

**IMPACT
HUB**



Embedding circularity

**A toolkit for
incubators and
accelerators**

Embedding circularity

A toolkit for incubators and accelerators

Contents

Introduction

- About this toolkit
- Background
- What is Circular Economy?
- Why does Circular Economy matter to Impact Hub?
- Circularity Tales
- Access more support

Trends and frameworks

- Key trends, concepts and players
- Sufficiency
- Developments and opportunities in key sectors
 - Agrifood
 - Construction and built environment
 - Fashion
 - Electronics
 - Waste and plastics
- Circular business models
- Starting a circular value chain versus moving from linear to circular
- Financing circular business models
- Job creation opportunities

Getting ready

- Inspire your team: how does Circular Economy link to their work and ambitions?
- Analyze opportunities
- Onboard talent

Ecosystem building

- Start the Circular Economy conversation
- Ecosystem facilitation
- Ecosystem mapping

Programmatic integrations

- Types of programs
- A focus on the Start-up and Growth stages
- Program design
- Impact management
- Funding the program
- Train the trainer
- Scouting and selecting the right entrepreneurs and ventures
- Promotion and communications
- Diagnostics
- Partners
- Facilitating access to capital
- Delivery of support
- Supportive Circular Economy connections

References and credits

- References
- Credits

Embedding circularity A toolkit for incubators and accelerators



Introduction

About this toolkit

We can mainstream circular design principles across small and growing businesses regardless of whether they are social, environmental or profit-driven.

This toolkit offers insights, tools and methodologies for Entrepreneur Support Organizations (ESOs) to take a Circular Economy lens to their entrepreneur support programs, particularly incubators and accelerators, in order to realize the statement above.

Resources are brought together here to enable you to:

- Develop knowledge of Circular Economy trends, frameworks, businesses and sectors.
- Build the capacity of your team, organization and ecosystem to catalyze action.
- Integrate circularity as a design principle into programmatic support for entrepreneurs.

This toolkit is designed for Entrepreneur Support Organizations, Business Development Service Providers, and any organization interested in integrating circular design principles into the support they currently offer to their entrepreneurial communities or would like to develop.

Embedding circularity

A toolkit for incubators and accelerators

You can use this toolkit to develop a program explicitly focused on supporting ventures with Circular Economy solutions, or to embed circular design principles into other programs that aren't explicitly focused on the Circular Economy. The latter approach is particularly encouraged in order to embed circularity at scale.

Existing knowledge of program design, delivery and management is assumed. This toolkit does not dive into what makes for a successful entrepreneur support program more generally.

Rather, this toolkit highlights opportunities to integrate Circular Economy knowledge, approaches and activities into entrepreneur support program design and implementation.

Rather than reinvent the wheel, in many cases this toolkit links to and spotlights the excellent resources and organizations that are already out there in the commons, curating them specifically for individuals and teams concerned with entrepreneur support.

By implementing elements of this toolkit, you will be contributing to a nascent yet increasingly active discourse in the entrepreneur ecosystem regarding how Entrepreneur Support Organizations, investors and others can collaborate to address climate change. Through your programs you will also be generating a pipeline of innovation for key industries and value chains that need to become more circular.

Background

All recommendations in this toolkit are based on tried and tested approaches piloted by the Impact Hub Network as part of a two year Circularity Program exploring how sustainability can be embedded as a design principle into the Small and Growing Businesses (SGB) sector, funded by MAVA Foundation and DOEN Foundation.

Between 2020 and 2022, 12 Impact Hubs were supported to pilot incubation and acceleration programs integrating circular design principles in a variety of ways, prompting Circular Economy interventions, enterprise development and ecosystem building in Rwanda, Tanzania, Senegal, Zimbabwe, Nigeria, Greece, Spain, Turkey, Croatia, China and Colombia.

The locations of these pilots have led to more of a focus on Europe and Africa in parts of this toolkit, but the majority of the resources are relevant regardless of ESO location.

Each pilot program focused on different industries based on the local context. From health to waste management, agriculture to education, or technology to transport and manufacturing, pilot programs supported enterprises to become more sustainable and to make their products and business models more circular. 82 enterprises were supported through the program.

Embedding circularity

A toolkit for incubators and accelerators

This toolkit was provided as part of a broader package of capacity building services to support these Impact Hubs design and deliver their pilot programs. Thus the contents have been validated through practice and refined based on learnings emerging from the pilots..

are woven throughout this toolkit. Now, let's create an even greater shift towards circularity and a regenerative economy!

What is Circular Economy?

The current system is not sustainable for business, people or planet. A part of the solution is the Circular Economy.

We take resources from the ground to make products, which we use, and when we no longer want them throw them away: take-make-waste. We call this a linear economy. We need to change from this linear model into a Circular Economy. A Circular Economy is an economy that is restorative and regenerative by design..

“My goals were to provide cheap and affordable pluckers to small and medium poultry farmers. I have considered working on reducing costs and I managed just by being 100% circular. Costs of production were on average \$150 and now they are \$100. Finished product was \$300 and now it is \$250.”

Entrepreneur participating in Impact Hub Harare’s pilot

“The major achievement is that, as a result of the knowledge gained, smallholder cassava farmers increased cassava productivity from an average of 1 metric ton/acre (with traditional framing methods) to 7 metric tons/acre in 2021.”

Entrepreneur participating in Impact Hub Dar es Salaam’s pilot

“We must transform every element of our take-make-waste system: how we manage resources, how we make and use products, and what we do with the materials afterwards. Only then can we create a thriving Circular Economy that can benefit everyone within the limits of our planet.”

[Ellen MacArthur Foundation](#)

The learning, stories and voices of pilot program practitioners and ventures

Circular Economy is a powerful model consisting of principles and activities that aim to retain the value of

Embedding circularity

A toolkit for incubators and accelerators

resources, materials, components and products for as long as possible in the economy. It takes a [systemic approach](#) to reducing consumption of natural resources and to contributing to sustainable development.

“Looking beyond the current take-make-dispose extractive industrial model, a Circular Economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital.”

[Ellen MacArthur Foundation](#)

The Circular Economy is based on three principles:

1. **Design out waste and pollution.**
2. **Keep products and materials in use.**
3. **Regenerate natural systems.**

This systemic change offers opportunities not only for the environment, for example by reducing CO₂ emissions, but also for companies

and households, for example by reducing costs, reducing health-related expenses and creating jobs. The [World Resources Institute](#) summarizes the five opportunities of a Circular Economy very simply, as follows:

1. **Make better use of finite resources.**
2. **Reduce emissions.**
3. **Protect human health and biodiversity.**
4. **Boost economies.**
5. **Create more and better jobs.**

Ellen MacArthur Foundation [calculates](#) the benefits of a Circular Economy like this:

- \$700 mln in annual material cost savings in FMCG sector.
- 48% CO₂ emissions reductions by 2030.
- \$550 bln in health care related cost savings in the food sector.
- €3000 annual increase in disposable income for EU households.
- 47% reduction in traffic congestion in Chinese cities.

Embedding circularity

A toolkit for incubators and accelerators

Why does Circular Economy matter to Impact Hub?

Impact Hub's mission is to facilitate a just and sustainable world where business and profit are used in service of people and planet. Impact Hub works to shape the business of the future by pioneering impact at the intersection of entrepreneurship, environmental action and inclusion.

Accelerating the transition to a Circular Economy that respects planetary boundaries will help accomplish this mission.

You can read more about how Impact Hub is taking environmental action as a global network [here](#).

Startups have an important and disruptive role to play in accelerating the transition to sustainability by developing, testing and scaling sustainable solutions in the marketplace. We should empower entrepreneurs to build and grow their ventures with neutral or positive environmental impact.

Impact Hub wants to scale the impact of entrepreneurs with a focus on sustainable food and agriculture, net zero and circular models, faster.

There is a very strong connection to circularity as a key driver for change. This also relates to the goal of Net Zero, as one key element of this effort is the

empowerment of entrepreneurs to understand and act on their environmental footprint. This [report](#) by Circle Economy highlights findings supporting this case.

If we as ESOs educate ventures on circularity in an early stage of product or service development, we can provoke early adoption of the approach.

We can make big inroads here by integrating circularity as a design principle directly into our entrepreneur support programs.

"There is already a lot of excitement around circularity and engagement. In many cases circularity policies do exist but they aren't being implemented well. Codifying, awareness and advocacy are key issues to focus on especially for ESOs in the the Global South"

Auxicillia, Impact Hub Harare

At Impact Hub we have found that offering programs with a Circular Economy focus or integration is also beneficial for Entrepreneur Support Organizations. This approach has positioned local Impact Hubs as the actors bringing different stakeholders together and galvanizing action as the Circular Economy Ecosystem Builder. The development and delivery of such

Embedding circularity

A toolkit for incubators and accelerators

programs has helped build relationships with government, policy makers, like minded organizations, strategically important associations and an emerging global community of impact oriented entrepreneurs ready to build better business and reimagine the future.

Circularity Tales

Impact Hub's Circularity Tales showcase stories of action from entrepreneurs in our network that have participated in our Circular Economy pilot programs and are leading the way by implementing the principles in their businesses.

Most of these case studies are of ventures that participated in the program related to this toolkit. A sample of our Circularity Tales are listed below.

We hope that these stories provide you with inspiration and insights regarding the profiles of the entrepreneurs you could support through your circularity-infused/focused programs.

- [From organic waste to alternative proteins.](#)
- [A holistic approach to sustainability in Greece.](#)
- [A new life to plastic waste in Tanzania.](#)

For more inspiring stories visit our [blog](#).

Access more support

This toolkit is part of Impact Hub's wider capacity building campaign to rapidly expand access to knowledge and methodologies to enable a transition to the Circular Economy.

If this toolkit inspires you to adapt your entrepreneur support programs and services but you identify a need for additional capacity building within your organization, reach out.

Impact Hub offers a range of capacity building services to support Entrepreneur Support Organizations and Business Development Service Providers integrate circular design principles and activities into the support they offer to their entrepreneurial communities. This includes an online curriculum for self-paced learning, facilitated workshops for cohort-based learning and collaborations and coaching for one-to-one support.

Impact Hub's capacity building services facilitate your Circular Economy learning journey alongside a supportive community of like-minded and inspiring impact practitioners.

You can email Impact Hub for more information about the support available to you, your team and your entrepreneurial community: capacitybuilding@impacthub.net.

Embedding circularity

A toolkit for incubators and accelerators



Trends and Frameworks

Key trends, concepts and players

To get you, your team and your partners started, immerse yourself in the ideas, conversations and actors shaping the Circular Economy.

It is important to understand the concepts and terminology in order to facilitate a precise conversation with stakeholders. As a facilitators of Circular Economy ecosystems, ESOs have a responsibility to avoid dilution of the concepts. We facilitate initiatives that may be early stage and under development, but we are also mindful of the actual impact of the initiatives. For example, working with recycled materials is not always a perfect solution. Sometimes in creating a solution for one problem, we unintentionally create a new problem

elsewhere, as this [blogpost](#) from World Resources Institute illustrates. It can be more energy intensive to recycle materials, and mixing natural materials with plastics creates a future waste problem. This is why it is important to understand the concepts and keep an open and critical mind when assessing ventures or partners.

What follows overleaf is an overview of key concepts and perspectives relating to Circular Economy. The definitions, approach and resources of [Ellen MacArthur Foundation](#) (EMF) are at the center of this chapter, but other relevant frameworks are also presented, because these are important too.

Take a look and find what resonates the most with your context. Don't get lost in complexity and give yourself permission to go slow - this toolkit will

Embedding circularity

A toolkit for incubators and accelerators

help you be pragmatic in how you apply everything to your work.

- The EMF [butterfly model](#) of the Circular Economy – separating the biological and technological spheres. Here is quick [summary](#) about how materials circulate.
- [The Value Hill](#) proposes a categorization based on the lifecycle phases of a product: pre-, in- and post- use. This allows businesses to position themselves on the Value Hill and understand possible circular strategies they can implement as well as identify missing partners in their circular network. Also refer to the R-ladder below.
- [Doughnut Economics](#) by Kate Raworth is about meeting our needs within planetary boundaries.
- The [Disrupt Framework](#) is a comprehensive list of circular strategies for products. It includes 80 tangible strategies that provide guidance and inspiration for you to render your product circular. These are wide-ranging: design guidance, decisions concerning inputs, use, and end-of-life, business models and collaboration in the supply chain and in the use of digital technologies to support circularity.

- [Circular strategies](#) are for companies willing to be more resource efficient by narrowing, slowing, closing and regenerating materials and energy loops. The Circularity Deck is a playful and accessible method to explore potential circular strategies and select the most appropriate ones. In this [WWF whitepaper](#) you can see how they understood various sectors in Switzerland and how these circular strategies can be applied.
- In the [Resolve Framework](#) the three principles of the Circular Economy are translated into six concrete business actions: Regenerate, Share, Optimize, Loop, Virtualize and Exchange. The framework also proposes three principles to guide action: 1) Preserve and enhance natural capital by controlling finite stocks and balancing renewable resource flows; 2) Optimize resource yields by circulating products, components and materials; 3) Foster system effectiveness by revealing and designing out negative externalities.
- The [R-Ladder](#) offers a different way to categorize circular solutions, looking at the best strategies from top to bottom (see illustration overleaf).

Embedding circularity

A toolkit for incubators and accelerators

R-LADDER, by PBL Netherlands Environmental Assessment Agency

Smarter product use and manufacturing

- a. Refuse (Stop using)
- b. Rethink (use more intense)
- c. Reduce (use more efficiently so you need less)

Expand life span

- a. Reuse
- b. Repair
- c. Refurbish
- d. Remanufacture
- e. Repurpose

Useful application of materials

- a. Recycle
- b. Recover energy (incineration)

Now going more deeply into the history, the Circular Economy model synthesizes several major schools of thought, including:

- The [Performance economy](#) of Walter Stahel.
- The [Cradle to Cradle design](#) philosophy of William McDonough and Michael Braungart.
- [Biomimicry](#) as articulated by Janine Benyus.
- The [industrial ecology](#) of Reid Lifset and Thomas Graedel.
- [Natural capitalism](#) by Amory and Hunter Lovins and Paul Hawken
- The [Blue Economy systems](#) approach described by Gunter Pauli.

Additional relevant concepts include:

- The planetary boundaries from [Stockholm Resilience center](#) that inspired the Doughnut Economy of Kate Raworth.
- [Sufficiency transitions](#) entail substantial changes in consumption patterns for high-consuming classes, including a reduction in consumption levels.

Embedding circularity

A toolkit for incubators and accelerators

Sufficiency

Often cited as an approach to halting planetary degradation, sufficiency is distinct from but connected to circularity. Lea Weissenberger and Patricia Matzdorf from [WWF Switzerland](#) provide an overview below, especially for this toolkit.

The concept of sufficiency in sustainability

The manufacturing of most goods has become more efficient over time, as have the services these products provide. Today, for example, the production and operation of a refrigerator uses less energy than it did a few decades ago. Despite this progress, from a global perspective, we have not succeeded in reducing the overall consumption of resources and the resulting environmental pollution in recent decades.

On the contrary: the consumption of energy and resources as well as the emission of critical pollutants such as CO₂ has steadily increased in line with economic growth and wealth. There are various approaches to counteract this trend. A distinction is made between technical measures (increasing efficiency and consistency often linked to circularity) and measures related to the behavioural dimension (sufficiency). At first glance, sufficiency appears to be a purely individual choice. However, this approach can also be facilitated on a political level using dedicated policy instruments to encourage the moderation of consumption (Schneidewind and

Zahrnt, 2014; Fischer and Griesshammer, 2013).

Sufficiency refers to measures which change people's consumption behaviour to stabilize and reduce overall resources used to produce new products (Karagounis, 2021). The central question for this strategy is: How many things do we need to lead a good life? Therefore, people should not consume in excess, but only as much as the environment can support (Alexander, 2012). Sufficiency approaches are relevant and applicable to each and every one of us. These approaches are particularly important for richer countries where over-consumption of goods and services has become the overriding trend (EEB, 2019).

Using objects instead of owning them is one aspect of sufficiency – cars, clothes or tools. Rental schemes, swap events or repair workshops are a few examples which enable this mode of consumption. The potential environmental impact of sufficiency measures is high. However, implementation is challenging because a fundamental change in people's behaviour is necessary.

In order to put the fundamental ideas of sufficiency into practice on a broad scale, some barriers still need to be overcome. For example, the notion that our economies can grow eternally and sufficiently are mutually exclusive, or the rebound effect must be taken into account (e.g. having an energy-saving light bulb, but leaving it on all night long on) (Zink and Geyer, 2017; Sorrell, 2010; EEB, 2019). In some areas, however, a change can be observed and discussions around consumption have been stimulated (Prince, 2005).

Embedding circularity

A toolkit for incubators and accelerators

Developments and opportunities in key sectors

The World Economic Forum released [this report](#) in 2021 about the opportunities for a Circular Economy in Africa for the African Circular Economy Alliance. According to this report the focus here should be on food systems, packaging, the built environment, electronics, and fashion and textiles.

Be sure to also check out the great overview of Circular Economy case studies by [Footprints Africa](#). Here are more [case studies on Scale-Ups](#) leading the way.

For these sectors this toolkit has collected some contextual information, best practices, examples of successful innovations and a list of interesting extra reads from various sources. You will also find a list of strategies that entrepreneurs operating in the given sectors can develop to support a Circular Economy.

Agrifood

The agrifood sector can benefit greatly from a circular perspective, for example:

- Healthy soils through replenishment of nutrients and increasing biodiversity.

- Avoiding food loss through cold storage (for example [Inspirafarms](#)), cold chain logistics and processing/preserving (for example [the Ketchup project](#)).
- Collecting organic waste for composting or biogas (for example [Lono](#)).
- An interesting development linking the agricultural sector to the construction sector is using agricultural waste like corn stalks in building materials (like what [ECOR](#) does).

Het Groene Brein outlined [three strategies](#) that many entrepreneurs focus on:

1. **Closing material cycles in companies, so that waste and purchasing costs are reduced.**
2. **Collecting waste streams, so that different fractions can be used separately and the whole increases in value.**
3. **Adding value to waste streams, such as by the creation of new products.**

More information on food and the Circular Economy can be found [here](#).

Embedding circularity

A toolkit for incubators and accelerators

Construction and built environment

“The construction sector consumes 42 billion tonnes of resources annually, making it the most material-intensive sector. The construction sector also produces about one-third of all global waste, most of which is not recycled or reused, but ends up in landfills.”

Circle Economy

Ellen MacArthur Foundation highlights [two clear benefits](#) of a circular construction industry:

1. Investing in renovating and upgrading buildings along circular principles can provide comfortable, adaptable, and positive impact results for the built environment sector.
2. Combined with building materials’ reuse and recycling infrastructure, greater value circulation and effective use of resources can be attained, which would help lower the industry’s burden on virgin resource consumption.

Here are important circularity topics in the context of construction:

- Locally sourced sustainable materials (no plastic).
- Design for deconstruction for reuse of construction materials, or for changes in usage, such as the switch from office space to apartment buildings.
- Ownership of the building and/or the materials.
- Employee skills for circular construction and training for new jobs creation.

Inspiring examples of keeping track of materials in use in a building are [Madaster](#) (a buildings ‘material passport’ in the Netherlands) and platforms providing access to construction leftover materials in the Basque region, Spain, or in Berlin, Germany. In South Africa [DigiYard](#) is building the bridge between leftover, recovered or slightly damaged building materials and social building initiatives (for schools or in slums), an intrapreneurial initiative of ARUP in South Africa.

Fashion

Fashion is a major global industry, posing serious sustainability challenges. The numbers in [EMF’s 2017 Circular Textiles report](#) are startling:

Embedding circularity

A toolkit for incubators and accelerators

“Clothes are an everyday necessity, and for many an important expression of individuality. Yet the industry’s current take- make-dispose model is the root cause of many environmental impacts and substantial economic value loss. Every second, the equivalent of one garbage truck of textiles is landfilled or burned. An estimated USD 500 billion value is lost every year due to clothing that’s barely worn and rarely recycled. If nothing changes, by 2050 the fashion industry will use up a quarter of the world’s carbon budget. As well as being wasteful, the industry is polluting: clothes release half a million tonnes of microfibres into the ocean every year, equivalent to more than 50 billion plastic bottles. Microfibres are likely impossible to clean up and can enter food chains.”

[Ellen MacArthur Foundation, A New Textiles Economy](#)

Often people don’t realize that many textiles contain plastics, which is why it is important to use different materials or consciously work with textile waste, separation and reuse.

Circular models include reusing clothes via a sharing platform or post-consumer waste recycling into

virgin yarns (like [Loop-a-life](#) for clothes or [Reblend](#) for interior design in the Netherlands).

More information about fashion and the Circular Economy can be found [here](#). A specific toolkit for fashion by Circle Economy can be found [here](#) including lots of workshop canvasses.

Electronics

In the technical sphere it is easy to see all the steps of the R-ladder, including repair, refurbishment, modular design, design for separation of materials for reuse and recycling, for example [FairPhone](#) and [Closing the Loop](#).

Not only phones and computers, but also household appliances are interesting topics and don’t forget about logistics for example with electronic cargo bikes or [tuktuks](#).

While opportunities are everywhere in the manufacturing industry, here are [three strategies](#) highlighted by Het Groene Brein on which many entrepreneurs focus:

- High quality recycling, so that there is no outflow of materials, including critical raw materials.
- Optimising use, so that products can be used for longer.
- Developing new business models, so that the focus of propositions is not on the product, but on the function.

Embedding circularity

A toolkit for incubators and accelerators

Waste and plastics

Waste is often described as a design problem, but it is also a problem linked to policies, logistics and markets, such as when waste is being shipped to developing economies.

A complicating factor in working with waste is that it usually mixes many different materials. While it can be challenging to collect one waste stream and energy-demanding to recycle it, it is even harder to separate waste into pure streams. Take plastics for example. Plastic products are often actually also a mix of various types of plastic materials. Look at [SweepSmart](#) and their waste centers in India and Indonesia as inspiring examples where waste pickers became waste managers.

Plastics can be found in all sectors of the economy; not only in packaging but also in textiles and the agricultural sector for example. Plastics are used everywhere but the challenges are not spread equally. Some countries export the waste stream, and look at [what happened](#) when plastic waste could no longer be shipped to China. This showed many governments that exporting waste for recycling is not a perfect solution and we need alternative solutions upstream. When we can avoid using plastic, or replace single-use plastic with alternatives, and expand the use-life of plastic products, we make a big win. In many locations waste collection and separation is improved. This is

important to avoid plastic waste leaking into the environment.

Het Groene Brein highlights [five strategies](#) upon which many entrepreneurs and administrators are focusing in order to achieve a circular application of plastics:

1. **Avoiding unnecessary use by handling plastic products and packaging as sparingly as possible.**
2. **Designs for reuse, such as a mug that can be used instead of a quantity of disposable cups.**
3. **Designs for high-quality recycling of products or packaging, such as plastic trays made from mono materials.**
4. **Targeted collection, sorting and recycling of plastic, so that it can be reused at a high quality level.**
5. **Business models for optimal use, such as renting instead of selling products.**

For more information check out these resources:

- Take a look at the open source plastic recycling workspaces of [Precious Plastic](#).
- Find out more about bioplastic [here](#).

Embedding circularity

A toolkit for incubators and accelerators

- See the example of [Mr Green Africa](#) about a circular plastic packaging system, and more case studies in the [report](#) of Footprints Africa.
- Check out the EMF [New plastics economy](#) program.
- Go through [this learning path](#) created by Ellen MacArthur Foundation.

Circular business models

An important point about the Circular Economy is that it refers to a totally different economic system.

Entrepreneurs and other stakeholders are developing pieces of this new system by trial and error.

Circular business models are different in how they organize value chains or look at ownership structures. Put more simply, one company cannot be a circular business on its own.

Companies need a system that facilitates their circular solution and until the entire economy is circular, it can be challenging to collaborate with linear companies and within regulations designed for a linear economy (read about Circular Economy legal challenges in this [article](#) about the Netherlands).

Circular business models are based on these five revenue models:

1. **Circular supply chain, with a closed loop, depending on a strong logistics system** ([Closing the Loop ECOR](#) and [Madaster](#)).
2. **Reuse (avoid waste streams, like [Ycloset](#)).**
3. **Product life extension** ([Motorlan](#), [MudJeans](#) and [Fairphone](#)).
4. **Platforms for a Sharing Economy** ([SnappCar](#)).
5. **Product-as-a-Service (access to product, instead of ownership, like [Signify's 'Light as a Service'](#)).**

Consider different strategies. For example a venture could create a new business model or facilitate a Business-to-Business collaboration in a certain value chain to increase circularity. A venture could look at packaging and logistics, or at waste stream valorization (one person's waste is another person's resource). A venture could design new products that will have no waste after end-of-use or build a local circular ecosystem.

You can find a detailed overview of how businesses create circular business models [here](#).

Embedding circularity

A toolkit for incubators and accelerators

Starting a circular value chain versus moving from linear to circular

Working with startups that from day one have had the explicit intent of being a circular solution is very different from working with existing ventures to transform from a linear into a more circular model. [SITRA](#) calls them the Circular Natives and the Circular Adapters. Impact Hub Donostia, for example, has focused on the latter – Circular Adapters – with their [Oleku](#) program.

As an ESO you can look at the [CIRCO](#) training for Small and Medium-sized Enterprises (SMEs), and read [Products that last](#) by Conny Bakker.

Circular Natives and Circular Adapters can be valuable to each other, because both have their strengths. The startup with a circular solution at the core of its business model can capitalize on that to create a compelling brand story. This is attractive to a transitioning company (or other organizations) that in turn can offer access to a supply chain or a market. Think of a startup selling circular compost in an agricultural inputs wholesaler or electric logistic vehicles powered by refurbished batteries coming from e-waste.

It is important to note that some ventures you are define as Circular Adapters might not necessarily be

aware of what circularity is, but may nevertheless be practicing at least some circular principles already.

For more inspiration on moving from linear to circular, you can also look at [these](#) circular service business models.

Financing circular business models

In general, funding is available in the form of participations, loans or public funding.

The right type of financing depends on circumstances such as the type of circular business model and the development phase of the organization.

Attracting funding for a new initiative is challenging as it will be perceived as riskier without a track record.

Circular business models have a different risk and return profile than current linear models. Companies and financiers will take this into account. There are important differences in the change in financial flows, the dependence on partners and customers, and the complexity of risks. In the case of circular startups this can be even more complicated when looking at Product-as-a-Service (access instead of ownership, like a car sharing membership, meaning a lot of assets on the balance sheet) or

Embedding circularity

A toolkit for incubators and accelerators

Pay-Per-Use (spreading payments over a long period of time, thus impacting on the cash flow).

For more information about the risks of financing circular businesses, check out:

- This [video](#) about innovations in circular finance.
- This [report](#) about financial risks related to circular models.

There are many potential funding partners to consider for entrepreneur support programs engaging in Circular Economy:

- Philanthropy (family offices).
- NGOs/Charities like Oxfam.
- Government funds like GIZ.
- Private funds like DOEN and MAVA Foundations.
- Private initiatives like WEF.
- B2C: memberships, pay-per-use.
- B2B: funding from value chain partners (sales or investment).
- Challenges can be initiated by various organizations creating demand for a circular solution, leading to prize money for Research and Development or a pilot/launching customer.

Job creation opportunities

A Circular Economy will have an effect on the labour market, from destruction of jobs that are no longer part of the system (unsustainable products) to creation of new jobs. A Circular Economy can also have an effect on the quality of jobs. The OECD has a [Review Paper](#) on this very subject.

This means it is important to consider which jobs are affected by an initiative and to include opportunities to reskill or upskill people when transitioning to a new system.

By supporting entrepreneurs and businesses to adopt circularity design principles and support the development of a Circular Economy, ESOs create opportunities for themselves to engage in local, regional, national and translocal policy conversations regarding pandemic/crisis recovery, green transitions/deals and job creation, and not to mention plenty of business development opportunities connected to these conversations.

You can read more examples of Circular Economy job opportunities [here](#) from the Circle Economy Jobs Initiative, who look at [vocational training](#) opportunities too. Also, [Young Africa](#) provides vocational training for the entrepreneurs and employees of the new economy.

Embedding circularity

A toolkit for incubators and accelerators



Getting ready

Inspire your team: how does Circular Economy link to their work and ambitions?

Organize a workshop or training bootcamp with the entire team, including the people who will not be directly involved in a Circular Economy program, in which you explore Circular Economy concepts and examples together

You can discuss how these concepts link to everyone's work and impact on partnerships, ambitions and opportunities. For example, consider facilitating such activity in the following ways:

- Share the [this reading list](#) with your colleagues to provide an introduction to the world of Circular Economy. There is a lot of content here so allow plenty of time to process it all!
- Discuss the [trends and frameworks](#) with them and how these link to their work and the organization's mission and strategy.
- Together or in teams map the local ecosystem ([see section below](#)).
- Complete the recommended [workshops](#) together, applying them to your own organization, services and products.

Embedding circularity

A toolkit for incubators and accelerators

Analyze opportunities

The next step is to analyze Circular Economy opportunities in your local context. Consider if the term 'Circular Economy' is already commonplace in your local context or if other concepts and terminology are in use. Ask yourselves who you need to bring along with you in understanding and accepting this concept and how to achieve this? Questions for you to answer as a team are listed below:

- Do you want to focus on a certain type of Circular Economy model, sector or value chain?
- Do you see an opportunity to partner with a larger entity, like a company, government organization or university, and develop circular business models with or for them?
- Or should you start ideating new Circular Economy models to be developed and tested in the community?
- Would you start with individual conversations, linking the Circular Economy concept to existing initiatives, or with a public campaign, or an expert event?

Onboard talent

When you welcome new talent into

your team, invest in their understanding of the concepts, ambitions and links to ongoing projects and external opportunities. The trends and frameworks are important for the entire team to understand, not only the Circular Economy program managers. It is important for your organization to lead by example.

Here are key roles to consider for your team, Full Time Equivalency dependant on the resource available to you:

- Coordinator: the person bringing everything together, from partnerships to evaluation.
- Lead Trainer: the familiar face for the program participants.
- Cohort Manager: the other familiar face, coordinating all practicalities.
- Mentor Coordinator: can also be integrated into Coordinator or Cohort Manager roles.
- Ecosystem Coordinator: a separate role, focussed on the network of a specific issue or sector.
- Event Manager: planning and organising various activities relating to the program.
- Circularity Expert(s): bringing the technical knowledge into your program.

Embedding circularity A toolkit for incubators and accelerators



Ecosystem building

Start the Circular Economy conversation

For this systemic change to happen, we need several stakeholders to interact - from companies to consumers, from NGOs and governments - which is why we use the term 'ecosystem'. Ecosystem building is looking at involving companies, financial institutions, knowledge institutions, government organizations and any other entities in the conversation. Constant attention is required, from facilitating the initial conversations to growing and maintaining the ecosystem.

In a Circular Economy companies and organizations need to cooperate: you can't be a circular company on your own. Building a new circular solution

requires stakeholders to change their roles, take risks and collaborate with others, which may not come naturally, and can be scary, but necessary to create a systemic change.

ESOs can play an important role in facilitating the connections required to build a local, regional and/or national ecosystem. For example, check out Impact Amsterdam's [Circular Ecosystem Building](#) and its report on [city-wide Ecosystem Building](#).

The ecosystem as a system-level network can be focused on a value chain involving a company's suppliers, like in the textile or construction sectors; or you can focus on a region, like we see in [Mondragon](#) in the Basque Region in Spain or in the [Port of Amsterdam](#).

Embedding circularity

A toolkit for incubators and accelerators

Within these ecosystems you will find flows of resources, money, energy and knowledge. Because of these flows between different types of actors, we call it an ecosystem – similar to the natural world.

You can map the ecosystem in a canvas. For here example [here](#) is one from Australia with startups in clean energy and Circular Economy. Alternatively, [here](#) is a circular roadmap for the city of Boulder, by Metabolic.

For each stakeholder there can be different reasons to participate in the ecosystem. For example a company struggling with the increasing cost of raw materials, or a government wanting to create job opportunities or reduce pollution.

It is important to acknowledge that interactions and activities need to take place at different levels, from one or several individuals within companies to regional institutions (like waste management), to national legislation, for example. For a company, their involvement would entail selecting a new material, changing their logistics or developing a new business model. National legislation could be discussed, for example regarding health and safety or ownership of a waste stream. Be sure to understand the needs of the various stakeholders (and those who aren't already involved but should be), but also the opportunities a Circular Economy creates for them, for example, in

creating jobs, increasing resilience in a changing economy and climate, reducing risk in supply chains, finding new clients and reducing costs. This is how you can create a win-win proposition and attract partners into the Circular Economy ecosystem.

Working in an ecosystem requires interaction, trust, common activities and shared goals. First build contacts, discuss expectations, develop a common language and buy-in. Then broaden the network while building trust. Performing activities together, setting Key Performance Indicators and allocating resources to achieve these all help. Make sure you evaluate progress and identify future opportunities. Stephanie Scott's [article](#) and [diagram](#), taking a network-based view of effective entrepreneurial ecosystems, offers further insight on this topic.

Ecosystem facilitation

The ecosystem needs constant attention. You can consider awareness raising events and campaigns via newsletters and social media. Extend invitations to people and organizations that are already active in the Circular Economy and those who are new to the topic or underrepresented in the sector, together or separately. Facilitate workshops for them to become more acquainted with the subject and focus on certain sectors

Embedding circularity

A toolkit for incubators and accelerators

for startups, SMEs and other stakeholders. Impact Hub Amsterdam offers a series of masterclasses, organizes field visits and hosts circular and linear companies in a LinkedIn group - consider doing this too.

A useful resource to check out is [Will you be my partner?: Nine steps to identify and establish successful collaborations for a Circular Economy](#) by Circle Economy.

ESOs can play an important role in bringing more organizations into the ecosystem and finding new opportunities for impact entrepreneurs.

For nascent Circular Economy markets, it may be beneficial to put even more emphasis on awareness raising with potential stakeholders. As the language of circularity isn't yet widely adopted, campaigns that help introduce the topic to as wide a range of audiences as possible, can only be positive for entrepreneurs operating in the field.

Use this [ecosystem mapping tool](#) to produce a report that can inform the development of your program and your positioning within your context. This is a big piece of work, but provides crucial foundations.

"The most beautiful parts from our circularity program were the days we held events. We organised three of them: a program launch, a networking event and a demo day closing the program. It was beautiful seeing everyone connecting with each other, making contacts, and building the ecosystem. I encourage future organisers to create as many face-to-face formats as possible, as the impact is much greater and the connections much more fruitful."

Marina, Impact Hub Barcelona

Ecosystem mapping

An ecosystem mapping exercise should precede all other programmatic activities as this scopes out the context in which you will operate, identifying stakeholders to include in the program and to orient entrepreneurs within the ecosystem.

Embedding circularity

A toolkit for incubators
and accelerators



Programmatic integrations

Types of programs

There are various types of programs to consider, each with their own goals, deliverables and considerations:

1. Programs focusing on supporting Circular Economy startups (in various stages of development).
2. Programs focusing on supporting SMEs move from linear to circular, by integrating Circular Economy activities into a broader program or by offering a package of support explicitly focused on circularity
3. Challenges coming from ecosystem partners like governments, NGOs or corporations.

4. Systemic venture building in response to local challenges.

A focus on the Start-up and Growth stages

This toolkit is focused on embedding circularity into programs supporting entrepreneurs at Start-up or Growth stage, for example through incubators or accelerators. There are some differences in the needs and experiences of entrepreneurs at these two stages and these have implications for the type of support you deliver through your programs and its format. In short:

Embedding circularity

A toolkit for incubators and accelerators

Start-up stage:

Building skills, connections, confidence and commitment in order to launch a business.

Such programs tend to bring together a range of sequenced and cohort-based support mechanisms, including workshops, training days, bootcamp style residencies, coaching from experts, mentoring, pitching events and regular cohort-based check-ins. Entrepreneurs should receive training and support based on their specific industry and market.

Growth stage:

Maturing from a fledgling business to one that is sustainable and investable.

Support is more tailored to the specific needs of entrepreneurs and ventures than Start-up stage programs. A program will have a less structured curriculum in favor of curating specialized expertise to strengthen the business. Each program should start with a thorough diagnostic during which the entrepreneur puts together a development plan. Specific support can be curated based on the results of the diagnostic and existing data and knowledge of the customer segment.

What follows is a series of considerations and recommended activities to deliver as part of your program design and delivery in order to embed circular design principles into the ventures that you're supporting through this program.

This is not an exhaustive menu, but a sample that has already been validated by Entrepreneur Support Organizations through Impact Hub's Circular Economy pilot programs.

Before we look at activities you can deliver through your programs, let's start with some foundational pillars of quality entrepreneur support.

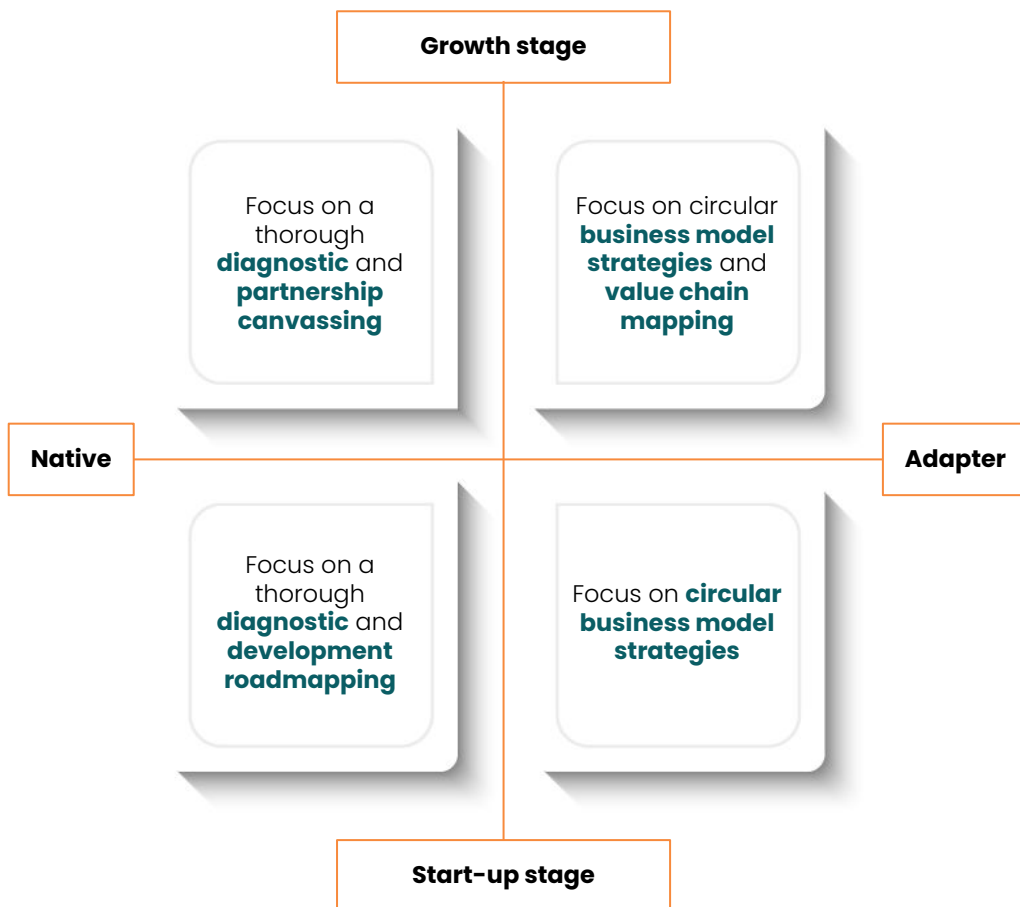
Program design

Here are some considerations for designing a program with a circularity twist:

- Understand the stage of development of the ventures and the challenges they are experiencing to create targeted problem-focused support.
- The diagram overleaf offers an overview of the kind of support that typically suits a venture based on its development stage and circularity status. This is very high level but offers an example of how support can vary based on two considerations.

Embedding circularity

A toolkit for incubators and accelerators



- What do you want to achieve with the ventures or the value chain at the end of the program? Do you envision a showcase to a particular audience at the end of the program? What outcomes do you want to see in your program participants and ecosystem?
- Conduct a diagnostic exercise that includes Circular Economy questions in order to identify problems, goals and support needs.

- Support prototyping, piloting and other validation activities to test solutions in real situations. Encourage ventures to test as soon as possible.
- Include on-site visits to partners in the value chain to get to know each other better. A variation could be to have all ventures invite one to three (potential) value chain partners they would like to work with (more) to an event.

Embedding circularity

A toolkit for incubators and accelerators

- Include live (online or in-person) meetings with experts and stakeholders. Don't forget to include a speaker or trainer fee and space and catering in your budget for these meetings.
- Include a practice pitch event with an audience of experts, mentors or partners, for feedback a few weeks before the final event. This way program participants may already get valuable tips and connections and the final presentation will improve.
- Impact Hub Amsterdam outlines five ways to embed circularity into startups in [this](#) article. Ask yourself how your program can address these recommendations and what this might look like in practice.
- The sooner ventures can be supported to become circular, the easier it will be for them, because it is easier to adapt business model earlier in on. Changing plans is easier than changing established systems, processes and cultures.

your organization and the impact of your ecosystem. You will also want to measure the impact your program is having on entrepreneurs, ventures and ecosystems. Be sure to confirm in advance what kind of impact reporting you and your partners require, and align this as closely as possible with your organization's strategy.

It can be tempting to report on many impact targets, because you want to create much impact. But it can be hard to execute this over a longer period of time (you will need to collect a lot of data), and maybe you don't directly influence all these targets, and then what impact can you really claim? It helps to define your vision and what you really want to influence and change. Then you can develop key metrics around areas to measure the difference you're making.

Take Impact Hub's Circularity Program as an example. Its desired impact was to embed sustainability as a design principle into the Small and growing businesses (SGB) sector, enabling SGBs to make positive contributions towards climate action and biodiversity:

1. **Supporting the development of Circular Economy enterprises.**
2. **Increasing Circular Economy awareness and know-how.**
3. **Strengthening the Circular Economy startup ecosystem.**

Impact management

When it comes to impact, you can focus on several levels: the impact of the entrepreneurs and ventures, the impact of the program, the impact of

Embedding circularity

A toolkit for incubators and accelerators

To measure progress against the above, we developed a series of outcomes, outputs and indicators. You can see examples of these in this [Impact Management Framework](#) which you can adapt based on your own intentions and priorities.

In addition to the quantitative impact measurement, it is important to look at qualitative impact. Use baseline surveys at the beginning of the program and endline surveys at the end of the program.

If you can have structured interviews with participants and partners, you can learn more about their journey, lessons learned and other needs for which you can develop a program. It also helps think about new partners you want to invite into the ecosystem.

Here are some [examples of baseline, endline and interview questions](#) to use with program participants. Review these and adapt for your own program.

Review meetings with participants offer another means to gather qualitative data. They allow participants to share experiences with each other, and allow you an an ESO to quickly grasp components of the program that were or were not helpful.

The stories you gather from Circular Economy entrepreneurs will be important for attracting new partners and participants.

Corporations interested in measuring their progress on circularity can use [Circulytics](#)

Funding the program

Depending on the type of program you're offering the funding will vary. In the local context look at funds dedicated to Circular Economy (or related terminology) from government bodies, NGOs and donor organizations.

It is also important to help your ventures find and secure capital to implement their circular innovations, usually ranging from €10,000 to €1 million. It can take at least six months to prepare your program once funding has been secured, so plan for this.

Train the trainer

Internal or external trainers may or may not already hold expertise regarding Circular Economy, entrepreneur support or certain value chains. Regardless, you should plan an onboarding process for all trainers in order to align them with your methodology and ensure that everyone has a baseline knowledge of particular subjects and industries.

Revisit the [Getting Ready](#) section for more guidance on this.

Embedding circularity

A toolkit for incubators and accelerators

Scouting and selecting the right entrepreneurs and ventures

Your scouting and selection strategy is vital to the success of your program. You need to find entrepreneurs and ventures at the right stage to make the most of the opportunities and support that you present them with.

Adapt your standard participation specifications, application form and selection progress to include Circular Economy-specific criteria.

Here are some questions you should be seeking to answer through your scouting and selection process:

Start-up stage support programs:

About the entrepreneur

- What knowledge does the entrepreneur have about Circular Economy?
- How committed is the entrepreneur to the program and do they have their team onboard (with at least one other person ready to participate in the program)?
- What are their ambitions and how are they aligned with your Circular Economy mission?
- Do they have contacts or experts in the field?

About the venture

- What type of circular solution do they propose?
- Does the solution imply one or more key design principles in their operations?
- How did they research the need, potential and required partnerships within a Circular Economy context?

Growth stage support programs:

About the entrepreneur

- Does the venture have all relevant knowledge and contacts in their team or advisory pool (this can be valuable for peer support activities in your program)?

About the venture

- What type of circular solution do they propose?
- Is the solution characterised by a circular business model?
- Does the solution imply one or more key circular design principles in their operations?
- Do they have product-market fit?
- Is the solution really a solution with systemic impact? (If it is not systemic, maybe that's OK for the program, but be alert to 'solutions' creating new problems.)

Embedding circularity

A toolkit for incubators and accelerators

- Did they start from a circular system perspective, or do they want to shift towards a more circular model?
- Does the team have enough knowledge of the industry they operate in, including different players of the value chain and how they envision to collaborate?
- Do they know if their solution has legal or logistical bottlenecks?

These questions will help your selection committee in their work to find the right program participants. Before making a final selection, discuss with the committee which criteria are key for your Circular Economy program and objectives. It is recommended to invite a Circular Economy expert from your country or region to join the selection committee. It can also be advantageous to have one of your partners or funders join the selection committee.

"Lean into the knowledge and connections of the participants. More often than not what you are looking for in terms of programme execution lies within the entrepreneurs and their networks, especially Circular Natives."

Auxicillia, Impact Hub Harare

Promotion and communications

It helps to select one or two examples of companies that illustrate what you're looking for, especially if Circular Economy is new to your entrepreneurial ecosystem. You could ask to use one of their images in your social media campaign. Alternatively you could find an ambassador who will promote your program to a relevant community.

Short meetups about Circular Economy can be helpful if this is a very new topic in the region or sector. Invite people to discuss the opportunities of Circular Economy and end with an invitation to sign up for the program or nominate other potential participants.

Especially for SMEs or more advanced startups it can be interesting to invite them to involve a supply chain partner, and sign up for the program together to jointly work on their Circular Economy innovations.

Whether you're the first to focus on a Circular Economy in your local context or building on other initiatives, it is important to consider your messaging in communication materials.

As mentioned previously, ESOs can play an important role in strengthening the conversation and avoid dilution of the terminology of Circular Economy.

Think carefully about the language you

Embedding circularity

A toolkit for incubators and accelerators

are using. While you want to avoid dilution of terminology, you do not want to use language that alienates your desired audience. Draw from a vocabulary that resonates with, includes and inspires your community and ecosystem.

Here are some examples of how Impact Hubs have packaged their Circular Economy interventions:

- [Circular Economy Acceleration Program, Impact Hub Kigali.](#)
- [Circular Together, Impact Hub Berlin.](#)
- [Tangram, Impact Hub Barcelona and Impact Hub Madrid.](#)

Diagnostics

In order to understand your ventures' specific business needs, you need to run diagnostics with them. This is a crucial part of your support program.

Impact Hub Circularity Program pilots integrated a **Circularity Check** into their existing diagnostics. If your ventures are new to Circular Economy then facilitate this activity later in the program rather than at the start because people need to have a baseline knowledge of Circular Economy in order to be able to understand the tool.

Partners

Partners can bring a combination of funding, sector network and expertise. Consider policy makers, corporations or strategy consulting firms for example. Be explicit with potential partners about your ambitions and take time to understand their objectives. Is it really a match? Remember your mission and values. your partnerships should strengthen, not compromise, these. Check out the section on [ecosystem building](#) for more on this subject

Facilitating access to capital

Once you have a baseline of what investment the ventures are looking for and how investment ready they are, the next step is to map what is out there for them, and bring what you find into your access to capital offering.

How to build this offering is beyond the scope of this toolkit, but you can review the section on [financing circular business models](#) to get started.

These [Circular Economy Knowledge Cards](#) from Het Groene Brein provide ten steps to making business models financeable, which you can explore in a workshop about value creation. You can also use their [case studies](#) on how circular businesses have been funded.

Embedding circularity

A toolkit for incubators and accelerators

Delivery of support

Here recommendations for workshops to include in your programs to support entrepreneurs develop circular products and business models.

These aren't detailed session plans but summaries, along with signposts to existing resources from in and outside the Impact Hub Network which you can use for inspiration to kick start the development of your own Circular Economy-focused workshops.

Workshop	Resources
<p>Develop a Circular Mindset Activate your cohort's circular journey by facilitating personal reflection, situation mapping, trend spotting and intention setting.</p>	<p>Oleku's Activating Circular Realities from Impact Hub Donostia.</p>
<p>Circularize Everyday Products Challenge participants to take an everyday product and redesign it through a Circular Economy lens, using a systems thinking approach.</p>	<p>Circular Design Case for pre/early stage ventures, or Circular Strategies Workshop for later stage Start-up/Growth ventures from The Circular Design Guide.</p>
<p>Circular Business Models Develop or redefine business models from a circular design perspective, choosing to implement circular strategies and principles.</p>	<p>Masterclass, templates and resources from Jan Konietzko.</p>
<p>Service Flip Support Growth stage ventures shift from selling a product to turning that product into a service, thereby developing a more circular business model.</p>	<p>Service Flip Canvas from The Circular Design Guide.</p>
<p>Circularity Check One-to-one and/or group support to measure the circularity status of ventures and develop a circularity roadmap.</p>	<p>Circularity Check Workbook developed by Accelerate2030 as part of the Impact Hub Circularity Program..</p>
<p>Circular Collaboration Bring together people from different companies in a value chain to explore how they can leverage each other's strengths for a circular solution.</p>	<p>Circular Joint Venture Design Workshop from The Circular Design Guide.</p>
<p>Relationship and Ecosystem Building Support ventures to map their own ecosystem and establish successful collaborations for realising circular products.</p>	<p>Tools for Systems Thinkers from Leyla Acaroglu, and Ecosystem Map from Service Design Tools.</p>

Embedding circularity

A toolkit for incubators and accelerators

Also check out these websites which offer many more resources to help you deliver circularity-related support through your programs:

- [Oleku](#), Impact Hub Donostia.
- [The Circular Design Guide](#), Ellen MacArthur Foundation and IDEO.
- [Circular Economy university courses](#), Ellen MacArthur Foundation.
- [The Circular Toolbox](#), Circle Economy.

Supportive Circular Economy connections

It is unlikely that you will be able to provide all the support needed by the entrepreneurs in-house. Develop partnerships instead. Build a comprehensive, flexible support network for your entrepreneurs, comprising coaches, mentors, experts, peer groups, community memberships and alumni communities.

It is a good idea to have mentors with an entrepreneurial background, who have built businesses before and have Circular Economy knowledge. You should also look for mentors with experience in the sector in which the ventures operate.

Mentors should be sparring partners to discuss the Circular Economy strategy

and revenue models with the entrepreneurs, also opening doors to partners and maybe investors.

"Create your pool of mentors. Then give your program participants a specific number of hours (credit) they can use however they like with this pool of mentors."

Joxean, Impact Hub Donostia

When circular startups discuss their intentions with partners like SMEs, researchers and policy-makers, a mentor can bring in their expertise to prepare or facilitate these conversations, as they may know the best angle to propose a circular solution.

You might want to avoid someone from 'the old system' if they are not engaged with the transition to a Circular Economy. Instead, seek out progressive individuals and organizations coming from different sectors, all with visions and values that resonate with Circular Economy principles.

If you cultivate a strong alumni community you may also be able to create a pipeline of homegrown mentors to support future program cohorts.

Embedding circularity

A toolkit for incubators and accelerators



References and credits

Introduction, trends and frameworks

Biomimicry Institute, [website](#).

The Blue Economy, [website](#).

Circular Strategies, [website](#).

Circle Economy (2020), [Climate change mitigation through the Circular Economy](#).

Circle Economy, [The Disrupt Framework](#).

Circle Economy (2016), [Master Circular Business with the Value Hill](#).

Cradle to Cradle Certified, [What is Cradle to Cradle Certified?](#)

Doughnut Economics Action Lab, [About Doughnut Economics](#).

Ellen MacArthur Foundation, [The butterfly diagram: visualising the Circular Economy](#).

Ellen MacArthur Foundation (2015), [Growth Within: a Circular Economy Vision for a Competitive Europe](#).

Ellen MacArthur Foundation, [Systems and the Circular Economy](#).

Ellen MacArthur Foundation, [What is the Circular Economy?](#)

Natural Capital Solutions, [website](#).

PBL Netherlands Environmental Agency (2019), [Outline of the Circular Economy](#).

Sandberg, M. (2021), [Sufficiency transitions: A review of consumption changes for environmental sustainability](#).

Embedding circularity

A toolkit for incubators and accelerators

Stahel, W. (2010) [The Performance Economy](#).

Stockholm Resilience Centre, [The nine planetary boundaries](#).

World Economic Forum (2021), [Circular Trailblazers: Scale-Ups Leading the Way Towards a More Circular Economy](#).

World Resources Institute (2019), [Here's What Could Go Wrong with the Circular Economy - and How to Keep it on Track](#).

World Resources Institute (2021), [5 opportunities of a Circular Economy](#).

Wikipedia, [Industrial ecology](#).

WWF (2021), [Circularity as the new normal: Future fitting Swiss businesses](#).

The concept of sufficiency in sustainability

Alexander, S., (2012), [Living Better on Less? Toward an Economics of Sufficiency. Simplicity Institute Report](#).

Bocken, N. and S. Short, (2019), [Transforming Business Models: Towards a Sufficiency-based Circular Economy](#).

Fischer, C. and G. Rainer (2013), [Working Paper. When less is more - Sufficiency: Terminology, rationale and potential. Oeko-Institute's Working Paper](#).

Parrique T., J. Barth, F. Briens, C. Kerschner, A. Kraus-Polk., A. Kuokkanen and J.H. Spangenberg (2019), [Decoupling debunked: Evidence and arguments against green growth as a sole strategy for sustainability](#).

Prince, T. (2005), [The Logic of Sufficiency](#).

Schneidewind, U. and A. Zahrnt (2014), [The Politics of Sufficiency. Make it easier to live the good life](#).

Sorrell, S. (2010), [Energy, Economic Growth and Environmental Sustainability: Five Propositions](#).

Zink, T. and R. Geyer (2017), [Circular Economy rebound](#).

Circular Economy in Africa

Footprints Africa (2020), [The Circular Economy: our journey in Africa so far](#).

World Economic Forum (2021), [Five Big Bets for the Circular Economy in Africa African Circular Economy Alliance](#).

Agrifood

Ellen MacArthur Foundation, [Food and the Circular Economy](#).

Het Groene Brein, [How do we use biomass and food circularity?](#)

Embedding circularity

A toolkit for incubators and accelerators

Construction and built environment

Circle Economy (2019), [Circle Scan Rockwool: opportunities to grow the Circular Economy in the Built Environment](#).

Ellen MacArthur Foundation (2020), [10 circular investment opportunities for a low-carbon and prosperous economy](#).

Fashion

Circle Economy, [Step by step guide for apparel brands to design and launch a rental or resale pilot in 10 months](#).

Ellen MacArthur Foundation, [Fashion and the Circular Economy](#).

Ellen MacArthur Foundation (2017), [A new textiles economy: redesigning fashion's future](#).

Electronics

Het Groene Brein, [How do we make manufacturing circular?](#)

Waste and plastics

Earth.org (2021), [The effects of China's ban on imported scrap plastic on global recycling efforts](#).

Ellen MacArthur Foundation, [Designing out plastic pollution](#).

Ellen MacArthur Foundation, [Plastics and the Circular Economy](#).

Het Groene Brein, [How do we make plastics circular?](#)

Business in the Circular Economy

Bakker, C, M. den Hollander and E. van Hinte (2019), [Products That Last: Product Design for Circular Business Models](#).

Circle Economy, [Circular Jobs](#).

Circle Economy (2021), [Closing the skills gap: vocational education and training for the Circular Economy](#).

CIRCO, [website](#).

CircularX, [Cases](#).

Het Groene Brein, [How does financial risk change with a circular business model?](#)

Het Groene Brein, [Which circular business models arise?](#)

Impact Hub Amsterdam, [The legal challenges of Circular Economy](#).

Impact Hub Donostia, [Oleku](#).

Embedding circularity

A toolkit for incubators and accelerators

Organisation for Economic Co-operation and Development (2020), [Labour market consequences of a transition to a Circular Economy](#).

SITRA (2021), [The winning recipe for a Circular Economy](#).

Wirtz Film and Experience, [De financiering van de Circulaire Economie](#).

Young Africa, [website](#).

Ecosystem building

Circle Economy (2020), [Will you be my partner?: Nine steps to identify and establish successful collaborations for a Circular Economy](#).

Impact Hub, [Circularity Ecosystem Mapping](#).

Impact Hub Amsterdam and City of Amsterdam, [Building a city ecosystem for Impact](#).

Metabolic (2020), [Circular Boulder, pioneering steps towards a zero-waste and climate-neutral city](#).

Scott, S., M. Hughes and D. Ribeiro-Soriano (2022), [Towards a network-based view of effective entrepreneurial ecosystems](#).

Startup Status (2020), [The Australian innovation ecosystem focused on climate, renewable energy, and Circular Economy](#).

Program resources

Acaroglu, L. (2017), [Tools for systems thinkers](#).

Accelerate2030 and Impact Hub, [Circularity Check](#).

Circle Economy, [The Circular Toolbox](#).

Ellen MacArthur Foundation, [The Circular Design Guide](#).

Ellen MacArthur Foundation, [Circular Economy courses](#).

Ellen MacArthur Foundation, [Circulytics](#).

Het Groene Brein, [How do you make your business model financeable?](#)

Het Groene Brein, [What are examples of circular financing?](#)

Impact Hub, [Impact Management Framework](#).

Impact Hub, [Tools for Impact Measurement](#).

Impact Hub Amsterdam (2022), [5 ways to embed circularity into your creative startups](#).

Impact Hub Donostia, [Oleku](#).

Konietzko, J., [Circularity Deck](#).

Metabolic (2020), [Systemic venture building](#).

Service Design Tools, [Ecosystem Map](#).

Embedding circularity

A toolkit for incubators and accelerators

Credits

Many thanks to the individuals and organizations involved in co-creating this toolkit, especially:

- Impact Hub Amsterdam’s Manon Klein for authoring content.
- Accelerate2030 for realizing the Circularity Program program with us and for producing the Circularity Check.
- Impact Hubs Athens, Barcelona, Dakar, Dar es Salaam, Donostias, Harare and Kigali for their trust, collaboration and courage as Circularity Program pilots.
- DOEN Foundation and MAVA Foundation for enabling this work.



Embedding circularity: a toolkit for incubators and accelerators © 2022 by **Impact Hub** is licensed under **Attribution 4.0 International**.



Impact Hub GmbH
 Lindengasse 56 / 18-19, 1070
 Vienna, Austria
 UID : ATU66357747 | FN : 358967v