USER's GUIDE

INCEPTION AND OUTGROWING TOOLKIT

R&I LOOP

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R&I Loop:

Shaping the way Higher Education Institutions do Research and Innovation with and for Society

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1. Introduction

The Renewed EU Agenda for Higher Education highlights that there is an unquestionable **need of refocusing efforts on bridging education, research, innovation, sustainability and community interaction**, asking for new "Entrepreneurial" Higher Education profiles. This need surfaced due to the realisation that Higher Education Institutions (HEIs) need to become **civic-minded learning universities connected to their communities**. HEIs must develop their profile as "*civic universities*" based on a societal engagement that is embedded across the whole institution, providing opportunities for interaction between research, students, businesses and public institutions; thus, having governance targeted to sustainability which facilitates institution-wide engagement with the city and region of which the HEI is part; as well as foster operations on a global scale but using its location to form its identity.

In this context, the **R&I (Research and Innovation) Loop project aims to leverage the new model of Civic University**, where the regional dimension and social innovation enables and opens citizen-centric strategies. The project proposes a systemic and holistic approach that creates bridges and **links between 3 main pillars**:

- research,
- education,
- innovation.

More specifically, the R&I Loop aims to achieve the following objectives:

1. Develop, test and mainstream a systemic and holistic approach that enhances the education, research, innovation and sustainability links of HEIs;
2. Build, test and scale-up capacitation actions for HEIs' teachers, researchers and staff to be better equipped to respond to societal and social challenges and needs;
3. Design, test and mainstream supporting tools that allow HEIs' to adopt a systemic holistic approach and improve their educational offer;
4. Promote and enhance civic and social responsibility across relevant actors of the quintuple helix nodes, including (industry, government, universities, sustainability and citizens[1]).

The project aims to accomplish such objectives by codesigning the methodology and tools with the end-users and beneficiaries, testing the model in partners HEIs and showcasing the R&I loop results to other HEIs and stakeholders across 4 different countries.

The project develops a set of key outcomes that will encourage the identification, implementation, and maintenance of new strategies, structures, tools, resources and solutions to meet the **twofold R&I loop steps of the proposed loop**. For each of these steps, the R&I Loop project is developing a dedicated toolkit:

- ✓ **Research and Innovation > Inception and outgrowing:** Inception of regional directives of civic participation and smart specialisation into HEIs priorities and research & outgrowing public engagement to enhance the outreach and impact of research activities and results at different levels, including local/regional economic growth.
- ✓ **Education > Nurturing:** Nurturing HEIs staff and students' curricula with research methods with and for society.

[1] The Quintuple Helix innovation model: global warming as a challenge and driver for innovation | Journal of Innovation and Entrepreneurship | Full Text (springeropen.com)

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This document consists of the User Manual of the "**Inception and Outgrowing Toolkit**". It includes a set of tools for HEIs to perform a strategic diagnosis, set objectives and define strategic options or paths to follow in regard to integrating smart specialisation directives into their internal policies, among other aspects. The Manual also suggests follow on activities aimed at fostering public engagement and enhancing the outreach and impact of research activities and results at different levels, including local/regional economic growth and innovation.

After this introduction, this User Guide (aggregating document of the Inception and Outgrowing Toolkit) includes the following chapters:

Chapter 2. Description of the Inception and Outgrowing Toolkit, including its objectives, target groups, expected impact, list of tools/resources that compose the kit.

Chapter 3. Guidelines and tools for HEIs to perform the self-assessment or strategic diagnosis and understand "How civic is my University?". This chapter includes a presentation of the self-assessment as a whole followed by the tools proposed by the R&I Loop project for the strategic diagnosis.

Chapter 4. Guidelines and tools on how to validate and follow-on the results of the self-assessment, namely by performing a strategy prioritization and strategy execution for HEIs.

Chapter 5. Tips to foster stakeholder engagement around the HEI's activities and presentation of the R&I Loop impact assessment methodology, that will allow HEIs to measure the impact of their actions to become more civic.

Chapter 6. Presentation of the flash course available on the project website for other HEIs and their staff be able to learn in practice how to use the toolkit and become (more) Civic-oriented universities

Annexes. Additional information, consisting mainly of supporting materials such as tools, templates and guidance notes.

This Inception and Outgrowing Toolkit is complemented by the **Nurturing Toolkit.** The Nurturing Toolkit is aimed at supporting HEIs, leaders, and teachers to become more aware and put into practice a mix of research-led/-oriented (linked to staff learning/presenting current research and developing research skills and techniques) and research-based/-tutored (linked to students learning how to do research and be a researcher as well as engaging in research discussions) practices.

2. The Inception and Outgrowing Toolkit

As explained in the Introduction, this Manual describes and aggregates the various components of the **Inception and Outgrowing Toolkit**. This chapter provides an overview of the main features and content of the Toolkit, before diving into the detailed explanation and guidance for the self-assessment and follow on.

The Inception and Outgrowing Toolkit was designed to support HEIs in their path towards enhancing their mission and profile as Civic Universities, as illustrated in the Figure 1. The path towards a more civic university implies a deep self-assessment of the starting point of the university and of its available strategic options. The self-assessment process proposed by R&I Loop includes the description and rationality of the process to become a more civic university and a set of recommended supporting tools in order to define goals, strategies, activities and resources required to become a more civic HEI.

2.1. Objectives of the Toolkit

The Inception and Outgrowing Toolkit aims to:

- ✓ Boost smart specialization and civic universities methodologies that identify the needs and interests of regions, companies, and citizens.
- ✓ Foster public engagement and enhance the outreach and impact of research activities and results at different levels.

Achieving these objectives by using the proposed Toolkit means that HEIs, their research and related structures and researchers will **set their research priorities based on smart specialization directives** (for instance, RIS3 and more recently, PRI - Partnerships for Regional Innovation[2]) as well as on results of consultation/ negotiation/ participatory processes that engage relevant actors and identify the needs/ interests of regions, companies and citizens. Besides, it also means that HEIs have a systematic approach to foster public engagement and to enhance the outreach and impact of research activities and results at different levels, including local/regional economic growth.

2.2. Target users of this Toolkit

This Manual and Toolkit have been tested and fine-tuned by the **R&I Loop project HEI partners**. These resources are targeted at all HEIs that wish to embrace a process of institutional transformation towards becoming (or becoming more) civic universities. Such HEIs must be willing to perform a comprehensive self-assessment and follow up with a series of activities to support them reshaping the way that they are doing research and innovation by integrating smart specialization civic universities strategies in the design of their priorities and actions and promote open intervention of society in the research activities, framed in three main pillars: (I) Innovation; (II) Governance; and (III) Sustainability.

Considering that the whole purpose of HEIs becoming more civically engaged is deeply connected to their capacity of involving various other stakeholders, the Toolkit will ultimately benefit other stakeholders of the quadruple/quintuple helix.

[2] PRI - Smart Specialisation Platform (europa.eu)

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End-users of the Toolkit: HEIs' representatives, leaders, teachers/researchers, students/alumni, and staff from core units dedicated to research support, pedagogical innovation, cooperation, and outreach.

Beneficiaries of the Toolkit: Representative individuals and organisations from the quintuple helix[3], including HEIs, industry/business, public authorities, and citizens/community, oriented to sustainability.

2.3. Expected results/impact

The Inception and Outgrowing Toolkit will allow HEIs to:

1) Dive into a wide and comprehensive exercise of self-assessment and strategic diagnosis that will enable HEIs to identify, explore and question their mission, activities, interaction and impact;
2) Rethink their role and responsibilities beyond the academia community;
3) Promote institutional transformation;
4) Dialogue with the different nodes of the quadruple helix, namely with other HEIs, industry, public authorities and citizens;
5) Enhance public engagement in responsible research and innovation;
6) Foster a wider acceptance of their research results.

2.4. Resources included in this Toolkit

The resources included in this Toolkit are organised as follows:

A. Resources to perform and follow-on the self-assessment (Chapters 3 and 4 and respective annexes)

The assessment tool of R&I Loop is a combination of methodological tools to assess, validate and (re)define the positioning of HEIs and their capacity to be/become civic universities. These methodological tools are:

- **SWOT Analysis and TOWS matrix:** To support the generation of strategic options, taking advantage of the opportunities and minimizing the impact of weaknesses and protecting against external threats. **Section 3.2.** of this document describes the SWOT and Annexes A4.1. and A4.2. include the templates that can be used to employ this method.

- **Triple Layer Canvas:** A business model design tool for exploring sustainability-oriented business model innovation. It extends the original business model canvas by adding two layers: an environmental layer based on a lifecycle perspective and a social layer based on a stakeholder perspective. When taken together, the three layers make more explicit how an organization generates multiple types of value (economic, environmental and

[3] The concept of Quadruple Helix has evolved to Quintuple Helix, which is more suitable for the R&I Loop approach, since it creates the possibility of including the Sustainability dimension. More information here: The Quintuple Helix innovation model: global warming as a challenge and driver for innovation | Journal of Innovation and Entrepreneurship | Full Text (springeropen.com). This approach is more recent and it is better aligned with Model of Civic Universities, including: (i) Innovation; (ii) Governance; and (iii) Sustainability.

social). **Section 3.3.** of this document describes the Triple Layer Canvas tool and includes templates that can be used by HEIs to employ this method, present in Annex A4.3.

- **R&I LOOP Benchmark (complementary/optional tool):** Using the 40 best practices identified and developed in the initial stages of the R&I Loop project HEIs are invited to select 3 best practices, compare and get inspired to **define their goals**. **Section 3.4.** of this document describes the benchmark and Annex A4.6 includes the templates that can be used by HEIs to employ this method.
- **Value chain analysis:** To identify the ways how the HEI creates value and reflect on how to maximise this value. It's a three-step process: **Activity Analysis, Value Analysis and Evaluation & Planning. Section 4.1.** of this document describes the Value Chain analysis and Annex A4.4 includes the templates that can be used by HEIs to employ this method.
- **Pyramid of purpose:** a tool for strategy execution that emphasizes the communication aspect of strategy, helping to communicate the organization strategy. **Section 4.2.** of this document describes the pyramid of purpose and Annex A4.5 includes the templates that can be used by HEIs to employ this method.
- **Impact Canvas:** Method developed for R&I Loop using the 3XL Canvas tool at three different stages of the process of becoming a civic university: initial self-assessment, target and in progress. **Section 5.2.** of this document describes the impact canvas and Annexes A6 includes the templates that can be used by HEIs to employ this method.
- **SUNAR self-Assessment tool of the RE-ACT project (complementary/optional tool)**: As a complement of the above-mentioned tools, the self-assessment tool "SUNAR – Self Reflection Tools Acting Regionally", developed under the "RE-ACT" project can be used. SUNAR is a free, flexible self-assessment tool to support HEIs to rethink and reposition their strategies, structures and actions to become more actively involved in their regional ecosystems. **Section 5.3.** of this document describes the SUNAR self-assessment tool.

B. Additional resources

The following additional resources are provided in this Toolkit:

- **Glossary of key terms:** Annex A1 provides a glossary of key terms related to the context and methodology of R&I Loop.
- **Flash Course:** A flash course is provided to support HEIs in presenting the R&I Loop methodology and engage relevant HEI stakeholders in its implementation.

3. How to perform the self-assessment?

3.1. Presentation of the self-assessment as a whole

Boosting smart specialization and becoming civic universities is a process through which HEIs need to:

- Rethink their role and responsibilities beyond the academic community;
- Promote institutional transformation;
- Dialogue with the different nodes of the quintuple helix, namely with other HEIs, industry, public authorities, and citizens;
- Enhance public engagement in responsible research and innovation;
- Foster a wider acceptance of their research results;

R&I LOOP works on providing methodologies universities can rely on during this process to allow their research-related structures and responsible bodies to:

- Identify the needs and interest of their stakeholders (regions, companies, and citizens);
- Set research priorities based on smart specialization civic university strategies as well as on results of consultation/ negotiation/ participatory processes that engage relevant actors;
- Foster public engagement and open intervention of society in the research activities;
- Design and implement a course of action to transform the institution and reshape their research and innovation framed in three main pillars: (I) Innovation; (II) Governance; and (III) Sustainability; and
- Improve the outreach and impact of research activities and results at different levels, including local/regional economic growth.

As any transformational process, the path towards a more civic university starts with a comprehensive self-assessment regarding the three-man pillars that frame the civic universities: (I) Innovation; (II) Governance; and (III) Sustainability. This Manual provides the technical tools and methodologies to support both self-assessment and follow-on activities.

As can be seen in the figure 1 there are two main processes in the R&I LOOP path to become a more civic university: the **strategic and situational analysis** (upper part of figure 1) and the **impact analysis** (bottom part of the figure).

- The **strategic and situational analysis** can be also split in two consecutives phases or steps: First phase corresponds to the **strategic diagnosis** which involves the development of **strategic options** and the production and implementation of the university's **business model**. Second phase is conceived as an overall **validation** of the outcomes of the strategic analysis. The strategic and situational analysis is intended to provide each university with an action plan to become a more civic university.
- Once the action plan has been implemented it will be necessary to perform an **impact analysis** to determine and measure the level of implementation, and the achievements and results of the implemented strategies. The results of the impact analysis will be used as inputs to start and refine the whole process again, setting new and more ambitious goals, defining new strategies and plan, implementing them and evaluating their impact.

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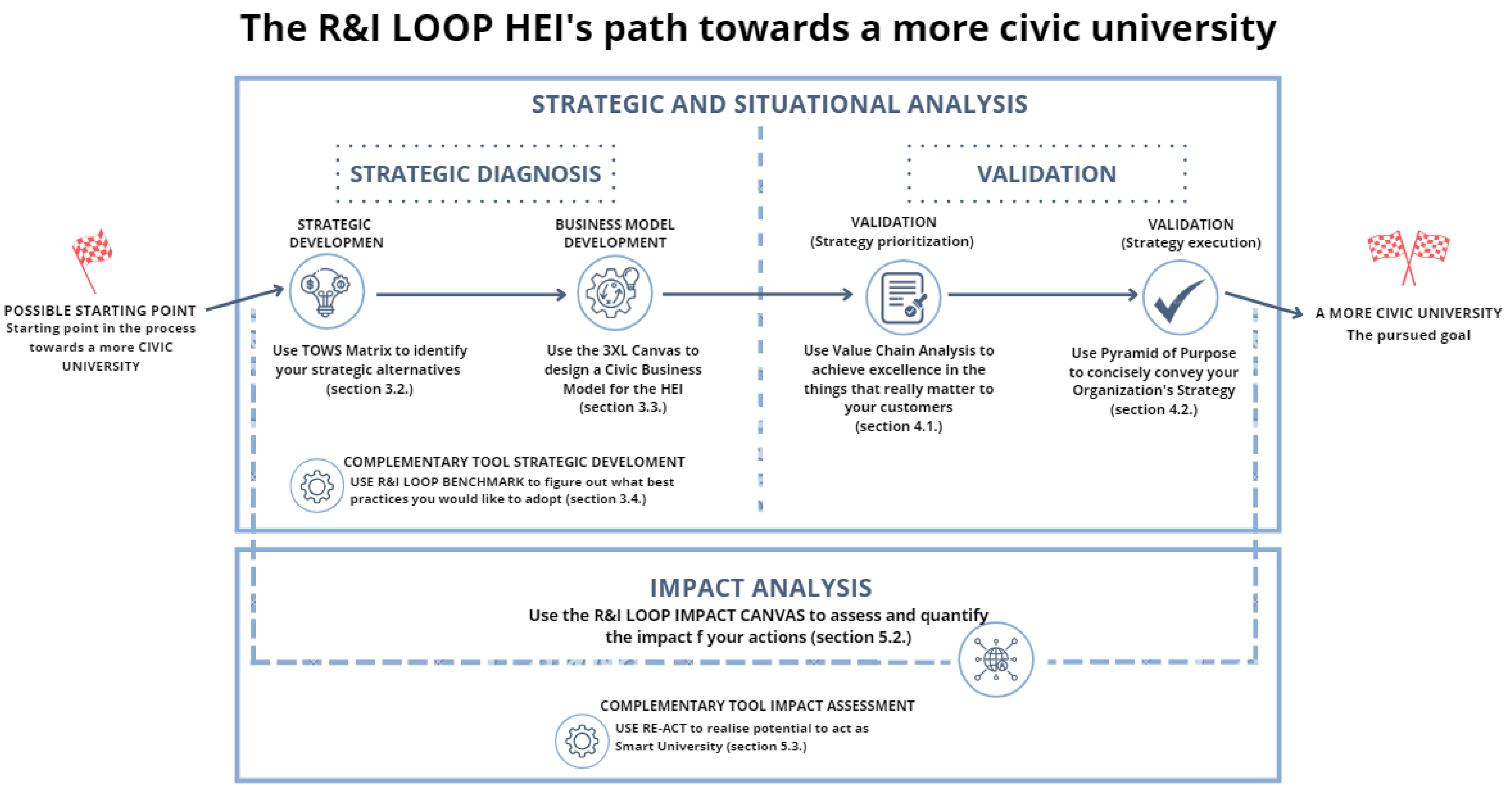

Figure 1. R&I LOOP recommended process to become a more Civic University

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As it can be seen, this is a cyclical and incremental process of improvement that combines strategic vision, operational implementation and impact assessments in recurrent process. To help universities in this process the R&I LOOP project has selected, tested and now recommends a set of practical and useful tools, that are also indicated in figure 1.

The recommended set of tools for the strategic and situational analysis involves 4 main tools and a complementary optional one. **TOWS matrix** will be used to generate strategic alternatives and will be followed by the application of **3XL Canvas** to detail the business model. After the strategic diagnosis is complete, at a more operational level, other two additional tools will help the university to validate the work previously developed: the **value chain analysis** and the **pyramid of purpose**.

- **TOWS matrix** is a fundamental tool to perform a strategic diagnosis and to produce a main set of alternative strategic options that any institution could follow in its transformation towards a more civic university.
- **3XL Canvas** method will be used to generate the detailed business model and value proposition of the organisation.
- **Value chain analysis** and **Pyramid of purpose** will be used to validate the outcomes of the previous process.

For the impact analysis, the project has developed an *ad-hoc* method that combines state of the art business methods and tools. As indicated in the figure, a tailored **impact canvas** methods is recommended for impact evaluation.

Although in general the previous tools are broadly known and spread in the business domain, their application or use within the scope of the R&I LOOP analysis have been slightly twisted or tuned, based on the partner's experiences, to be more effective and fit for the R&I LOOP purposes.

It should be noticed that **the R&I LOOP path intends to be a flexible process,** which considers that the starting point of each HEI, its context and aims, as well as its maturity and experience applying business models and tools can be very different. In that sense the method proposed cannot be rigid and should build upon strategic process, methods and tools already implanted at each university.

Therefore, depending upon how civic our university already is, the starting point in the R&I LOOP process can be different. Some universities might have already implemented SWOT analysis, TOWS matrix or even 3XL Canvas as part of their internal strategic planning process. If that is the case they do not need to start from scratch and develop again the TOWS or 3XL Canvas analysis, but rather to integrate them in the way R&I LOOP suggest.

Other universities with no previous experience on these processes and tools would find in this handbook detailed guideline on how to implement them within a coherent and directed process with the aim of becoming more civic universities.

Additionally, the project has produced other tools that although not considered essential in the overall process, have been found useful as supporting or complementary tools: the **R&I LOOP benchmark analysis** (for the strategic diagnosis process), the SUNAR Self-assessment tool of the RE-ACT project (for the impact analysis). Both tools are indicated in grey in figure 1.

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3.2. Presentation of the SWOT Analysis and TOWS Matrix

Once universities have outlined a vision of the goal they would like to achieve, the next step is to develop the strategy options they can apply. To assist in this step, we propose to use: firstly, the **SWOT analysis** to produce a situational analysis; secondly, the **TOWS Matrix**[4] to develop a set of strategic alternatives by conducting an External-Internal Analysis.

SWOT Analysis is a technique we can use to understand the Strengths, Weakness, Opportunities, and Threats being faced in order to achieve a particular objective. SWOT analysis can be used in a number of contexts, covering both organizations and our personal lives. SWOT works by examining, firstly, the set of external factors, namely, the Threats (-) and the Opportunities (+); and secondly the set of internal factors, including the Weaknesses (-) and the Strengths (+).

What gives SWOT analysis its power is that it enables us to better understand your external threats and weaknesses. Additionally, you can very quickly find external opportunities that we are actually well positioned to exploit. You can also take steps to manage those that might not have otherwise been obvious.

- **Threats (T):** Here we examine what changes in the external environment could pose a threat.
- **Opportunities (O):** Examining the external environment may result in identifying new opportunities. Another way to approach this is to examine your already completed strengths and determine if any of them could evolve into opportunities. Additionally, examine your weaknesses to see if resolving any of them would lead to opportunities.
- **Weaknesses (W):** Weaknesses are obviously the opposite of strengths, or even just the absence of strengths in particular areas.
- **Strengths (S):** By strengths we mean the resources, products, and capabilities available which enable you to achieve a competitive advantage.

Using the Tool

Step 1: On the first table included in Annex A4.1 conduct a SWOT analysis and record your findings in the space provided. This will help you understand what your strengths and weaknesses are, as well as identify opportunities and threats that you should consider.

Step 2: On the second table (TOWS matrix, Annex A4.2), copy the key findings from the SWOT worksheet into the area provided.

Step 3: For completing the central part of the TOWS matrix (Annex A4.2), in each combination of external and internal factors, consider how you can use them to create alternative strategic options:

- **Strengths and Opportunities (SO)** - How can you use your strengths to take advantage of these opportunities?
- **Strengths and Threats (ST)** - How can you use your strengths to avoid actual and potential threats?
- **Weaknesses and Opportunities (WO)** - How can you use your opportunities to overcome the weaknesses you have?
- **Weaknesses and Threats (WT)** - How can you minimise your weaknesses and avoid threats?

[4] For further information on the TOWS matrix, please consult here the original article from Weihrich (1982): The TOWS matrix—A tool for situational analysis - ScienceDirect

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Step 4: Evaluate the options you've generated, and identify the ones that give the greatest benefit, and that best achieve the mission and vision of your organization. Add these to the other strategic options that you're considering.

Although in general this tool is broadly spread in the business domain, its application within the scope of the R&I LOOP analysis has been tuned to be more effective and fit for the R&I LOOP purposes. The project recommends applying the TOWS matrix as indicated in the following TIP.

TIP: R&I LOOP adaptation

Start the TOWS MATRIX analysis at the most difficult scenario, the MIM,MIM (-,-) intending to reduce the negative impact of threats and weaknesses and produce strategies by crossing threats and weaknesses. Then move to MIN, MAX (-,+) scenario, as it will be easy to manage the same set of internal factors, and generate strategies by crossing internal weaknesses with external opportunities. Then, visit the MAX,MIN (+,-) scenario and let the optimal one MAX,MAX (+,+) for the end.

Finally, the **key-points** are summed-up:

The SWOT analysis and the TOWS matrix are relatively simple tools for generating strategic options. By using it, you can look intelligently at how you can best protect yourself against threats and take advantage of the opportunities open to you, while minimizing the impact of weaknesses and leveraging the strengths. Used after detailed analysis of your threats, opportunities, weaknesses and strengths, it helps you consider how to use the external environment to your strategic advantage and, thus, to anticipate some of the strategic options available to you.

3.3. Presentation of 3XL Canvas

3XL Canvas serves for designing a Business model for the HEI, comprehending the value that an organization has to offer to its clients, as well as resources, social/relational capital, partners needed for creating, commercializing and distributing the associated value proposition. Such tool aims at generating profitable and sustainable revenue streams or outcomes, being the central focus on the Customers (Osterwalder, 2004). 3XL Canvas assumes 3 specific layers: (i) Economic BMC, (ii) Environmental life cycle BMC and (iii) Social stakeholder BMC.

Each layer has a horizontal coherence, denoting an integrated approach that will allow the exploration of the organization's economic, environmental and social impact through a set of key activities and relationships within the nine components of each layer. As such, the triple layered business model canvas brings two new dynamics: a) horizontal and b) vertical coherence.

Grouping the 3 layers, instead of just using the traditional BMC, can better clarify the way the organization is creating diverse types of values – **economic**, **environmental** and **social**. In terms of visual effect, it is a tool that can help to develop and communicate a more holistic and integrated perspective of the business model. 3XL Canvas is an innovative framework that can bring the sustainability layer of the business models, going deeper than the economic focus and integrating it with the environmental and social value of an organization's actions (Bocken et al., 2013, Willard, 2012).

These additional layers support the interconnections between the economic side and the environmental and social impacts separately, showing an integrated triple bottom line perspective of organizational impact (Glaser, 2006, Hubbard, 2009, Sherman, 2012).

The next 3 layer canvas shows what should be focused on each of the 3 layers:

- The first layer brings the 9 components of the Business Model design in the economic layer of the 3XL Canvas.
- The second shows the important components of the environmental layer, building on a life cycle perspective of the environmental impact
- The third one presents the 9 parts of the social layer, bringing a stakeholder management approach to explore the organization's social impact (Freeman, 1984), framing the interests of all stakeholders.

Although in general this tool is broadly known and spread in the business domain, its application or use within the scope of the R&I LOOP analysis have been slightly twisted or tuned, based on the partner's experiences, to be more effective and fit for the R&I LOOP purposes. The project recommends applying the 3XL Canvas as indicated in the following TIP.

TIP: R&I LOOP adaptation

Use a neuroscience approach when performing the 3XL Canvas. Do not start by the value proposition itself, let it for the end of the analysis. Instead focus first on the target clients, employ an empathic approach using the right side of your brain, and take an emotional (not rational) approach to identify the clients and all that is related to clients (sources part in the canvas): what are channels and connections? how are we going to manage the relationship with the clients?,… Next you can focus on the value proposition with a more rational approach using your left side of the brain and work on the resources, the configuration of activities and the costs. Then focus on being efficient and reduce costs.

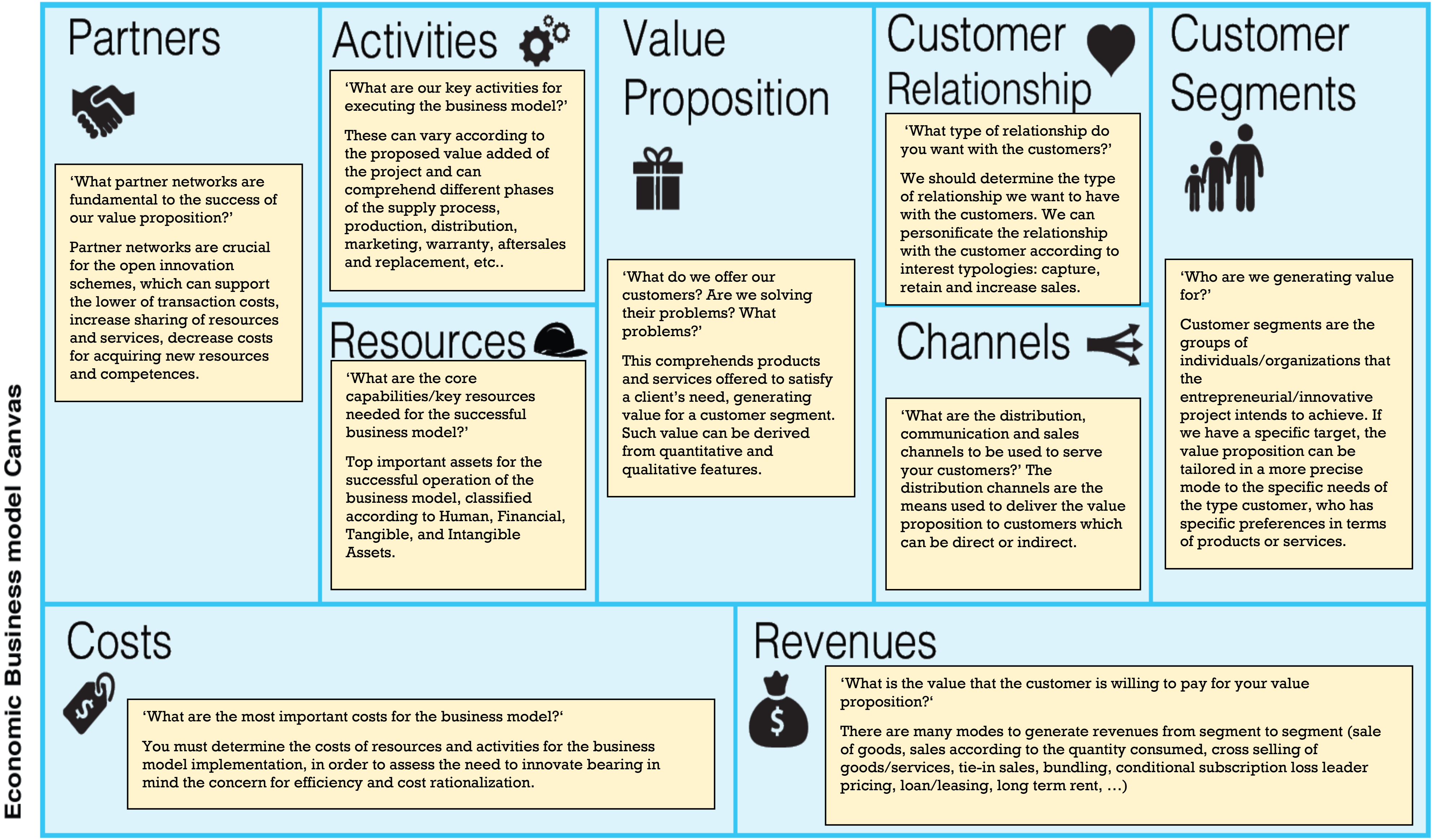

Figure 2. Economic Layer of the Canvas

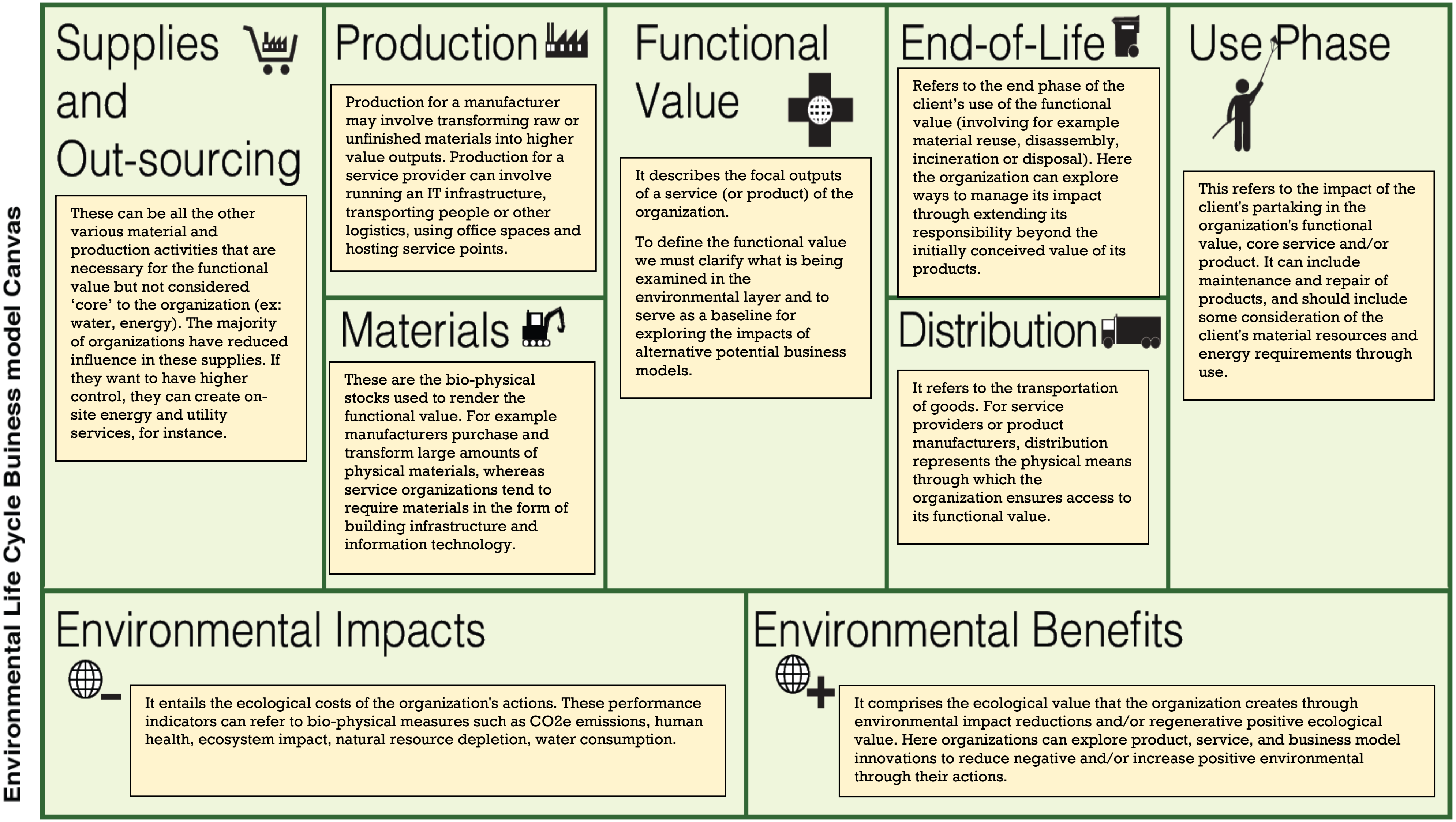

Figure 3. Environmental Layer of the Canvas

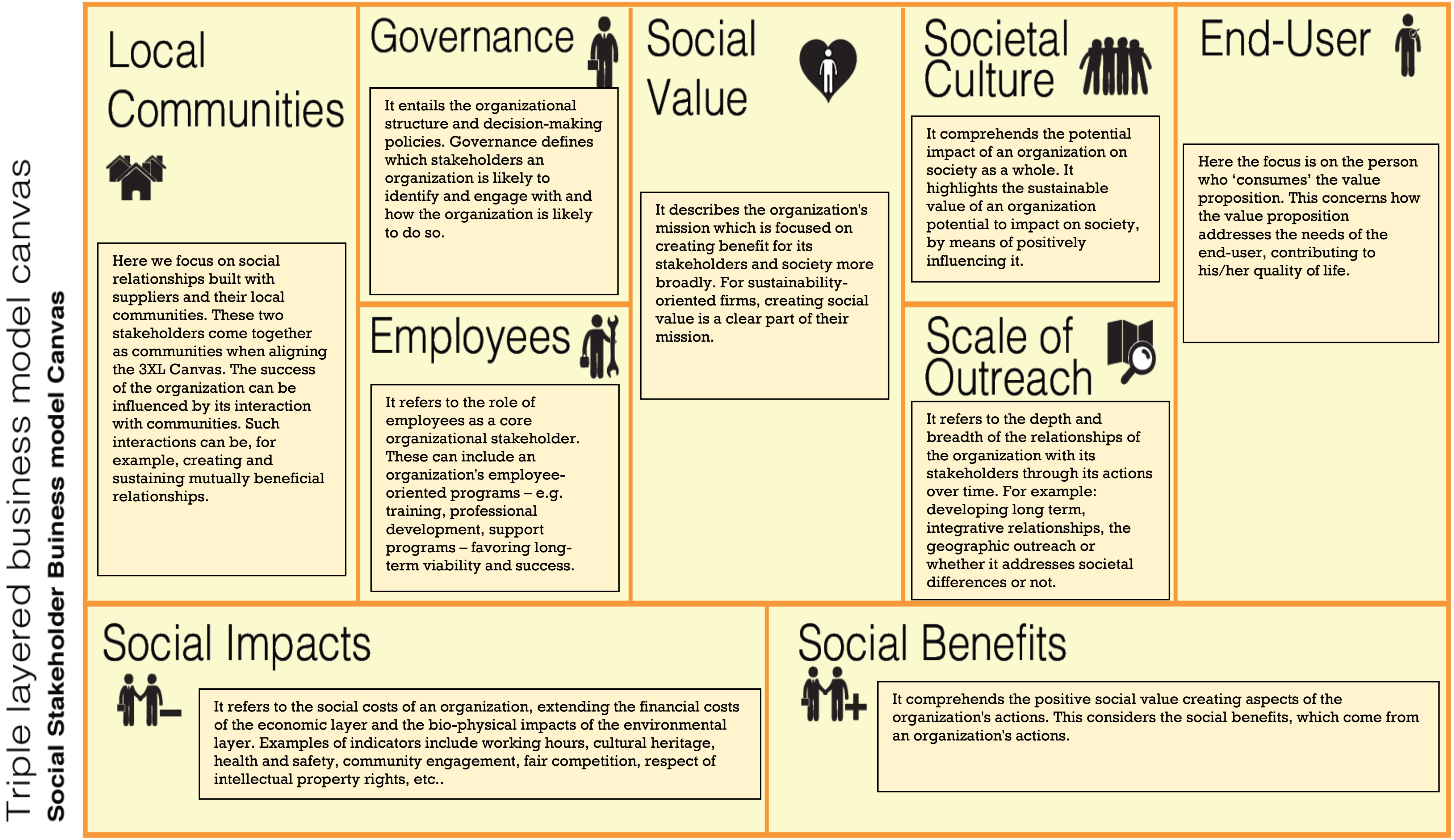

Figure 4. Social Stakeholders Layer of the Canvas

3.4. Presentation of the R&I LOOP Benchmark (complementary)

As a complement to the strategic diagnosis, each HEI needs to figure out what kind of civic university they would like to become and set their objectives accordingly. In this process, it may be useful to look into what others are doing and select the practices they would like to implement. Therefore, R&I LOOP project has developed the **R&I LOOP Benchmark**.

In order to perform the Benchmark, each organisation should start by analysing the 40 best practices identified and developed in previous stages of the R&I Loop project. Among these 40, the organisation must identify the three best practises that best fit the organisation's objectives to become a civic university. To do so, the organisation should identify practices that fit the three pillars (Innovation, Sustainability and Governance), and that are manageable for the organisation, even if it has to make some changes to implement them.

The three best practises are practises which other organisations (mostly HEIs) have undertaken, so there will be differences towards the organisation that intends to implement them. A fundamental step for the Benchmark is to identify the parts of the best practise that your HEI is already performing, and the parts that it is not. In this way, the organisation can situate itself and see what is already being done correctly and what it still needs to be done to apply these best practices and get closer to being a civic university.

By differentiating this, the organisation will be able to benchmark itself, identify the changes to make, and consequently set the HEI goals based on each of the best practices. In Annex A4.6 a table is presented as a template for doing this analysis in a structured way. An additional space is included for additional HEI goals that the organisation may have inherently, and which are not related to the three best practices. The purpose of this approach is to benchmark the organisations, and to have a robust and complete selection of goals.

4. How to follow-on the self-assessment

4.1. Presentation of the Value Chain Analysis

Since available resources are often limited, HEIs must focus their efforts and prioritise the strategies they develop first. To help in this step, we propose to make use of Value Chain Analysis to help the institution focus on what really matters. The method is described below.

Value chain analysis is a useful tool to determine how to get the most value from an organisation. This value does not necessarily have to impact outside your organisation - it can benefit your managers, your co-workers, or the people who depend on you. Value chain analysis helps you identify the ways in which your organisation creates value and then helps you think about how you can maximise this value, whether through great products, great services, or jobs well done.

Value chain analysis is a three-step process:

- **Activity analysis**: Identify the activities you perform to deliver your product or service.
- **Value analysis**: For each activity, think about what would add the most value.
- **Evaluation and planning**: Assess whether it is worth making changes and then plan the action.

Each of these stages will be further elaborated; however, an example of the Value Chain Analysis applied to another field is included below in order to exemplify its structure:

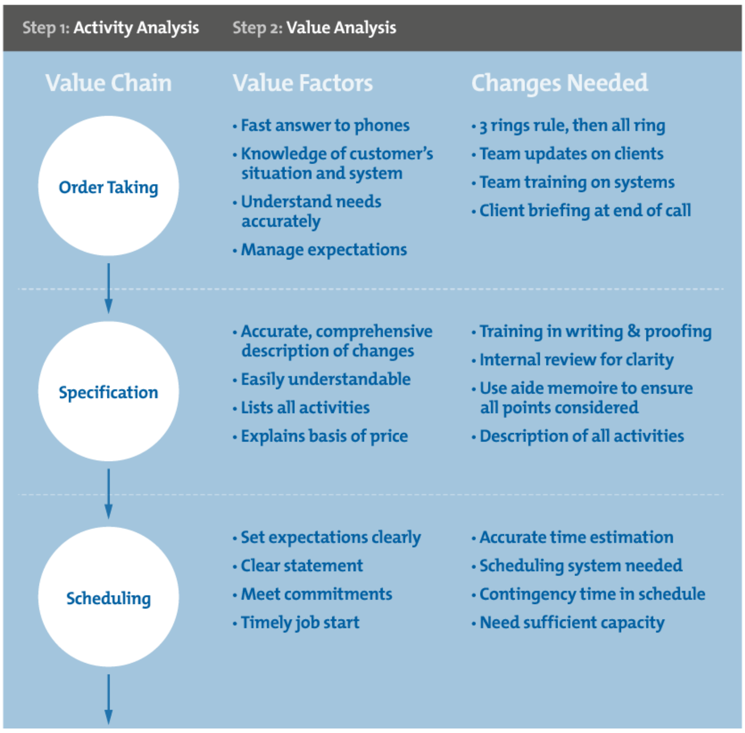

Figure 5. Value Chain Analysis example

Activity analysis: The first step is to brainstorm the activities that you, your team, or your company do that in some way contribute to your customer's[5] experience. For example:

- How do you motivate yourself or your team to perform well?
- How do you keep up to date with the most efficient and effective techniques?
- How do you select and develop the technologies that give you the edge?
- How do you get external feedback on how you are doing and how you can improve?

[5] Customers refer to the beneficiaries of the service or product offered by each organisation.

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TIP

If you carry out the Activity Analysis and Value Analysis starting by a brainstorming with your team, you'll almost certainly get a richer answer than if you do it on your own. You may also find that your team is more likely to "buy into" any conclusions you draw from the exercise. After all, the conclusions will be as much theirs as yours.

Value Analysis: Now, for each activity you have identified, list the "Value Factors" – the things that your customers value in the way that each activity is conducted. If you are thinking about delivery of a professional service, your customer will most likely value an accurate and correct solution; a solution based on completely up-to-date information; a solution that is clearly expressed and easily actionable; and so on. Next to each activity you have identified, write down these Value Factors. And next to these, write down what needs to be done or changed to provide great value for each Value Factor.

Evaluate changes and design an action plan: When you have completed your value analysis, you will probably feel encouraged to take action: you will have generated a lot of ideas to increase the value you offer to customers. And if you could offer all of them, your service could be fabulous.

However, be careful at this stage: you could easily waste your energy on a hundred different tasks and never complete any of them. So, first of all, choose the quick, easy, and cheap wins. Then select the more difficult changes. Some may be impractical. Others will bring only marginal improvements, but at great cost. Discard them. Next, prioritise the remaining tasks and plan how to tackle them feasibly and incrementally, so that steady improvements occur while maintaining the team's enthusiasm.

TIP

If you have a strong enough relationship with one or more of the beneficiaries of the improvements, it may be worthwhile to present your findings to them and get their feedback: it's a good way to confirm that you are right or to better understand what they really want.

Finally, the **key-points** are included:

Value chain analysis is a useful way to reflect on the ways in which value is delivered from within the organisation and to review all that can be done to maximise that value. It is carried out in a three-stage process:

- ✓ **Activity analysis**, in which you identify the activities that contribute to the delivery of your product or service.
- ✓ **Value analysis**, where you identify the aspects that customers value in the way each activity is carried out, and then work out what changes are needed.
- ✓ **Evaluation and planning**, where you decide what changes to make and plan how to make them.

If you use value chain analysis and put it into practice, you can achieve excellence in the things that really matter to your customers. Annex A4.4 contains the template needed to apply the Value Chain Analysis to your organisation. Since the three basic pillars of a civic university are **innovation, sustainability,** and **governance**, it is proposed to complete this template three times, each time targeting the objectives of a single pillar.

4.2. Presentation of the Pyramid of purpose

To succeed in the process of becoming more civic universities, organisations must align all internal and external stakeholders with the pursued vision. Strategies need to be effectively conveyed to all who will be part and make the change possible. To help in this step, we propose to use of the **Pyramid of Purpose** to help management communicate the organization strategy. The method is presented next.

The Pyramid of Purpose is a tool to plan a strategy but also to communicate it graphically. Effective strategic planning is essential to be able to develop the strategy and then implement it. But no matter how good the strategy is, it is necessary to make the people within the organisation, who will be responsible for implementing it, understand the strategy, and share the same vision.

The Pyramid of Purpose is a tool for strategy execution that emphasizes the communication aspect of strategy. This is because it is a tool that graphically describes the elements of the chosen strategy. An image of the Pyramid of Purpose is shown below. From this image the functioning of the tool will be explained.

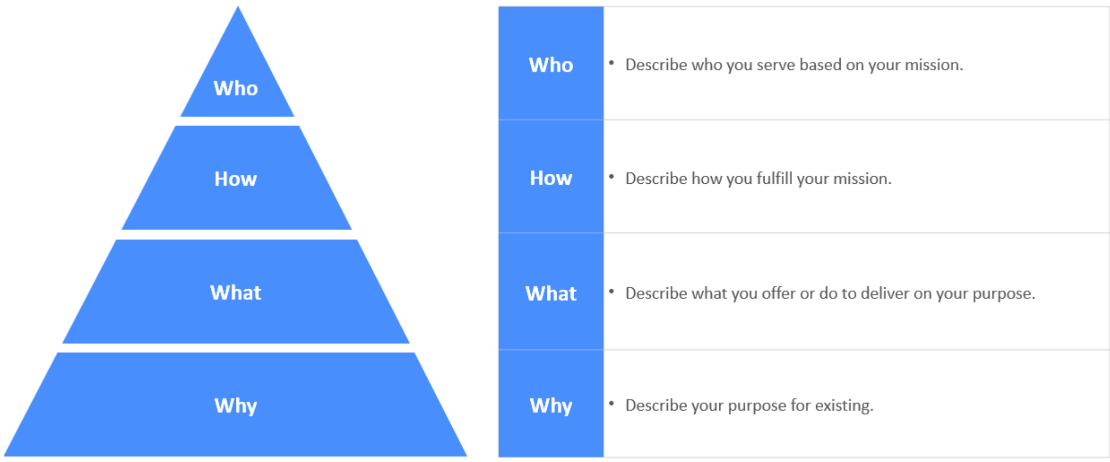

Figure 6. Scheme of the Pyramid of Purpose

The Pyramid of Purpose is structured into four tiers. In each of these tiers, there will be a question that will help the communication of the strategy. The lower tier is the base of the pyramid on which the whole process will be structured. From this lower tier, new tiers will emerge with new questions which have to be answered according to the lower tier. With this approach, a tool is created that allows the planning of how to execute the strategy, as well as facilitating the explanation of the strategy, as it is a very structured tool.

Specifically, the four questions that are asked in this tool are:

i. **Why?** At this level, the question to ask is: *What is the reason why my organisation exists?* Here, the purpose of the organisation itself will be specified. This first tier is the base of the pyramid, so the ultimate purpose of the organisation will appear here and will determine the whole path of the strategy.

ii. **What?** Starting from 'Why', it will be necessary to materialise the purpose set. The question here is: *What needs to be done to fulfil the organisation's purpose?* This step is where the organisation's activity plan will be established. It is at this tier that the *organisation's goals must be listed*. These goals will be measurable and actionable tasks that will allow the organisation to get closer to its purpose.

iii. **How?** Once the organisation's goals are set, the next step in the implementation of the strategy will be to see how they are done. Some of the questions to be answered in this step are: *What actions need to be taken to check the goals? When do actions need to be taken?* Ultimately, for the list of activities set out in 'What', it will be necessary to specify how they are to be carried out.

iv. **Who?** The last step of the tool allows you to specify the human resources that will enable you to carry out the activities described in 'What' and 'Who'. This last tier is often overlooked in other strategic planning models. The questions to be answered are the following. *Are there people in the organisation to complete each of the tasks? What competencies will the people in charge of performing the tasks need?* This last step will therefore make it possible to study whether the HEI has the necessary human resources to implement the strategy defined in the three previous tiers.

By answering the questions marked in the four tiers, the organisation's strategy will be planned from its most general purpose to the most specific part, which is the selection of the personnel in charge of the different tasks. In addition to being a very structured tool, the Pyramid of Purpose is very straightforward to apply, and the results allow for a very concrete execution.

TIP

At each step of the pyramid, as it is made, check that the relationship with each of the previous tiers is maintained. Only in this way will the pyramid be robust.

For the application of this tool, the template is attached in Annex A4.5. The idea proposed for the civic university is to mark three purposes for each of the pillars of a civic university (**innovation, sustainability, and governance**) and apply the Pyramid of Purpose for each of the pillars based on these purposes, with the final result being three different pyramids, but related to each other by the concept of the civic university.

Although this tool is broadly known and spread in the business domain, its application or use within the scope of the R&I LOOP analysis has been slightly twisted or tuned, based on the partner's experiences, to be more effective and fit for the R&I LOOP purposes. The project recommends applying the Pyramid of Purpose as indicated in the following TIP.

TIP: R&I LOOP adaptation

When applying the Pyramid of Purpose start by the top to the pyramid, WHO. WHO should identify the target clients using the economic dimension of the 3 layer canvas. WHO represents our target publics order by priority (for example, students, families, companies and governments). Then move to the base of the pyramid and move up through the pyramid analysing WHY, WHAT and HOW for each of the targets categories in which we have segmented our public.

5. Engaging and measuring impact

5.1. Fostering Stakeholder engagement and participation

Among the various types of activities that a HEI should consider in their strategy and plan to become more civically engaged, the organisation of initiatives to foster stakeholder engagement and participation is definitely a very relevant one.

This can include the implementation of activities that aim to promote a different positioning of HEIs in what it comes to research (how they do research, how do they communicate research, how do they involve society into the research), that can result in:

- Co-creation events (with business, public bodies, educational entities, NGOs and other regional actors to embed RIS3 strategies and needs into HEIs agenda and identify areas of cross-interest at the regional level and of effective cooperation);
- Science for all events (where citizens are invited to see, understand and experiment research results produced by HEIs and what are the impacts for society, and to perceive where and how citizens can be part of the research).

In **annex A5** you can find 2 templates to support the reporting and evaluation of such events.

Besides, check the following sources where you can get inspired by other HEIs and obtain guidance on how to foster stakeholder engagement:

- Check the various types of events proposed by the University of East Anglia (UEA) to get their regional stakeholders engaged. Link here
- Check the video from the University of Bristol about how they present themselves and what are the HEI's aims as Civic University. Watch here.
- Check the R&I Loop Nurturing Toolkit to learn about how to introduce or reinforce research methods with and for society.

5.2. Presentation of the R&I Loop Impact Canvas

Finally, HEIs need to assess and quantify the impact they have achieved in the process of becoming a more civic university. To help in this step, R&I LOOP project has developed a bespoke method that combines and integrates elements of previous methodologies while adapting them to the context of the project. The method is called **R&I LOOP Impact Canvas Methodology** and it is presented here below.

5.2.1. Why is important to assess the impact?

Becoming a civic university is not an easy task. There are several singularities that complicate the process:

- The starting point of each HEI is different.
- The organisation of each of the HEIs (departments, faculties, schools, countries, etc.) is different. Similarly, it is very complex to identify people in exactly the same role with the same post in two institutions.
- The context for each of them is totally different. This includes the domain of degrees and classes taught to students, the characteristics, background and interests of students, the local authorities with which the HEIs have to collaborate, the local and national laws and regulations with which they have to comply, etc.

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Taking all of the above into account, the process of achieving the goal of becoming a civic university may vary in scope and duration depending on the institution. The key idea is to standardise the process and to generate a series of documents to justify the work done, the impact of the actions taken and to be able to detect what steps remain to be taken in the context of each of the HEIs.

The ability to determine the impact of the activities carried out and compare it with the intended target is the last step in the process of becoming a civic university and can also be used as a follow-up tool once the university has achieved the civic status.

Similarly, working with common tools for measuring impact will allow a common framework to be established and to learn collaboratively from the progress made by other HEIs with similar characteristics or to take ideas from other universities that are further along in the process.

5.2.2. Is it necessary to establish a new tool to assess the impact?

The aim of this section is not to generate a new tool, but to take advantage of some of the work previously done and adapt it to the reality of the R&I Loop project, thus generating a methodology that uses already known tools, but from a different point of view. For this reason, it has been decided to call this combination *R&I Loop Canvas Methodology*. For its design, two previous works have been considered.

Firstly, **in the self-assessment process, each of the HEIs must have completed a 3XL Canvas,** covering the economic, environmental, and social layers. The information collected in this tool will be the starting point of the methodology.

The University of Tampere has developed a tool called **Impact Canvas**, which focuses on measuring the impact of research. Using this tool, when filling in the categories and answering the questions proposed in the chart, a distinction has to be made between **three categories**: Status, Target and Test&Do. This three-level idea, with a different approach adapted to the project, has been considered in the R&I Loop Impact Canvas. In the case of the R&I Loop Canvas Methodology, **the three stages to be covered are: initial self-assessment**, **civic university target** and **civic university in progress**.

Therefore, it is not a question of designing a new tool, but of developing a new methodology, which, with the final objective of becoming a civic university, allows the impact of the actions developed by each HEI to be measured in a standard manner.

5.2.3. R&I Loop Canvas Methodology

The R&I Loop Canvas Methodology proposes an orderly and efficient use of the Canvas 3XL tool. The main features of the Canvas 3XL Tool have been presented in section 3.3. of this document.

The methodology consists of using the 3XL Canvas tool at three different stages of the process of becoming a civic university: initial self-assessment, target and in progress.

The first two states are fixed: the starting state and the target state. However, during the transformation process, it may be necessary to revise and update the 3XL In Progress Canvas.

The following flowchart provides an outline of the steps necessary to implement this methodology and the checks that need to be carried out in order to use it correctly.

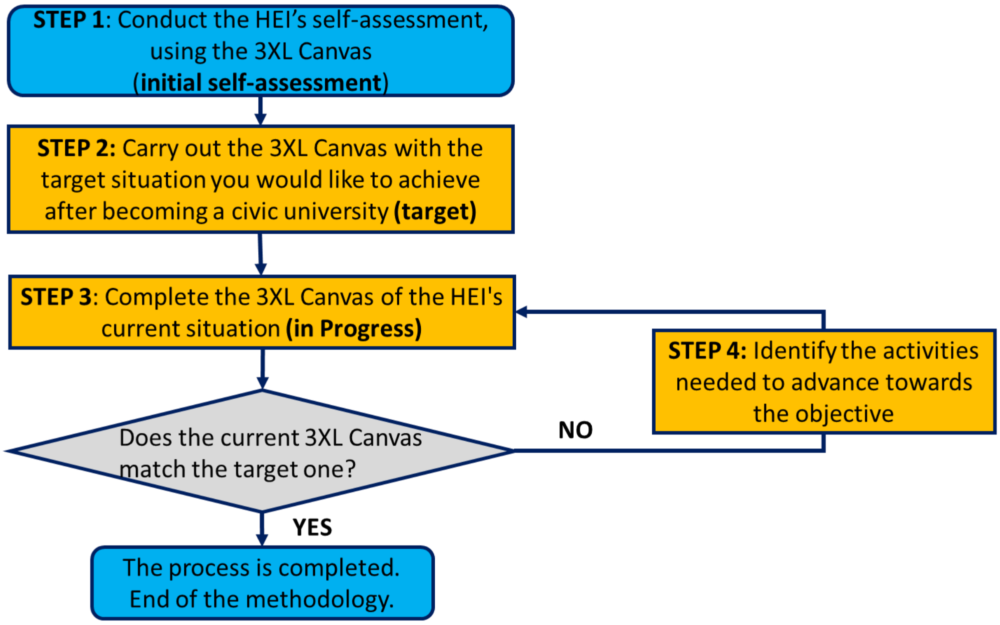

Figure 7. Flowchart of the R&I Loop Canvas Methodology

- **STEP 1**: The first step for each HEI is to carry out its self-assessment using the 3XL Canvas tool. This tool and its three layers have been explained above in section 3.3. It corresponds to the **initial self-assessment** before the HEI starts implementing the activities that will enable it to reach the status of a civic university.

- **STEP 2**: Using the 3XL Canvas again, the HEI should carry out the following exercise. It should assume, on the basis of the good practices it has analysed and internal discussion, that it has already achieved the status of a civic university. With that idea in mind, they should fill in each of the layers again, but including in each of the categories those elements, activities or tools that they would like to have as a civic university. This second step, therefore, consists of the elaboration of the **target Canvas**.

Between the starting and end points, there are a number of intermediate steps, which will be reflected in the **In-Progress Canvas**.

- **STEP 3**: Before the transition to the civic university model, each HEI will have to define a checkpoint (at least, one). At this point, a review of the activities carried out and the impact they have generated will be made. This intermediate stage is divided into three different actions: **Create, Do and Test**. At this checkpoint, STEP 3 of the methodology will be carried out:

  At a previously defined intermediate point, the HEI should make a new 3XL Canvas. In this case, the HEI should indicate in each of the categories the elements that are available at that precise moment. STEP 3 corresponds to the Create action of the In Progress stage.

  Up to this point, the impact of the activities carried out has not yet been evaluated. For this purpose, the templates in **Annex A6** should be used. There is a template for each of the 3XL Canvas layers (see **Annex A6.1** for the template for the economic layer, **Annex A6.2** for the template for the environmental layer and **Annex A6.3** for the social layer). As an example, in order to explain its structure, the following figure presents the template to be used for the economic layer.

ITERATION N°:_______________

DATE:___/____/____

Is this your first "In-Progress Economic Canvas"? YES ☐ NO ☐

Time since the last In-Progress Canvas: _______________

Team in charge of developing this Layer: ______________________________

ECONOMIC LAYER							
TOPIC	DOES THE CURRENT SITUATION MATCH THE TARGET ONE?	WHAT ACTIVITIES CAN BE IMPLEMENTED TO ACHIEVE THE GOAL? **(TO BE COMPLETED ONLY IS THE "NO" SQUARE HAS BEEN SELECTED IN THE PREVIOUS COLUMN)**	WHAT IS THE DEGREE OF IMPLEMENTATION OF THIS ACTIVITY? 5 being the highest value **(TO BE COMPLETED IN ITERATION NUMBER ☐)**				
			1	2	3	4	5
Partners	YES ☐ NO ☐						
Activities	YES ☐ NO ☐						
Resources	YES ☐ NO ☐						
Value Proposition	YES ☐ NO ☐						
Customer Relationship	YES ☐ NO ☐						
Channels	YES ☐ NO ☐						
Customer Segments	YES ☐ NO ☐						
Costs	YES ☐ NO ☐						
Revenues	YES ☐ NO ☐						

Figure 8. Template used to develop Steps 3 and 4 for the economic layer

It is worth remembering that the aim of this methodology is not only to measure impact, but to leave a record of all the activities carried out. For this reason, the first elements that appear in the template are a series of data that allow the traceability of the documents.

- <u>No. of In Progress Canvas</u>: Each HEI should mark one or more points where it considers relevant to study the current situation in the process of becoming a civic university. There may be several iterations. This number identifies the iteration being presented.
- <u>Date</u>: In order to be able to chronologically order all the progress achieved.
- <u>Is this the first time you are doing this layer of the In Progress Canvas</u>?
  - If yes, please indicate "YES".
  - If other In Progress Canvas has been done before and this is a revision or complement to one of them, indicate "NO". If this option has been indicated, it would be necessary to specify the time elapsed since the last time a Canvas was completed.
- <u>Team in charge of developing this layer of the canvas</u>: to identify the people who have worked on its elaboration and to be able to contact them if the successive Canvas are developed by others.

To complete the table properly, the information that appears on each of the categories of the Canvas that has just been created should be compared with that of the target Canvas. If the information matches, select the option "YES" in the second column. This topic can then be considered as analysed. The objective has been achieved. If this is not the case, "NO" must be indicated.

This way, it is easy to see which topics are progressing most quickly and on which topics further work needs to be done. This idea of working answers the question "Does the current 3XL Canvas match the target one?" for each of the categories in the Canvas layer and corresponds to the rhombus in the flowchart in Figure 4. In case there are categories whose current status does not match the objective, proceed to STEP 4, only with those categories.

- **STEP 4**: Certain activities should be clearly and concisely defined in order to make progress in these categories. These activities correspond to the action Do and should be indicated in the third column of the template.

The status of these tasks should be reviewed in subsequent iterations. To indicate the iteration number in which the fourth column of the table has been revised, a blank square has been left in the column heading. This improves the traceability of the process.

In the next In-Progress Canvas, these activities should be reviewed. Depending on the complexity of the task, some may be fully completed at the time of the review, but others may still be in the process of implementation. To reflect these intermediate states, instead of a binary answer of "YES" or "NO", the fourth column of the table asks for the degree of implementation of the activity. For each of the activities, a value should be selected on a scale of 1 to 5, depending on the progress achieved. A value of 1 is the minimum and a value of 5 is the maximum, indicating that the activity has been fully implemented. This sub-phase corresponds to the action Test.

TIP
If each HEI follows the R&I Loop Canvas methodology, it will be able to clearly identify the impact of its activities and monitor its progress towards the goal of becoming a civic university. It will also provide the institution with an orderly database of the progress made.

5.3. The "SUNAR – Smart Universities Acting Regionally" tool (complementary)

As a complement, we suggest HEIs to go through the exercise proposed by the ERASMUS+ project *RE-ACT: Self-reflection tools for smart universities acting regionally*. A brief presentation of the project can be found in its brochure. The aim of the RE-ACT project and its SUNAR Self-assessment tool is to support HEIs in realising their potential to act as Smart Universities that play a pivotal role in the respective RIS3 (Research and Innovation Strategies for Smart Specialisation). In summary, SUNAR helps HEIs' to assess their responsiveness to the challenge of being engaged in the regional innovation ecosystem.

Built on the 8-dimension logic of HEINNOVATE, *SUNAR is a free, flexible self-assessment tool to support Higher Education Institutions (HEIs) and other regional stakeholders to rethink and reposition their strategies, structures and actions to become more actively involved in their regional ecosystems.* The addition of SUNAR in comparison to HEInnovate, relates to the inclusion of the "regional" component. Based on the concept of collaboration among the actors of the Quadruple Helix, this tool allows HEIs to self-reflect and assess their contribution to RIS3, helping them to understand, among other issues, how well they fulfil their mission and reach out to others.

How to use SUNAR?

The first step is to register through the following link: https://sunar.pbs.up.pt/signin. After login in, SUNAR invites HEIs to assess their position in relation to a set of statements. The self-assessment consists in choosing a score for each statement. Under each statement there is a bar to indicate the score on a scale of n/a (not applicable) to 5 (the highest score). Each dimension assessed presents a brief summary of what is being assessed under the heading. Under each statement, there is a scale from n/a to 5 which enables an assessment of how the HEI performs against the statement. Under each statement there are also some guidelines to support the assessment, indicating what actions should be in place for higher scores.

Results are provided based on scores for each HEI and compared to other HEIs that also performed the self-assessment.

Among other resources developed by the RE-ACT project, the following ones are particularly useful to perform the self-assessment:

- **Users guide of the SUNAR tool**: here
- **Statements and explanation**: If HEIs don't want to register in the tool, they can take a look at all the statements and respective explanation here.
- **Training module for presenting the tool**: A specific module presenting the tool can be consulted here.

The picture below shows part of the statements included in the self-assessment tool.

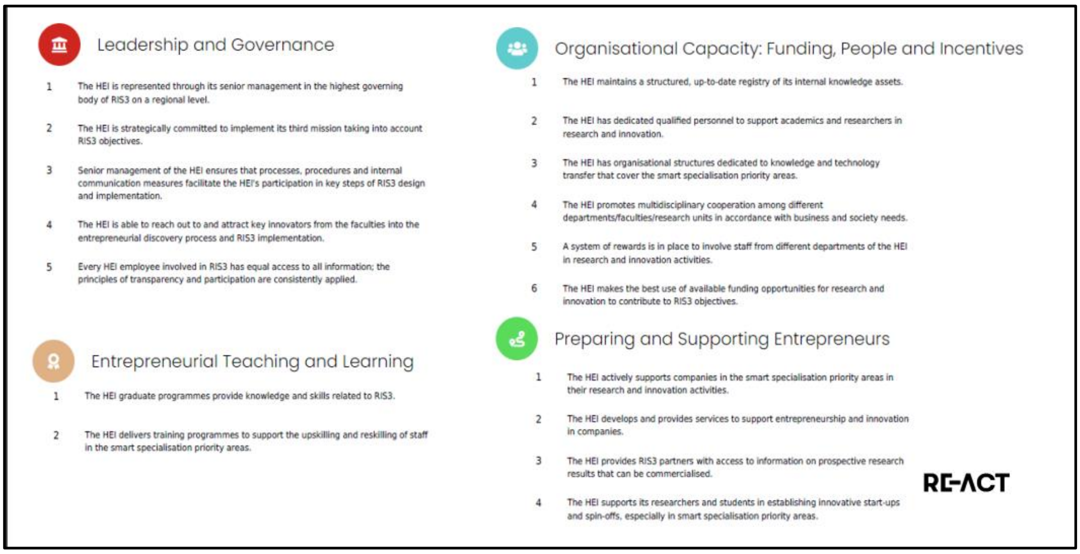

Figure 9. Selection of statements included in the SUNAR tool (RE-ACT project)

Self-assessment follow-up

Like the R&I Loop Toolkit, also SUNAR is complemented by a set of follow up tools and guidelines. Thus, after performing the self-assessment, Universities can capitalize on results to propose and implement actions that help them to become more entrenched within the quadruple helix of their region and promote innovation and regional development. However, in the frame of the R&I Loop project, we advise the use of follow up tools and steps proposed in this manual as they are tailored to the role of Civic Universities.

Other potentially useful tools and initiatives

Several other tools and methodologies are available for HEIs and other stakeholders to enhance collaboration and target their strategies and actions towards more meaningful and effective objectives. One example consists of the methodologies used in the Network of Circular Cities (Rede de cidades circulares), namely in the Academy of Circular Cities. This is a good example to complement and connect the 3 Pillars of Civic Universities: (I) Innovation; (II) Governance; e (III) Sustainability. More information about this initiative can be found here: InC2 - Quatro Redes Cidades Circulares aprovadas | PNPOT (dgterritorio.gov.pt).

6. R&I Loop Flash Course

The R&I Loop flash course in a set of training resources designed to support the core HEI staff involved in the R&I Loop path to explain and involve other key players in the self-assessment and follow up processes. The course was designed to have a short duration and be very practically oriented.

The flash course is divided into three modules according to the following structure:

Module I. R&I Loop and Civic Universities

- What is R&I Loop and how it can help HEIs?
- Key concepts: What is "Civic University"?
- Case studies/ best practices of Civic Universities

Module II. Self-assessment and follow-on: How "Civic" is my HEI?

- Presentation of the self-assessment as a whole
- How to perform the self-assessment: Strategic Diagnosis
    - I. Strategy Development (TOWS matrix)
    - II. Business model development (3XL Canvas)
    - III. R&I LOOP Benchmark (complementary)
- How to follow-on the self-assessment: Validation
    - I. Strategy priorization (Value Chain Analysis)
    - II. Strategy execution (Pyramid of purpose)

Module III. Engaging and measuring impact

- Fostering stakeholder engagement and participation: co-creation events, science and research communication, social involvement in research
- Impact Analysis:
    - I. R&I Loop Impact Canvas
    - II. RE-ACT self-assessment (complementary)

The course is provided in a PowerPoint format and includes many of the contents already included in this manual. The flash course can be deployed in online or face-to-face format. However, due to the eminently practical nature and aims of this course, it is highly recommended to perform the course in face-to-face format, taking advantage of the various interactive and co-creational activities proposed.

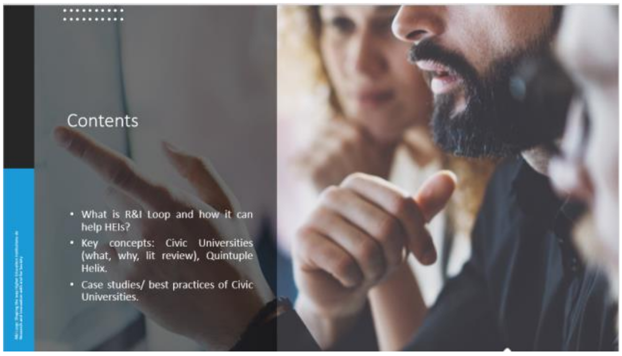

Figure 10. Examples of slides of the R&I Loop flash course

7. Annexes

List of annexes

Nr and name of annex
A1. Glossary of key terms
A2. Setting up a working group
A2.1. Working group Terms of Reference – ToR
A2.2. Template of working group minutes
A3. Training
A3.1. Training report template
A3.2. Training evaluation/ satisfaction form
A4. HEI assessment/ evaluation tools
A4.1. SWOT Analysis template
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A4.3. Templates for 3XL Canvas
A4.4. Value Chain Analysis template
A4.5. Pyramid of Purpose template
A4.6. Benchmark template and R&I Loop good practices
A5. Implementation of events
A5.1. Event report template
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A6. R&I Loop Impact Canvas
A6.1. Economic Layer Activities: Create, Do and Test
A6.2. Environmental Layer Activities: Create, Do and Test
A6.3. Social Layer Activities: Create, Do and Test

A1. Glossary of key terms

Term	Definition & Source
Civic University	Civic universities have engagement embedded across the whole institution, providing opportunities for students, businesses and public institutions. They're managed to facilitate institution-wide engagement with the city and region of which they are part and they also operate on a global scale but use their location to form their identity.
Quadruple helix	The quadruple helix is an advanced innovation network framework developed from the original triple helix model. The triple helix model describes a system where the networking and cooperation between universities, businesses (industry) and government can enhance the innovation and the infrastructure needed for economic development (Etzkowitz & Leydesdorff, 1995). The 4th element in the quadruple helix model is the public and civil society (Carayannis & Campbell, 2009), thus, this model is more comprehensive stakeholder-wise.
Quintuple helix	The quintuple helix is an advanced innovation network framework developed from the quadruple helix model. The 5th element in the quintuple helix model is the natural environments of society, therefore being ecologically sensitive.
Research and Innovation Strategy for Smart Specialisation (RIS3)	RIS3 stands for Research and Innovation Strategy for Smart Specialisation. It is a six-step approach to enhance national or regional economic transformation: 1. Analysis of the regional context and potential for innovation, 2. Set up of a sound and inclusive governance structure, 3. Production of a shared vision about the future of the region, 4. Selection of a limited number of priorities for regional development, 5. Establishment of suitable policy mixes, 6. Integration of monitoring and evaluation mechanisms. https://ec.europa.eu/regional_policy/sources/docgener/presenta/smart_specialisation/smart_ris3_2012.pdf
Smart Specialisation	Conceived within the reformed Cohesion policy of the European Commission, Smart Specialisation is a place-based approach characterised by the identification of strategic areas for intervention based both on the analysis of the strengths and potential of the economy and on an Entrepreneurial Discovery Process (EDP) with wide stakeholder involvement. It is outward-looking and embraces a broad view of innovation including but certainly not limited to technology-driven approaches, supported by effective monitoring mechanisms. https://s3platform.jrc.ec.europa.eu/what-is-smart-specialisation

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A2. Setting up a working group

Any HEI willing to implement the R&I LOOP method is encouraged to follow these guidelines and use these templates together with the other elements of the toolkit. The first step for HEIs is to set up an internal working group that will be responsible for promoting transformation towards a civic university.

A2.1. Working group Terms of Reference - ToR

Background

The renewed EU Agenda for Higher Education highlights that there is an unquestionable need to focus efforts on bridging education, research, innovation, sustainability and community interaction, calling for new "Entrepreneurial" HE profiles. This need surfaced due to the realisation that HEIs are no longer sufficient to tap on current and evolving societal challenges, therefore, a reformation is deemed necessary to ensure that HEIs are not ivory towers, but civic-minded learning universities connected to their communities. In that sense, institutions must develop their profile as 'civic universities' based on a societal engagement that is embedded in the whole institution, providing opportunities for interaction between research, students, businesses, and public institutions; thus, having governance targeted to sustainability which facilitates institutional involvement in the city and region of which the HEI is part; as well as fostering operations on a global scale but using its location to form its identity.

The R&I Loop project has developed a set of resources to encourage the identification, implementation, and maintenance of new strategies, structures and tools, grouped in two stages:

- **Inception** of civic participation and smart specialisation regional directives into HEIs priorities and research & **Outgrowing** public engagement to enhance the outreach and impact of research activities and results at different levels, including local/regional economic growth;
- **Nurturing** HEIs staff and students curricula with research methods with and for society.

Working Group composition, responsibilities, and operating procedures

The working group should include managers, teachers/researchers or staff, preferable from core units dedicated to research support, pedagogical innovation, cooperation, and outreach within the university. Working Group members should be prepared to take responsibility to help the organisation in its transition towards a more civic university by making use of the concept and tools provided in the framework of the R&I LOOP project.

The working group should have a chairman/women who will be responsible for:

- Plan and organise the working group activities
- Produce minutes of the meetings of the working group.
- Ensure and supervise the execution of the proposed activities.
- Appoint the person responsible for the individual task.

It is highly recommended that the WG meets at least once a month during its intended life to ensure the development of its activities.

Names and contact of the persons integrating this working group [complete with the info from your WG]:

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Name	Position and contact details
Chairman of the WG	
Members of the WG	

Working Group Activities and planning

The working group will be responsible for the execution of the activities indicated in the following table.

Activity/task
Setting up a working group within each HEI to perform the pilot testing and to promote the transformation of the institution to a civic university.
Scale up training to other 15 teachers/researchers and staff in research support, pedagogical innovation, cooperation, and outreach units.
Perform the HEI assessment /evaluation according to the toolkit provided by the project. This includes initial self-assessment plus follow-up activities.
Implement events to promote a different positioning of HEIs. Each university will implement 1 activity , either a co-creation event or a science for all events.
Impact assessment and reporting. Reporting the results through an internal review by HEIs to evaluate the short-term impact of the toolkit.

A2.2. Template of working group minutes

Each meeting of the WG should have minutes including at least the following elements:

1. Date and place of the meeting
2. Agenda of the meeting
3. List of Attendees
4. Development of the meeting
5. List of actions

A3. Training

HEIs can use the flash courses developed by the R&I Loop project to train the members of the WG and other teachers/researchers and staff in research support, pedagogical innovation, cooperation and outreach units. The structure and features of the Flash Course are presented in Chapter 6 of this Manual. The files of the Flash Course are available in the R&I Loop website.

Besides, the following templates can be used to support this activity:

- **Training report template.** This template can be used to report on the internal training carried out at each HEI. It basically reports on the schedule and organisation of the internal training; the trainers and trainers; a summary on how the training was developed, and a summary of the feedback received from participants through the training evaluation/satisfaction form.
- **Training evaluation/satisfaction form.** This will be provided to participants at the end of the internal course. Each participant will have to answer the questions about the training received.

A3.1. Training report template

In order to report the implementation of the training to prepare the HEI staff to use the Inception and Outgrowing toolkit, the training report should include at least the following elements:

1. Date and place of the scale-up training
2. Planning of training
3. List of trainers
4. List of trainees
5. Development of the training
6. Photos and evidence
7. Scanned Training Evaluation/satisfaction Forms

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A3.2. Training evaluation/satisfaction form

This form is intended to provide feedback on the scale up training activity. Each participant is encouraged to fill out the form openly and return it to the training organiser.

Date:

Title and location of training:

Trainer/s:

Instructions: Indicate your level of agreement with the statements listed below:

1. The objectives of the training were clearly defined.

Strongly disagree 1 2 3 4 5 Strongly agree

2. Participation and interaction were encouraged.

Strongly disagree 1 2 3 4 5 Strongly agree

3. The topics covered were relevant to me.

Strongly disagree 1 2 3 4 5 Strongly agree

4. The content was organized and easy to follow.

Strongly disagree 1 2 3 4 5 Strongly agree

5. The materials distributed were helpful

Strongly disagree 1 2 3 4 5 Strongly agree

6. This training experience will be useful in my work.

Strongly disagree 1 2 3 4 5 Strongly agree

7. The trainer was knowledgeable about the training topics.

Strongly disagree 1 2 3 4 5 Strongly agree

8. The trainer was well prepared.

Strongly disagree 1 2 3 4 5 Strongly agree

9. Training objectives were met.

Strongly disagree 1 2 3 4 5 Strongly agree

10. The time allotted for the training was sufficient.

Strongly disagree 1 2 3 4 5 Strongly agree

11. The meeting room and facilities were adequate and comfortable.

Strongly disagree 1 2 3 4 5 Strongly agree

12. What did you like the most about this training?

----

13. What aspects of training could be improved?

----

14. How do you hope to change your practice as a result of this training?

----

15. What additional related trainings would you like to have in the future?

----

16. Share other comments or expand on previous responses here:

Thank you for your feedback!

A4. HEI assessment / evaluation tools

The working group constituted at each HEI will be responsible for the organisation of the HEI internal assessment or evaluation. This evaluation will be performed using the R&I LOOP toolkit and following the guidelines provided during the training. Evaluation involves the self-assessment and the follow-on activities described in this document, more specifically:

Assessment - Strategic Diagnosis:

- SWOT Analysis and TOWS Matrix (strategic development) – A4.1 and A4.2.
- 3XL Canvas (business model development) – A4.3
- R&I Loop Benchmark (optional/additional) – A4.6

Follow-on activities - Validation:

- Value Chain Analysis (strategy priorization) – A4.4
- Pyramid of Purpose (strategy execution) – A4.5

A4.1. SWOT Analysis template

Note: it is recommended to start with the external factors: (i) Threats (-); (ii) Opportunities (+); and afterwards, go to the internal factors (iii) Strengths (+); and (iv) Weaknesses (-).

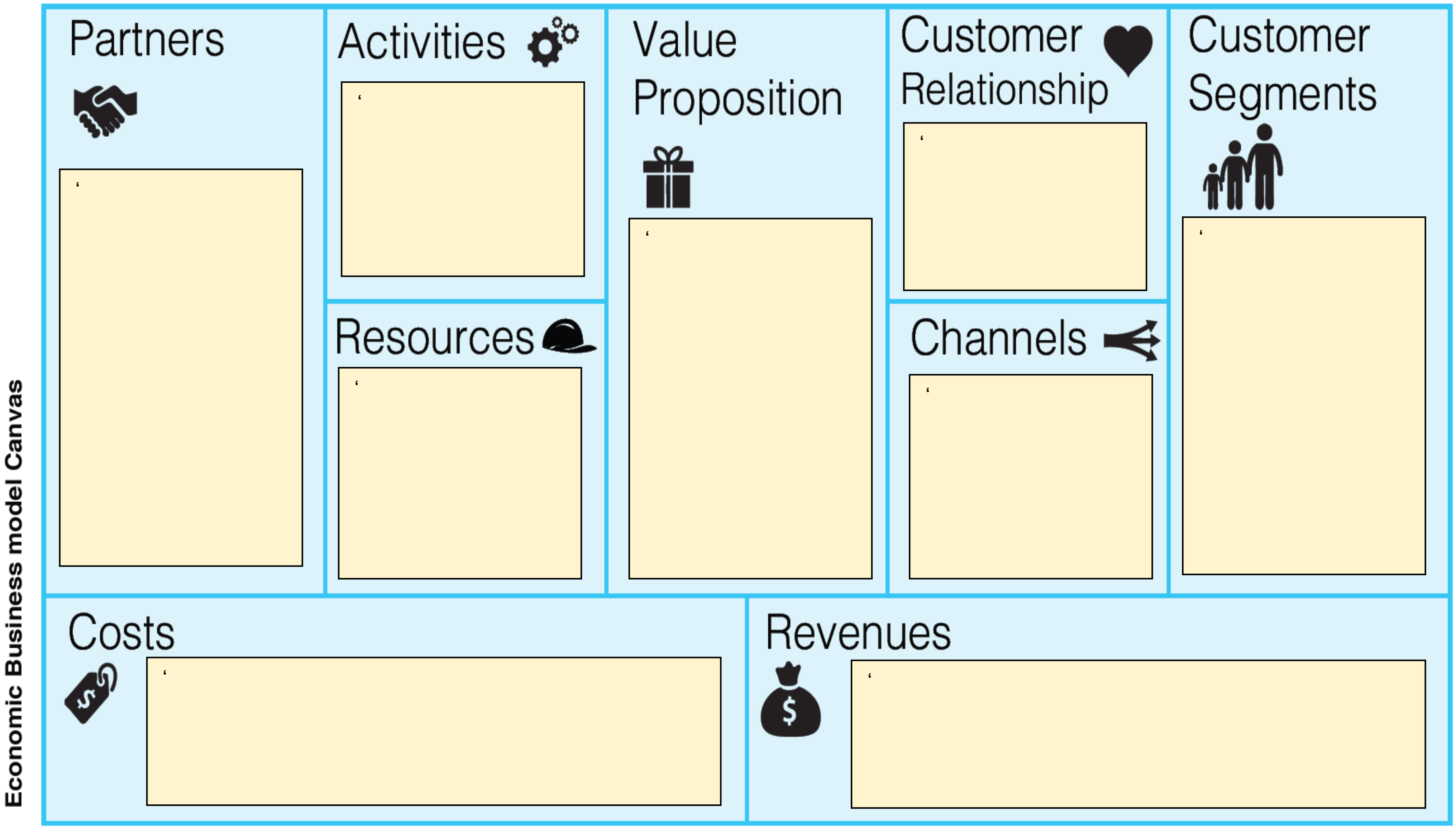
Threats What threats could harm you? What is your competition doing? What threats do your weaknesses expose you to?	**Opportunities** What opportunities are open to you? What trends could you take advantage of? How ca you turn your strengths into opportunities?
Strengths What do you do well? What unique resources can you draw on? What do others see as your strengths?	**Weaknesses** What could you improve? Where do you have fewer resources than others? What are others likely to see as weaknesses?

A4.2. TOWS Matrix template

Note: It is recommended to start with the external factors: (i) Threats (-); (ii) Opportunities (+); and afterwards, go to the internal factors (iii) Strengths (+); and (iv) Weaknesses (-).

	External Opportunities (O)	External Threats (T)
	1. 2. 3. 4.	1. 2. 3. 4.
Internal Strengths (S) 1. 2. 3. 4.	SO Maxi-Maxi Strategy	ST Maxi-Mini Strategy
Internal Weaknesses (W) 1. 2. 3. 4.	WO Mini-Maxi Strategy	WT Mini-Mini Strategy

A4.3. Templates for 3XL Canvas



Environmental Life Cycle Buiness model Canvas

Supplies and Out-sourcing	Production / Materials	Functional Value	End-of-Life / Distribution	Use Phase
	Production		End-of-Life	
	Materials		Distribution	

Environmental Impacts	Environmental Benefits

Triple layered business model canvas

Social Stakeholder Buiness model Canvas

Local Communities

Governance

Social Value

Societal Culture

End-User

Employees

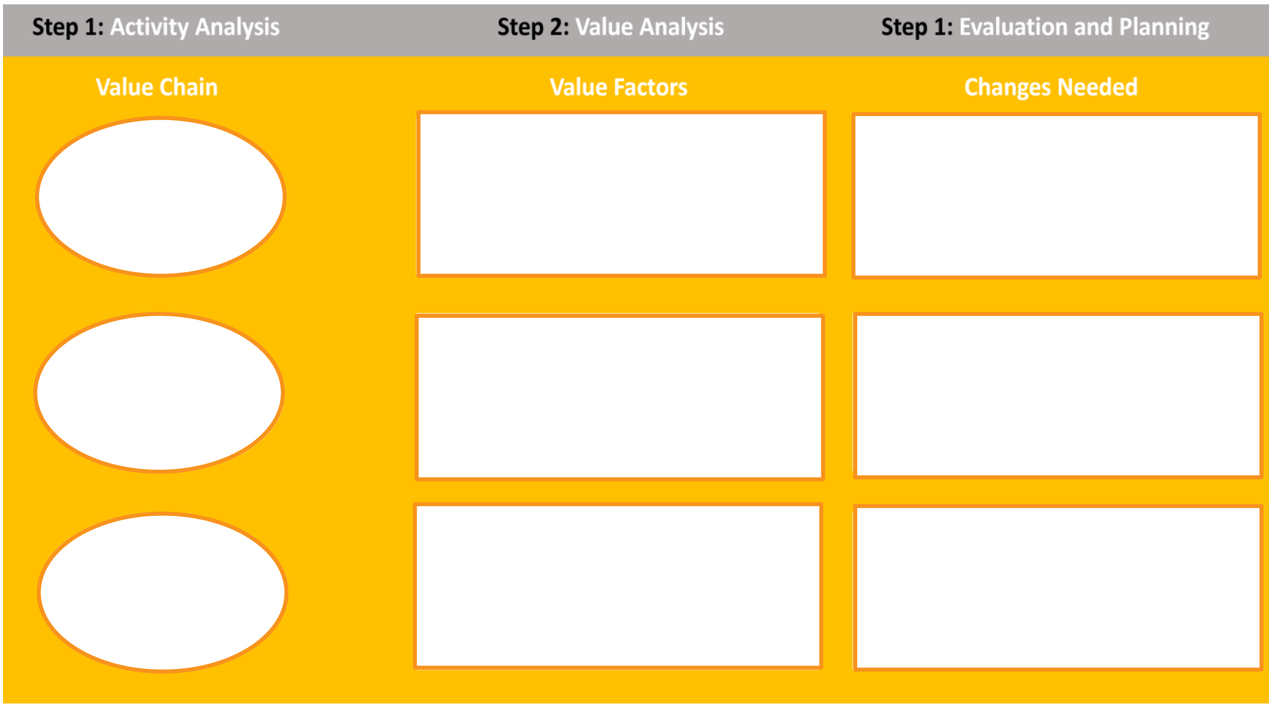
Scale of Outreach

Social Impacts

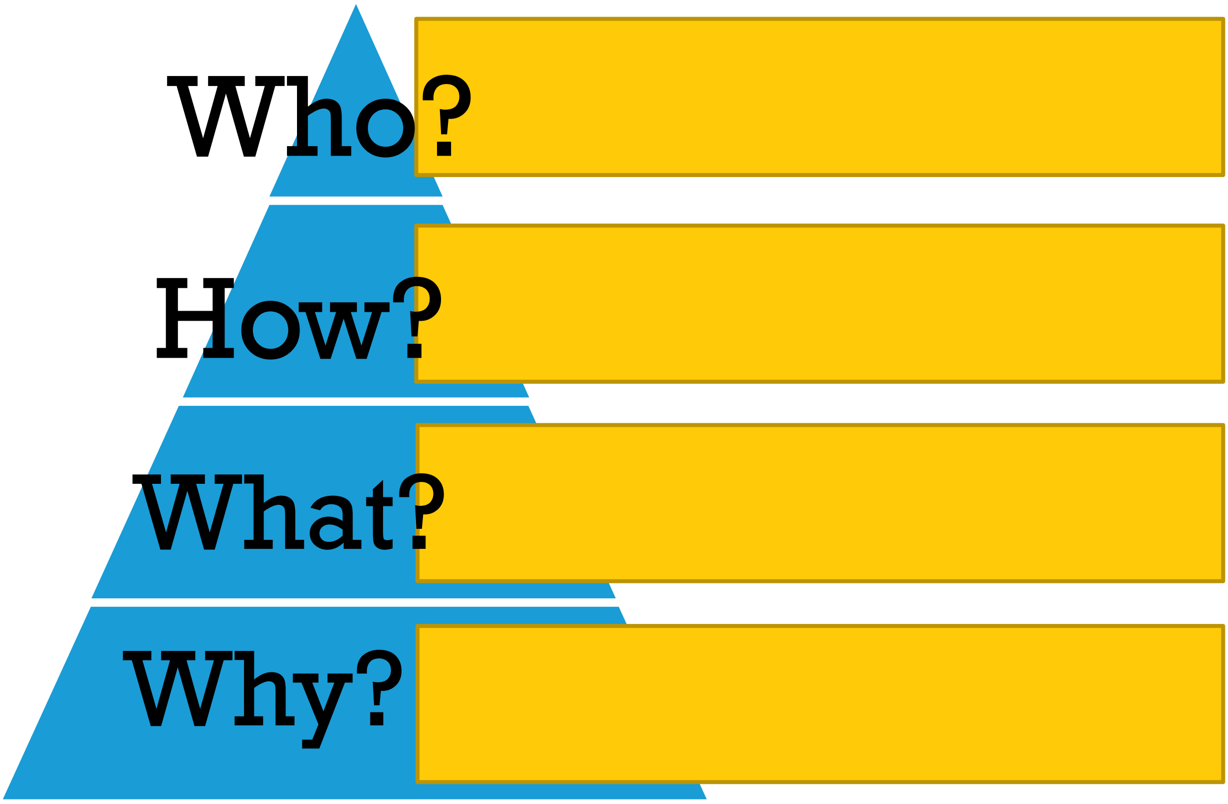
Social Benefits

A4.4. Value Chain Analysis template

Value Chain Analysis



A4.5. Pyramid of Purpose template



A4.6. Benchmark template and R&I Loop good practices

In order to perform these activities, the WG members should first consult the Good Practices developed by the R&I Loop project and available at the project website in this link.

After selecting 3 good practices, participants should complete the table below.

	Name of best practise	What is my organisation already performing of this practise? (see note)	What does my organisation need to adapt in order to implement this practise? (see note)	What are my HEI goals related to this practise? (see note)
1				
2				
3				

Other HEI Goals	

Note. Each of these 3 questions should be evaluated using a liker scale from 1 to 5 for a benchmark comparison, but also with descriptive text explaining the justification for the numerical value provided in the scale.

A5. Implementation of events

The WG should organize at least one event to promote a different positioning of HEIs. The event can be either a co-creation event or a science for all events. To help during the process, the project has prepared 2 templates:

- **Event report template**. This template can be used to report on the schedule and organisation of the event; the participants, a summary on how the event was developed, and a summary of the feedback received from participants through the event evaluation/satisfaction form.
- **Event evaluation form**. This will be provided to the participants at the end of the event.

A5.1. Event report template

In order to report an event, at least the following elements should be included:

1. Date and place of the event
2. List of Attendees
3. Agenda
4. Development of the event
5. Photos and evidence
6. Scanned event evaluation/satisfaction forms

A5.2. Event evaluation form

This form is intended to provide feedback about the implementation events (co-creation or science for all events). Each participant is encouraged to fill out the form openly and return it to the event organiser.

Date:

Title and location of the event:

Instructions: Indicate your level of agreement with the statements listed below:

1. The objectives of the event were clear.

Strongly disagree 1 2 3 4 5 Strongly agree

2. The issues on the agenda were consistent with the objectives

Strongly disagree 1 2 3 4 5 Strongly agree

3. How satisfied were you with the agenda of the event?

Not satisfied at all 1 2 3 4 5 extremely satisfied

4. How would you rate the knowledge of each speaker?

Very bad 1 2 3 4 5 Very good

5. How likely are you to recommend this event to a friend or colleague?

Not at all likely 1 2 3 4 5 extremely likely

6. How likely are you to attend this event again next year?

Not at all likely 1 2 3 4 5 extremely likely

7. How would you rate the value of this event?

Very bad 1 2 3 4 5 extremely good

8. How beneficial was the information presented at this event?

Not beneficial at all 1 2 3 4 5 extremely beneficial

9. How much will this event positively impact the execution of your job?

Not positively at all 1 2 3 4 5 extremely positively

10. All participants contributed to the success of the meeting.

Strongly disagree 1 2 3 4 5 Strongly agree

11. The opinions of all participants were taken into account in an equal and unbiased manner.

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Strongly disagree 1 2 3 4 5 Strongly agree

12. The meeting was useful in establishing good working relationships among the participants.

Strongly disagree 1 2 3 4 5 Strongly agree

13. The meeting met my expectations. Why or why not?

Strongly disagree 1 2 3 4 5 Strongly agree

----

14. The decisions taken are clear.

Strongly disagree 1 2 3 4 5 Strongly agree

15. Please share your thoughts on the event as a whole.

----

16. What was your favorite speaking session/performer/workshop?

----

17. Why did you choose to attend our event and what do you hoping to take away from the experience?

----

18. What was the highlight of this event? (What did you like the most about it?)

----

19. Are there any suggestions you have for next events?

A6. R&I Loop Impact Canvas

A6.1. Economic Layer Activities: Create, Do and Test

ITERATION N°:_______________

DATE:___/____/____

Is this your first "In-Progress Economic Canvas"? YES ☐ NO ☐

Time since the last In-Progress Canvas: ________________

Team in charge of developing this Layer:

____

ECONOMIC LAYER							
TOPIC	DOES THE CURRENT SITUATION MATCH THE TARGET ONE?	WHAT ACTIVITIES CAN BE IMPLEMENTED TO ACHIEVE THE GOAL? **(TO BE COMPLETED ONLY IS THE "NO" SQUARE HAS BEEN SELECTED IN THE PREVIOUS COLUMN)**	WHAT IS THE DEGREE OF IMPLEMENTATION OF THIS ACTIVITY? 5 being the highest value **(TO BE COMPLETED IN ITERATION NUMBER ☐)**				
			1	2	3	4	5
Partners	YES ☐ NO ☐						
Activities	YES ☐ NO ☐						
Resources	YES ☐ NO ☐						
Value Proposition	YES ☐ NO ☐						
Customer Relationship	YES ☐ NO ☐						
Channels	YES ☐ NO ☐						
Customer Segments	YES ☐ NO ☐						
Costs	YES ☐ NO ☐						
Revenues	YES ☐ NO ☐						

A6.2. Environmental Layer Activities: Create, Do and Test

ITERATION N°: ________________

DATE: ___/____/____

Is this your first "In-Progress Environmental Canvas"? YES ☐ NO ☐

Time since the last In-Progress Canvas: __________________

Team in charge of developing this Layer:

____

ECONOMIC LAYER							
TOPIC	DOES THE CURRENT SITUATION MATCH THE TARGET ONE?	WHAT ACTIVITIES CAN BE IMPLEMENTED TO ACHIEVE THE GOAL? **(TO BE COMPLETED ONLY IS THE "NO" SQUARE HAS BEEN SELECTED IN THE PREVIOUS COLUMN)**	WHAT IS THE DEGREE OF IMPLEMENTATION OF THIS ACTIVITY? 5 being the highest value **(TO BE COMPLETED IN ITERATION NUMBER ☐)**				
			1	2	3	4	5
Supplies and Out-Sourcing	YES ☐ NO ☐						
Production	YES ☐ NO ☐						
Materials	YES ☐ NO ☐						
Functional Value	YES ☐ NO ☐						
End-of-life	YES ☐ NO ☐						
Distribution	YES ☐ NO ☐						
Use Phase	YES ☐ NO ☐						
Environmental Impacts	YES ☐ NO ☐						
Environmental Benefits	YES ☐ NO ☐						

A6.3. Social Layer Activities: Create, Do and Test.

ITERATION N°: ________________

DATE: ___/____/____

Is this your first "In-Progress Social Canvas"? YES ☐ NO ☐

Time since the last In-Progress Canvas: _________________

Team in charge of developing this layer:

____

SOCIAL LAYER							
TOPIC	DOES THE CURRENT SITUATION MATCH THE TARGET ONE?	WHAT ACTIVITIES CAN BE IMPLEMENTED TO ACHIEVE THE GOAL? **(TO BE COMPLETED ONLY IS THE "NO" SQUARE HAS BEEN SELECTED IN THE PREVIOUS COLUMN)**	WHAT IS THE DEGREE OF IMPLEMENTATION OF THIS ACTIVITY? 5 being the highest value **(TO BE COMPLETED IN ITERATION NUMBER ☐)**				
			1	2	3	4	5
Local Communities	YES ☐ NO ☐						
Governance	YES ☐ NO ☐						
Employees	YES ☐ NO ☐						
Social Value	YES ☐ NO ☐						
Societal Culture	YES ☐ NO ☐						
Scale of Outreach	YES ☐ NO ☐						
End-User	YES ☐ NO ☐						
Social Impacts	YES ☐ NO ☐						
Social Benefits	YES ☐ NO ☐						

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