R²π

The route to
circular economy

Circular Business Model Innovation Toolkit

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Work Package 5

Deliverable 5.1

Contents

Introduction

R2π – Transition from Linear to Circular is a European Union Horizon 2020 project focused on enabling organisations and their value chains to transition towards more viable, sustainable and competitive economic models and supports the European Union's strategy on sustainability and competitiveness.

The ultimate objective of the R2π project is to accelerate the widespread implementation of a circular economy based on successful business models and effective policies:

· to ensure sustained economic development,

· to minimise environmental impact and
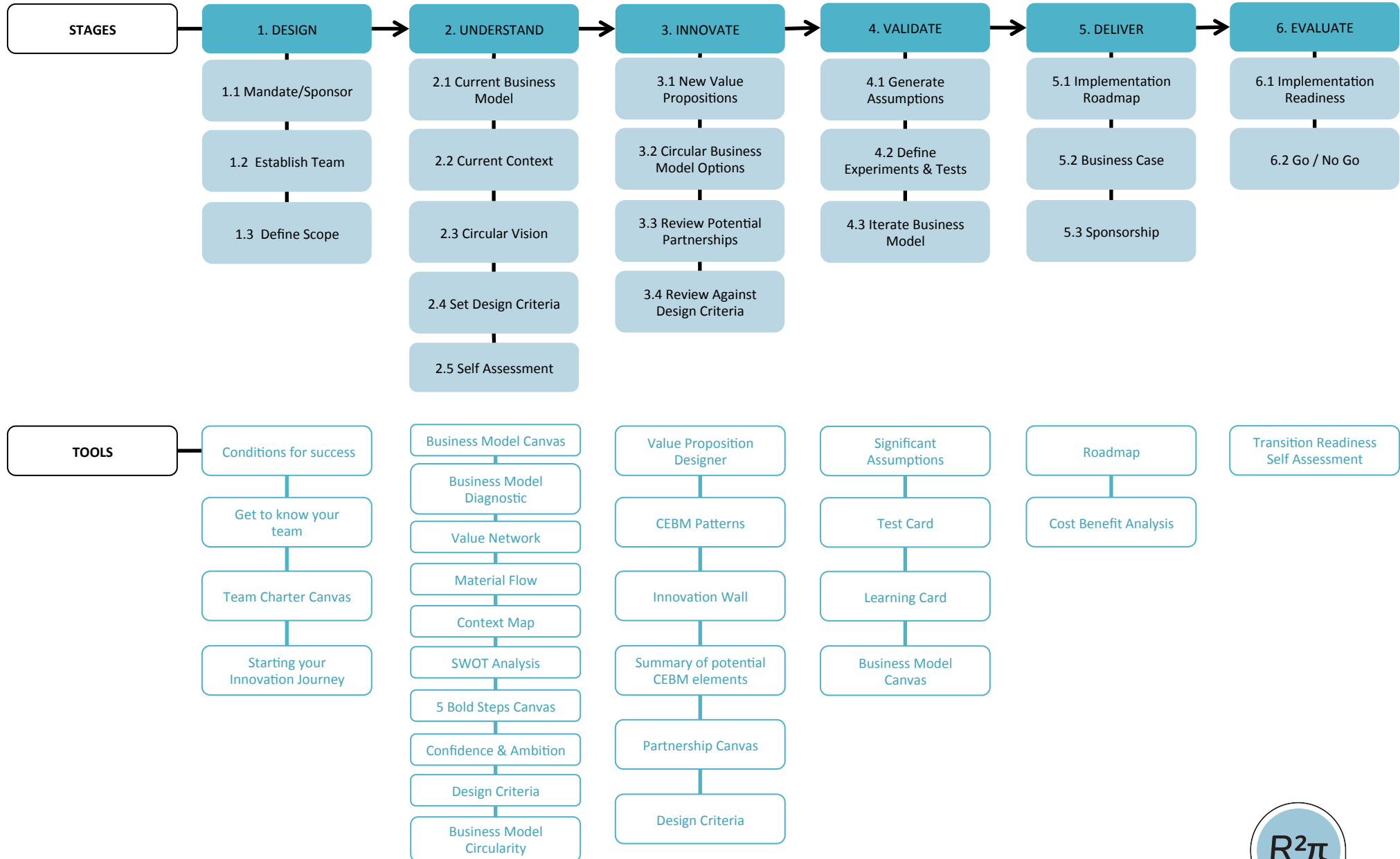
· to maximise social welfare

A core part of this project is to work with organisations who are already on the journey towards developing circular economy business models, as well as those who have the ambition to do so but have not yet begun. The project has conducted case studies with 21 selected organisations, their business models and their value chains.

The chosen cases cover all five priority areas highlighted in the EU Action Plan on the Circular Economy: plastics, food waste, biomass/bio-based, important raw materials, and construction & demolition, and additionally, the water sector. The cases were also selected to ensure learning in each of the seven business model patterns defined by the R2π project: re-make, re-condition, circular sourcing, co-product recovery, access, performance and resource recovery, and these will be shown in more detail in this report. To gather wide-ranging lessons from differing company sizes and maturities, the following were selected: 9 large corporations, 9 small, medium enterprises, 1 public entity, 1 public/private value chain with both government and corporate organisations and 1 ongoing social entity.

This Circular Business Model Innovation Toolkit presents the process, worksheets and tools that were selected and/or developed to aid organisations in analysing and innovating their business models to become more sustainable and circular. In the cases mentioned above, these tools were used, tested and developed into the process and toolkit contained here. Not all parts of the process nor all tools were used with every organisation, but the approach was customised based on the specific needs of each case. The intent of the toolkit is to support organisations that have an ambition to improve their business models towards sustainability and circularity in embarking upon and executing that innovation journey.

Circular Business Model Innovation Toolkit

STAGES

1. DESIGN	2. UNDERSTAND	3. INNOVATE	4. VALIDATE	5. DELIVER	6. EVALUATE
1.1 Mandate/Sponsor	2.1 Current Business Model	3.1 New Value Propositions	4.1 Generate Assumptions	5.1 Implementation Roadmap	6.1 Implementation Readiness
1.2 Establish Team	2.2 Current Context	3.2 Circular Business Model Options	4.2 Define Experiments & Tests	5.2 Business Case	6.2 Go / No Go
1.3 Define Scope	2.3 Circular Vision	3.3 Review Potential Partnerships	4.3 Iterate Business Model	5.3 Sponsorship	
	2.4 Set Design Criteria	3.4 Review Against Design Criteria			
	2.5 Self Assessment				

TOOLS

Conditions for success	Business Model Canvas	Value Proposition Designer	Significant Assumptions	Roadmap	Transition Readiness Self Assessment
Get to know your team	Business Model Diagnostic	CEBM Patterns	Test Card	Cost Benefit Analysis	
Team Charter Canvas	Value Network	Innovation Wall	Learning Card		
Starting your Innovation Journey	Material Flow	Summary of potential CEBM elements	Business Model Canvas		
	Context Map	Partnership Canvas			
	SWOT Analysis	Design Criteria			
	5 Bold Steps Canvas				
	Confidence & Ambition				
	Design Criteria				
	Business Model Circularity				

R²π The route to circular economy

1   Design

This is the first stage of the journey toward building a circular business model. The main aim of this stage is to establish whether the circular economy (CE) has any significant footholds in your organization. For your circular business model to be successful, you need to involve the right people from across the entire organization. Therefore, establishing the right team, evaluating their influence and competencies, and defining the roles they will play throughout different parts of your innovation journey needs to be your priority. Only then, you can start scoping out the projects. There are several tools that you can use to guide you through this process.

1.1 Mandate/Sponsor	1.2 Establish Team	1.3 Define Scope

1.1   Mandate / Sponsor

Before commencing an innovation journey, it is imperative to evaluate the organisation's circular ambition, the level of buy-in and support (i.e., are all business functions on-board?), degree of commitment (i.e., project level or organisation-wide transition?) and access to relevant resources, decision makers and stakeholders within the ecosystem.

1.1.1   Conditions for Success

Description
To evaluate the feasibility and the overall potential of the opportunity to transition, you first need to identify that you have the necessary conditions in place in order for a successful innovation journey.

Steps and Output
There are several questions that you need to ask yourself to understand at what level your CE ambition is mandated (i.e., who and what drives the CE in your organisation):

- Steps
    - **Step 1:** Answer in as much precise detail as possible, the series of questions provided. This will act as a diagnostic for how ready you are to embark on an innovation journey.

- Output
    - A clarity of vision and expectations
    - An understanding of the core values and motivation to change
    - An understanding of what level the ambition is mandated at and which stakeholders are on board

Figure 1 [Conditions for success. Source: R2Pi Project]

CONDITIONS FOR SUCCESS

1. Is there a clear ambition within the organization to improve value for people and planet with a profitable business model?

2. At what level is that mandated within the organization (e.g: C-suite; business unit; project level; individual)?

3. What evidence is there that the organization could allocate resource and sustain attention and focus for the entire business model innovation journey?

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 730378

Established by Whole Earth Futures   WEF

1.2   Establish Team

Innovation journeys can be long and complex, and therefore you need to define a core team & wider cohort that will participate in each stage of this journey. The core team will likely consist of the decision makers and senior representatives of the organisation. The wider cohort needs to include a range of managers and employees to ensure full coverage and proliferation through every relevant department. This will ensure that every aspect of the business is being considered while working toward a new (circular) business model. Once the team is established, the following tools can be used to give context to everyone and help them understand their role in this whole process.

1.2.1   Get To Know Your Team

Description

To achieve the needed impact and proliferation, it is imperative to involve people from multiple departments and across diverse functions. This might mean that the members of the implementation team might not be so familiar with their colleagues from different departments. 'Get to know your team' allows the CE team to better understand each other (e.g., background, competencies, struggles and expertise within the company) and lead to more effective and fruitful collaboration with less unnecessary friction.

Steps and Output

- Steps
  - o **Step 1:** Each team member is required to fill out a sheet, prior to or at the beginning of the 'understand' phase
  - o **Step 2:** The documents can be stored in a local, shared area online and/or displayed on a wall within a shared working space

- Output
  - o Allows everyone access to and clarity of the range of skills and contacts available within an organisation, so that they can assess who to leverage for specific tasks during this circular innovation journey

Figure 2 [Get to know your team. Source: Inspired by IDEO and developed by Whole Earth Futures]

GET TO KNOW YOUR TEAM

WHOLE EARTH FUTURES
WEF

NAME:

HOW I CAN CONTRIBUTE:
What skills and background knowledge do you possess that you think will be useful during this transformation journey?

WHAT I WANT TO LEARN:
What areas do you have most interest in learning and developing skills during this transformation journey?

www.wholeearthfutures.com   Designed by Whole Earth Futures, inspired by original from IDEO

1.2.2   Team Charter Canvas

Description

A team charter will help you create a blueprint for the engine behind a project: a well-balanced team. As a co-created document, the team charter will help clarify the team's direction.

Steps and Output

- Steps
  - o **Step 1:** Quick introduction from everyone in the team and where they'd like to be "on the bus" e.g in the driver's seat, steering the project? The 'Get to know your team' completed in the previous stage provides a foundation for establishing these roles
  - o **Step 2:** All team members individually write on post-it notes (1 idea per post-it) what their expectations are (max 3), what they see as obstacles (max 3), their 1 most important value, and what will give them energy. Also each should write down the most important value they want to add to the group. Follow this with discussion to elaborate on and reach some preliminary common understanding of these expectations and obstacles
  - o **Step 3:** Identify common themes! Cluster similar post-it notes to identify any overarching themes and label as such
  - o **Step 4:** Lastly, based on these overarching themes, establish a maximum of 3 shared goals that every team member subscribe to and agree with. These goals need to be relevant for every team member to increase their buy-in and commitment. In other words, everyone needs to see how they can contribute to achieving these goals – these roles needs to be clearly defined

- Output
  - o Clarity and coherency of shared goals and everyone's role within the project

Figure 3 [Team Charter Canvas. Source: Design a Better Business]
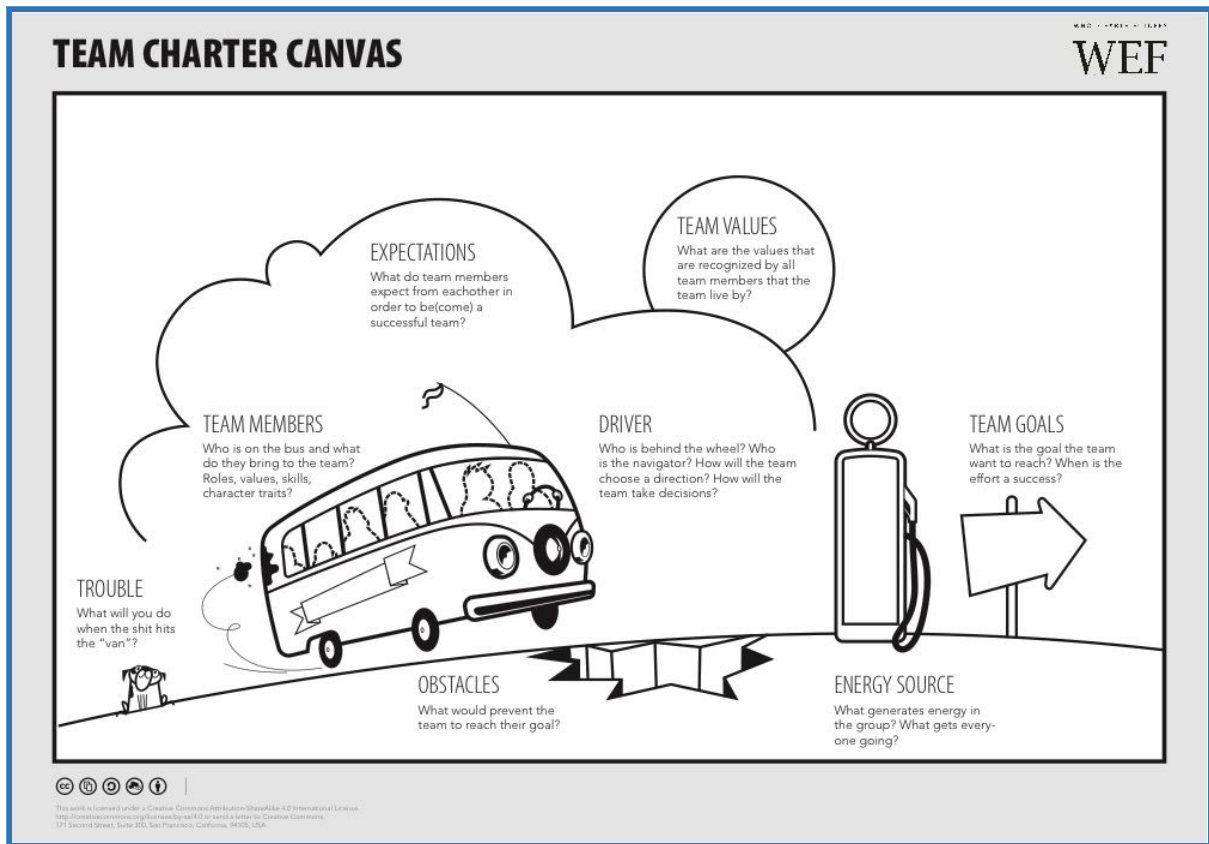
1.3   Define Scope

After understanding the mandate and core supporters of CE within your organisation, and establishing the implementation team – before progressing to the next stage – you need to define the scope for your circular business model innovation journey.

There needs to be a shared understanding of what your organisation's current situation is, what your reasons are for wanting to change and what are the overall goals that can help you in creating a bigger picture.

1.3.1   Starting the innovation journey

Description
This is a tool that allows for synthesis of the key elements driving this innovation journey forward.

Steps and Output
Based on primary discussion with your chosen core team, complete each section of the canvas in the following order. This acts as an initial overview but elements of the canvas will be delved into

deeper, during the innovation journey. It may become apparent upon further investigation in later stages, that your learnings deviate from your initial thoughts:

- Steps
    - **Step 1: Circular Ambition:** What is your long-term ambition to improve value for people, planet & prosperity?
    - **Step 2: Sponsor / Key Supporters:** Who are the crucial people to drive this transformation?
    - **Step 3: Key Goals:** What are your main objectives in the short-term for this journey?
    - **Step 4: Key Strengths:** What do you believe are the top strengths within your current business model?
    - **Step 5: Key Opportunities:** What do you think are your top potential opportunities within your current context?

- Output
    - A plain sight view and broad understanding of your overall drivers for the innovation journey and a basic insight of elements to routes that can be explored throughout the following stages.

Figure 4 [Starting the Innovation Journey. Source: R2Pi Project]
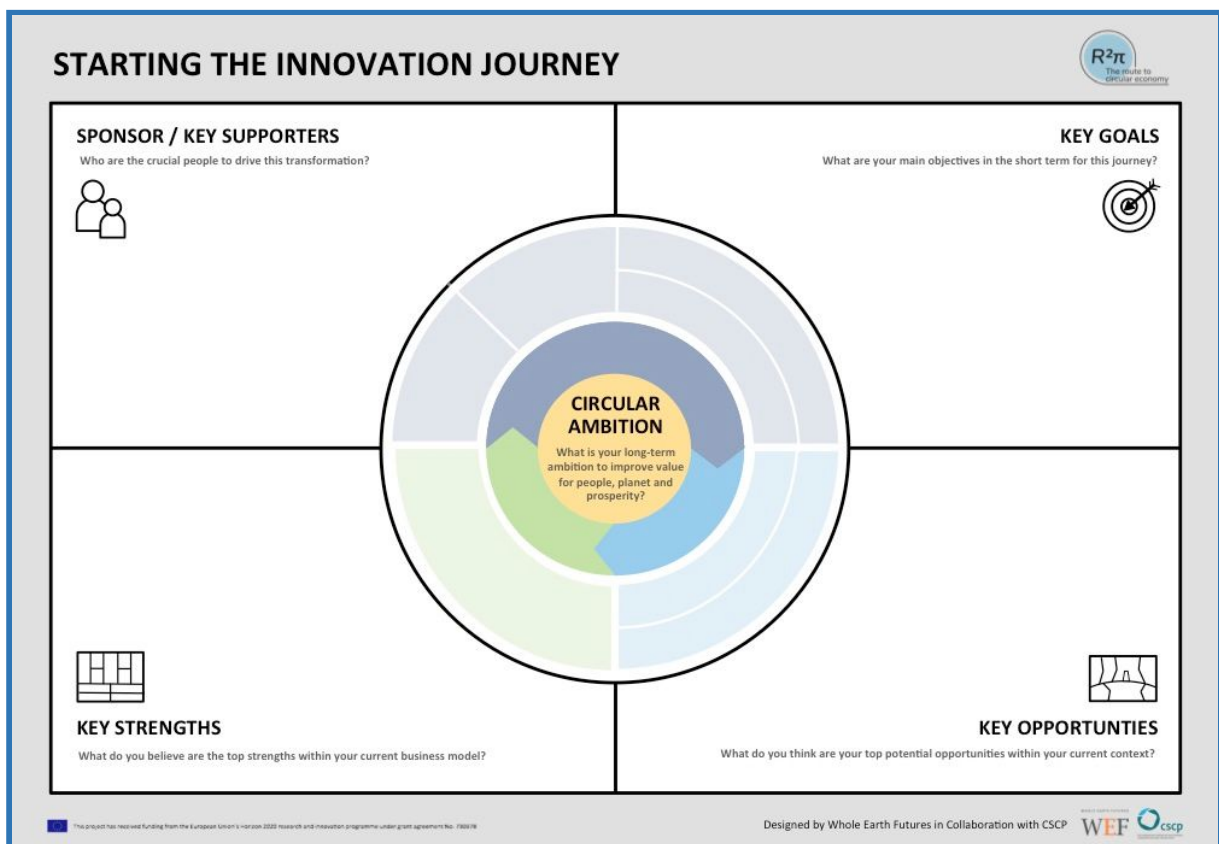
2   Understand

Before establishing your future vision and CE ambition for your business, it is imperative to establish your starting point. Therefore, firstly you need to get a clear view of what is happening in the world around you – your business context. For instance, you need to understand the impact that changes in customer needs, demographics or technology can have on your future business. Your business model exists precisely within this context and as such, it is under its immediate influence. Therefore, your second task is to understand your current business model, its core strengths and weaknesses and evaluate how well these are aligned with your current context.

2.1 Current Business Model	2.2 Current Context	2.3 Circular Vision
2.4 Set Design Criteria	2.5 Self Assessment	
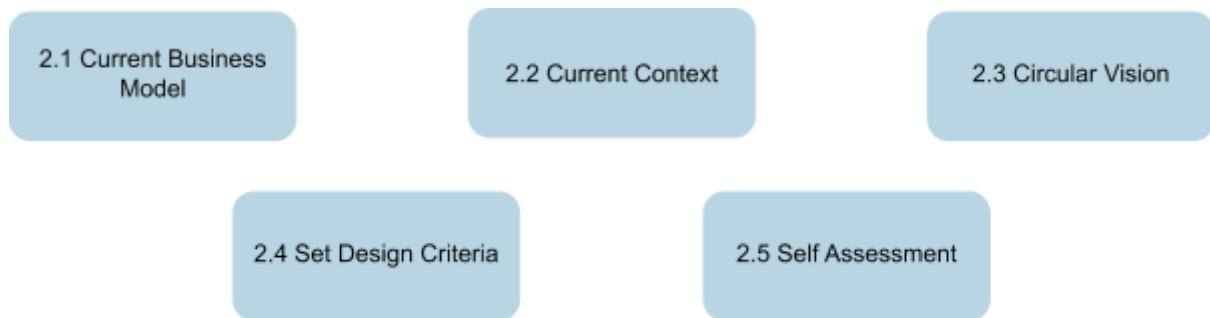
2.1   Current Business Model

This stage is designed to document the current state of your business by breaking down all activities into 9 digestible building blocks. This provides an overarching view of all aspects of your current business.

2.1.1   Business Model Canvas

Description

The business model canvas is a shared language for describing, visualising, assessing and changing business models. It describes the rationale of how an organisation creates, delivers and captures value. This adaptation adds a special focus on social and environmental costs and benefits to highlight the importance of sustainability and circularity in providing value also, to people and planet.

Steps and Output

It is important that the canvas is completed, one section at a time, in the following order:

- Steps
    - **Step 1: Customer Segments:** Who are your customers? List at least your top three segments. Look for the segments that provide the most revenue.
    - **Step 2: Value Propositions:** What are your products and services? What is the job you get done for your customer?

- o **Step 3: Revenue Streams:** List your top three revenue streams. If you do things for free, add them here too.
- o **Step 4: Channels:** How do you communicate with your customers? How do you deliver the value proposition?
- o **Step 5: Customer Relationships:** How does this show up and how do you maintain the relationship?
- o **Step 6: Key Activities:** What do you do every day to run your business model?
- o **Step 7: Key Resources:** The people, knowledge, means, and money you need to run your business.
- o **Step 8: Key Partners:** List the partners that you can't do business without (not suppliers).
- o **Step 9: Cost Structure:** List your top costs by looking at activities and resources.
- o **Step 10: Social and Environmental Positives:** What are the key positive impacts that you have on people and planet?
- o **Step 11: Social and Environmental Negatives:** What are the key negative impacts that you have on people and planet?

- ● Output
  - o Clear and common understanding of the current state business model. This will give a clear view of the resources available when considering Value Network and your **Current Context in 2.2**

Figure 5 [Business Model Canvas. Source: Adapted by R2Pi from the original by Alexander Osterwalder of Strategyzer.]
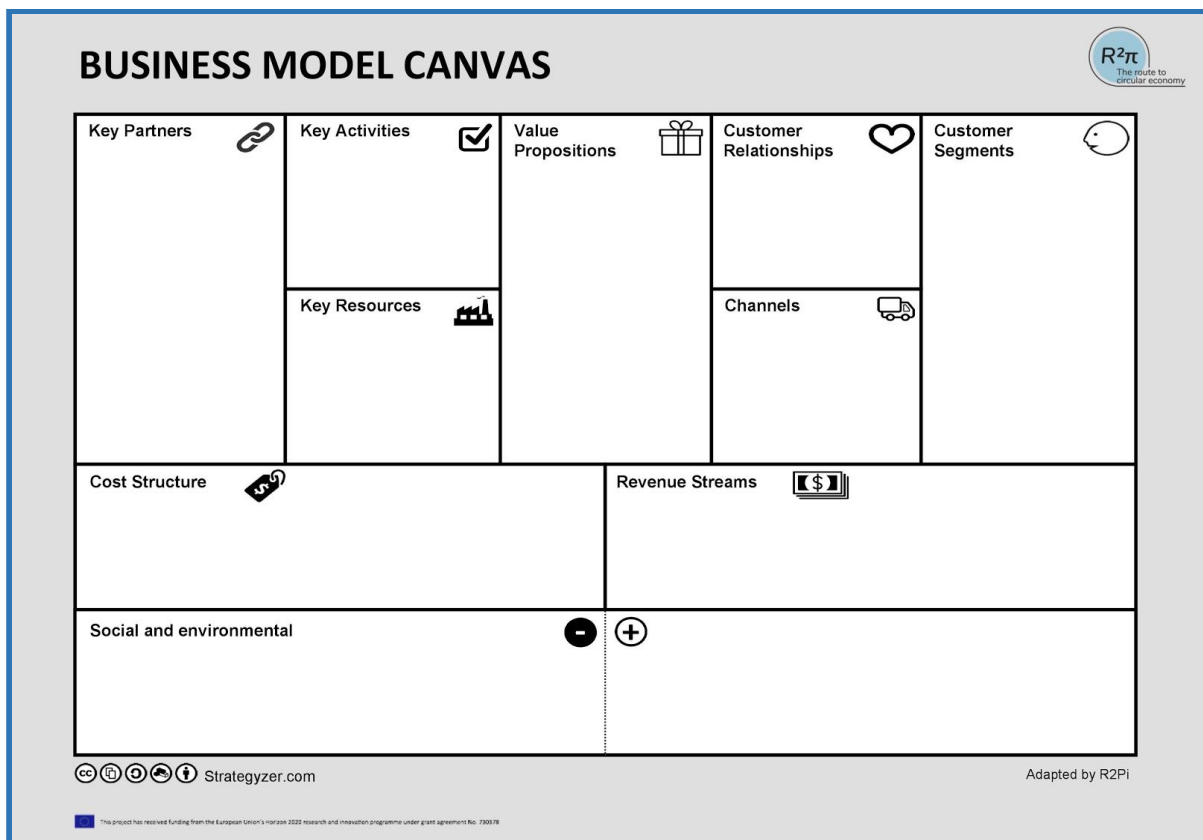
2.1.2 Strengths & Weaknesses

Description

Developed as part of the WP3 Methodology, drawing inspiration from the previously tested project tool in H2020's Maribe Project – this tool allows you to focus on the core aspects of your business and consider.

Steps and Output

Questions on the tool are respectively split into the 9 existing building blocks of the Business Model Canvas. In relation to each question:

- Steps
  - **Step 1:** Assess the respective building block on your current business model and score on the template (on a scale of 1-5), whether you think this aspect of your business as usual is weak (1) or strong (5).
  - **Step 2:** Reviewing the completed template, identify what you believe to be the top 2 strengths and top 2 weaknesses within the canvas. Apply to **SWOT Analysis** see end of **2.2**

- Output
  - Clarity of strengths to be utilised and weaknesses to be improved on in your current business model with focus on the top 2 of each.

Figure 6 [Excerpt from Business Model Strengths & Weaknesses. Source: Maribe Project; R2Pi Project. Link to downloadable excel file provided in 'Reference']

		N/A	1	2
	Weaknesses			
Value Proposition				
	Our value proposition leaves significant customer segments' needs unmet			
	Customer satisfaction is low			
	Our value proposition has no network effects			
	Our charging and pricing models don't meet customer needs and expectations			
	We do not capture 'sustainability value' created for customers			
Cost/Revenue				
Margins	Our margins are low compared with competitors			
Revenues	Our revenues are unpredictable			
	Each sale requires additional effort			
	We earn no revenue before incurring costs of goods/services sold			
Costs	Our costs are unpredictable			
	Our product cost structure is substantially higher than that of competitors			
	Our service cost structure is substantially higher than that of competitors			
	Our cost structue has low economies of scale			
	Our cost structure is asset-heavy and costs are mainly fixed			
	Our cost to serve customers is misaligned with customer segments			
Operating Model				
Key Activities	Our key activities can be easily copied by competitors			
	Our key activities need significant investment in order to scale with growth			
	Our key activities do not fulfil the core competencies we need			
	Our key activities poorly support circular economy within our business model			
Key Resources	Our key resources do not meet the needs of our business model			
	Our key resources poorly support circular economy in our business model			

2.1.3 Value Network Mapping

Description

Companies cannot work in isolation to enable circular economy models. This requires suppliers, partners, customers, and other organisations along the value chain to collaborate directly or indirectly. These relationships all involve an exchange of value (financial or non-financial).

Please see **Stage 3: Circular Economy Business Model (CEBM) Patterns** for reference to the terminology of different types of material flow.

Steps and Output

- Steps
  - Step 1: Discuss and map out the flow of key materials which relate to the value proposition and business model being examined in the case study.
  - Step 2: Discuss and map out the relationships among key players which influence the material flow and the nature of the relationship in terms of value being exchanged. The 'value mapping' will be done from the perspective of economic/financial value as well as social and environmental value.
- Output
  - Clarity on how material and value is currently flowing as well as a better understanding of the key relationships necessary to enable more circular flows.

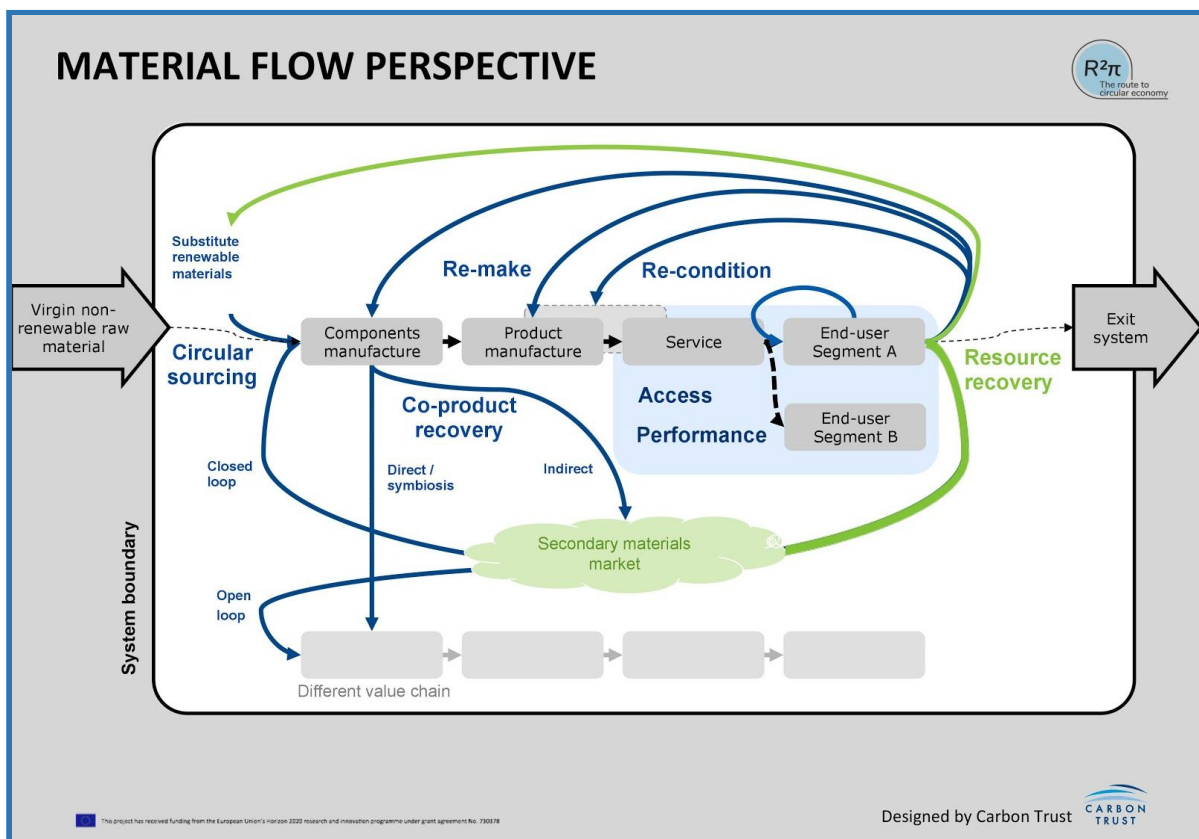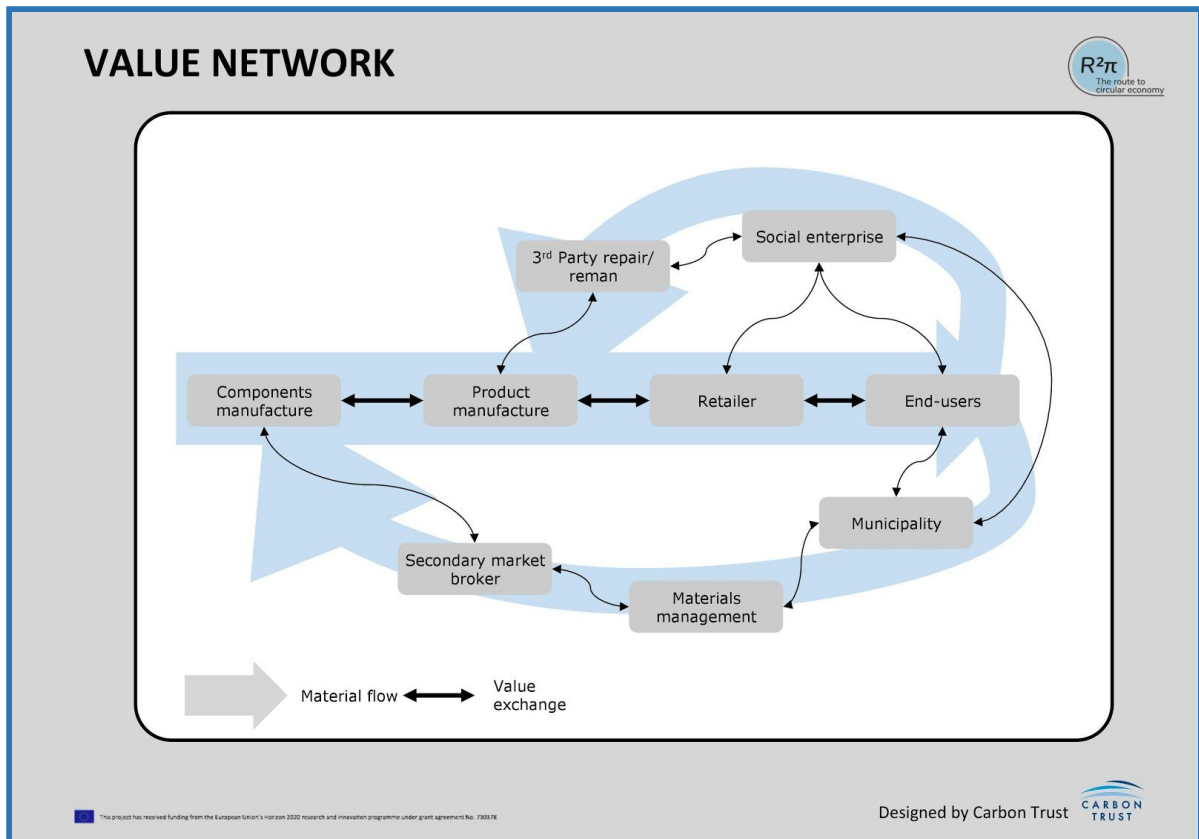*Figure 7 [Material Flow. Source: R2Pi Project]*

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 730378

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Figure 8 [Value Network. Source: R2Pi Project]

2.2 Current Context

Before diving straight into creating new business models, you need to have a good understanding of the existing context in which you operate (i.e., broader market, value networks, industry or economy). Your business model does not exist in a vacuum and as such is shaped and influenced by a myriad of external factors. By mapping out the current trends (i.e., factors that affect your business now), you can predict future ones with more accuracy. Context mapping will help you to look for drivers outside of your own organisation and identify the forces that (could) shape your business now and in the future.

2.2.1 Context Map

Description

When most teams begin to unpack the context of their product or organisation, they take a myopic point of view that is rooted in the here and now. The Context Canvas® is meant to help you and your team expand your thinking beyond the boundaries of your product and organisation, to have a deeper conversation about what's going on in the world and what's changing that will affect your business in the future.

Steps and Output

- Steps
    - **Step 1: Your Company:** Your own company or organisation stands in the centre of the image.
    - **Step 2: Demographic Trends:** Look for data on the demographics, education level, employment situation. What are the big changes in these areas?
    - **Step 3: Rules & Regulations:** What policies, rules, and regulations do you think will be applied in the (near) future? What is the government up to? Any new taxes?
    - **Step 4: Economy & Environment:** What is happening in the economy? And what is going on in the larger environment? Are there economic trends that will impact your business? Do you think climate change will have an impact?
    - **Step 5: Competition:** What about the competition? Take the time to find the unexpected competition. Are there new entries? Competition coming from unexpected sources?
    - **Step 6: Technology Trends:** What new technological trends do you see emerging that will impact your business?
    - **Step 7: Customer Needs:** How will the customer needs change in the future? Do you see new trends? Do you see any big shifts in customer behavior? Are there new trends going mainstream?
    - **Step 8: Uncertainties:** Do you see any important uncertainties? Things that potentially have a huge impact but it is unclear how or when?
    - **Step 9: Opportunities & Threats:** Reviewing the completed canvas, individually identify (1 idea per post-it) what you believe to be the top 2 opportunities and top 2 threats within the canvas. Apply to **SWOT Analysis** see end of **2.2**

- Output
    - Clear and common understanding of the current context that surrounds your business model, it's greatest opportunities to be harnessed and it's greatest threats to take into consideration moving forward.

Figure 9 [Context Map. Source: Design a Better Business adaptation of original by David Sibbet of the Grove International]
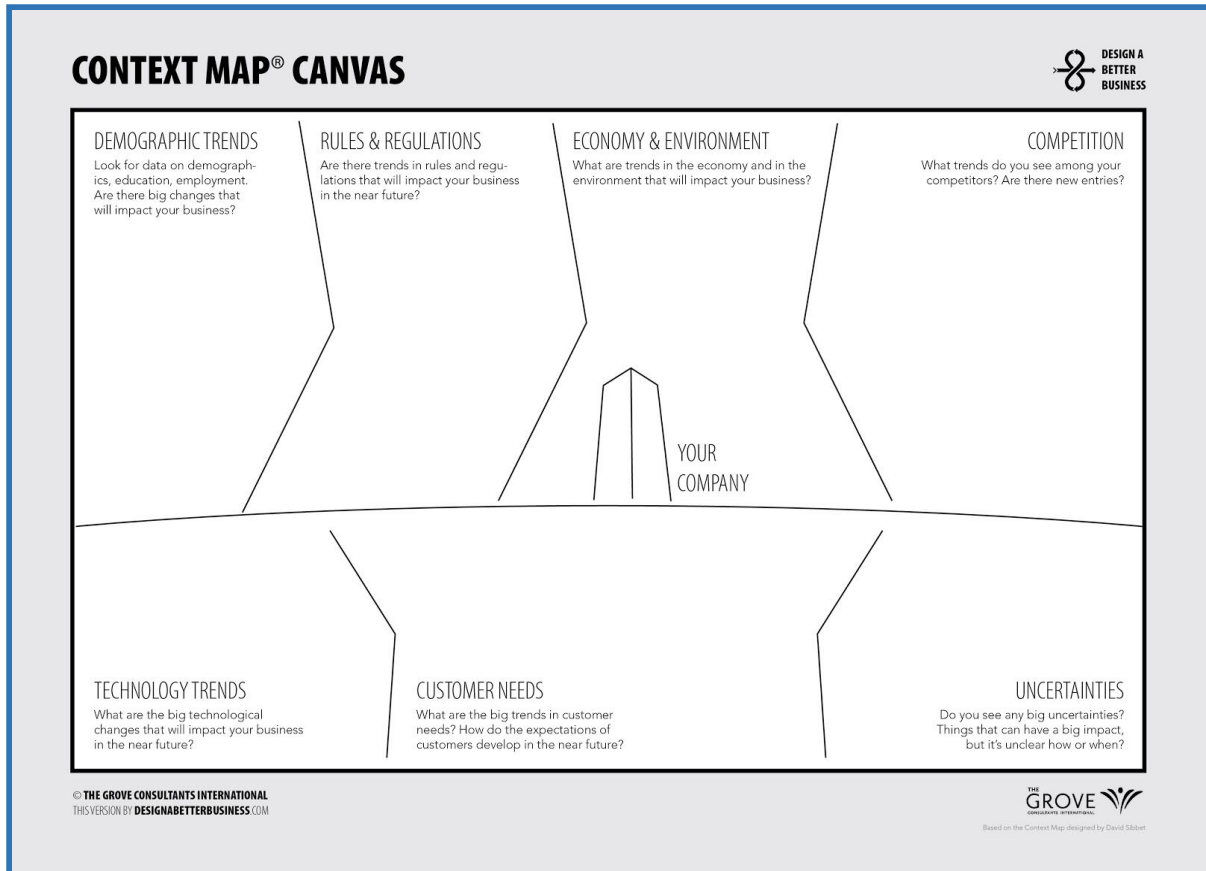
2.2.2 SWOT Analysis

Description

This section contains an analysis of the Strengths, Weaknesses, Opportunities and Threats (SWOT) associated with the current business model. As is customary in SWOT analysis, the Strengths and Weaknesses are *internal* to the case organisation's business model. Whereas, the Opportunities and Threats are *external* to the case organisation, coming from the context in which they operate (exemplified in the diagram above**)**.

Steps and Output

- Steps
    - Step 1: Having identified Strengths & Weaknesses within your current business model **See 2.1 Current Business Model: Strengths and Weaknesses** and Opportunities & Threats within your current context **See 2.2 Current Context: Step 9**, place them in the appropriate section of the SWOT analysis template to map out your internal and external, barriers and enablers to circularity.

- Output
  - Common understanding of the factors important to this business model as well as potential for improvements in future state business models.

Figure 10 [SWOT Analysis. Source: R2Pi Project]
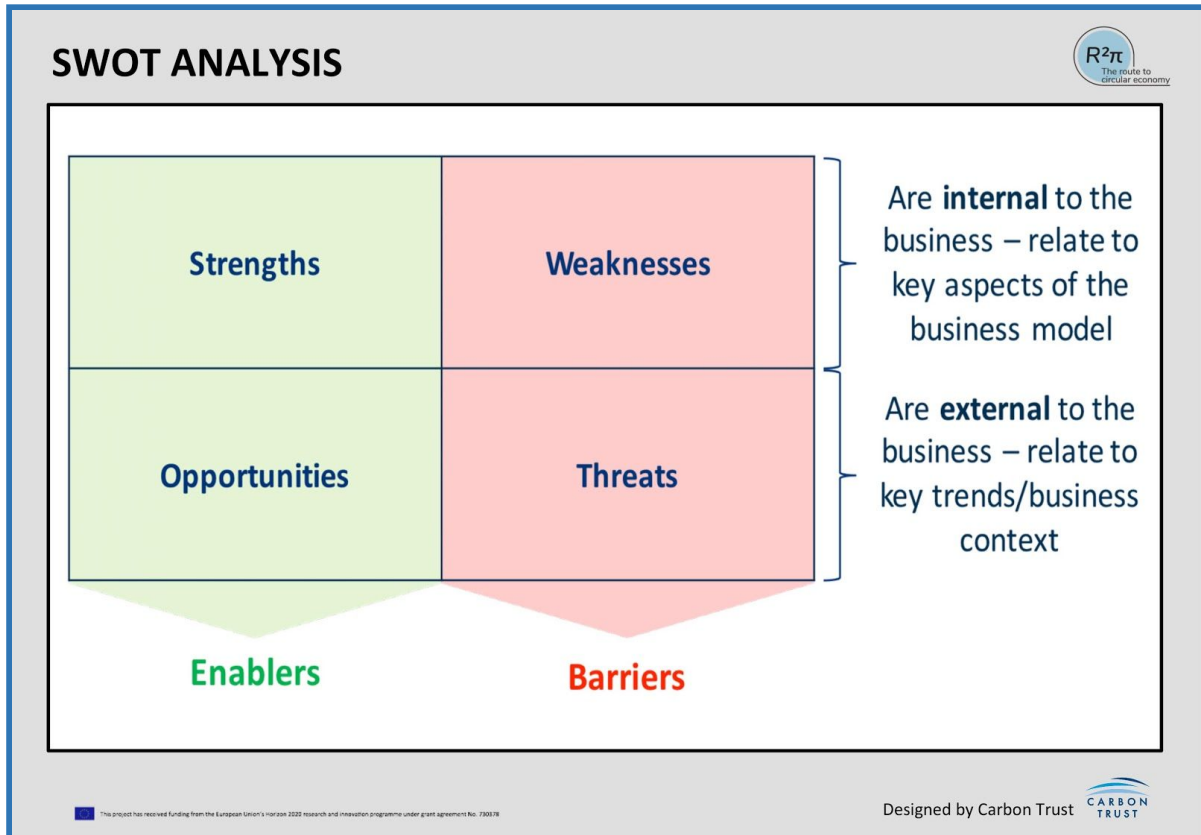
2.3   Circular Vision

Equally, as it is important to know where you are starting from, you need to know where you are going. Therefore, you need to establish a circular vision so that your organisation has a clear direction of travel (i.e., integrated with core principles of a circular economy). A clear vision brings focus and provides an anchor point for making bold strategic choices. It drives the search for new circular business models. Clear and compelling circular vision provides direction in everything your organisation does moving forward.

2.3.1   5 Bold Steps Vision Canvas

Description

The vision canvas will help you co-design the vision as well as the 5 bold steps to achieve that vision. Additionally, using this tool, your team will be able to clarify what supports your vision, what challenges your vision, and what opportunities are created in working toward your vision. Best of all, the vision canvas will help you derive design criteria for your business model(s) and strategy.

Steps and Output

It's important that the canvas is completed, one section at a time, in the following order:

- Steps
  - **Step 1: Vision Statement:** What's your guiding circular vision? Your north star that you're going to aim towards at all times.
  - **Step 2: Essential Themes:** What are the essential themes supporting your vision? Describe them in 1 or 2 single words.
  - **Step 3: How it shows up:** How will the themes show up in your company? How will they make the vision themes concrete and how will they inspire others?
  - **Step 4: Supports:** What are the supports that enable you to reach your future?
  - **Step 5: Challenges:** What are the challenges that could potentially hinder you from reaching your future?
  - **Step 6: 5 Bold Steps:** What are the 5 bold steps to take in order to achieve your circular vision?
  - **Step 7: Key Values:** What are the crucial values that form the foundation for your vision and steps? How can you align those values?

- Output
  - A clear vision and 5 concrete steps for you to take, that will get your company closer to the envisioned 'north star.'

Figure 11 [5 Bold Steps Canvas. Source: Design a Better Business adaptation of original by David Sibbet of the Grove International]

5 BOLD STEPS VISION® CANVAS

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 730378

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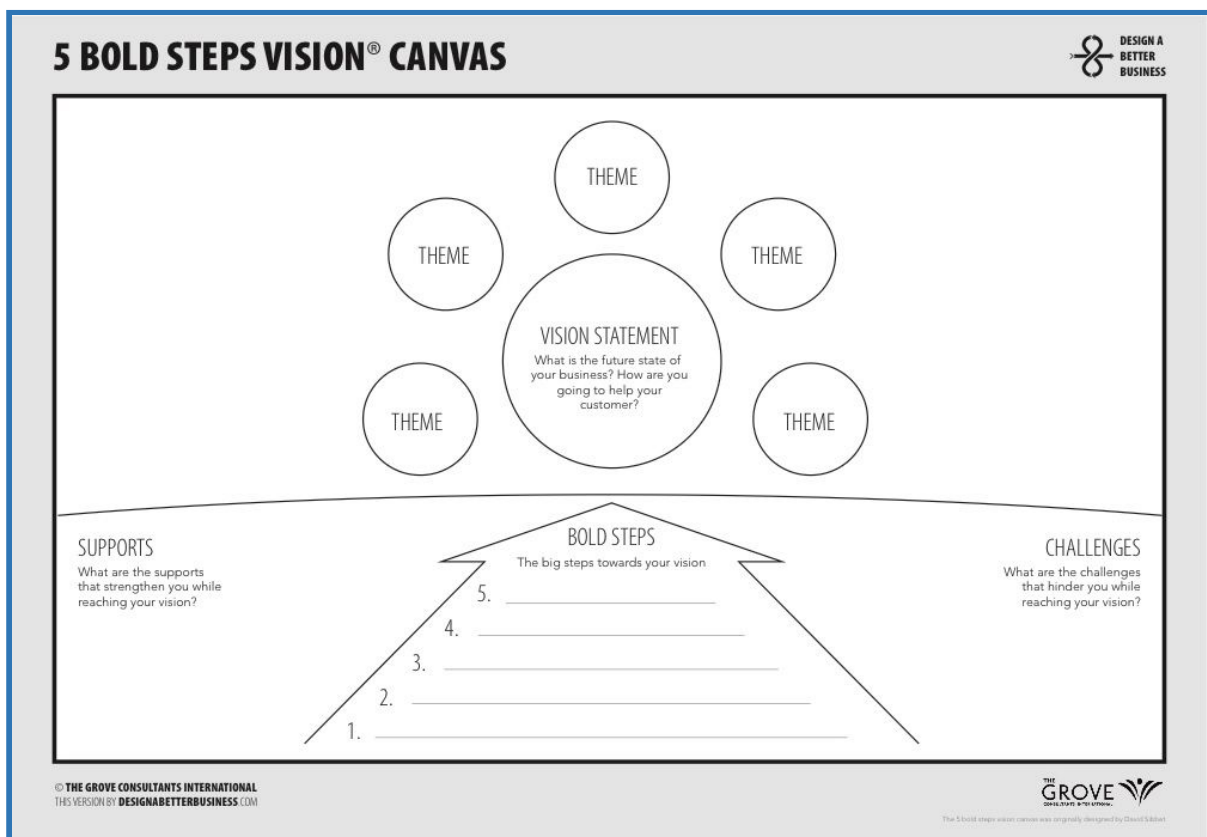
2.3.2   Confidence & Ambition Level

Description
This simple template is used to grade how ambitious you believe your circular vision is and how confident you are in that vision. Completing this as a team, identifies how aligned everyone's thoughts are surrounding the vision and whether or not there's reason for further discussion.

Steps and Output

- Steps
    - **Step 1:** Using coloured sticker dots or simply writing their initials straight onto the canvas, each team member notes on the canvas, where they believe their collective vision scores in relation to confidence and ambition.

- Output
    - Clarity and evidence of whether or not your team are aligned on your (circular) vision.
    - A view of whether or not your (circular) vision is ambitious enough, as per popular consensus
    - A view of how confident your team are, that you can achieve this (circular) vision and perhaps identifies whether you need to work to get your team on board or reconsider *why* your team might not be confident

Figure 12 [Confidence and Ambition Level. Source: Whole Earth Futures]
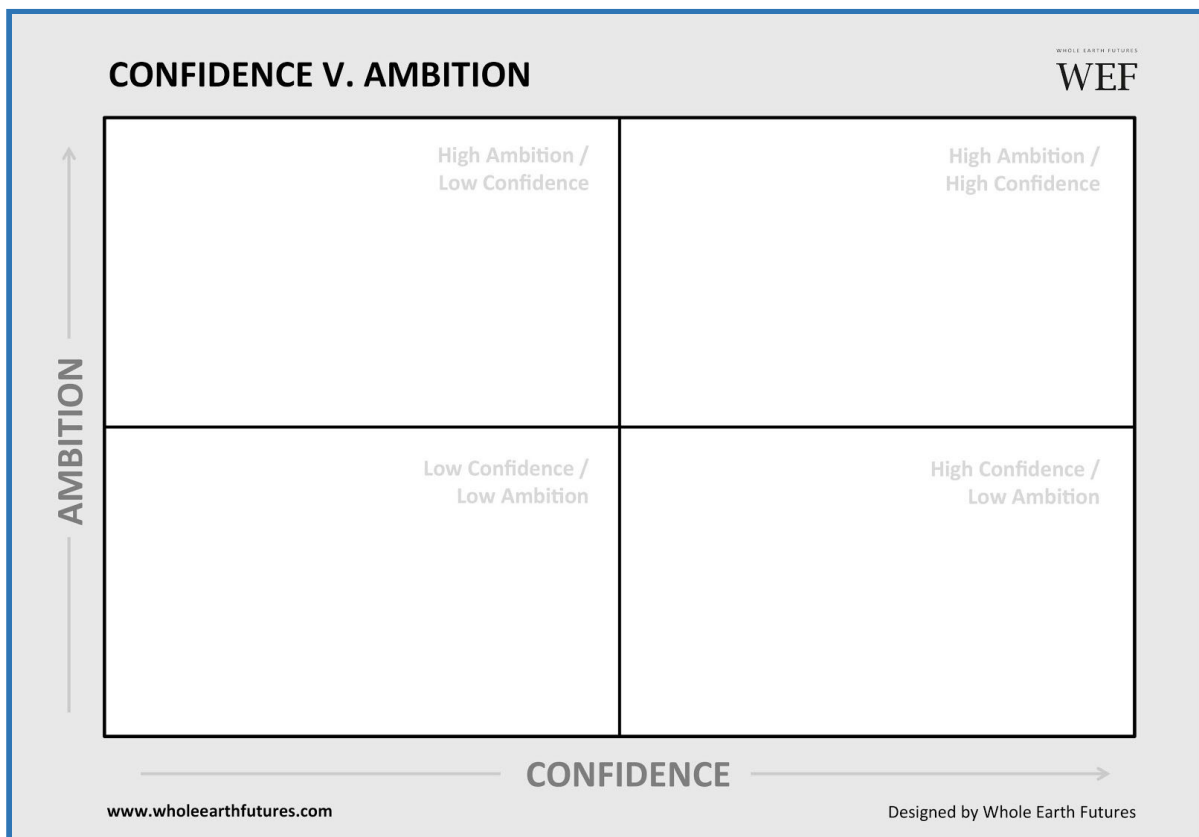
2.4 Set Design Criteria

The various outputs from the business modeling, context mapping, and circular vision setting exercises will inform your design criteria. This helps to provide clarity and focus in playing to strengths in your business model or addressing weaknesses. Equally, what are the important and relevant contextual trends that inform your design of future state business models? The direction of travel, boldness and ambition levels indicated by your vision will also flavour your design criteria and help you understand what must be, should be, could be and won't be part of your future state circular business model design.

This is also an opportune point to review the circular business model patterns and select which one(s) you believe should/could be designed into your new business model as your current state has proven potential for these types of circular activities. **See Stage 3: Circular Economy Business Model (CEBM) Patterns for reference**.

2.4.1 Design Criteria Canvas

Description

The design criteria you capture will likely first come from the vision you've formulated with your team. You'll find that some of the elements in that vision are so important that they are non-negotiable. Yes, that also means that some elements are a bit more flexible (maybe not totally flexible). To find the most important elements in your vision, use the "MoSCoW" method: categorize every element under "Must," "Should," "Could," or "Won't." This will help you prioritize.

Steps and Output

- Steps
  - o **Step 1: Must Haves:** Non-negotiable elements that you can't leave out.
  - o **Step 2: Should Haves:** Non-vital criteria you would love to have.
  - o **Step 3: Could Haves:** Anything not immediately connected to realizing your vision.
  - o **Step 4: Won't Haves:** Non-negotiable things you definitely will NOT do.

- Output
  - o Clarity and focus of design intentionality to inform future state (circular) business model options.

Figure 13 [Design Criteria. Source: Design a Better Business]

2.5 Self Assessment

Using the R2Pi circularity and business model assessment tools, complete both worksheets to identify areas of interest that may need attention. This assessment is also helpful to understand readiness and to provide a baseline for future benchmarking.

2.5.1 Business Model Circularity Diagnostic

Description

The Business Model Circularity Diagnostic Tool was developed for the methodology based on research conducted on methods for assessing circularity at product, business model, and system-level, as they relate to the conceptualisation of CEBMs (several product metrics were drawn from and validated by C2C Institute's methodology). This tool forces you to look at your current model through a circular lense. Where you may have previously been less aware – this allows you to assess and identify aspects of your current business model that already possess circular-centric strengths that can be leveraged during the innovate stage (**See stage 3.2.2**) and helps focus your mindset on the shift from linear to circular.

Steps and Output

Noting the key at the top of the spreadsheet, record the following on the linear to circular scale of 1-5, beside each of the: Product, Business Model and System elements. If it's below 3, you are

tending towards a linear model. If it's above 3, you are tending towards a circular model. If the particular factor is not applicable to you, put a cross under 'NA':

- Steps
  - Step 1: Record the 'S' (– Status today) on the range of 1-5 based on where your organization is today.
  - Step 2: Record the 'O' (– Objective) on the range of 1-5 based on where you would like to be within 3 years.
  - Step 3: Review your answers. Ideally, your 'objective' should be (at worst) the same as 'status today' or one or more steps towards becoming more circular.

- Output
  - Overview of where there are elements of your current business model that are already leaning towards circular, that can be leveraged during your transition journey
  - Encourages you to consider which aspects of your business you would like to improve through circularity and acts as a record of that

Figure 14 [Excerpt from Business Model Circularity Diagnostic. Source: R2Pi Project. Link to downloadable excel file provided in 'Reference']

		Tending towards LINEAR model	N/A	1	2	3	4	5
PRODUCT	1	We have not characterised the identity of our products in terms of generic materials (e.g., aluminum, polyethylene, steel etc.)						
	2	We have not assessed the chemical composition of materials (recycled materials included) used within our product.						
	3	We do not seek to use recycled materials in our product						
	4	We do not seek to use third party co-product or waste streams as an input to our own production						
	5	We do not seek to use remanufactured, refurbished, or repaired parts and components within our products						
	6	We do not not seek to use rapidly renewable materials in our product						
	7	We do not not seek to use compostable/biodegradable materials in our product						
	8	We do not consider the 'recyclability' of materials used in our products						
	9	Planned obsolescence is built into product design						
	10	Product technical lifetime is below industry average						
	11	Product functional lifetime is below industry average						
	12	Product warranty period is below industry average						
	13	Product is not designed for disassembly to enable component/material recovery or reuse; nor is it biodegradable						
	14	Product is not designed with the intention to return to a 'technical' or 'biological' cycle, nor is there a defined plan for product recovery and reutilization.						

Above the table header columns 1-5: **S = Status today / O = Objective within 3 yrs**

3   Innovate

The main focus during this stage should be on designing several feasible options for your new business model and value proposition. You will need to review these against your design criteria and choose only one option that you will carry into the validation stage. Be aware that you are likely to return to these options once you cannot operationalise (fail to validate) your first business model option and thus, trying to validate your other options in turn. This is one of the reasons why you should aim to establish 4-6 different value propositions and business models – you will need to pivot between these two stages until you find a good business model fit (successful validation). There are several tools that you can use to develop and review your options.

3.1 New Value Propositions	3.2 Circular Business Model Options	3.3 Review Potential Partnerships	3.4 Review Against Design Criteria

3.1   Create New Value Propositions

The Value Proposition besides being one of the most fundamental building blocks of the Business Model Canvas is also one of the most complex ones. The overall success of your new circular business model is contingent upon the value it creates for customers. By designing a sound and relevant value proposition, you will be able to create, test and deliver precisely what your customers want. It helps you systematically understand customers and allows you to organise customers' information and assumptions in a simple way. A direct result of the well-designed value proposition is reflected in the profitability of your business model. It is simple, the more directly and effectively you can design your value proposition around customers' most pressing issues, wants, and desires, the more likely they are willing to pay for it.

3.1.1   Value Proposition Designer

Description
When it comes time to really understand your customers, including their: jobs-to-be-done; pains and gains; as well as your offer to them – the Value Proposition Canvas, is one of the best tools available to help you in this regard.

Steps & Output
It's important that the canvas is completed, one section at a time, in the following order:

- Steps
  - **Step1: Persona:** Who is he/she (e.g., profession, age)? Is this persona buyer, user, decision maker?
  - **Step 2: Jobs-To-Be-Done:** What are the jobs your customer is trying to get done in work or life? These could be both functional and social. What basic needs do your customers have (emotional and/or personal)?

- o **Step 3: Pains:** What is annoying or troubling your customer? What is preventing him or her from getting the job done? What is hindering your customer's activities?
- o **Step 4: Gains:** What would make your customer happy? What outcomes does he or she expect and what would exceed their expectations? Think of the social benefits, functional, and financial gains.
- o **Step 5: Pain Relievers:** How can you help your customer relieve his pains? Be explicit about how they can help.
- o **Step 6: Gain Creators:** What can you offer your customers to help them fulfill the gains? Be concrete (in quantity and quality)!
- o **Step 7: Products and Services:** What are the products and services you can offer your customer(s) so they can get their job done?

- ● Output
  - o Clarity of your customers' Pains and Gains with ideas around ways you can address these. This will feed into the following exercise – the Pain Relievers, Products and Services providing direction for innovating new options.

Figure 15 [Value Proposition Designer. Source: Design a Better Business adapted from original by Alex Osterwalder at Strategyzer]
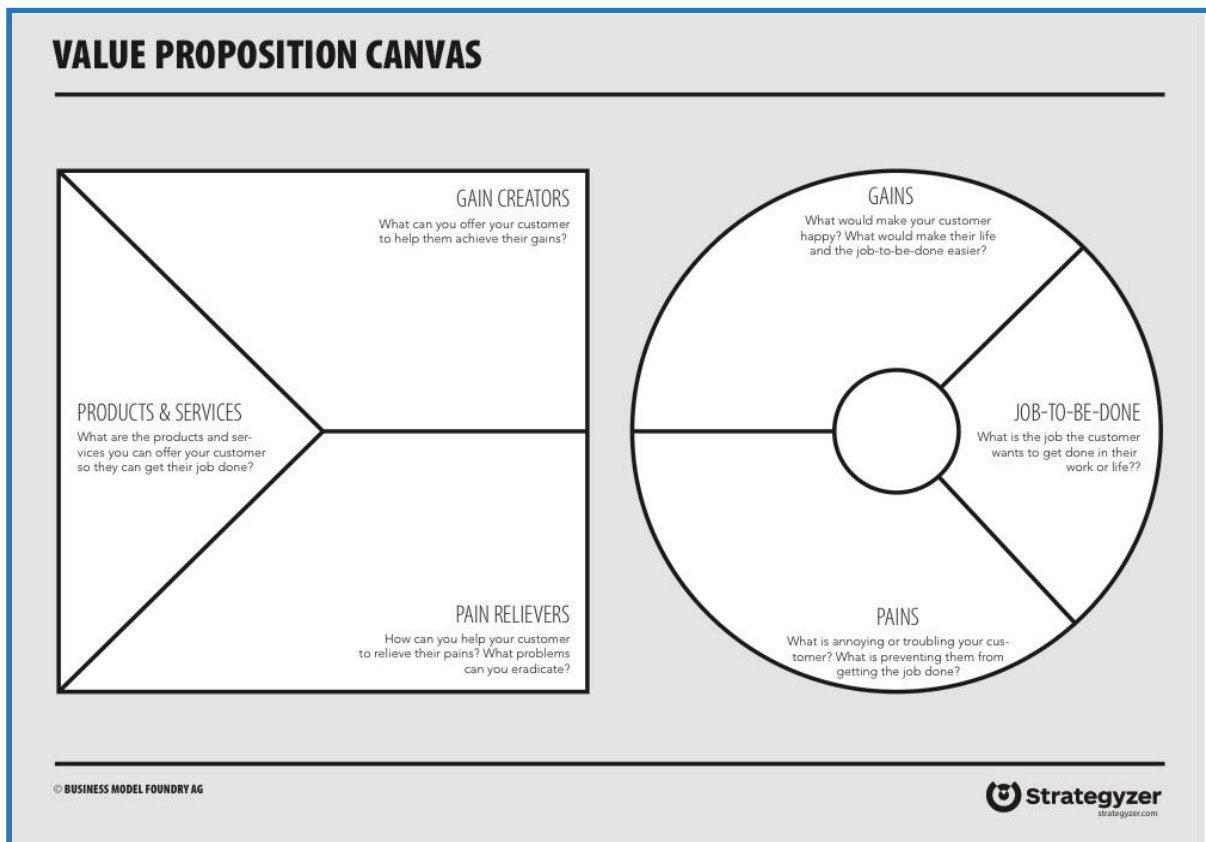
3.2 Create New Circular Business Model Options

After you have defined your core customer segments and understood their needs (pains, gains, jobs-to-be-done), you are ready to start designing a business model through which you would be

able to address these. To do this effectively, you should aim to create several (4-6) different business model options and choose the one that you will further validate.

3.2.1   Circular Economy Business Model (CEBM) Patterns

Description

A 'business model pattern' (or archetype) describes a distinct set of business model dynamics. In order to generate circular material pathways, seven circular economy business model patterns have been identified. These are defined based on a set of distinctive business model dynamics and where they lie along a product's lifecycle. The patterns are described in Figure 2 below. Two of these – the 'Access' and 'Performance' patterns – are not necessarily circular per se, but significantly enhance the circularity impact and value when combined with other patterns.

Each of the 7 Circular Patterns have been built out as individual canvases – 'circularising' the Business Model Canvas framework to include relevant prompting statements in each of the 9 elements of the canvas. These act as examples of what a Business Model could look like for each of the 7 Circular Patterns.

Output

- Understanding of potential circular business models and inspiration for new value propositions and improved future state.

Figure 16 [Circular Economy Business Model Patterns. Source: R2Pi Project]

CIRCULAR SOURCING

R²π
The route to circular economy

Sourcing recycled or renewable materials that can be returned to either the technical or biological cycle.

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Circular Materials: Sourcing recycled / circular materials from commodity partners.	**Product design**: Designing products to use higher levels of recycled content, or substituting more 'circular' materials (e.g. bio-based).	**Sustainability**: Main value to customers is environmental sustainability of product. Price isn't necessarily lower than alternatives (and may have a premium).	May generate loyalty from customer segments valuing sustainability features.	**New customer segment**: Potentially new segments of 'sustainability-conscious' customers.
	Key Resources		**Channels**	
	Additional resources generally not required.		May use distinctive channels to reach sustainability-conscious customers if product is sufficiently differentiated.	

Cost Structure	Revenue Streams
Materials: Cost of materials is driven by market price for secondary materials, or raw material cost of bio-based options.	**Product sale**: Product may be priced at a premium to 'non-circular' alternatives.

Social and environmental ⊖ ⊕	
Potential decrease of jobs in virgin materials sector	Reduced waste to landfill. Reduced waste to incineration Increase of jobs in circular materials sector

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CO-PRODUCT RECOVERY

R²π
The route to circular economy

Residual / secondary outputs from one process (or value chain) become inputs for another process (or value chain).

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Technology: May include partners for recovery and processing of co-products into secondary materials for sale.	Processes for capture or recovery of secondary materials from co-product streams.	**Co-value**: Value to customer includes reliable supply of material; and/or **Lower Cost** vs. other sources.	Generally transactional relationships. May be long-term within an 'industrial symbiosis' arrangement.	**Vertical Customer**: Customers are in different 'vertical' segments. May be commodity companies, or manufacturers.
	Key Resources		**Channels**	
	Plant and equipment for recovery processes, where relevant.		**Secondary material Market**: Markets for sale of recovered materials (co-products; scrap; recycled, etc.)	

Cost Structure	Revenue Streams
Waste Disposal: Reduction/elimination of own disposal/removal costs which organisation may have to otherwise incur.	**Waste-as-value**: Sale of co-product direct to customer or to secondary material markets.

Social and environmental ⊖ ⊕	
Potential increase of environmental impacts due to additional transport between value chains	Reduced waste to landfill. Reduced waste to incineration

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RE-CONDITION

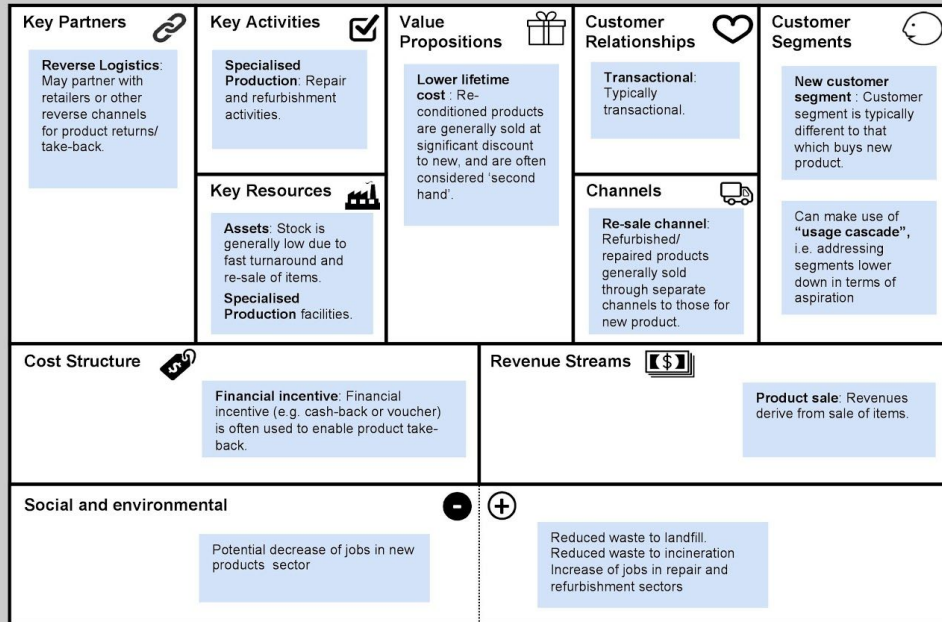Fixing of a fault / aesthetic improvement of a product, but with no new/additional warranty on the product as a whole. Includes repair and refurbishment.

Key Partners

Reverse Logistics: May partner with retailers or other reverse channels for product returns/take-back.

Key Activities

Specialised Production: Repair and refurbishment activities.

Key Resources

Assets: Stock is generally low due to fast turnaround and re-sale of items.
Specialised Production facilities.

Value Propositions

Lower lifetime cost : Re-conditioned products are generally sold at significant discount to new, and are often considered 'second hand'.

Customer Relationships

Transactional: Typically transactional.

Channels

Re-sale channel: Refurbished/ repaired products generally sold through separate channels to those for new product.

Customer Segments

New customer segment : Customer segment is typically different to that which buys new product.

Can make use of **"usage cascade"**, i.e. addressing segments lower down in terms of aspiration

Cost Structure

Financial incentive: Financial incentive (e.g. cash-back or voucher) is often used to enable product take-back.

Revenue Streams

Product sale: Revenues derive from sale of items.

Social and environmental   ⊖ ⊕

Potential decrease of jobs in new products sector

Reduced waste to landfill. Reduced waste to incineration Increase of jobs in repair and refurbishment sectors
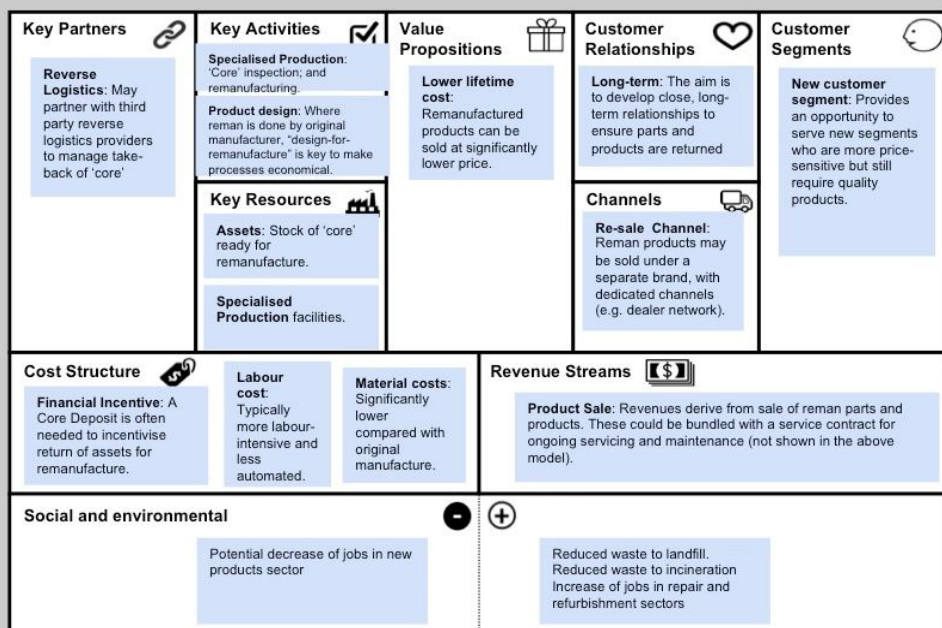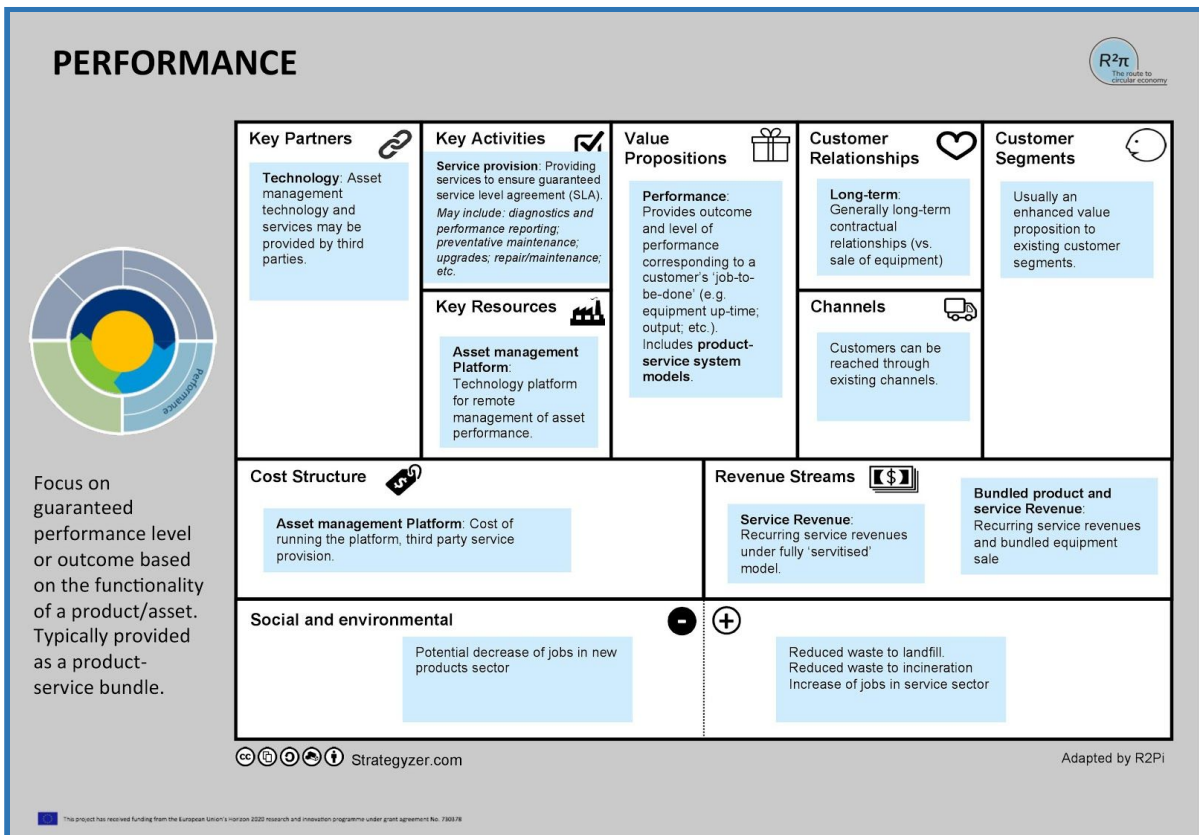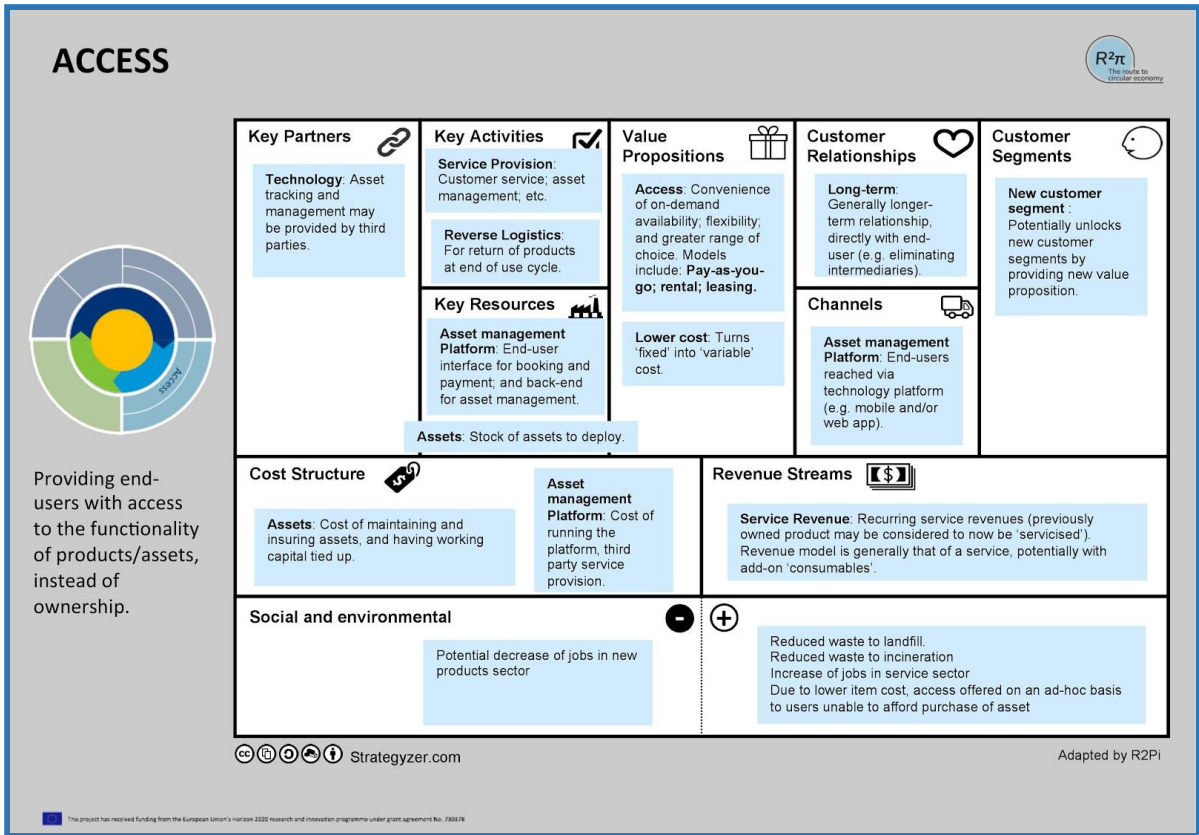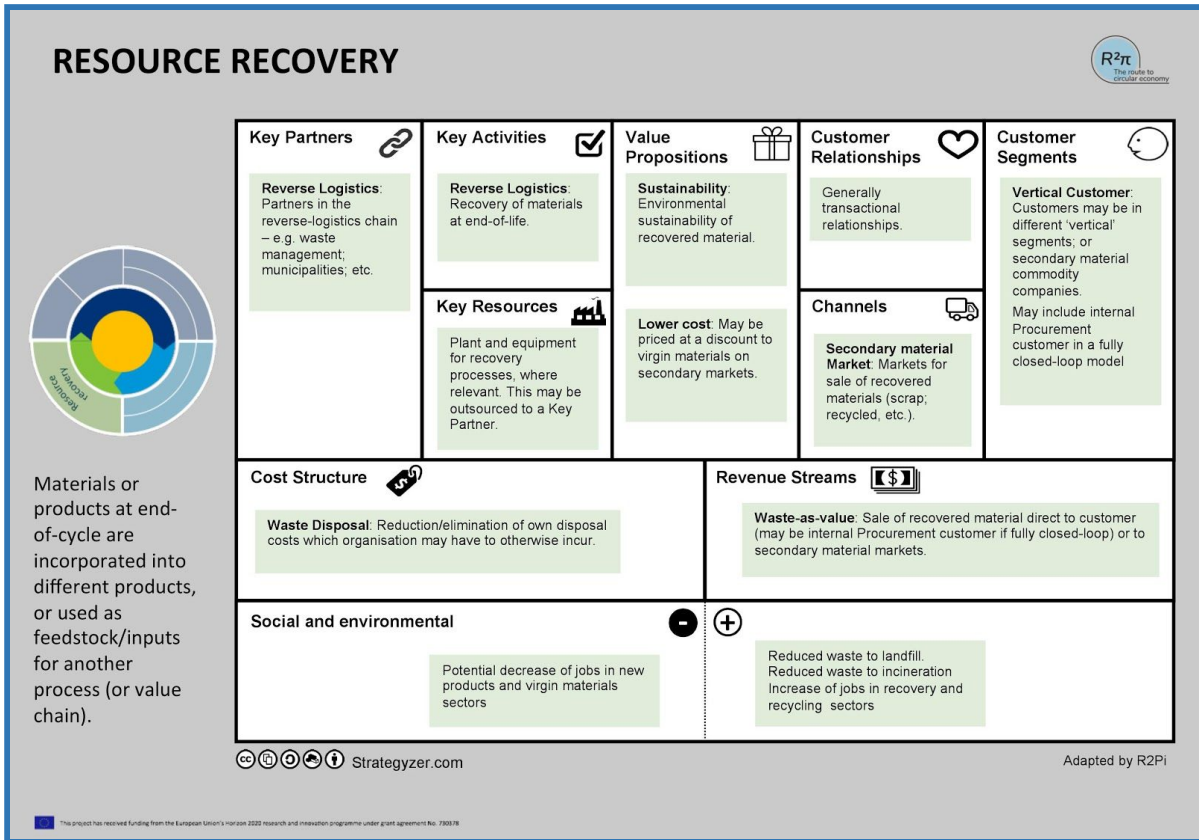
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RE-MAKE (RE-MANUFACTURE)
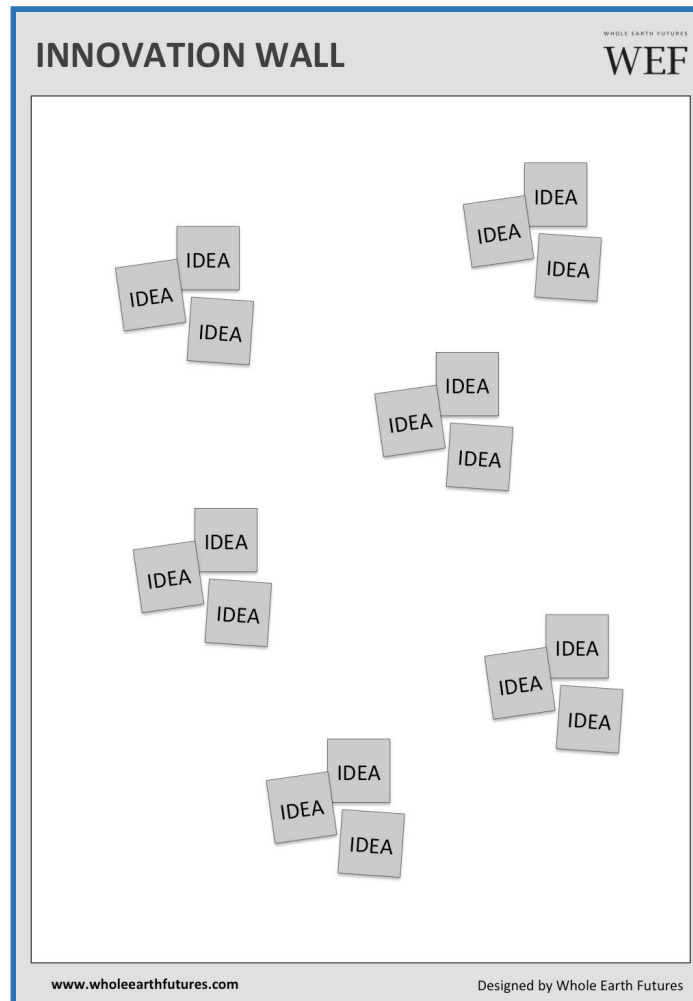

Manufacturing steps acting on an end-of-cycle part or product in order to return it to like-new or better performance, with warranty to match.

Key Partners

Reverse Logistics: May partner with third party reverse logistics providers to manage take-back of 'core'

Key Activities

Specialised Production: 'Core' inspection; and remanufacturing.

Product design: Where reman is done by original manufacturer, "design-for-remanufacture" is key to make processes economical.

Key Resources

Assets: Stock of 'core' ready for remanufacture.

Specialised Production facilities.

Value Propositions

Lower lifetime cost: Remanufactured products can be sold at significantly lower price.

Customer Relationships

Long-term: The aim is to develop close, long-term relationships to ensure parts and products are returned

Channels

Re-sale Channel: Reman products may be sold under a separate brand, with dedicated channels (e.g. dealer network).

Customer Segments

New customer segment: Provides an opportunity to serve new segments who are more price-sensitive but still require quality products.

Cost Structure

Financial Incentive: A Core Deposit is often needed to incentivise return of assets for remanufacture.

Labour cost: Typically more labour-intensive and less automated.

Material costs: Significantly lower compared with original manufacture.

Revenue Streams

Product Sale: Revenues derive from sale of reman parts and products. These could be bundled with a service contract for ongoing servicing and maintenance (not shown in the above model).

Social and environmental   ⊖ ⊕

Potential decrease of jobs in new products sector

Reduced waste to landfill. Reduced waste to incineration Increase of jobs in repair and refurbishment sectors

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ACCESS

R²π
The route to circular economy

Providing end-users with access to the functionality of products/assets, instead of ownership.

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Technology: Asset tracking and management may be provided by third parties.	**Service Provision**: Customer service; asset management; etc.	**Access**: Convenience of on-demand availability; flexibility; and greater range of choice. Models include: **Pay-as-you-go; rental; leasing.**	**Long-term**: Generally longer-term relationship, directly with end-user (e.g. eliminating intermediaries).	**New customer segment**: Potentially unlocks new customer segments by providing new value proposition.
	Reverse Logistics: For return of products at end of use cycle.			
	Key Resources	**Lower cost**: Turns 'fixed' into 'variable' cost.	**Channels**	
	Asset management Platform: End-user interface for booking and payment; and back-end for asset management.		**Asset management Platform**: End-users reached via technology platform (e.g. mobile and/or web app).	
	Assets: Stock of assets to deploy.			

Cost Structure		Revenue Streams
Assets: Cost of maintaining and insuring assets, and having working capital tied up.	**Asset management Platform**: Cost of running the platform, third party service provision.	**Service Revenue**: Recurring service revenues (previously owned product may be considered to now be 'servicised'). Revenue model is generally that of a service, potentially with add-on 'consumables'.

Social and environmental   ⊖ ⊕

Potential decrease of jobs in new products sector	Reduced waste to landfill. Reduced waste to incineration Increase of jobs in service sector Due to lower item cost, access offered on an ad-hoc basis to users unable to afford purchase of asset

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PERFORMANCE

R²π
The route to circular economy

Focus on guaranteed performance level or outcome based on the functionality of a product/asset. Typically provided as a product-service bundle.

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Technology: Asset management technology and services may be provided by third parties.	**Service provision**: Providing services to ensure guaranteed service level agreement (SLA). *May include: diagnostics and performance reporting; preventative maintenance; upgrades; repair/maintenance; etc.*	**Performance**: Provides outcome and level of performance corresponding to a customer's 'job-to-be-done' (e.g. equipment up-time; output; etc.). Includes **product-service system models.**	**Long-term**: Generally long-term contractual relationships (vs. sale of equipment)	Usually an enhanced value proposition to existing customer segments.
	Key Resources		**Channels**	
	Asset management Platform: Technology platform for remote management of asset performance.		Customers can be reached through existing channels.	

Cost Structure	Revenue Streams	
Asset management Platform: Cost of running the platform, third party service provision.	**Service Revenue**: Recurring service revenues under fully 'servitised' model.	**Bundled product and service Revenue**: Recurring service revenues and bundled equipment sale

Social and environmental   ⊖ ⊕

Potential decrease of jobs in new products sector	Reduced waste to landfill. Reduced waste to incineration Increase of jobs in service sector

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RESOURCE RECOVERY

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Reverse Logistics: Partners in the reverse-logistics chain – e.g. waste management; municipalities; etc.	**Reverse Logistics**: Recovery of materials at end-of-life.	**Sustainability**: Environmental sustainability of recovered material.	Generally transactional relationships.	**Vertical Customer**: Customers may be in different 'vertical' segments; or secondary material commodity companies. May include internal Procurement customer in a fully closed-loop model
	Key Resources		**Channels**	
	Plant and equipment for recovery processes, where relevant. This may be outsourced to a Key Partner.	**Lower cost**: May be priced at a discount to virgin materials on secondary markets.	**Secondary material Market**: Markets for sale of recovered materials (scrap; recycled, etc.).	

Cost Structure

Waste Disposal: Reduction/elimination of own disposal costs which organisation may have to otherwise incur.

Revenue Streams

Waste-as-value: Sale of recovered material direct to customer (may be internal Procurement customer if fully closed-loop) or to secondary material markets.

Social and environmental ⊖ ⊕

Potential decrease of jobs in new products and virgin materials sectors

Reduced waste to landfill.
Reduced waste to incineration
Increase of jobs in recovery and recycling sectors

Strategyzer.com

Adapted by R2Pi

Materials or products at end-of-cycle are incorporated into different products, or used as feedstock/inputs for another process (or value chain).

3.2.2   Rapid Innovation

Description
Considering which areas your current business model scored highly in during the CEBM assessment stage (**See 2.5.1**), and the 7 Circular Economy Business Model Patterns that have been provided as examples, it's time to throw out some ideas about the new direction that your business model could take.

Steps & Output

- Steps
  - **Step 1:** Individually brainstorm new business ideas, 1 idea per post it and stick up onto a blank wall for everyone to see.
  - **Step 2:** It will eventually become apparent that some ideas are repeated often, and so can be clustered throughout. This eventually shows the most popular ideas that have come up during the rapid innovation stage.
- Output
  - 4 - 6 new circular business model options to build out

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Figure 17 [Innovation Wall – use of a physical space, example. Source: Whole Earth Futures]

3.2.3   Circular Business Model Thinking

Description

Using the Business Model Canvas from **Stage 2.1** as your template, refer to the Circular Business Model Thinking canvas to prompt consideration of CE business model elements when building out your new, chosen business model options. Each 'option' should be built out as an individual canvas.

Steps & Output

- Steps
  - **Step 1:** Complete each block of the canvas, referring to their respective block on the Circular Business Model Thinking canvas. **See Stage 2.1** for order of steps
  - **Step 2:** Repeat for each new option you wish to explore

- Output
  - 4 - 6 new circular business models to choose from moving forward

Figure 18 [Summary of potential CE Business Model elements to consider. Source: R2Pi Project]
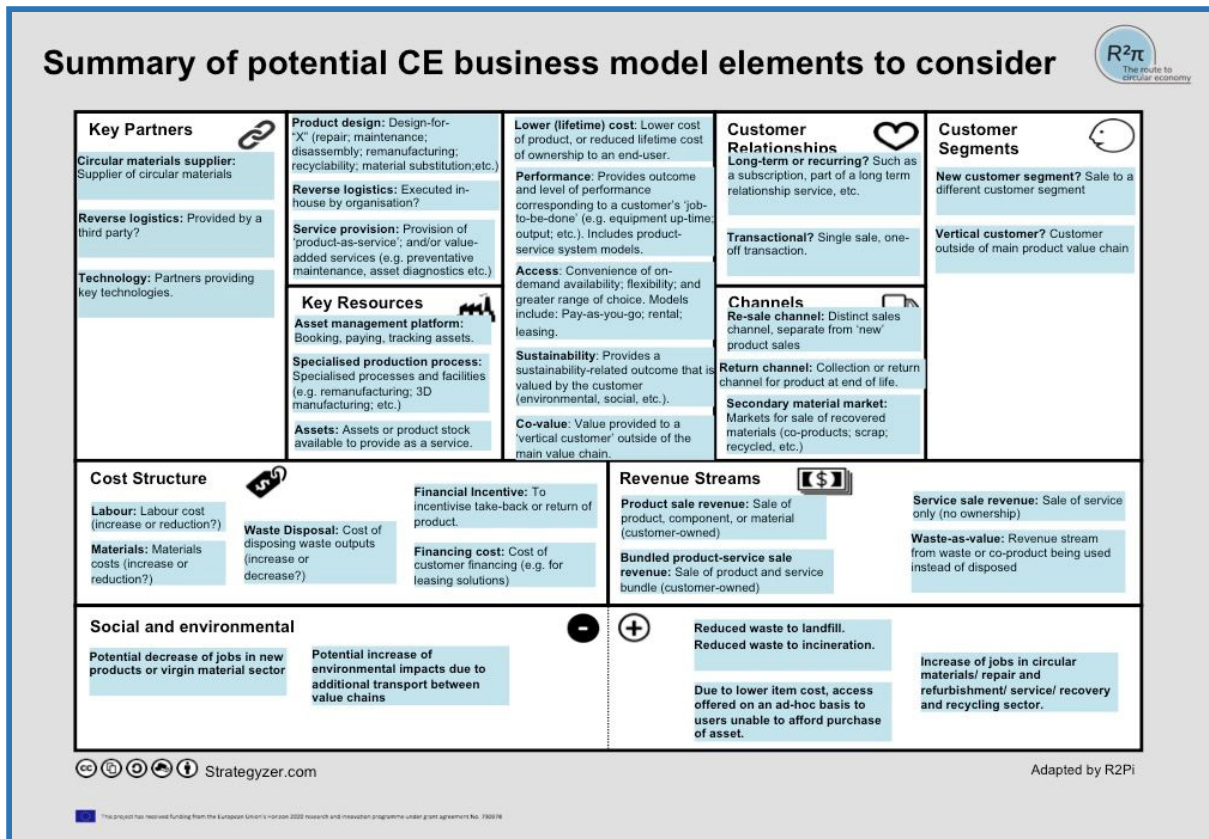
3.3 Review Potential Partnerships

Now that you have a number of new (circular) business model options to choose from, it's important to identify relevant value exchange with your current key partners or potential new partners to approach, that can be leveraged towards circular activity.

3.3.1 Partnership Canvas

Description

An essential tool for designing, negotiating, and adapting partnerships. This tool works as an add-on to the business model canvas **See Stage 2.1**.

Steps & Output

- Steps
  - **Step 1: Desired Assets:** Based on the definition of this purpose, you will be able to describe the missing element from your own business model, for which you are seeking a partner. You can use the definition of this element to screen candidate partners on a (set of) asset(s) that you desire.
  - **Step 2: Value Offer:** If you have identified what value you desire in a partner, then you need to develop a matching offer that connects with that value. A value offer is required, which is based on one or more elements from your own business model. An effective offer either complements or enhances the value you would desire from

a partner. Only if this connection is made, do you have a basis for creating a relationship.

- o **Step 3: Transfer Activity:** Through what collaboration activities or through what form will these values be connected? It is essential that both parties find a way to integrate the value that they are putting to the table. This transfer activity building block is the exchange by which synergy between the partnering business models is created.

- o **Step 4: Creating Value:** What we've defined so far is a basis for connecting values. The ultimate question is whether this value engine enables you to create a new form of value that you can utilise to innovate in one of the building blocks of your business model. This question on created value makes up the fourth building block of the partnership.

- ● Output
  - o The partnership canvas creates empathy between two prospective partners on the strategic importance of the partnership to each. It can be used as a stand-alone tool to quickly identify a partnering opportunity. But for full strategizing value, it's better to use it in conjunction with the business model canvas **See Stage 2.1**

Figure 19 [Partnership Canvas. Source: Value Chain Generation, adapted by Whole Earth Futures]
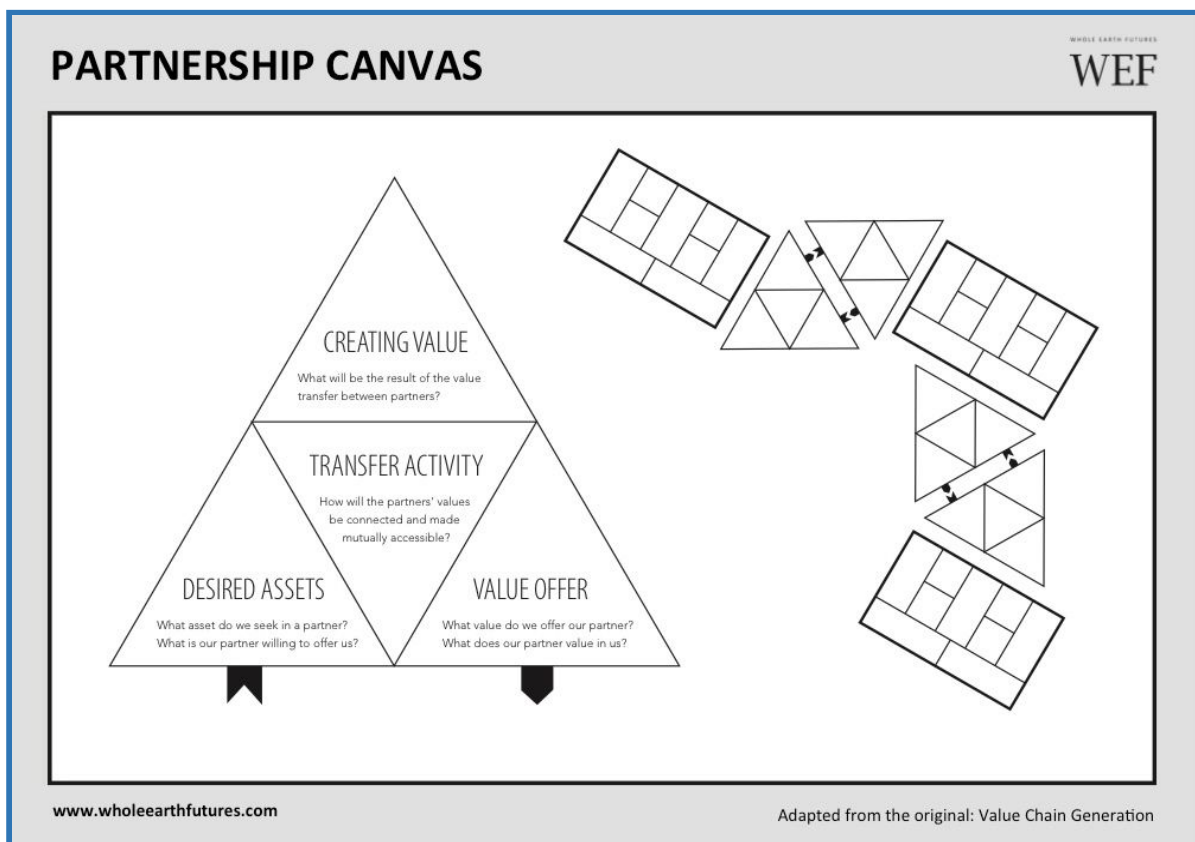
3.4 Review Against Design Criteria

You have set out your design criteria in the previous stage, so your task now is to review your new circular business model options against them to ensure they fit what you are trying to achieve. Based on these criteria you will choose one business model option that you will carry into the validation

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stage. There will be several business model options that will meet your design criteria, and that is fine. At this stage, you only need to choose one and keep the others as your go-to options should your chosen one, fail the validation stage (i.e., the most significant assumption cannot be validated, and no iteration in the business model is possible).

3.4.1   Design Criteria: See stage 2.4.1

Steps & Output

Review your new Circular Business Model against your established:

- Steps
  - **Step 1: 'Must's'** – how does it score? If it doesn't encapsulate the criteria that you decided *must* be at its' core, then you're missing the most fundamental aspect of the overall model.
  - If this is the case, please re-review your multiple business model options developed during **Stage 3.2**.
  - **Step 2: 'Should's'** – how does it score? If it's lacking, you may want to take into consideration, whether or not these 'shoulds' are crucial to the success of the business model.
  If this is the case, please consider this when re-reviewing your business model options from **Stage 3.2** If the model can be successful based on the Must's alone, and they are covered, you may be okay to continue.
  - **Step 3: Could's** – how does it score? This section is quite flexible. If some of these are featured on your business model, it's a bonus. If none of them are featured, your business model will survive without them, but keep them in the back-burner for development, if needed.
  - **Step 4: Won't's** – how does it score? If you find that anything you established would not be a part of your business model, features in your chosen option, you need to re-review your multiple business model options developed during **Stage 3.2**.

- Output
  - Confirmation that your chosen business model option fits the criteria you set out as optimal guidelines for the success of your circular vision.

Figure 20 [Design Criteria. Source: Design a Better Business. See stage 2.4.1]
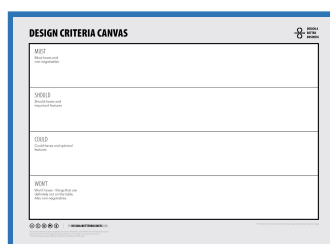
4 Validate

So far, everything in your business model is in the form of assumptions or hypotheses. You need to test and validate these as quickly and effectively as you can. Only testing your hypothesis and validating it, wholly or partially, or invalidating it is progress in the real world. The aim in early innovation is to maximize the learning per hour or dollar spent; where you start testing really matters!

| 4.1 Generate Assumptions | 4.2 Define Experiments & Tests | 4.3 Iterate Business Model |

4.1 Generate Assumptions

Before you can start testing and prioritising your core hypothesis, it is vital to generate all of the assumptions that you have about your new business models. Everything is just a guess until validated. Once you have identified all of your assumptions, it will become clear, which of those are "critical" – the ones that must be true for your business model to be a success. Several assumptions can be found at every building block of your business model:

- Your customer and market
- The problem(s) you can help them with
- How you get, keep and grow customers
- Your channels
- You and your partners' capabilities
- Your competition
- The macro environment
- Investment etc...

4.1.1 Significant Assumptions Matrix

Description

Using the Significant Assumptions Matrix allows you to categorise your assumptions based on their importance and significance for your envisioned business model. Using this tool, you will be able to evaluate your assumptions. For each assumption, you must decide whether it is based on a reliable fact, an educated view, or a wild guess. Furthermore, you must try to determine the potential impact of each assumption (whether true or false) on the success of your business model. You want to establish whether the effect will be severe, moderate or minor. The grid provided, allows you to place each assumption in the correct place in relation to these possibilities.

Steps & Output

- Steps

- o **Step 1:** Brainstorm individually, all of the assumptions you have about your chosen Business Model Option (1 assumption per post-it note)
- o **Step 2:** One at a time, place your assumptions in, what you believe to be, the correct box on the matrix based on its severity and how well educated an assumption it is
- o **Step 3:** Once each team member has done so, cluster any similar assumptions that fall into the same box
- o **Step 4:** All assumptions that fall into the top right box are going to be your focus for testing and validating as they will have the most severe impact if incorrect and are based on wild guesses, so need to be investigated

- ● Output
  - o Identification of your most significant assumptions – the ones that *must* be true, or else have a severe impact on the success of your new business model and must therefore be tested and validated as soon as possible.

Figure 21 [Significant Assumptions Matrix. Source: Whole Earth Futures]
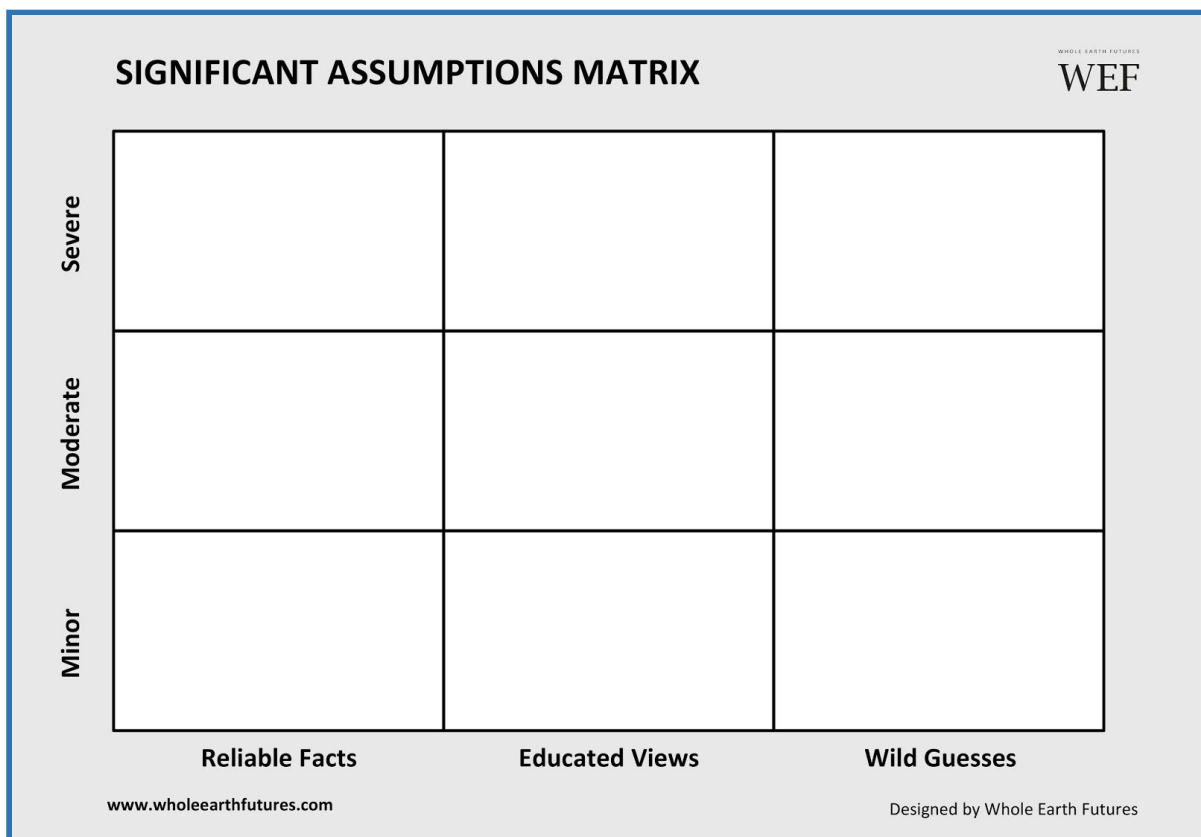
4.2 Define Experiments & Tests

Once you have identified your most critical assumptions, they will be just that until you validate them. Having these assumptions validated will determine whether you can implement and scale your business model. Do not take this lightly. Therefore, in this stage, your task is to design experiments that will allow you to test these critical assumptions quickly. You need to be able to measure and quantify your results. This cannot be done in the comfort of your office. It is necessary to get out of the building to talk to your customers and other key stakeholders, to observe what they

do and why. You want to prove or disprove something as quickly as possible (i.e., fail fast so you can learn from it and define further tests).

4.2.1 Test & Learning Cards

Description

You must validate your business ideas with customer experiments/tests before scaling them and record your learnings from each experiment.

- **The Test Card forces you to make the following things explicit:**
    - What needs to be true for your idea(s) to work (aka hypothesis, assumption, or simply guess)?
    - How are you going to test if that hypothesis is true or false?
    - What are you going to measure to (in)validate your hypothesis?
    - How does success look like? What's the threshold?
- **The Learning Card forces you to explicitly articulate:**
    - Which hypotheses you went out to test
    - What you observed, discovered, or learned in the field
    - What you deduct from those observations (i.e the insights you gained from the experiment)
    - How you'll act upon this learning (e.g to improve your business model and value proposition ideas)

Steps & Output

- Steps
    - **Step 1:** Using a single test card for each assumption, write out what you 'believe'.
    - **Step 2:** Design a lean and simple experiment to test each assumption and establish how you aim to measure the outcome of each experiment.
    - **Step 3:** Record your results on the learning card.

- Output
    - A series of lean and simple experiments designed to get a yes/no as quickly as possible in relation to each significant assumption with recorded results. The outcome of each of these experiments will determine what changes you may need to make and whether you need to iterate previous steps in order to get to a fully validated business model.

Figure 22 [Test Card. Source: Strategyzer]

Figure 23 [Learning Card. Source: Strategyzer]

4.3 Iterate Business Model

There are many different business models for any one product, service or business idea. The interplay between current state business model, context, vision, and ambition provide opportunities to test significant assumptions, engage with key stakeholders and explore multiple and various value exchanges. The main challenge with launching an innovative new circular business model or value proposition is that the market (system) is largely linear by design. A design, measure, learn iterative approach will help you find the way to design and develop an establishing circular business model or at least catalyse and flush out the systemic barriers or enabling context to your innovation. Look at your circular business model innovation journey as a film-strip of change as you note the changes to your first business model canvas to the one that is validated in the market.

4.3.1 Iteration of Previously Used Tools

Description
At this stage, iteration is crucial if you're to ensure that your business model is fully validated before taking it to market. *This is key to ensuring optimum conditions for success.*

Steps & Output

- Steps
  - **Step 1:** Repeat each of the above steps until you believe you have explored, tested and validated every critical assumption that you identified upon iteration and have developed your model to accommodate these results.

- Output
  - A fully tested, developed and validated business model, ready to take to the market.

Figure 24 [Business Model Canvas. See stage 2.1.1]

Figure 25 [Significant Assumptions Matrix. See stage 4.1.1]

Figure 26 [Test & Learning Cards. See stage 4.2.1]

5   Deliver

Gathering the learning and outcomes obtained from each different stage of the process, you must now turn theory into practice – building a path for your organisation to follow, moving forward towards your overarching vision.

5.1   Implementation Roadmap

In order to ensure you remain focussed on achieving your circular vision, it's important to set out a clear path for your organisation to follow during the transition. This should consist of bold strategic steps, agreed implementation milestones and defined roles & responsibilities.

5.1.1   Roadmap

Description

The roadmap provides a simple layout to set goals and milestones over a specific time period. Using this tool allows for a more granular view of the 5 bold steps. These can be broken down into sub-goals (i.e, smaller steps) to allow for better focus, monitoring and management.

Steps & Output

- Steps
    - o **Step 1:** Map out clear targets to reach within your chosen timeframe
    - o **Step 2:** Set a date for which to have reached this target
    - o **Step 3:** Identify the correct team members to be responsible for seeing that this target is reached (remember to refer back to 'Get To Know Your Team' if needed. **See stage 1.2.1**)
    - o **Step 4:** Map these out in order on your roadmap and display in a visible place at all times to see that it remains a key focus for your team

- Output
    - o Clear and co-ordinated targets & deadlines, allocated to the right team members, to see that you stay focused on reaching the end goal, whether that be the first of your 5 Bold Steps or your overall Vision.

Figure 27 [Roadmap. Source: Whole Earth Futures]
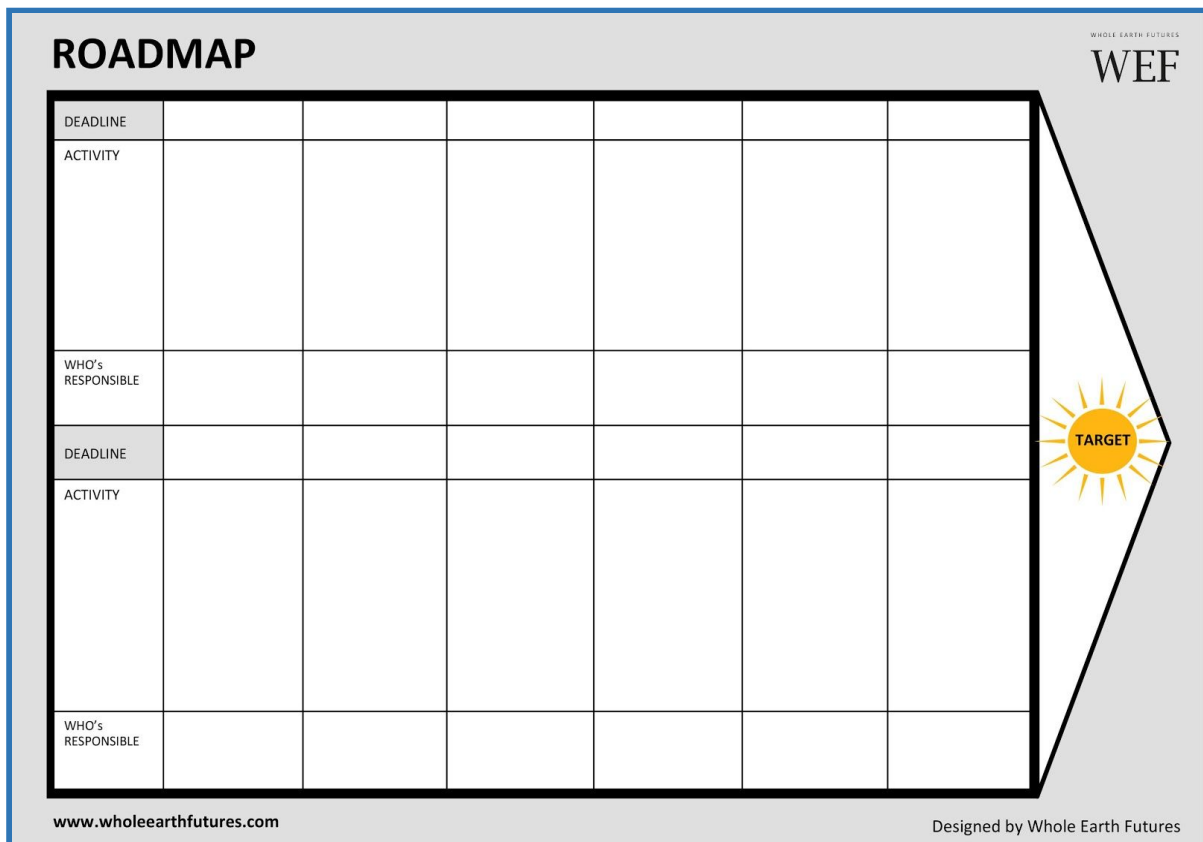
5.2   Business Case

Having followed each step of the innovation journey – gathering learning, insight, and outputs – you should have a wealth of collateral to build a strong business case. But there are also a number of external factors to take into consideration. Potential benefit; the size of the market; and any major costs (both monetary and in other time/resource) that the business will incur as a result are the most fundamental.

5.2.1 Cost-Benefit Analysis

Description
As simple as your average 'Pro's Vs Con's' – you need to weigh out the Cost Vs Benefit and consider how to present or address this to develop a strong business case.

Steps & Output

- Steps
    - Step 1: Note down each of the proposed changes/activities that need to take place for the transformation to happen
    - Step 2: Respectively note down what benefits each of these changes will bring (consider internal benefits and also economic; environmental etc)
    - Step 3: How impactful are these benefits?
    - Step 4: Respectively note down what costs your organization will incur as a result of each of these changes
    - Step 5: How impactful are these costs?
    - Step 6: Record the Cost / Benefit ratio for each of the changes

- Output
    - A focussed Costs Vs. Benefits to provide clarity of whether any further consideration or adaptation needs to be made before you present your business case.

Figure 28 [Cost/Benefit Analysis. Source: R2Pi Project]

5.3   Sponsorship

You've made the journey from A to V – (A)n idea to a (V)alidated business model but of course, the key success factor to drive forward this new vision and developed business model, is having champion and sponsorship at the core of the organisation. It's now time to present your business case to the key players.

6   Evaluate

Now that you've built a roadmap with clear actions and responsibilities to help you on your first steps towards your circular vision, you need to evaluate how ready your organisation is to start implementing your newly developed circular business model. Your aim is to evaluate your current conditions and how they will foster or hinder this transition. Have you got the right people? Do you have clarity of all the necessary contributing factors? Ensure that you have everything in place, tried and tested, before committing to the implementation stage of your journey.

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6.1 Implementation
Readiness

6.2 Go / No Go

</div>

6.1   Implementation Readiness

It's important to know that each stage of your circular innovation journey has been thoroughly explored and your envisioned (CE) business model was validated before moving out to market with this new business model. The easiest way to review whether you're 'implementation ready' is to ask yourself a series of questions – each one relating to your confidence in the outcomes expected at each stage of the journey.

6.1.1   Transition Readiness Self Assessment

Description
Presented with the multiple choice of 'YES', 'NO' and 'N.M.A' (Needs More Attention), this assessment tool allows you to identify gaps in the process that need to be revisited before you can confidently implement your newly developed circular business model.

Steps & Output

- Steps
  - Step 1: Answer the multiple-choice questions based on your confidence of clarity at each stage of the process.
  - Step 2: Once complete review your answers to identify what parts of the process need to be revisited and iterated. Any question answered with 'NO' or 'N.M.A' will be your focal point.

- Output
  - Clarity on what areas within your innovation journey still need further attention to ensure that your CE business model is fully validated before entering the market.

Figure 29 [Transition Readiness Self Assessment. Source: R2Pi Project]

6.2   Go / No Go

Depending on the results of your implementation readiness scale, it's time to make a decision: Are you ready to implement?! Or do you need to iterate some of the previous steps before implementing your new circular business model?

Description

Ideally, you want a 'YES' to each of the questions in the Readiness Self Assessment: Section 6.1.
The answers 'NO' or 'N.M.A,' indicate that you still need to revisit particular stages of this CE toolkit to address the identified gaps. Any stage in which you have identified these gaps will need to be iterated until you can confidently answer 'YES.'

Output

- Confidence in a fully validated innovation journey and new circular business model to move forward with implementation to market.

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7   Reference

Page 4: Design

Figure 1 [Conditions for success. Source: R2Pi Project]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 2 [Get to know your team. Source: Whole Earth Futures]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 3 [Team Charter Canvas. Source: Design a Better Business]
https://designabetterbusiness.tools/tools/team-charter-canvas

Figure 4 [Starting your innovation journey. Source: R2Pi Project]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

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Figure 5 [Business Model Canvas. Source: Adapted by R2Pi from the original by Alexander Osterwalder of Strategyzer.]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 6 [Business Model Diagnostic. Source: Maribe Project; R2Pi project]
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Figure 7 [Value Network. Source: R2Pi Project]
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Figure 8 [Material Flow. Source: R2Pi Project]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 9 [Context Map. Source: Design a Better Business adaptation of original by David Sibbet, of the Grove International]
https://designabetterbusiness.tools/tools/context-canvas

Figure 10 [SWOT Analysis. Source: R2Pi Project]
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Figure 11 [5 Bold Steps Canvas. Source: Design a Better Business adaptation of original by David Sibbet, of the Grove International]
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Figure 12 [Confidence and Ambition Level. Source: Whole Earth Futures]
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Figure 13 [Design Criteria. Source: Design a Better Business]
https://designabetterbusiness.tools/tools/design-criteria-canvas

Figure 14 [Business Model Circularity Diagnostic. Source: R2Pi project]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

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Figure 15 [Value Proposition Designer. Source: Design a Better Business adaptation of original by Alex Osterwalder at Strategyzer]
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Figure 16 [Circular Economy Business Model Patterns. Source: R2Pi Project]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 17 [Innovation Wall. Source: Whole Earth Futures – Physical space. See stage 3.2.2]

Figure 18 [Summary of potential CE Business Model elements to consider. Source: R2Pi Project]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 19 [Partnership Canvas. Source: Value Chain Generation adapted by Whole Earth Futures]
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Figure 20 [Design Criteria. Source: Design a Better Business. See stage 2.4.1]
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Figure 21 [Significant Assumptions Matrix. Source: Whole Earth Futures]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 22 [Test card. Source: Strategyzer]
https://www.strategyzer.com/canvas

Figure 23 [Learning card. Source: Strategyzer]
https://www.strategyzer.com/canvas

Figure 24 [Business Model Canvas. See stage 2.1.1]
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Figure 25 [Significant Assumptions Matrix. See stage 4.1.1]
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Figure 26 [Test & Learning Cards. See stage 4.2.1]
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Page 39: Deliver

Figure 27 [Roadmap. Source: Whole Earth Futures]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Figure 28 [Cost Benefit Analysis. Source: R2Pi Project]
http://www.r2piproject.eu/circular-economy-business-models-toolkit/

Page 42: Evaluate

Figure 29 [Transition Readiness Self Assessment. Source: R2Pi Project]
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