international sources (World Bank, UN) and survey data from the WEF's Executive Opinion Survey
Countries	127 economies (2017)
Frequency	Annually, since 2007
Level	National
Pros	Includes relevant, specific topics (e.g. agriculture in 2017).
Cons	Business sophistication and creative outputs are particularly interesting pillars, but for indicators in those areas there are no data available for many of our partner countries.
Link	→ https://www.globalinnovationindex.org/

BUSINESS ENVIRONMENT AND ENTERPRISE PERFORMANCE SURVEY (BEEPS) – EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

Aim	Providing information that enables a conducive business environment to be created, which can boost growth by establishing competitive and fair conditions for all businesses.
Methodology	BEEPS is a firm-level survey (business owners and top managers) of a representative sample of an economy's private sector (stratified random sampling). It covers a broad range of business environment aspects: firm characteristics, gender participation, access to finance, annual sales, costs of inputs/labour, workforce composition, bribery, licensing, infrastructure, trade, crime, competition, capacity utilisation, land and permits, taxation, informality, business–government relations, innovation and technology, and performance measures. In most economies, the majority of firms are small and medium-sized, hence BEEPS over-samples large firms since they tend to be engines of job creation. Sector breakdown is usually manufacturing, retail, and other services.
Countries	32 economies, mainly MENA and Europe (2012–2016)
Frequency	Irregular, the last round (BEEPS V) took place between 2012 and 2016
Level	National
Pros	Primary data collection. Contains information on the top three business environment obstacles for businesses. Differentiates between large businesses and SMEs
Cons	Data collected irregularly; no year-on-year comparison possible. Only a limited number of countries are covered.
Level	Regional (e.g. MENA) and national
Link	→ http://ebrd-beeps.com/

ENTERPRISE SURVEY – WORLD BANK

Aim	To offer an expansive array of economic data on 127,000 firms (non-agricultural economy) in 139 countries. The data are presented in a variety of ways useful to researchers, policymakers, journalists, and others.
Methodology	A firm-level survey of a representative sample of an economy's private sector. The surveys cover a broad range of business environment topics including access to finance, corruption, infrastructure, crime, competition, and performance measures.
Countries	139 economies (but not on an annual basis)
Frequency	Irregularly, in 2017 there were 10 country surveys under preparation
Level	National
Pros	Very useful as it presents the private sector's viewpoint and perception of the business environment. Also highly relevant for assessing the entrepreneurial ecosystem.
Cons	The frequency in which the data are collected is irregular (five years or more). Therefore, no year-on-year comparison is possible. It is an opinion-based survey (not facts), giving the private sector's perception.
Link	→ http://www.enterprisesurveys.org/

VENTURE CAPITAL & PRIVATE EQUITY COUNTRY ATTRACTIVENESS INDEX – IESE BUSINESS SCHOOL AND EMLYON BUSINESS SCHOOL

Aim	Determining the relative positioning of particular economies and regions as they stand in relation to their attractiveness for investment in venture capital and private equity assets.
Methodology	The venture capital/private equity attractiveness of each country is computed by calculating a weighted average of country performance scores in the six key drivers: 1. Economic activity 2. Depth of capital market 3. Taxation 4. Investor protection and corporate governance 5. Human and social environment 6. Entrepreneurial culture and deal opportunities
Countries	126 economies (2016)
Frequency	Annually
Level	National
Pros	Covers the area of business environment. Most relevant sub-index is the 'depth of capital market' component.
Cons	As with every index, it is important to look at what exactly the index contains to understand its value. Uses a variety of sources for the data (WEF, Doing Business, also national statistics). The sub-index on entrepreneurial culture mostly focuses on R&D and innovation and the ease of starting a business. Therefore, not a useful source of information on entrepreneurial culture.
Link	→ http://blog.iese.edu/vcpeindex/

BERTELSMANN TRANSFORMATION INDEX – BERTELSMANN FOUNDATION

Aim	› Analysing and evaluating the quality of democracy, market economy and political management in developing and transitioning countries. › Measuring successes and setbacks on the path towards a democracy based on the rule of law and a socially responsible market economy.
Methodology	The BTI analyses and evaluates whether and how developing countries and countries in transition are steering social change towards democracy and a market economy. Guided by a standardised codebook, country experts assess the extent to which a total of 17 criteria have been met for each country. The BTI aggregates the results of the study of transformation processes and political management into two indices: the Status Index and the Management Index. The Status Index, with its two analytic dimensions of political and economic transformation, identifies where the countries stand on their path towards democracy under the rule of law and a social market economy. Focusing on the quality of governance, the Management Index assesses the acumen with which decision-makers steer political processes.
Countries	129 economies (2017)
Frequency	Annually
Level	National
Pros	Good source for information on the investment climate.
Cons	Focus is on market economy in general, no special focus on entrepreneurship.
Link	→ https://www.bti-project.org/

GEDI INDEX – GLOBAL ENTREPRENEUR DEVELOPMENT INSTITUTE

Aim	Providing a more complete understanding of economic development by capturing the contextual nature of business formation, expansion, and growth.
Methodology	Thirty individual-level and institutional-level dimensions are paired together into 15 pillars that are further divided into three main sub-indices: entrepreneurial environment, entrepreneurial ecosystem and entrepreneurial aspirations. In the 2017 report, GEDI introduced four measures of the digital entrepreneurial ecosystem.
Countries	137 economies (2017)
Frequency	Annually
Level	National; regional reports are also available as special editions (European Union)
Pros	Broad coverage of countries and comparability between countries. Extensive set of indicators on entrepreneurship. Specifically targets entrepreneurship. Highlight is the focus on the digital entrepreneurial ecosystem. Special reports on selected topics for further in-depth information.
Cons	Data are sourced from internationally recognised datasets, also the data from the GEM. In the cases where there is no data from GEM for a country, GEDI uses the data from a neighbouring country. Users have to make sure they understand what the different indices and sub-indices contain.
Link	→ https://thegedi.org/research/gedi-index/

GLOBAL GREEN ECONOMY INDEX – DUAL CITIZEN LLC

Aim	Measures how countries perform in the global green economy, signalling which countries are making progress towards greener economies, and which are not.
Methodology	The index is based on a perception survey and consists of four main dimensions: › Leadership & Climate Change › Efficiency Sectors › Markets & Investment › Environment
Countries	80 economies (2016), 50 cities (2016)
Frequency	Annually, since 2010
Level	National
Pros	Good source for information on the investment climate.
Cons	Focus is on market economy in general, no special focus on entrepreneurship.
Link	→ https://dualcitizeninc.com/global-green-economy-index/

FEMALE ENTREPRENEURSHIP INDEX – GLOBAL ENTREPRENEUR DEVELOPMENT INSTITUTE (GEDI)

Aim	Measuring the development of high potential female entrepreneurship worldwide.
Methodology	The Female Entrepreneurship Index framework pairs together individual-level and institutional-level variables into pillars. These contain three main sub-indices that measure the quality of: 1) the entrepreneurial environment; 2) the entrepreneurial ecosystem; and 3) women's entrepreneurial aspirations. GEDI's proprietary methodology captures the dynamic, inter-related nature of the pillars.
Countries	77 economies (2016)
Frequency	Annually, between 2013 and 2015
Level	National
Pros	Very comprehensive and hard data on the issue of female entrepreneurship.
Cons	The index has not been published for 2016, making a comparison over time difficult. Data are sourced from internationally recognised datasets, and the data from the GEM. In the cases where there are no data from GEM for a country, GEDI uses the data from a neighbouring country.
Link	→ https://thegedi.org/research/womens-entrepreneurship-index/

WEF GENDER GAP REPORT – WORLD ECONOMIC FORUM

Aim	Quantifying the magnitude of gender disparities and tracking their progress over time, with a specific focus on the relative gaps between women and men.
Methodology	The report features an index designed to measure and compare gender equality. Furthermore, it contains four sub-indices: economic participation and opportunity, educational attainment, health and survival, political empowerment. For all sub-indices, the highest possible score is 1 (parity) and the lowest possible score is 0 (imparity), thus binding the scores between inequality and equality benchmarks. An unweighted average of each sub-index score is used to calculate the overall Global Gender Gap Index score.
Countries	144 economies (2016)
Frequency	Annually
Level	National
Pros	The most relevant sub-index for the entrepreneurial ecosystem mapping is the one on economic participation. The data used to construct the index come from international organisations.
Cons	The index and the sub-indices can serve as orientation. For a detailed analysis it is necessary to look in detail at how the indices are built up to know what they measure. In most cases they serve as proxies. No primary data collection.
Link	→ https://www.weforum.org/reports/the-global-gender-gap-report-2016

GENDER ICT STATISTICS – ITU

Aim	The list provides a split per country of women and men using the internet. ITU's work on gender equality is guided in particular by Resolution 70: Mainstreaming a gender perspective in ITU and the promotion of gender equality and the empowerment of women through information and communication technologies.
Methodology	The data are based on the World Telecommunication/ICT Indicators Database. The data are collected from an annual questionnaire sent to official economy contacts, usually the regulatory authority or the ministry in charge of telecommunication and ICT. Additional data are obtained from reports provided by telecommunication ministries, regulators and operators and from ITU staff reports.
Countries	Over 200 economies
Frequency	Annually
Level	National
Pros	The most comprehensive overview of gender distribution based on internet users. The information is updated regularly and can be accessed by downloading the excel list.
Cons	The data are only shown in excel and lacks further analysis. ITU relies primarily on official economy data, availability of data for the different indicators and years might vary.
Link	→ https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx (follow the link and select the "Gender ICT Statistics" link to download the data in excel)

UNCTAD B2C E-COMMERCE INDEX– UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

Aim	The UNCTAD B2C E-commerce Index measures an economy's preparedness to support online shopping.
Methodology	The index is calculated as the average of four indicators (i.e. each indicator carries the same weight) using data for 2018 or the most current available. The four indicators are: › Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+) (Source: World Bank) › Individuals using the internet (% of population) (Source: ITU) › Postal Reliability Index (Source: Universal Postal Union) › Secure internet servers (per 1 million people) (Source: Netcraft retrieved from World Bank)
Countries	152 economies (2019)
Frequency	Annually
Level	National
Pros	Broad coverage of countries with break down for each indicator. List format makes it easy to compare countries. Sources are reliable.
Cons	Online report, so not interactive. No national interpretations.
Link	→ https://unctad.org/system/files/official-document/tn_unctad_ict4d07_en.pdf (on that page scroll down to the link to report. The report is a download, so this is not a direct link).

THE OPEN DATA BAROMETER – WORLD WIDE WEB FOUNDATION

Aim	A global measure of how governments are publishing and using open data for accountability, innovation and social impact.
Methodology	The index is calculated based on 3 types of data: › A peer-reviewed **expert survey** with a range of questions about open data contexts, policy, implementation, and impacts and a detailed dataset survey completed for 15 kinds of data in each government, which touched on issues of data availability, format, licensing, timeliness, and discoverability. › A **government self-assessment** simplified survey with the same range of context, implementation, and impacts questions, as an additional source of information. › **Secondary data** selected to complement our expert survey data. This is used in the readiness section of the Barometer, and is taken from the World Economic Forum, International Telecommunications Union, United Nations e-Government Survey, and Freedom House.
Countries	152 economies (2019)
Frequency	Annually
Level	National
Pros	The foundation aims to make government data broadly accessible for reasons of transparency and accountability. Yet, access to this type of data is also an opportunity for entrepreneurs to work with it. It can create or strengthen business cases and it will create trust in a government if the scoring is high on a continuous basis which can also contribute to investment opportunities.
Cons	This index is not equally important for every entrepreneur and applied specifically for the ones that are dependent on open and transparent data from the government.
Link	→ opendatabarometer.org

GLOBAL CONNECTIVITY INDEX – GSMA

Aim	The Mobile Connectivity Index measures the performance of mobile internet adoption and evaluates the status of internet access.
Methodology	The index is comprised of four ‚levels', with each level scored between 0 and 100. A higher score is associated with a more enabling environment for delivering mobile internet connectivity. The index considers a wide range of indicators, including: › **Index**: A single composite indicator to measure a country's enabling environment for mobile internet adoption. › **Enablers**: Four dimensions, which are aggregated to produce the overall index score. › **Dimensions**: 14 dimensions, which are aggregated to produce the four enabler scores. › **Indicators**: 38 indicators, which are aggregated to produce the 14-dimension scores.
Countries	165 economies
Frequency	Annually
Level	National
Pros	Broad coverage of countries and easy to read data due to visualisations. For more detailed information, there is the option to break the data down into data maps or – to gain even more detail – the data can be downloaded which provides more insight into each indicator, as well as the sources of the data. GSMA data is widely used and quoted by trusted parties in the development sector.
Cons	The data sources are very diverse and might change per indicator. Most data sources are recognised and can be verified, however, there are some sources with cannot easily be accessed and hence full due diligence is not possible.
Link	→ https://www.mobileconnectivityindex.com/

ICT DEVELOPMENT INDEX (IDI) – ITU

Aim	The index monitors and compares developments in information and communication technology (ICT) between countries and over time.
Methodology	The IDI is divided into the following three sub-indices, and a total of 11 indicators: › **Access sub-index**: This sub-index captures ICT readiness, and includes five infrastructure and access indicators (fixed-telephone subscriptions, mobile-cellular telephone subscriptions, international internet bandwidth per internet user, households with a computer, and households with internet access). › **Use sub-index**: This sub-index captures ICT intensity and includes three intensity and usage indicators (individuals using the internet, fixed broadband subscriptions, and mobile-broadband subscriptions). › **Skills sub-index**: This sub-index seeks to capture capabilities or skills which are important for ICTs. It includes three proxy indicators (the average years of schooling, gross secondary enrolment, and gross tertiary enrolment). As these are proxy indicators, rather than indicators directly measuring ICT-related skills, the skills sub-index is given less weight in the computation of the IDI than the other two sub-indices.
Countries	176 economies (2017)
Frequency	Annually
Level	National
Pros	Broad coverage of countries and the visualisation by rank and map make it easy to compare countries. Since this is meant to provide an understanding of the development, the report also focuses on year-by-year changes which are easy to view. There is also an option for comparing regions. Furthermore, the 'economy card' provides an overview of a specific country and a deep dive into the indicators.
Cons	Data are usually collected at the end of the year and require a further year for evaluation. That means the data might be two years old by the publication date, which makes the data old concerning today's technology and digital development.
Link	→ https://www.itu.int/net4/ITU-D/idi/2017/index.html

THE INCLUSIVE INTERNET INDEX – THE ECONOMIST INTELLIGENCE UNIT

Aim	The index seeks to measure the extent to which the internet is not only accessible and affordable, but also relevant to all, allowing usage that enables positive social and economic outcomes at individual and group levels.
Methodology	The overall Index score is based on: › **Availability**: Quality and breadth of available infrastructure required for access and levels of internet usage. › **Affordability**: Cost of access relative to income and the level of competition in the internet marketplace. › **Relevance**: Existence and extent of local language content and relevant content. › **Readiness**: Capacity to access the internet, including skills, cultural acceptance, and supporting policy.
Countries	100 economies (2019)
Frequency	Annually
Level	National
Pros	Easy to read and understand visualisation which allows a deeper insight into all data points. The data can be sorted and filtered according to your interest and provides very up to date information.
Cons	The index covers only 100 countries and has only been going for 3 years, so comparison over time on a country basis might not always be possible or meaningful.
Link	→ https://theinclusiveinternet.eiu.com/explore/countries/performance

GLOBAL DIGITAL REPORTS – WE ARE SOCIAL

Aim	The data collection and analysis aim to explain the status and use of social media and e-commerce country-by-country and across regions and the world. The use of social media is increasingly becoming an imperative for young businesses and business owners, so understanding who and how many people they can reach is of upmost importance.
Methodology	'We are Social' work with recognised partners such as GlobalWebIndex, GSMA Intelligence, Statista, Locowise, App Annie, SimilarWeb. The yearly report can be over 200 pages long, providing information about all countries. Country specific downloads are possible. The data are generally directly from the source, e.g. Facebook or Twitter, or from their partners.
Countries	All economies that use social media
Frequency	Annually
Level	Global with national breakdowns
Pros	A very comprehensive overview of social media use, also available as a break down by gender and age groups. The report is published for free. Generally, the individual reports are not made with a development/SDG focus, but they are a unique resource for today's online business opportunities and the users' behaviour. 'We are social' can also provide support with specific reports.
Cons	'We are social' is a private company. Whilst the annual report is for free, all other research and analysis might require funding.
Link	→ https://wearesocial.com/blog/2019/01/digital-2019-global-internet-use-accelerates

INNOVATION ACROSS EMERGING MARKETS – BRITER

Aim	Briter is not so much an index, but more a visual overview of innovation across emerging markets.
Methodology	Briter works with local partners from a broad range of countries to collect and analyse data and information regarding the development and adoption of innovative businesses and new technologies.
Countries	Depends on report and analysis, but focus is on Africa.
Frequency	Ongoing
Level	National & regional
Pros	Gives a quick overview of trends and businesses in a particular sector and country. It is fairly unique in its focus on emerging countries and provides a useful and fast growing visual. There are reports that provide more details on focus areas.
Cons	Still a growing organisation with a limited database focusing mainly on Africa. However, for Africa there is a lot of insight available that cannot easily be found elsewhere.
Link	→ https://briterbridges.com/maps

COUNTRY LEGAL FRAMEWORKS RESOURCE (CLFR) – GLOBAL NETWORK INITIATIVE

Aim	The index examines governments' legal authority to intercept communications, obtain access to communications data, or restrict the content of communications.
Methodology	This initiative is driven by two telecommunication companies (Telenor and Vodafone) that are concerned about a worldwide trend towards government laws and policies which pressure ICT companies to intercept communications, share user data, and restrict content and service access in ways that may threaten internationally recognised rights to freedom of expression and privacy. Their methodology is developed together with Hogan Lovells International LLP. However, they only cover 50 countries and also freely reference similar work done by other telecommunications companies such as BT or Telefonica. The Country Legal Frameworks Resource contains reports on the legal frameworks of over 50 countries, organised around a common set of categories. The first three categories cover the legal authority for governments to demand access to user data, including laws and regulations authorising: (1) requests for interception of users' communications, including in real time; (2) requests to disclose the non-content data of users' communications; and (3) supplemental powers for national security purposes – as defined in domestic laws and regulations – including certain intelligence capabilities. Category (4), censorship-related powers, covers powers to order ICT companies to block or restrict access to either entire networks and services or specific websites, and in some instances, the authority to take control of a company's network. Finally, the reports include sections on (5) oversight of access-related powers and (6) oversight of censorship-related powers. In some reports, supplemental categories of laws pertaining to encryption or publications of data on government requests are also included.
Countries	50 economies
Frequency	Annually
Level	National
Pros	The overview provides possibilities to review a country's laws pertaining to all six categories. In addition, it facilitates a comparison of laws in two to four countries simultaneously. It is possible to download the entire database or a comparison of countries and search the entire resource or within a comparison of countries.
Cons	The current overview analyses only 50 countries. There is also a disclaimer in their methodology that not all laws and regulations will fit into their six categories, so local validation should be done.
Link	→ https://clfr.globalnetworkinitiative.org/

DATA PROTECTION LAWS OF THE WORLD – DLA PIPER

Aim	The map and handbook provide an overview of the different data protection laws around the world. For every new organisation it is crucial to manage and safeguard personal information and address their risks and legal responsibilities in relation to processing personal data, to address the growing thicket of applicable data protection legislation.
Methodology	The handbook sets out an overview of the key privacy and data protection laws and regulations across nearly 100 different jurisdictions and offers a primer to businesses to make sure they stay compliant with the law, but equally understand the importance of data protection and privacy. Changes in regulation are being driven largely by cultural and trade considerations and by a struggle to keep pace with emerging technology and online business methods. That means that it is often hard to fit the regulatory requirements into an early stage business, yet, it has the potential to harm both business and consumers significantly if the business is not compliant. DLA Piper provides a handbook to check the current laws and policies applicable in a specific country. But in addition, they also offer methods to check a business's status of compliance through the 'data privacy scorebox' or 'Cyber Trak'.
Countries	Nearly 100 economies
Frequency	Ongoing, but sporadic
Level	National
Pros	Very broad coverage and detailed analysis of laws in most countries. Apart from the very informative world map and the handbook with more details, there are great features like specific sections about the authorities in each country, the registration process, the collection and processing requirements and other specific elements typical to these types of laws. It also allows for the comparison of countries.
Cons	The updates might be irregular. The last big collection of information was done in 2017, after that it seems that the updates have been done on a sporadic basis. If in doubt, it will still be necessary to check for the most up-to-date information locally with the local authorities.
Link	→ https://www.dlapiperdataprotection.com/index.html?t=world-map&c=GH

FREEDOM ON THE NET – FREEDOM HOUSE

Aim	The report monitors if common offline rights are equally being adhered to in the online realm. Namely, the freedoms of speech, information, privacy, and association enshrined in international covenants are fundamental to the upholding of liberal democratic values. Whilst technology can enable much good, it can also be used by both evaders and enforcers of government censorship and surveillance. Freedom on the Net measures internet freedom in order to identify threats to online freedoms and opportunities for positive change.
Methodology	The report features a ranked, country-by-country, assessment of online freedom, a global overview of the latest developments, as well as in depth country reports. Its methodology includes three categories: › **Obstacles to Access** details infrastructural and economic barriers to access, legal and ownership control over internet service providers, and independence of regulatory bodies; › **Limits on Content** analyses legal regulations on content, technical filtering and blocking of websites, self-censorship, the vibrancy/diversity of online news media, and the use of digital tools for civic mobilisation; › **Violations of User Rights** tackles surveillance, privacy, and repercussions for online speech and activities, such as imprisonment, extra-legal harassment, or cyberattacks.
Countries	65 economies
Frequency	Annually
Level	National
Pros	Representatives from the private sector use the reports to perform market research and due diligence. It is specifically important for entrepreneurs to consider the environment under which they might engage in the use of online services. The closer a country directs its internet rules, the harder it might be for an online business to enjoy the freedom of an open business case.
Cons	It does not cover every country in the world. In the most repressive environments, Freedom House has to take care to ensure researchers' anonymity or, in exceptional cases, works with foreign nationals living outside their home country.
Link	→ https://freedomhouse.org/report-types/freedom-net

TOOL 3: Table of indicators and data sources

ENTREPRENEURIAL CULTURE AND ATTITUDES

Variable		2019	2018	2017	Source
Entrepreneurship is a good career choice*	Rate (% prevalence rate in 18–64 population)				Global Entrepreneurship Monitor ➔
	Rank				
Frequent stories about successful new businesses in the media*	Rate (% prevalence rate in 18–64 population)				Global Entrepreneurship Monitor ➔
	Rank (among MENA)				
Successful Entrepreneurs have high status and respect in the country*	Rate (% prevalence rate in 18–64 population)				Global Entrepreneurship Monitor ➔
	Rank				

* If no GEM report available, data needs to be collected via interviews or other means.

BUSINESS ENVIRONMENT

Variable	Indicator		2019	2018	2017	Source
Business registration	Ease of starting a business index	Score 0–100				Doing Business Report ➔
		Rank				
	Procedures to legally start and operate a business	Number of procedures				
		Days per procedure				
		Costs % per capita				
		Minimum capital requirement (% of income per capita)				
	Ease of resolving insolvency index	Score 0–100				
		Rank				
Business registration	Percentage of firms identifying business licensing as biggest obstacle					World Bank Enterprise Surveys ➔
	Percentage of firms formally registered when they started operations in the country					
	Percentage of firms competing against unregistered or informal firms					

Variable	Indicator		2019	2018	2017	Source
Tax policies	Ease of paying taxes index	Score 0–100				Doing Business Report ➔
		Rank				
	Percentage of firms visited or required to meet with tax officials					World Bank Enterprise Surveys ➔
	Percentage of firms identifying tax rates as biggest obstacle					
Access to finance	Financial market development Index	Scale 0–7				WEF Competitiveness Report ➔
		Rank				
	Venture Capital and Private Equity Index	Score 0–100				IESE ➔
		Rank				
	Ease of securing credit	Score 0–100				Doing Business Report ➔
		Rank				
		Rank				
	Venture capital availability	Scale 0–7				WEF Competitiveness Report ➔
		Rank				
Access to finance	Domestic credit to private sector by banks (% of GDP)					WB World Development Indicator Database ➔
	Microfinance gross loans, % GDP					Global Innovation Index ➔
	Percentage of firms identifying access to finance as a major constraint					World Bank Enterprise Surveys ➔

Variable	Indicator		2019	2018	2017	Source
Labour laws and administration	Firms identifying labour regulations as biggest obstacle (%)					World Bank Enterprise Surveys ➔
	Labour market efficiency index					WEF Competitiveness Report ➔
Quality of regulatory governance	Government effectiveness, percentile rank (0–100)					World Bank, Worldwide Governance Indicators ➔
	Regulatory quality, percentile rank (0–100)					
	Senior management time spent dealing with the requirements of government regulation (%)					World Bank Enterprise Surveys ➔
Land titles	Quality of land administration index (0–30)					Doing Business Report ➔
Land titles	Ease of registering property	Number of procedures				Doing Business Report ➔
		Time required per procedure (calendar days)				
		Cost incurred per procedure (% of property value)				
	Percentage of firms identifying access to land as biggest obstacle					World Bank Enterprise Surveys ➔

Variable	Indicator		2019	2018	2017	Source
Access to commercial courts	Efficiency of legal framework in settling disputes	Score (1–7)				WEF Competitiveness Report ➔
		Rank				
	Rule of law	Score				Global Innovation Index ➔
		Rank				
	Percentage of firms identifying court system as a major constraint (%)					World Bank Enterprise Surveys ➔
PPD mechanism	Existence of a PPD mechanism focusing on entrepreneurship*					PPD Evaluation Wheel ➔
	Existence of mission statement and capacity of participants to explain the mission statement (%)*					
	Existence of rules and regulations in the partnership, including formal mechanisms in place to balance power (equal participation of each stakeholder group)*					
Market information	Support services for SMEs and public procurement (on a scale from 0 to 5)					SME Policy Index, OECD ➔
	Clear and targeted information for enterprises (on a scale from 0 to 5)					

* No data source available. Data needs to be collected via interviews or other means.

INVESTMENT CLIMATE

Variable	Indicator		2019	2018	2017	Source
Economic predictability	Expected GDP growth (%)					WB World Development Indicator Database ➔
	Intensity of local competition	Score (0–100)				Global Innovation Index ➔
		Rank				
	Economic transformation	Score (0–10 best)				Bertelsmann Transformation Index ➔
		Rank				
Political situation	Political environment	Score (0–100)				Global Innovation Index ➔
		Rank				
Political situation	Political stability and safety/absence of terrorism and violence	Score (0–100)				Global Innovation Index ➔
		Rank				
	Political transformation	Score (0–10 best)				Bertelsmann Transformation Index ➔
		Rank				
	Percentage of firms identifying corruption as a major constraint					World Bank Enterprise Surveys ➔

INDICATORS FOR GREEN AND INCLUSIVE ENTREPRENEURSHIP

Variable	Indicator		2019	2018	2017	Source
Business registration	Special legal form for inclusive usinesses or social businesses is in place (no. of enterprises registered)					Primary data collection
	Number of B-corps					B-corps Website ➔
Access to finance	Alternative finance transaction volume per capita					Cambridge Centre for Alternative Finance – Benchmark Report ➔
	Total non-DFI impact investment	Number of deals				GIIN – Landscape for Impact Investing*** ➔
		Capital disbursed				
Tax policies	Tax incentive schemes for green and inclusive businesses					Primary data collection
Preferential procurement	Preferential procurement scheme for green and inclusive businesses					Primary data collection
PPD mechanism	Existence of a PPD mechanism for green and inclusive businesses					PPD Evaluation Wheel ➔

*** Coverage of report only sub-Saharan Africa

INDICATORS FOR FEMALE ENTREPRENEURSHIP

Variable	Indicator	2019	2018	2017	Source
Conduciveness of business environment for women entrepreneurs	GEDI Female Entrepreneurship Index (Rank)				GEDI Female Entrepreneurship Report ➔
	Female/male TEA ratio				GEM Report ➔
	Female/male opportunity ratio				
Legal environment for women entrepreneurs	Number of legal gender differences				World Bank Women, Business and the Law ➔
	Equal access to land (Scale from 0 = same legal rights; to 1 = no legal rights)				OECD Gender, Institutions and Development Database ➔
	Equal access to finance (Scale from 0 = same legal rights; to 1 = no legal rights)				
Cultural perceptions of women entrepreneurs	Ability of women to rise to positions of leadership (Scale from 1 to 7)				WEF Gender Gap Report ➔
	Social acceptability of female entrepreneurship				GEM Womens Report ➔
	Social encouragement of female entrepreneurship				

INDICATORS FOR DIGITAL ENTREPRENEURSHIP

Variable	Indicator	2019	2018	2017	Source
Conduciveness of business environment for digital entrepreneurs	Affordability/price of internet access relative to income				The Inclusive Internet Index
	Fixed (wired)-broadband subscriptions per 100 inhabitants				ITC Development Index
	Active mobile-broadband subscriptions per 100 inhabitants				
Legal and political environment for digital entrepreneurs	Policy measures i.e. the existence of national strategies that promote the safe and widespread use of the internet.				The Inclusive Internet Index
	Violation of user rights				Freedom on the Net Report
	Obstacles to access				
Gender Equality	Gender gap in mobile ownership (Scale of 0 to 100 with 100 being the best)				GSMA Mobile Connectivity Index
	Gender gap in social media use (Scale of 0 to 100 with 100 being the best)				

TOOL 5: Guideline questions for structured interviews

INTERVIEWEE'S BACKGROUND INFORMATION

Meeting date	
Meeting address	
Interviewee	
Category (Entrepreneur, Government, Support Organisation, etc.)	
Organisation	
Contact details	
Website	

ENTREPRENEURIAL CULTURE AND ATTITUDES

1. What do you think is society's perception of entrepreneurship?
2. From your perspective, to what extent does society honour entrepreneurial success?
3. From your perspective, to what extent does society honour creativity and experimentation and recognise persistence?
4. How does society react to entrepreneurial failure?
5. From your experience, to what extent are people with entrepreneurial ideas or intentions hampered by a fear of failing or risk aversion?
6. What is the general attitude within society towards entrepreneurship as a career choice?
7. To what extent is entrepreneurial activity restricted to a certain ethnic/social/religious or age group of society?

8. In your experience, can an entrepreneur rely on strangers, friends and family to support her/him along the way, i. e. is it common to ask for help in a private and professional context?
9. How would you rank the "entrepreneurial spirit" in your environment from 1–10? (0 = society is very risk averse and little or no entrepreneurship can be observed, 10 = entrepreneurship is very prolific, chances and risks are taken)

Additional questions for green and inclusive businesses

1. How is green and inclusive entrepreneurship (social entrepreneurship) understood and valued by society?
2. What role in general does society foresee for the private sector when it comes to offering public goods/services (healthcare, education, etc.)?
3. How relevant are social and environmental challenges perceived to be by society and the business community?

Additional questions for female entrepreneurship

1. Are there gender-specific societal/cultural barriers hindering women from starting their own business?
2. As a career choice, is becoming an entrepreneur equally attractive to men and women?

Additional questions for fragile contexts

1. In how far do people trust each other when doing business? Do you trust potential business partners that are outside of your family ties?

Additional questions for digital entrepreneurship

1. How would you rate digital rights in your country/ ecosystem? Are there restrictions on freedom of expression or is internet content filtered and blocked? What are the laws regulating the digital space?
2. In your opinion, is there a trust issue hindering your country's progress towards a digital nation?
3. To what extent do values and beliefs hinder digital transformation and the usage of digital tools and applications?
4. How receptive are people towards the change that the digital transformation brings?

PLAYERS

1. What is your organisation's role in the entrepreneurial ecosystem?
2. Is there a common goal/a vision you and your partners in the ecosystem are striving for?
3. In your experience, who is the most important person/organisation to contact if somebody (entrepreneur, support organisation, etc.) wants to gain access to the entrepreneurial ecosystem and relevant networks?
4. From your perspective, which are the most relevant actors in the local entrepreneurial ecosystem in terms of influencing entrepreneurial success in a significant way?
   - › What do they do?
   - › Who do they work closely with?
   - › Do you foresee other relevant actors appearing over the next few years?
5. On a scale from 0–10: How would you classify your connectivity to the local ecosystem? (0 = no exchange between different actors, 10 = very high flow of information, talent, etc.)
6. Do you think there are important players or services missing in the entrepreneurial ecosystem?
   - › Do entrepreneurs have access to a range of adequate financial services (debt, equity, grants, guarantees)?
   - › Are there suitable incubation/acceleration programmes?
   - › Are specialised business services, such as legal, tax or accounting services offered?
   - › Do entrepreneurs have a body which represents their interests, for example a chamber of commerce or institute which also communicates on a political level or with support organisations?
   - › Are entrepreneurial education programmes available in schools, technical institutes and universities?
   - › Is physical infrastructure, such as office space or makerspaces, available for entrepreneurs?
   - › Are large corporations present that support entrepreneurs as part of their business activities or corporate social responsibility programmes?
   - › Do the media report on entrepreneurs (success stories)?
7. Which formal/informal mechanisms are in place for ecosystem coordination?
8. How would you rate the intensity of cooperation between ecosystem actors, ranging from information exchange to coordination and co-production[34]? What would be ideal?
9. In your experience, which are the main barriers to effective interaction between actors?

34 Gesellschaft für Internationale Zusammenarbeit (GIZ), Cooperation Management for Practitioners – Managing Social Change with Capacity WORKS, GIZ, Eschborn, 2014, p. 144.

10. How would you rate the entrepreneurial ecosystem's international connectedness?

Additional questions for green and inclusive businesses

1. What financial and non-financial business services providers focus their services on the needs of green and inclusive businesses?
2. How open is the government to collaboration with businesses as regards environmental and social challenges?
3. How are the interests of green and inclusive businesses formulated and brought to the government's attention?

Additional questions for female entrepreneurship

1. What financial and non-financial business services providers focus their services on the needs of women entrepreneurs?
2. How are the interests of women entrepreneurs formulated and brought to the government's attention?

Additional question for fragile contexts

1. To what extent is entrepreneurial activity restricted to a certain ethnic/social/religious or age group of society? Have you experienced any difference?

Additional questions for digital entrepreneurship

1. Are there any training courses or services offered exclusively for digital/ICT and/or women founded start-ups?
2. Focusing on digital training, what training courses do you offer? How many people have been trained (women/men ratio)? In your opinion, have these training courses contributed to entrepreneurship or employment, especially among women? What gaps in training are there?
3. What activities are you conducting to strengthen the overall (digital) start-up ecosystem?
4. Do universities create enough talent and impart practical digital skills that support them to become entrepreneurs or find employment?
5. Who are the main actors involved in digital entrepreneurship promotion and the digital transformation process in [XYZ] and in this region/city and what do they offer? What is your assessment of these actors (e. g. incubators, government, investors, academia, etc.).
6. How do you rate the interplay between these actors? Who has been very proactive in supporting digital businesses and the transformation process?
7. Do you think that there are any actors, services or programmes lacking with regards to supporting digital entrepreneurship and the digital transformation process?
8. Do digital entrepreneurs have access to a range of adequate financial services (equity, grants, debt, etc.)?
9. Are specialised business services, such as legal, tax or accounting services offered?
10. Do digital entrepreneurs have a body which represents their interests, for example a chamber of commerce or institute which also communicates on a political level or with support organisations?
11. Are entrepreneurial and digital education programmes

available in schools, technical institutes and universities?

12. Is physical infrastructure, such as office space or makerspaces, available for entrepreneurs?
13. Are large corporations present that support digital entrepreneurs as part of their business activity or corporate social responsibility programmes?
14. Does the media report on digital entrepreneurs (success stories) and the digital transformation?
15. How would you rate the digital eco-system's international connectedness?

BUSINESS ENVIRONMENT AND INVESTMENT CLIMATE

Business environment

1. How would you rate the general regulatory environment for entrepreneurs (government effectiveness, etc.)?
   - › What would you like to change?
2. From your perspective, which are the main challenges for entrepreneurs in registering their businesses?
3. How do the legal framework and procedures for bankruptcy influence entrepreneurship?
4. How do the tax framework and procedures influence entrepreneurship?
5. Which type of finance is available for entrepreneurs?
   - › What is your experience of it?
   - › To what extent is the legal framework conducive for obtaining alternative forms of finance (crowd funding, microfinance framework, credit information system, etc.)?
6. How do you think the legal framework influences entrepreneurs' decisions on hiring staff?
   - › What would you change to make it more efficient?
7. To what extent do entrepreneurs have access to commercial courts?
   - › What is your experience of accessing commercial courts?
8. In your opinion, how does land administration influence entrepreneurship?
9. What communication channels are in place for entrepreneurs to communicate regulatory challenges to the respective public sector actors?
   - › What is your experience of them?
   - › How useful are they for your work?
10. What market information is necessary for entrepreneurs to facilitate the development of their businesses?
    - › How/where can an entrepreneur access this information?
    - › What is your experience of accessing market information?

Investment climate

1. What do you think are the main factors of the overall economic situation that influence entrepreneurial activity in your country (both in a positive and a negative way, e. g. GDP growth, macroeconomic instability, etc.)?
2. Do you know if there is a strategy in place to promote entrepreneurship?
   - › To what extent is it a guideline document for all ecosystem actors?
   - › Does it tackle the right things?
3. From your perspective, how does the political situation in the country affect the entrepreneurial ecosystem?
   - › What would be ideal?
4. In your opinion, how does the situation in the labour market affect entrepreneurial activities?

Additional questions for green and inclusive businesses

1. To what extent does the government contribute to enabling an environment for green and inclusive businesses (is policy framework in place)?
2. What are the specific regulatory challenges for green and inclusive businesses?
3. What regulatory barriers are particularly burdensome for green and inclusive businesses?

Additional questions for female entrepreneurship

1. To what extent does the government contribute to enabling an environment for women entrepreneurs (is policy framework in place)?
2. What are the specific regulatory challenges for women entrepreneurs?
3. What regulatory barriers are particularly burdensome for women entrepreneurs?

Additional questions for fragile contexts

1. To what extent do you experience informal rules and regulations side-lining governmental laws regarding setting up and running a business?

Additional questions for digital entrepreneurship

2. To what extent do you have access to public data?
3. Is data exchanged or traded between various ecosystem actors?
4. Do laws and regulations sufficiently apply in the digital realm?
5. In your view, is the digital and ICT infrastructure conducive for entrepreneurs setting-up digital business models? Where do you see challenges?
6. What skills are missing in the workforce?

For more information

GIZ – SECTOR PROJECT SUSTAINABLE ECONOMIC DEVELOPMENT

If you have any questions regarding ecosystem mapping or need more advice,
please do not hesitate to contact us at: private.sector@giz.de

If you would like to find out more about GIZ's Sector Project Sustainable Economic Development click here

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ASPEN NETWORK OF DEVELOPMENT ENTREPRENEURS

The ANDE is a global network of organisations which promotes entrepreneurship in emerging markets.
Members include consulting firms, investors and foundations. The network's website is available at:
http://www.andeglobal.org/

To get in touch with the network directly, please contact:
Kate McElligott (Kate.McElligott@aspeninstitute.org)
at global level or for your regional chapter manager visit http://www.andeglobal.org/?page=regionalchapters

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