CHAPTER 8

A SCENARIO APPROACH TO STIMULATE DIGITALISATION AND INCLUSIVE ECONOMIC GROWTH

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ABSTRACT

This chapter describes a scenario approach to develop policy recommendations at the level of an entrepreneurial ecosystem with the relevant stakeholders. It contains four steps: 1] analysis, 2] scenario selection, 3] selection of actions, 4] action plan. The purpose of BEYOND4.0 is to enable digital transformation and facilitate inclusive growth. Society can, however, create opposing contexts to strive after this purpose. It makes a huge difference if digitalisation becomes less predictable and if the world becomes more conflicting, compared to a situation in which digitalisation is rather well predictable and the world is more harmonious. The first situation is named the 'contested terrain' scenario, and the second one is the 'common ground' scenario: these are examples that can be used for a scenario study. Applying the technique of backcasting, participants in the workshop are invited to develop policy recommendations for each scenario, with the desired purpose, such as inclusive growth, as 'the end in mind'. The scenario approach can be used by anyone who has a responsibility for policy making at the level of ecosystems.

Keywords: *scenario approach, scenario, ecosystem, backcasting, workshop*

1. SCENARIO AS A TOOL FOR CHANGE

Introduction

A scenario is an internally consistent and challenging description of possible futures. Scenarios are intended to represent the range of possible future developments and outcomes in the external world (Van der Heijden, 2005). While scenario planning is a way to deal with future uncertainties, this chapter applies scenarios as a form of backcasting (explained below). Scenarios haven been proven to support business and entrepreneurial success, for instance, in the case of the British-Dutch multinational Shell Oil Company (De

Geus, 1999). The approach of Shell spread as on oil stain through the world of business (Van der Heijden, 2005).

Scenario planning is making assumptions on what the future will be and how your business environment will change over time in light of that future; it is more precisely identifying a specific set of uncertainties, different "realities" of what might happen in the future of your business. The goal is to identify weaknesses and possible adverse effects in advance and anticipate measures for these adversities by planning and adapting so that your business can deal with them most effectively. Often scenarios are used in a business context, but here we apply it in an ecosystem context, namely to improve 'entrepreneurial ecosystems'. Entrepreneurial ecosystems are environments in which several actors collaborate to improve its outputs and outcomes: entrepreneurial activity and inclusive economic growth.

Backcasting is a planning method that starts with defining a desirable future and then works backwards to identify policies and programs connecting that specified future to the present. The fundamental question of backcasting is: if we want to attain a certain goal, what actions must be taken to get there? (Robinson, 1990:822–823). While forecasting involves predicting the future based on current trend analysis, backcasting approaches the challenge by discussing the future from the opposite direction; it is "a method in which the future desired conditions are envisioned, and steps are then defined to attain those conditions, rather than taking steps that are merely a continuation of present methods extrapolated into the future" (Holmberg & Robèrt, 2000:6).

In this chapter, the future is defined as the goal to which BEYOND4.0 wants to contribute, namely successful digital transformation and the realisation of inclusive economic growth (see Chapter 1). We describe tools for and analysis of the possibilities to achieve this goal. During our project, we developed two scenarios, namely one in which the future is harmonious, 'Common ground', and another in which the future is conflicting, 'Contested terrain'. The assignment was to maximise the chances of achieving digital transformation and inclusive economic growth in each scenario, and develop policy recommendations at the regional level to do so. The variables influencing these goals were connected to the elements of the entrepreneurial ecosystem model (Box 1 below; also see Chapter 1). We applied the backcasting method in the project and shall describe this method as a guide for users.

This chapter contains the presentation of the scenario approach as a method. By way of example we describe how the method was used in the BEYOND4.0 activities.

Target groups

The target groups for the scenario building exercise in this chapter are mainly the stakeholders at the entrepreneurial ecosystem level, such as regional administrators, politicians, development agencies and the core companies. However, applying this method at the level of industries / industrial sectors and the level of (larger) companies is possible in a similar way and can be very useful as well. In these two latter situations, the elements of the entrepreneurial ecosystem model should be adapted to these respective levels. The future of an ecosystem is dependent on effective policy. To maximise successful inclusive growth of an ecosystem, a multi-party approach is recommendable. The implication is to involve actors who can co-determine and object to the formulation of policy. In selecting participants, it is wise to consider how they can contribute to the desired result of the scenario exercise and which kind of results might be relevant to them ('what's in it for them?').

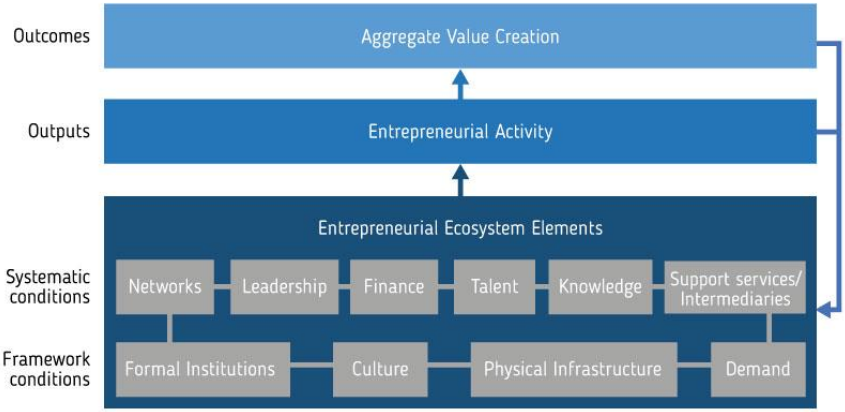
At least three types of stakeholders can be distinguished concerning matters of policy (Van den Berge et al., 1997) 1 [the leading target group(s), namely anyone who benefits or suffers from policy results]; 2 [administrators, who strive after specific goals based on programmatic or strategic interests]; and 3 [professionals, who design, implement and execute the policy decisions]. Among the stakeholders in group 1 are the entrepreneurs and employees of the ecosystem. Of course, other regional actors will also be affected by ecosystem policies, such as educational institutions and regional service organisations. Regional administrators and politicians, together with business leaders of the ecosystem, are the obvious actors to organise a scenario approach like this.

Theoretical background and concepts applied in BEYOND4.0

The collaboration between partners influences economic and social development in a region. The **BEYOND4.0**-project uses the concept of **entrepreneurial ecosystems** (Stam, 2015) to describe this collaboration. Prosperous regions show the strong collaboration of networks of organisations and policy actors to generate new knowledge, company innovations and social results. There are different pathways for successful ecosystem development, with policy recommendations that can be derived from these pathways. These pathways or patterns can be regarded as ecosystem strategies for successful, productive entrepreneurship and provide indications for regional policy options (Dhondt et al., January 2022).

Ten elements play a key role in creating value through entrepreneurial activity: they are divided into four framework conditions: formal institutions, culture, physical infrastructure & demand; and six systemic conditions: networks, leadership, finance, talent, knowledge & support services/intermediaries (See Box 1).

Box 1: The entrepreneurial ecosystem model and its ten elements, and how that relates to entrepreneurial activity (outputs) and inclusive economic growth (outcomes)



The entrepreneurial ecosystem and its elements, based on Stam (2015)

Description of the elements of the entrepreneurial ecosystem model for the ecosystem (based on Dhondt et al., January 2022; Stam, 2015)

Elements	
Formal institutions	Rules and regulations; enable voice for entrepreneurs; tax regime. Regional-specific elements
Entrepreneurship culture	Entrepreneurial activities, start-ups, accelerators, risk-taking culture
Physical infrastructure	Transport/mobility, digital infra, accessibility, educational institutions
Demand	Regional demand and purchasing power
Finance	Investors, banks, venture capital/angel investors, governmental support for innovation
Talent	Labour market, enough labour supply, (interregional) labour mobility, skill development
New Knowledge	Innovative sector; investments in R&D and new knowledge
Intermediaries	Institutions, supporting and business services for the sector
Networks	Partnerships, co-innovation / co-creation / open innovation in the sector
Leadership	Vision, technological entrepreneurs present, ecosystem strength compared to other competing ecosystems

Productive entrepreneurship (output)	Economic growth generated by the ecosystem; income and wealth, employment and their growth; 'high road strategy'
Inclusiveness (outcome)	Social cohesion, support for vulnerable labour market groups, generating jobs; 'high road strategy'

BEYOND4.0 investigated, partly via workshops in different entrepreneurial ecosystems, how **digital transformation** affects the choices made in these ecosystems. These choices will affect primary entrepreneurial and social outcomes. The explanation of the central concepts is as follows:

Digital transformation. Digital transformation is studied as using robotics (if relevant), digital technology and data analytics to make data-driven decisions, improve operational efficiency, streamline work and gain (or retain) a competitive edge in business. Digital transformation affects ways that technology can be used to streamline workflows, make business processes more agile and improve customer experience. Technologies associated with digital transformation include cloud computing, big data analytics, artificial intelligence (AI), blockchain, machine learning (ML), the Internet of Things (IoT) and 5G. The ecosystem model identifies the main drivers of change within companies and the region. Digital transformation is affected by the ten elements of the model in different ways. Digital transformation brings with it, next to opportunities, uncertainty and risk.

Entrepreneurial outcomes. BEYOND4.0 defines entrepreneurial outcomes as the rise of new start-ups, the support to start-ups to become scale-up companies and to have a rise in business output and employment in general. Apart from that, economic performance and growth, in general terms, were discussed as well.

Inclusive growth. 'Inclusive growth' is about improving the situation of weaker groups in society or in the labour market. We focus inclusive growth on the following topics: 1] better work and human capital (e.g. skills requirements; 2] work content; health at work (Occupational Safety & Health, OSH); 3] improve social inclusion (e.g. labour participation; gender balance; (un)employment); and 4] more equal (re)distribution (e.g. income and wealth by skills, by gender, by age; high vs low paid jobs; regional income). All this is in view of the structural change and dynamics caused by digital transformation.

High Road. Generally, we understand a high-road situation as a company environment focusing on economic growth and inclusiveness. Technology and digitalisation are not only used to substitute jobs. Instead, technology is used to improve working situations, working conditions, and recruiting and HR practices. The strategy seeks a balance between economic goals and social cohesion. This does not mean that high road environments are always the best or most ideal situations, but that these are environments in which a human-centric approach is active and provides citizens and workers with means and

resilience to better cope with socio-economic conditions and impacts of digitalisation. The high road is not the same as high pay. For example, if low-skilled people with moderate incomes have decent jobs with fair pay, this can also be a high-road situation (Osterman, 2018; Totterdill et al., 2020).

Four steps of the scenario approach

The scenario approach contains four steps:

Step 1. Analysis: to make an analysis of the strong and weak points of the ecosystem, in relation to the ten elements in Box 1. This is mainly (desk) research with additional interviews with key stakeholders of the ecosystem.

Step 2. Scenario selection: to determine the main trends in the region. In the example of this chapter we describe two scenarios which we applied in BEYOND4.0. These are described below. Applicants of this method can, however, choose to develop alternative scenarios if these suit better with the ecosystem under study. This is mainly desk research and discussion with experts.

Step 3. Selection of actions: the task is to design measures or policy recommendations that effectively deal with a scenario and its trends, to ensure entrepreneurial growth and inclusiveness. This is the core of the scenario approach in this chapter, and is executed via a workshop.

Step 4. Action plan: to make a plan to carry out the measures / policy recommendations. This is the responsibility of the initiators, namely the regional administrators and politicians, together with business leaders of the ecosystem.

2. INPUT TO THE WORKSHOP: TWO FUTURE SCENARIOS

The workshop as a method

For BEYOND4.0, we applied the workshop as a method that focuses on participatory, small-group activity and problem-solving via pair and small-group discussions. (Due to the COVID pandemic, all workshops were held online). Because of the “active” rather than “passive” nature of participation, larger numbers of persons are stimulated to share their insights and expertise in other ways, such as via preceding questionnaires or interviews. A workshop is a working conference in the sense that it is an instrument for change and to connect stakeholders, who are dealing with complex issues and relevant topics in order to

achieve specific results, with people constituting a temporary organisation (Van den Berge et al., 1997). Sometimes more than one workshop is needed to achieve the desired results. In the case of BEYOND4.0, three rounds of workshops[1] were designed to understand the past, present and future of entrepreneurial ecosystems, and develop policy recommendations at the regional and national level (Oeij et al., October 2022).

In this section we pay special attention to the core of the four-step scenario approach (see Figure 1), namely the workshop (step 3). Step 1 (the analysis) requires an analysis of the quality of the ecosystem and to assess the weak and strong points. This can serve as an agenda to discuss possible directions for policy making (see e.g. Dhondt et al., January 2022). Step 2 (scenario selection) demands to imagine the future environment of the ecosystem, in terms of possible trends that, for example, can be positive (opportunities) or negative (threats). In either situation, certain measures may be needed to ensure entrepreneurial activities and inclusive economic growth. For BEYOND4.0 we developed such scenarios, which will be discussed below. Following step 3 is the action plan (step 4), which is to ensure that the initiators take action to implement the selected measures during the workshop (step 3).

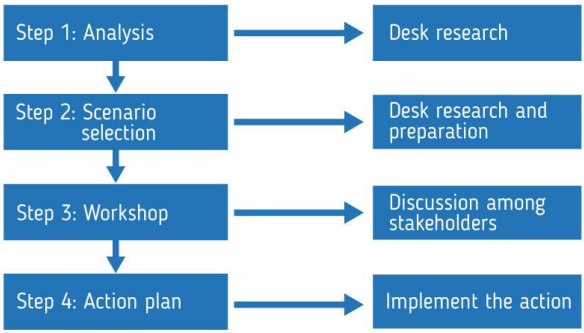


Figure 1: overview of the four steps

Input for the workshop (Step 3)

To prepare the participants for the discussion during the phase of the scenario workshop (Step 3), input documents are preferably produced. The documents should include the

[1] In BEYOND4.0 workshop 1 dealt with the evaluation of Step 1, the Analysis of the ecosystem; Workshop 2 dealt with discussing the scenarios (as in Step 3); and workshop 3 dealt with the formulation of policy recommendations (also part of Step 3 in the approach developed in this Chapter).

assessments and analysis of the situation of an ecosystem as determined in Step 1. Box 1 (above) provides basic information about the ecosystem model and its elements (Stam, 2015). Each of the elements (or framework and systematic conditions) was studied to understand how they relate to the outputs and outcomes; in our case, this was inclusive economic growth against the background of digitalisation. The effect of digitalisation on economic activities, economic performance, innovation and work and skills was investigated (Dhondt et al., January 2022). By example, the research that we carried out in BEYOND4.0 was based on interviews with ecosystem stakeholders, representatives of companies within the ecosystem and literature. The type of research activities that were used as input for the workshop was (i.e. Step 1, Analysis), among others:

- Desk research to determine the historical development of the ecosystem;
- Desk research and interviews and/or a workshop with key stakeholders of the ecosystem to determine weaknesses and risks for future development, as well as opportunities (related to the ten elements of the entrepreneurial ecosystem model);
- Desk research and interviews and/or a workshop with key stakeholders to determine the outcomes and outputs of the ecosystem regarding digitalisation, entrepreneurial activities and performance; inclusive growth; and presence of a high road perspective;
- Optional: assess current regional policies and formulate in a group discussion with expert to develop policy recommendations (again related to weaknesses and strengths of the ten elements);
- Develop contextual scenarios of the future. We will discuss these below.

Scenarios for the future

One way to answer what kind of recommendations are needed that improve entrepreneurial activities and inclusive economic growth is by using the methodology of future scenarios. Participants of the workshops – most likely stakeholders of the ecosystem – are presented with plausible future scenarios and are being asked what will change in their situation and what are then the subsequent actions with regard to the ten elements of the ecosystem model? Participants should in the workshop focus on what they think need to happen to deal with each of the scenarios. Scenarios are therefore changing contexts that force stakeholders to consider the choices and collaboration they face today.

From the input provided in advance, i.e. the analysis of the entrepreneurial ecosystem context, the participants are aware of the strengths and weaknesses of their region. Before

applying the scenarios, a discussion could be held to indicate what the main direction of the strategy should be for their region. The follow-up question then is: do your choices and recommendations change if the 'future' becomes very different?

To build scenarios of the future, we need to understand what the main driving forces are of this future. The main question is: What will affect the ecosystems in the near future? How this was done during the BEYOND4.0 project is explained below. Before we discuss that, we will give a short overview how to design a scenario project in general. One approach (see Box 2) applies the following six steps divided into three phases (Nekkers, 2020).

Box 2: An approach in six steps

Phase One: diverge

1. Prepare the scenario trajectory:

- Why and what is the purpose?
- What is the scenario question for the ecosystem?
- What is the time horizon and who should participate?

2. Explore:

- The environment of the ecosystem
- Relevant trends and developments for the future of the ecosystem
- Major uncertainties with the biggest impact
- Most important choices to be made

Phase Two: structure

3. Build the scenario framework:

- Distinct strategic choices from environmental issues that cannot be influenced
- Determine the number of dimensions of your framework. A 2x2 table of dimensions is preferred as this is less complex than applying a higher number of dimensions (i.e. number of scenarios)

4. Build the scenarios:

- Is a scenario an analytical piece, a narrative or perhaps an image?
- Are the scenarios plausible, relevant, and radical / disruptive?
- Are the scenarios of the future positive or negative, or a mix of both?

Phase Three: converge

5. Using scenarios:

- What do scenarios teach us? What is their impact? What chances emerge for the ecosystem?
- Which scenario is most desirable?
- What is the vision and strategy that can be linked to this scenario?
- Given this scenario: what must we keep, develop or get rid of?
- Developing measures, actions, action plans
- Report on the threats and opportunities, listing of choice options, assessment of alternatives, recommendations of the scenario team, carry out the selected recommendations in practice

6. Monitoring and scanning:

- How the world is changing and what it means for the chosen scenario and the ecosystem
- Evaluate the results of recommendations, measures and action
- Return to step 1 if necessary

In this chapter we will, however, not describe all these steps in detail in how we developed the scenarios for the BEYOND4.0 project.

Assumptions about the future

Using scenario development (De Geus, 1999; Nekkers, 2020; Van der Heijden, 2005), two driving forces were derived from expert discussions in the example of the BEYOND4.0 project. In the BEYOND4.0 analysis of regions and policy options (Dhondt et al., January 2022), team members of the BEYOND4.0 team contended that there are two dominant driving forces that define the future of ecosystems and, consequently, the entrepreneurial ecosystem's economic and inclusive growth outcomes. These dominant driving forces were developments in digitalisation on the one hand and the development of the societal climate on the other.

Two driving forces:

1. Digitalisation: companies and organisations like to see that digital change is predictable and controllable. This may be the case, but also not the case.

This first dimension reflects that companies and organisations like to see that digital change is predictable and controllable. Digitalisation may become very unpredictable, but it could be that technological changes may be more predictable. It is not so much the technology itself that is the issue, but the fact that companies (and other stakeholders) cannot foresee the possible demands these technologies put on companies. Companies that do not know if technologies lead to more productive outcomes may be hesitant to invest, even if their competitors are investing. We foresee two futures in which digital technologies become either very predictable and one in which uncertainty of benefits becomes large.

2. Cultural climate: companies and organisations like to see a cultural and social climate that is supportive of their purposes. However, polarisation already exists and may become worse in the future.

This second dimension relates to the context of collaboration between stakeholders and companies in specific regions. Entrepreneurial ecosystems rely on contexts in which stakeholders can predict how their counterparts will react and behave. Stakeholders like to see a cultural and social climate that supports their purposes: harmonisation and collaboration. However, our European societies are already experiencing polarised cultural environments in which distrust between different social groups may worsen.

The present ecosystems are based on choices made in the past. Apart from choices made by individual actors within the ecosystem (like the core companies), such choices can be connected to the elements of the entrepreneurial ecosystem model. When both 'drivers' change, the past choices in the entrepreneurial ecosystem may not be valid. The assignment to workshop participants is to determine the choices about the ecosystem elements, given the fact that all stakeholders want to keep the entrepreneurial and inclusive social outcomes as they are today and preferably even better.

Figure 2 shows the two driving forces and how they can be used to identify future states-of-play ('scenarios'). It allows assessing to what degree ecosystems will face digitalisation and polarisation and what needs to be done for economic and inclusive growth within ecosystems.

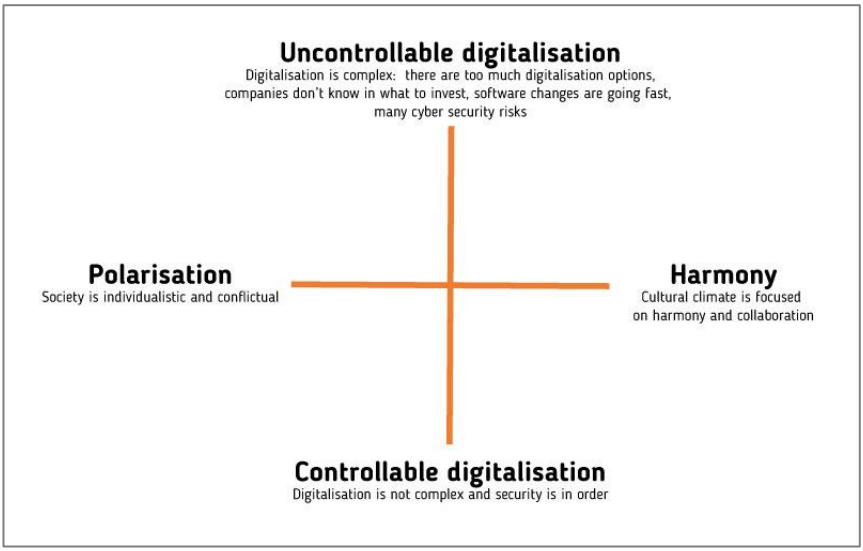


Figure 2: The digitalisation and culture dimension as driving forces (Oeij et al., October 2022)

Each quadrant of Figure 2 presents different implications for the economic and inclusive growth outcomes. For the workshop, participants could discuss two different scenarios considering the following opposite situations[2]:

Scenario A: Common Ground scenario: Harmonisation and controllable digitalisation

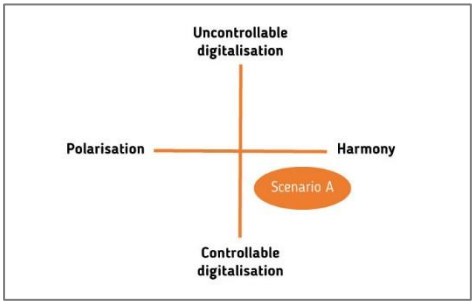
Scenario B: Contested Terrain scenario: Polarisation and uncontrollable digitalisation

We explain in Box 3 these scenarios with narratives. Participants of the workshop could be asked during the workshop to reflect on what these scenarios mean for the current arrangements in their ecosystem.

[2] Two quadrants are not designed as scenarios because they are either less realistic, or do not add much extra to the two opposite scenarios. As such they are seen as not helpful to create policy recommendations.

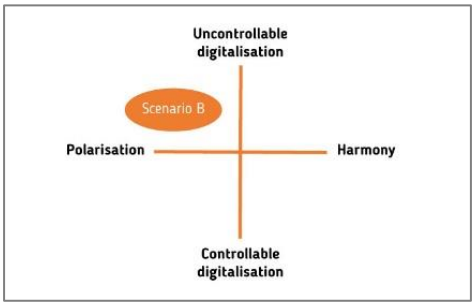
Box 3: Narratives of the scenarios

Narrative of Scenario A: Common Ground



"The cultural climate of society is focused on harmony and collaboration. This makes it easier for companies and other stakeholders within ecosystems to collaborate. Support from institutions and policymakers at region, national and EU level are in order. The digital transformation has gone step-by-step, less uncertainty, and organisations have had sufficient time to digitalise and change their business models. There are no large cyber security risks."

Narrative of Scenario B: Contested Terrain



"Society becomes more individualistic and conflictual. People and companies collaborate less intensive, and focus on their own goals. Policymakers struggle with each other, which makes it hard for companies to get support. It is hard for ecosystems to flourish. Digitalisation is becoming more and more complex, and uncertain, making an ecosystem-approach even more important. There are too many digitalisation options (e.g. machine learning, cobots, block chain), AI becomes more and more a black box, companies do not know in what to invest, software changes are going fast, lot of digital competitiveness, many cyber security risks. Business models need to change fast to deal with digitalisation."

Preparation and execution of the workshop

Preparing a workshop is a crucial step and is in itself a form of scenario planning. The workshop organisers must have a clear picture of the end result: ask yourself, what do you want to achieve in the future? For the BEYOND4.0 project, the desired results were policy recommendations for different policy levels, namely regional, national and European.

This requires planning how to get there. For this purpose a set of coherent research activities were planned and carried out, to conceptualise, investigate and analyse a robust understanding of digital transformation in ecosystems, and their socio-economic effects (Warhurst et al., June 2020). Subsequently, by comparing the different ecosystems, it was possible to learn which elements of the ecosystem model worked well for certain regions and this enabled to conceive a variety of possible recommendations across ecosystems.

The preparation of the workshop included the following steps in BEYOND4.0:

- Select and invite relevant stakeholders of the ecosystem. Among them are business representatives, entrepreneurs, administrators, policymakers, representatives from knowledge institutes and education, financial and other service institutions, employer organisations and unions, and labour/employment agencies;
- Produce an analysis (input report) of the ecosystem and its elements; introduce the scenarios;
- Produce policy recommendations or statements for discussion;
- Define an agenda and a programme; design the workshop process; divide the roles; formulate the expected input of participants during the workshop;
- Design a trajectory which from a to z, includes the start, analysis, evaluation, policy recommendations, implementation, evaluation, and follow-up actions until the end. It is important that participants will know what will be done with their input, what are the next steps after the workshop, and what are the intended results.

The mentioned steps are not exhaustive. In BEYOND4.0 the following activities were carried out during (and after) the workshop:

Activities in the workshop

1. In the workshop the workshop leaders described:

- The ecosystems and its main strengths and weaknesses;
- The current state of the ecosystem with regard to digitalisation, entrepreneurship, and inclusiveness;
- The scenarios and its components, and its narrative.

2. After these introductory steps the participant groups discussed:

- What the scenarios mean for entrepreneurial activities of the ecosystem;
- What the scenarios mean for inclusive growth;

- What needs to be done to ascertain a high-road ecosystem with entrepreneurial and inclusive growth based on the elements of the ecosystem model; The ten elements of the ecosystem model concentrated on 1) capital & investments; 2) labour & skills; 3) knowledge development and sharing.
- In the end policy recommendations at the organisational, regional and EU level were defined.

To stimulate the discussion, it is helpful to present a set of statements that may trigger possible action repertoires in the participants. The following text box indicates possible core ideas of these action repertoires for the common ground and contested terrain scenarios (these are examples from the BEYOND4.0 study):

Box 4: Examples of statements

Common Ground

Companies should focus more strongly on eliminating any discrimination in the labour market.
Regional development funding should be completely private.
The education system should focus on technical skills, not on ICT or soft skills.
Employment services should direct themselves primarily to the long-term unemployed.
Regional support agencies should develop more initiatives for long-term international cooperation

Contested Terrain

Public national and regional funding should rise to reduce innovation risks for companies.
More regional services are needed to support cooperation and technical support to companies.
Regional support agencies should focus on short-term international cooperation.
Skilling, upskilling, and reskilling are core company training issues. No external support is helpful.
Employment services should have programmes to reduce very short-term unemployment.

In the common ground scenario, the BEYOND4.0 workshop leaders suggested to the participants that stakeholders and companies need less funding and those actors need to shift their attention to the longer term. In the contested terrain scenario, they suggested to the participants that more public support is needed and that the perspective is short-term. The idea of these statements was that they helped the participants to be more precise in their reactions. The workshop leaders did not want the participants to agree on vague notions. The participants needed to make their opinions explicit and agree in the discussion on their positions.

In Box 5 an example of a recommendation is given, that resulted from the BEYOND4.0-workshops about the element of 'talent' in the ecosystem. Talent proved to be scarce and there was much competition for talent. To make the recommendation as concrete as possible, the workshop leaders requested participants to address these issues: Inclusive outcome: 1] what should be the productive entrepreneurship aspect; 2] what must be improved; 3] who do you see as responsible agent(s); 4] mention the EU dimension of your recommendation.

Box 5: Example of a formulated Policy recommendation about 'Talent'

Talent: *A broad approach is needed to engage stakeholders (educational organisations, employment organisations, industry representatives, social partners and governmental bodies) in attracting talent and enhancing the skills of employees, students and job seekers (technical skills [job-specific], ICT skills, 'soft' skills [social, personal and methodological]). In itself, this is not a new issue. However, more collaboration and cooperation involving companies (especially SMEs and start-ups) are needed. Educational programmes must be connected to the newest technological developments and innovations to minimise the gap between company practices and the educational curricula, but also have more attention to soft skills (creativity, critical thinking) (methodological skills). The talent base, including different educational levels, is crucial for ecosystems to move forward. There is a shortage of skilled labour (medium and high-level) in almost all studied ecosystems. This issue of talent is not restricted to employees alone. Entrepreneurs must also become more 'digital savvy' to understand the entrepreneurial possibilities and requirements to sustain their businesses, especially SMEs and 'traditional' entrepreneurs.*	
Inclusive outcome	Prevent/reduce labour market polarisation; stimulate diversity; more girls opting for technological skills
Productive entrepreneurship aspect	Ensure that business models are future-proof and include opportunities based on digitalization
What must be improved	The collaboration between agents that have a stake in qualified labour supply
Responsible agent(s)	Education, governmental bodies, industry representatives and companies
EU dimension	Retention of competitiveness, resilience, sustainability and social cohesion

Based on recommendations like these, the organisers of the workshop should together with other regional key stakeholders develop a concrete action plan to follow up on the recommendations (Step 4). In such a plan for action one should at least pay attention to these topics:

- Describe the problem and objective of the ecosystem.
- The actions needed to improve entrepreneurial activities and inclusive economic growth based on the recommendations.
- The responsible actors for each action.
- The needed resources including financial investments.
- Planning and deadlines.
- Plan how and when to evaluate whether the objectives have been achieved, and monitor the measures taken.

3. FINAL REMARKS

Scenarios can be helpful in developing policy actions to direct developments in ecosystems towards desired outcomes. In this chapter, we propose to use a backcasting technique in which we gave the example of a desired future of digital transformation with inclusive growth by analysing two opposing scenarios, a 'common ground' and a 'contested terrain'. How can ecosystems reach the goal in these different contextual scenarios; what must be done in the case of a harmonious society and what must be done in a conflicting society?[3] Both scenarios force workshop participants to be prepared for alternative realities and thus enhance the resilience of policy-making, preventing responsible actors from lumbering with their own tunnel vision (confirmation bias). They must be invited to think 'out-of-the-box'.

3 Designers of scenario workshops like these can use the concepts of sociotechnical systems design and workplace innovation practices, which are described in the chapter on the Theory of Change (chapter 1). These concept can be part of the solutions, and are applicable to the level of ecosystems and the level of companies within ecosystems.

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