

CREATING CIRCULAR FASHION ECOSYSTEMS

A ROADMAP FOR
SYSTEMIC CHANGE

November 2022

Findings from the foundation phase
of developing Circular Fashion Ecosystems
in UK cities



BRITISH
FASHION
COUNCIL

ACKNOWLEDGEMENTS

This report has been prepared by Circle Economy, commissioned by the British Fashion Council's Institute of Positive Fashion (IPF). It gathers the findings from the foundation phase to develop Circular Fashion Ecosystems in the UK cities of London and Leeds. The study has been managed and the report researched and authored by Ilektra Kouloumpi—Senior Strategist, Gwen Cunningham—Lead Textiles Programme, Mayya Saliba—Strategist, Natalia Papú Carrone—Senior Strategist and Rita Cruz—Project Manager, of Circle Economy. Contributions to the report were made by Dr Naomi Bailey Cooper—IPF Post-Doctoral Fellow, Dr Savithri Bartlett—IPF Post-Doctoral Fellow and Shailja Dubé—Institute of Positive Fashion Lead & Circular Fashion Ecosystem Project Lead, of the British Fashion Council's Institute of Positive Fashion.

The British Fashion Council and Circle Economy teams are grateful to the following persons for their time and input into the insights gained for this project, through a combination of online hackathons and an in-person workshop. Content does not reflect individual views from contributors but rather an aggregation of the insights that emerged from the sessions they participated in.

PARTICIPANTS

- **John Atcheson**, Circular Way
- **Zaramia Ava**, Leeds Ethical Fashion Designer
- **Laura Culligan**, Burberry
- **Orsola de Castro**, Fashion Revolution
- **Kate Goldsworthy**, Centre for Circular Design - UAL
- **Rob Greenland**, Zero Waste Leeds
- **Leonora Grcheva**, Doughnut Economics Action Lab
- **Esra Kasapoglu**, Innovate UK
- **Jaki Love**, UKFT
- **Sarah Malone**, ReLondon
- **Clara Mercer**, British Fashion Council

- **Suzanne Nicholls**, Zero Waste Leeds
- **Ronan O Dalaigh**, Thriftify
- **Dr Pammi Sinha**, University of Leeds
- **Josephine Philips**, Sojo
- **Vanessa Podmore**, Podmore Consulting
- **Katie Rawle**, British Fashion Council
- **Kate Raworth**, Doughnut Economics Action Lab
- **Cyndi Rhoades**, Worn Again Technologies
- **Julia Roebuck**, Upcycle Fashion
- **Stephen Russell**, University of Leeds
- **Catherine Salvidge**, Textiles 2030 - WRAP
- **Gilda Smith Leigh**, Leeds City Council
- **Samantha Southern**, Sam Southern
- **Bobi Steel**, Leeds Arts University
- **Dr. Mark Sumner**, University of Leeds
- **Josie Warden**, RSA
- **Alan Wheeler**, Textile Recycling Association

ABSTRACT

The IPCC Sixth Assessment Report stresses the urgent need for radical action to prevent the catastrophic effects of climate change. It also describes the circular economy concept as a structural solution that can achieve human well-being by minimising waste of energy and resources, and reducing greenhouse gas emissions. The way clothes are designed, produced, distributed, used and disposed of, has led to devastating environmental and social impacts, and has placed the fashion industry as a major global greenhouse gases emitter.

Founded in 2020 by the British Fashion Council, the Institute of Positive Fashion has embarked on a journey to mitigate the industry's footprint and combat climate change, for a more resilient and sustainable future. Through the inaugural Circular Fashion Ecosystem Project, and by aligning with the UK government's ambitions for a green industrial revolution and the Levelling Up agenda, the Institute of Positive Fashion aims to develop new industry standards and unite the UK fashion industry towards the foundations of a circular economy by 2030.

A Circular Fashion Ecosystem requires deep levels of transformation across diverse aspects of our current, mostly linear, system. It also requires all stakeholders to be involved and take bold actions to achieve the target state. In the first phase of the work undertaken by the Institute of Positive Fashion, ten priority Action Areas were identified to make this transformation happen. Circle Economy joined the second phase of the Institute of Positive Fashion's work to assess the feasibility of developing a city-level Circular Fashion Ecosystem.

This assessment aims to develop a replicable methodology and a multi-phased innovation journey for all UK cities, to drive their fashion sector from the current state to a target state that is fully circular, through transformative strategies and real-time pilot projects. Proven methods and learnings from Circle Economy's Textiles, Cities and Circular Jobs Initiative programmes and from their extensive work on applying the Doughnut

Economics model on a city-level were revisited. The current landscape of circular activities and initiatives in both case-study cities, London and Leeds, was established, and a first city-level Circular Fashion Ecosystem network was assembled. A methodology for the design and implementation of city-level circular fashion ecosystems was developed and validated. It establishes a scalable model that can be used to help meet the UK government's *Levelling Up* agenda.

Three conclusions stemmed from this report:

1. **Building a Circular Fashion Ecosystem** is crucial to incite and scale grassroots action, co-create circular solutions, and bring together multinational fashion players and SMEs through this network,
2. **The methodology and model** should be agile to be replicable as each city has a different focus and a way in which it operates, and
3. **Collaborative and cross-sectorial research** is needed to drive innovation investment and fully grasp the potential of Circular Fashion Ecosystems. It will drive long-lasting changes in consumer behaviour and policy.

FOREWORD

The Institute of Positive Fashion is leading a Sustainable Fashion Programme for industrial change through the vision for a Circular Fashion Ecosystem throughout the UK. The pathway to change starts with practical pilots at city level, initially in Leeds and London. This piece of research is the first step in mapping what already exists. It also seeks to understand the opportunity for pre-competitive collaboration, to establish a methodology to co-ordinate and accelerate activity from infrastructure to policy labs, which will enable all stakeholders to constructively engage and play their part in positive change.

The foundation of the methodology is the implementation of the Institute of Positive Fashion's (IPF) Circular Fashion Ecosystem target state model, through the lens of Kate Raworth's Doughnut Economics model. This will enable a roadmap for change that will benefit both the planet and people, meeting the government's *Levelling Up* agenda and creating thriving city-level circular fashion ecosystems throughout the UK, meeting the needs of industry.

The IPF and the British Fashion Council is committed to accelerating industrial change to meet both the climate targets of the Fashion Industry Charter for Climate Action¹ and to future proof the UK fashion industry.



Caroline Rush CBE

Chief Executive, British Fashion Council

Caroline Rush

The vision of the Doughnut is to meet the needs of all people within the means of the living planet.

So what does it mean for the future of the fashion industry? Can fashion become a regenerative and distributive industry by design? What systemic changes - within businesses, within industry ecosystems, and within the wider economy - are needed to make it possible?

This pioneering initiative is providing crucial leadership by exploring these questions, learning through practice from what's already happening in Leeds and London, and drawing out insights and actions that will help spur the ambitious changes needed across the UK and beyond.



Kate Raworth

Author of Doughnut Economics, co-Founder, Doughnut Economics Action Lab



Photograph: Ryoji Iwata, 2017



Circle Economy is a global impact organisation with an international team of passionate experts based in Amsterdam. They empower businesses, cities and nations with practical and scalable solutions to put the circular economy into action. Their vision is an economic system that ensures the planet and all people can thrive. To avoid climate breakdown, their goal is to double global circularity by 2032.

BRITISH
FASHION
COUNCIL

The British Fashion Council strengthens British fashion in the global economy as a leader in responsible, creative businesses. It does this through championing diversity, building and inviting the industry to actively participate in a network to accelerate a successful circular fashion economy.

TABLE OF CONTENTS

1	WHY CIRCULAR FASHION ECOSYSTEMS INSPIRED BY THE DOUGHNUT	8
1.1	Background	8
1.2	Project scope	8
1.3	Framing the future of fashion through the Doughnut Economics model	10
2	LAYING THE FOUNDATIONS FOR A CIRCULAR FASHION ECOSYSTEM IN TWO UK CITIES	14
2.1	Mapping stakeholder initiatives	14
2.2	Building a network of Circular Fashion Champions	20
2.3	Plotting opportunities and challenges for the fashion ecosystems on the Doughnut	20
3	THE JOURNEY AHEAD: CO-CREATING CIRCULAR FASHION ECOSYSTEMS	26
	Phase A: Creating the blueprint for city ecosystems	28
	Phase B: Developing the ecosystem blueprint through the lens of each stakeholder	30
	Phase C: Designing pilot projects across the stakeholder landscape	31
	Phase D: Implementing pilot projects	34
	Parallel Workstream 1: Diving into circular enterprise design with business pioneers	34
	Parallel Workstream 2: Running Fashion Policy Labs	35
4	CONCLUSION	36
5	NEXT STEPS	40
	REFERENCES	42

1 WHY CIRCULAR FASHION ECOSYSTEMS INSPIRED BY THE DOUGHNUT

1.1 BACKGROUND

‘...the Circular Economy (CE) concept is highlighted as an increasingly important mitigation approach that can help deliver human well-being by minimising waste of energy and resources. While definitions of CE vary, its essence is to shift away from linear “make and dispose” economic models to those that emphasise product longevity, reuse, refurbishment, recycling, and material efficiency, thereby enabling more circular material systems that reduce embodied energy and emissions.’— Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), 2022.²

The fashion and textiles industry is considered one of the largest contributors to greenhouse gas emissions.³ Extractive and exploitative, as well as polluting, the current system of producing, distributing and disposing of clothing operates in an almost completely linear way. To achieve the Sustainable Development Goals (SDGs) and 2-degree warming scenario⁴, as set out in the Paris Agreement in 2015, an urgent transition from a linear to a circular economy is needed. Transforming economic models to be more regenerative and inclusive represents an opportunity to reclaim the human, economic and natural value lost in today’s linear systems.

Fashion has unparalleled influence on culture and society, and therefore citizen self-expression and behaviour change. *‘Fashion sits across innovation, creativity, culture, and self expression, and is unique in the way it influences society. If transformed to be regenerative and equitable through circularity, it can serve to be the industry blueprint for others.’—Institute of Positive Fashion (IPF), The Circular Fashion Ecosystem Project, Phase one, 2021.*

The British Fashion Council (BFC) has a critical role in accelerating the transition to a circular fashion sector in the UK. It is uniquely placed to shape industry practices and policies through dialogue amongst stakeholders across the UK’s fashion ecosystem. The IPF was launched in 2020 by the BFC with the ambition to create new industry standards and unite the UK fashion industry in its goal of a more resilient and circular future. The BFC’s ambition is to establish the foundations of a circular fashion economy in the UK by 2030.

Focused on creating actionable pathways in response to the climate change agenda, the IPF developed its inaugural Circular Fashion Ecosystem (CFE) project. The findings from research conducted in Phase one of the project were presented in the report *The Circular Fashion Ecosystem: A Blueprint for the Future*.⁵ This report provides a framework for leading and enabling stakeholder collaboration, and highlights the interconnected areas of this ecosystem.

Three target outcomes for a future CFE in the UK were presented, which combined would lead to the target state and enable its long-term viability, resilience and prosperity. These outcomes are: 1) a reduced volume of new physical clothing, 2) maximised utilisation through product circularity, and 3) optimised sorting methods and materials recovery.

Additionally, the diverse ecosystem of stakeholders required to achieve a CFE have been explored and ten priority action areas have been identified for these stakeholders to achieve the target state. These action areas will be further explored in connection to the key insights emerging from this foundation phase later in the report.

1.2 PROJECT SCOPE

Building on Phase one, the IPF has started working on Phase two of the CFE project: Creating a Roadmap for Change. Phase two envisions the development of city-level CFEs across the UK that will not only apply circular economy principles

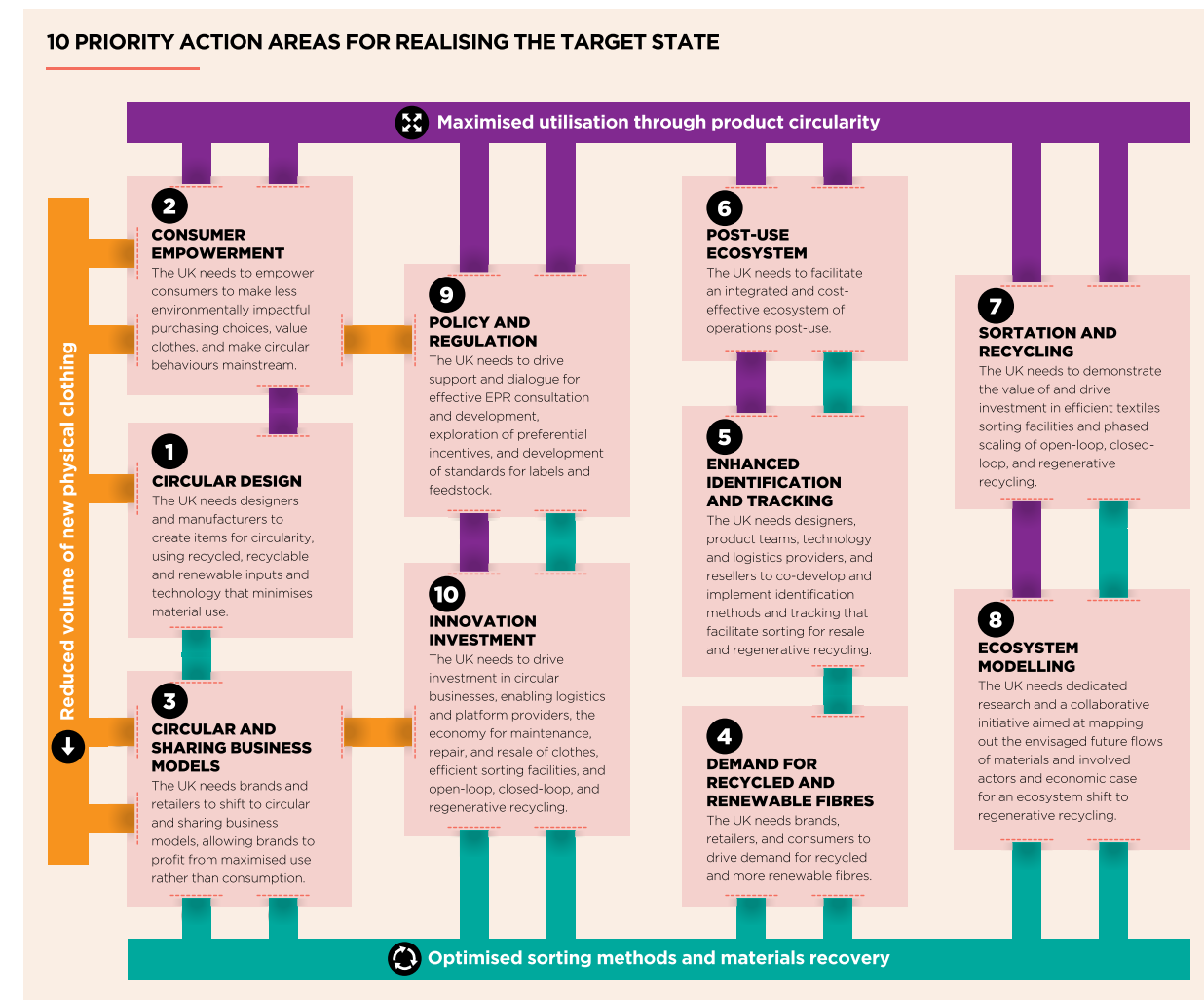


Figure one. Realising the Circular Fashion Ecosystem. Source: IPF (2021).

but will also integrate the Doughnut Economics model.⁶ This is the overarching programme of change for Phase two.

The Doughnut Economics model, introduced by the British economist Kate Raworth in 2012, is a visual framework that aims to summarise humanity’s 21st century challenge: meeting the needs of all within the means of our planet.⁷ Inspired by this thinking, the IPF’s ambition for city-level CFEs is for the UK fashion industry to operate in cities in a way that will allow both people and the planet to thrive.

At the request of BFC, Circle Economy joined Phase two to assess the feasibility of developing a city-level CFE, and achieve three objectives:

1. Identify the key components to enable the implementation of a CFE in two case-study cities, with the objective of expanding beyond these cities and into other cities and regions.
2. Establish the current circular activities and initiatives landscape in these two cities.
3. Develop and validate a scalable methodology for the design and implementation of city-level CFEs, which is aligned with the UK Government’s ambitions for a green industrial revolution⁸ and the *Levelling Up* agenda.⁹

This report presents the key findings from the foundation phase, which was conducted between April and July 2022.

To achieve the project objectives, Circle Economy has integrated its proven methods and learnings from its Textiles, Cities and Circular Jobs Initiative programmes, and from its extensive work with the Doughnut Economics model. Section two of this report presents the key insights from the foundational work conducted by Circle Economy. Section three describes the six-steps transformation journey for actionable implementation of a city-level CFE, as envisioned by Circle Economy.

To enable tangible outcomes that are action-oriented in nature, this foundation phase was focused on two case-study cities: London and Leeds. They were chosen due to their standing as key fashion and textiles hubs in the UK. As the capital city and through the strength of its fashion week, London is a renowned fashion capital with significant designer and innovation talent, and worldwide influence. Leeds has a rich fashion and textiles heritage, which continues to be an emblem of innovation, design, manufacturing and recycling technologies.

1.3 FRAMING THE FUTURE OF FASHION THROUGH THE DOUGHNUT ECONOMICS MODEL

Since it was first published, the Doughnut Economics model has gained considerable international attention—from cities and towns to the United Nations,¹⁰ and across many layers of society, such as social enterprises, community activists, businesses, educators and governments.

The Doughnut of social and planetary boundaries

The model has two rings: the outer ring, or ecological ceiling, which consists of nine planetary boundaries, as described by the scientific community, that represent Earth's carrying capacity to sustain itself. Beyond these boundaries lies catastrophic environmental degradation and the collapse of Earth's supporting systems.

The inner ring of the model represents the social foundation, and has been derived from the SDGs, as agreed by the world's governments in 2015. According to the model, no one should be placed within the centre of the circle, since that would mean that they would lack basic essentials for living.

Between these two rings, the social and the planetary boundaries, lies a Doughnut-shaped space, representing the safe and just space for humanity. This is a space of dynamic balance, where everyone has enough to lead a decent life, without destroying the one planet we all call home.

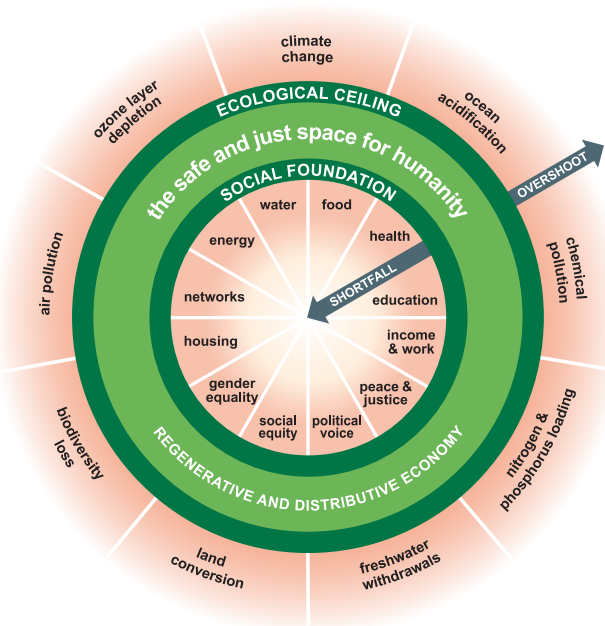


Figure two. The Doughnut Economics model. Source: Kate Raworth (2017).

Applying the Doughnut Economics model to a city-level CFE

Circle Economy has worked closely with Kate Raworth on the first-ever downscaling of the Doughnut model to the city level, with Amsterdam¹¹ being the first pioneering city to use this approach—inspiring many others to follow suit.

During the fascinating journey of experimenting with the Doughnut model in Amsterdam and other cities, teams from the Doughnut Economics Action Lab (DEAL) and Circle Economy have developed applicable tools¹²

and participatory processes that allow all necessary stakeholders to take transformative action.

The experience of translating the conceptual holistic framework of the Doughnut model in cities like Amsterdam, Philadelphia, Portland, Cape Town, Brussels, São Paulo, Austin and others, has highlighted the importance of applying systems thinking to transform cities into places where both people and the environment can thrive. Using the Doughnut model as a compass helps create an in-depth understanding of the challenges cities face, and of the indirect impact made on ecosystems, even beyond their geographical boundaries. In this regard, Leeds¹³ and London¹⁴ have published, in April and June 2022 respectively, civic organisations in Doughnut City Portraits. These insights have triggered new discussions around transformative policy-making, industry practices, as well as new measurement tools for monitoring cities' progress.

Despite the fact that all cities have their unique cultural, geographical and political identity, the experience of working with the Doughnut model in various cities demonstrated that one common, critical factor for creating transformative action was the ownership, shared responsibility and the involvement of all necessary stakeholders in the process. To truly achieve change, stakeholders should create and co-design a shared vision and implement pilot projects collaboratively.

One of the tools that was developed from the experiences of applying the Doughnut model to a city level was the Doughnut Unrolled.¹⁵ This framework can be used as a tool for city-level holistic thinking and decision-making. It is based on the idea that the Doughnut model needs to be 'unrolled' to reveal four lenses that would allow us to look at the interconnections between local and global aspirations and responsibilities—both socially and ecologically—and identify possible entry-points for transformative action.

How can this place help bring humanity into the Doughnut?



Derived from DEAL
doughnuteconomics.org

If we unroll it...

We can create a space for exploring possible futures we want, through four lenses

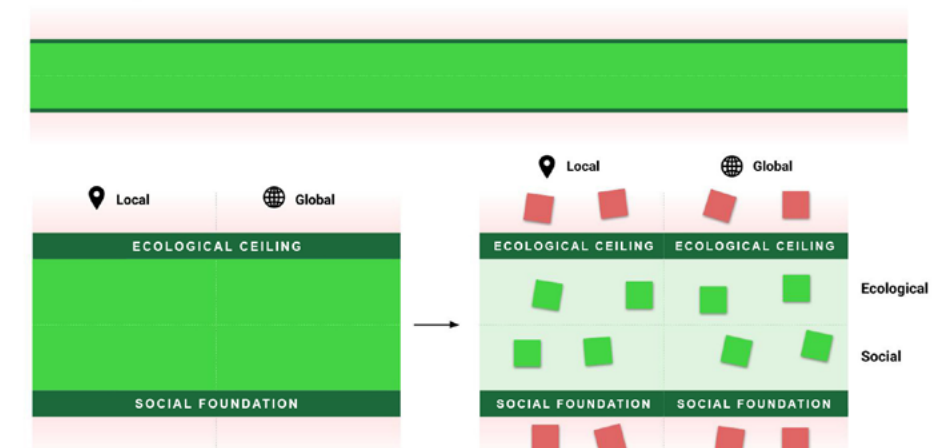


Figure three. The Doughnut Unrolled. Source: Doughnut Economics Action Lab (2022).

The question that emerges is: how do we apply the learnings from the city-level Doughnut model to a specific industry, like the fashion industry? This foundation phase aims to answer this question by developing a novel approach that translates the methodology of the city-level Doughnut model and applies it to the fashion industry.

Building upon the work that BFC has carried out in Phase one, which depicts all the different stakeholders and their relationships in a CFE, this foundation phase analysed these ecosystems from different perspectives:

Macro perspective—city ecosystem, and how it operates as one large system of citizens and private and public stakeholders, with a shared vision, which drives policy design on both a city and regional level.

Meso perspective—stakeholder groups, stakeholder groups, identifying the challenges and opportunities that each group of stakeholders faces, and how they contribute to a shared vision.

Micro perspective—individual businesses, looking in depth into the enterprise design of each business and what their roles and responsibilities could be as actors in the larger circular fashion ecosystem.



2 LAYING THE FOUNDATIONS FOR A CIRCULAR FASHION ECOSYSTEM IN TWO UK CITIES

2.1 MAPPING STAKEHOLDER INITIATIVES

To reach the CFE target state, the engagement of stakeholders around the IPF ten CFE Action Areas (Figure four) is central,¹⁶ as they will be the driving force for building viable, resilient and prosperous city-level CFEs. Thus, in addition to building a replicable methodology, it was seen as critically important to involve stakeholders in London and Leeds, to gain clarity on the circular landscapes in both cities, and to begin to assemble a first city-level CFE network.

Stakeholder hackatons

With the support of BFC, Circle Economy conducted an initial mapping of key players and circular initiatives across both case-study cities, London and Leeds, via desk research. This overview was further expanded upon and detailed via two collaborative online City Fashion Ecosystem Hackathons, representing those who are particularly active in Leeds and in London. The sessions involved a diverse group of sector stakeholders, with representatives from leading academic institutions such as the University of Leeds and the University of

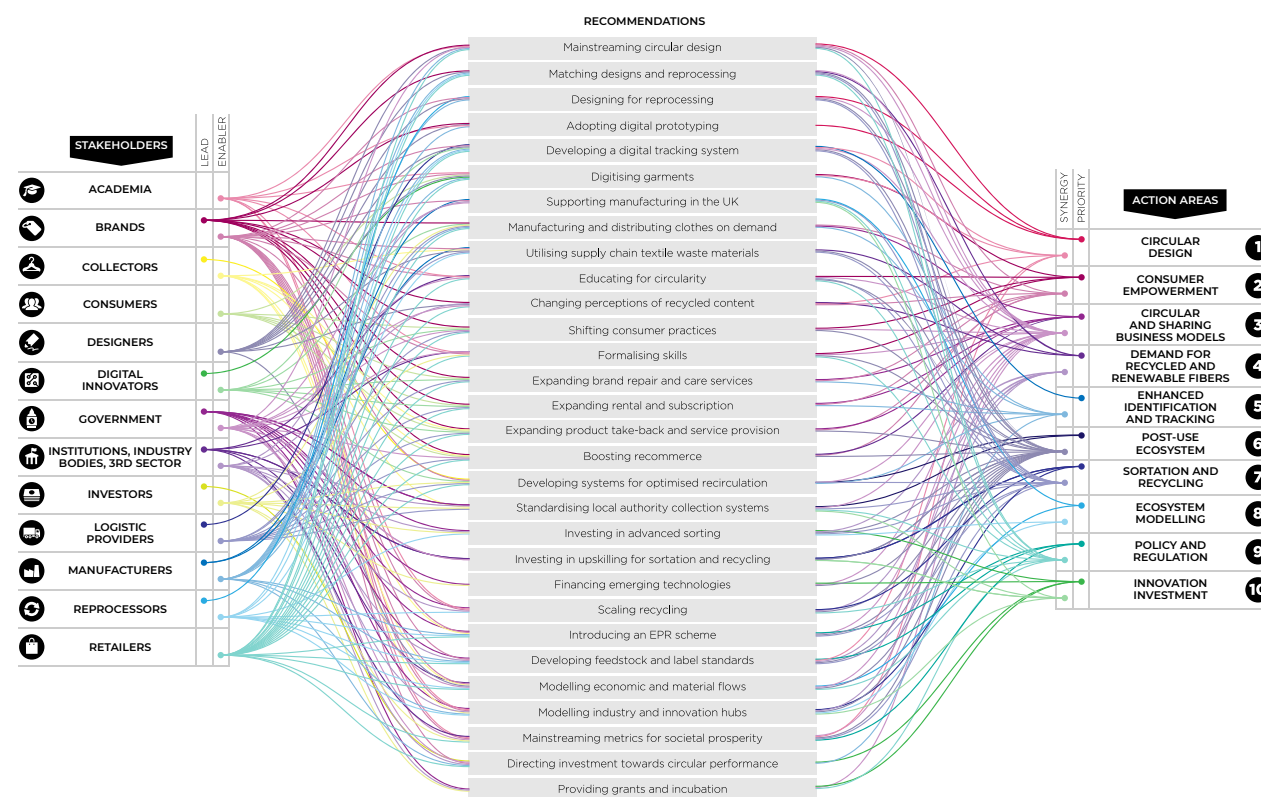


Figure four. Stakeholder actions and connections.
Source: [Institute of Positive Fashion \(2021\)](#).

the Arts London; from the private sector, including circular fashion innovators such as Thriftify; and from pioneering social projects such as Zero Waste Leeds.

The aim of the Hackathons was to collaboratively generate and capture a comprehensive overview and shared understanding of the current state of circular fashion and textiles in a particular city, by mapping key circular initiatives through a digital workshop. The desired outcomes, to be achieved by the end of the two Hackathons, were:

- **Increased knowledge and visibility** of the current circular fashion and textiles landscape within a city.
- **Increased understanding and insight** as to which circular activities have the most/least traction within a city, and why.
- **Increased connection and collaboration** between participants, on the topic of circular fashion and textiles.

The Hackathons were led by two facilitators from Circle Economy and the sessions consisted of both a slides deck presentation and interactive exercises. Exercises combined Circle Economy's Key Elements framework (Figure five),¹⁷ and the Doughnut Unrolled framework (Figure three).

The Key Elements framework identifies and defines three core elements of the circular economy, which relate to the direct circular handling of material and energy. Additionally, the framework identifies and defines five enabling elements that support the implementation and uptake of circularity by removing some of the obstacles for core elements. In the case of the Hackathons, the framework was used to categorise and group circular activities, within the given city. Figure six is a screenshot showcasing the three steps of the interactive mapping exercise of circular initiatives.

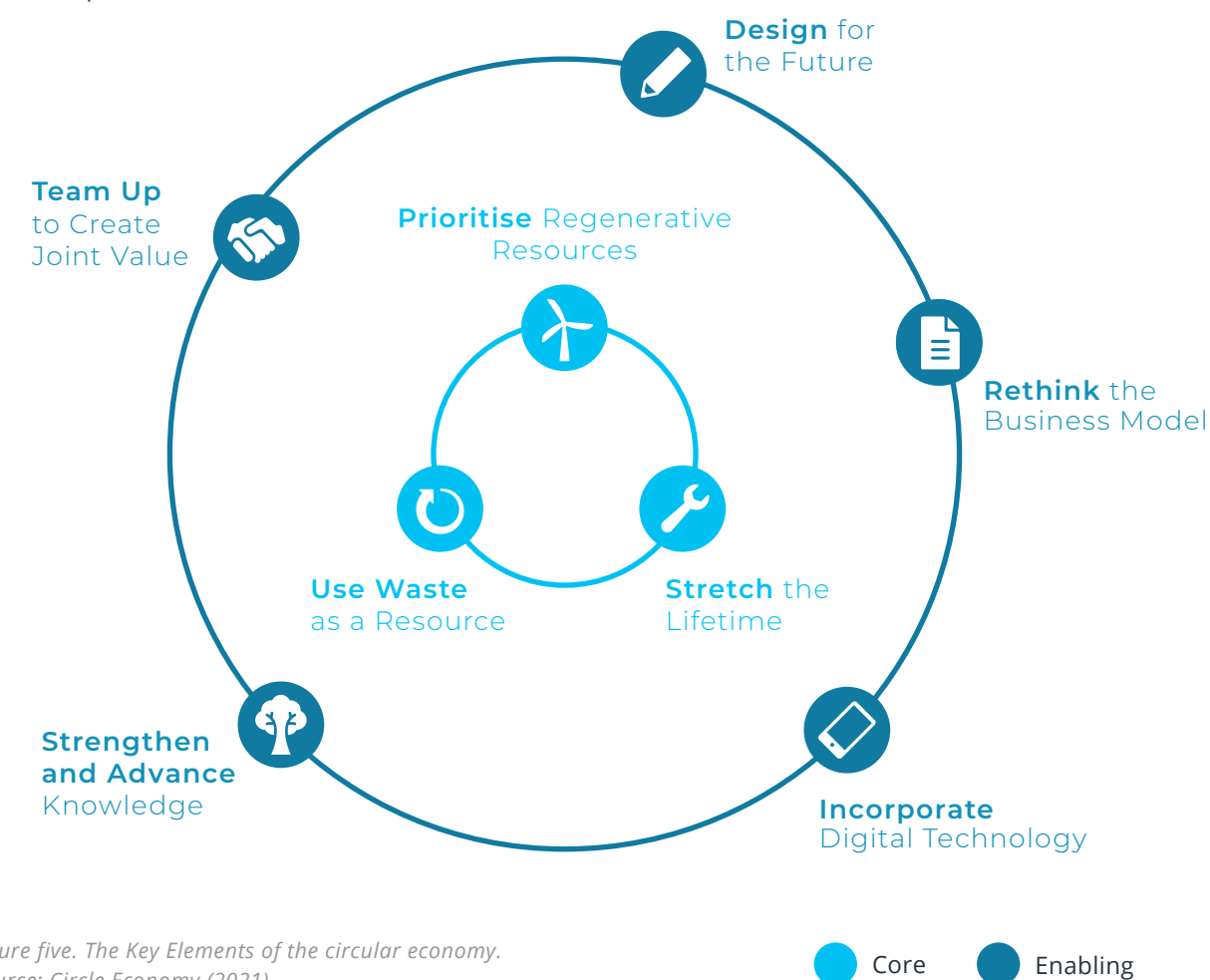


Figure five. The Key Elements of the circular economy.
Source: [Circle Economy \(2021\)](#).

KEY INSIGHTS FROM LEEDS

From early fulling mills in the middle ages, to medieval cloth markets, the mass-production of wool and flax during the industrial revolution and the birth of high street stalwarts like Marks & Spencers, the city of Leeds is synonymous with the development of the textile industry.¹⁸ The ripple effect of these regional developments has been felt across the global textiles industry. Today, Leeds continues to drive innovation in textile machinery and engineering. Now, its efforts have a distinct focus on sustainable and circular textiles.¹⁹ The current state mapping illustrates a diverse and energetic community of changemakers, who are individually driving regenerative and circular practices in a variety of areas, from reuse, to manufacturing, to research and education. During the Leeds Hackathon, which was conducted virtually, 90 initiatives were mapped across Circle Economy's Key Elements framework and placed against the Doughnut Unrolled four lenses framework.

1. The circular initiatives landscape in Leeds appears to be predominantly focused on clothing reuse

The majority of the circular initiatives mapped through the desk research and by participants in the Hackathon were related to the key element Stretch the Lifetime, which includes repair, reuse, re-commerce and sharing strategies. These activities amounted to a total of 16 initiatives, and are, in part, enabled by the city's collection, sorting, resale and recycling infrastructure, which is quite significant.²⁰ Key elements that were the least present were Prioritise Regenerative Resources and Rethink the Business Model. This might indicate that circularity has not yet been adopted by brands and manufacturers at large in the region, which are mainly producing and selling new textile products.

2. The majority of circular activities in Leeds operate more locally and have social objectives at their core

When mapping each initiative's sphere of influence and impact on a local and global scale, and within the social foundation and ecological ceiling, participants placed most circular initiatives on a local scale and within the social foundation. These grassroots innovations, as well as circular initiatives, are seen to have a strong sense of place and primarily impact their direct communities.

3. The main challenges Leeds faces relate to fragmented and siloed work between players in the ecosystem

There is a clear need to connect up similar players and initiatives, so that successes can be amplified, and common challenges can be collectively tackled. Furthermore, there is a need to bridge the gap between individual and grassroots innovations and businesses, institutions and policy makers, so that a broader systems transformation can take place. In addition, participants mentioned disruptions in the supply chain in regards to scaling the handling of post-consumer waste.

4. The main opportunities Leeds has relate to optimising and innovating the city's post-use ecosystem

In particular, participants identified the need for improved waste profiling to better determine end-markets, the need to revalue and re-investigate downcycling processes (which the city has strong reputation and expertise in, historically) and the opportunity to create local, open loop systems, that builds on the city's variety of manufacturing and research activities and cultivates cross-sector collaboration.

'The textiles industry has a rich heritage in Leeds that is woven into the DNA of the city. Recycling processes were created in Yorkshire that started a new industry. We are in danger of forgetting what we already know.'—Stephen Russell, Professor of Textile Materials & Technology, University of Leeds

KEY INSIGHTS FROM LONDON

In mediaeval Britain, London was central in the international export of unfinished products, such as wool and silk, and the import of luxury fur and embroideries.²¹ Since then, London has progressively become one of the most iconic and trend-setting fashion capitals in the world. It is home to renowned British high-end fashion houses like Alexander McQueen and Burberry, and hosts the prestigious London Fashion Week three times a year, alongside the cities of New York, Paris and Milan.²² Known for its craftsmanship and design innovation, the current state mapping of London illustrates a variety of initiatives and diverse changemakers, who are implementing circular practices in a range of areas, from design, to recommerce and digital platforms, to research and education. During the London Hackathon, 93 initiatives were mapped across Circle Economy's Key Elements framework and placed against the Doughnut Unrolled four lenses framework.

1. The stakeholder landscape in London seems to be predominantly focused on rental and re-commerce retailers, and brands

Most of the circular initiatives that cropped up through the desk research and interviews with participants in the Hackathon were related to the key element Stretch the Lifetime, which includes repair, re-commerce and sharing strategies. These activities amounted to a total of 15 initiatives, which can be explained by the city's focus on charity shops, resale and rental platforms, which are quite prevalent. Another key element that was central to the London Hackathon was Use Waste as a Resource, which includes reuse strategies and upcycling. Participants mentioned that this might be related to London's sustainable design scene, where brands and textile manufacturers focus on designing new products and materials made from waste. Aside from the key elements Stretch the Lifetime and Use Waste as a Resource, the other key elements were equally represented.

2. Most of London's circular activities operate globally and have social objectives as well as environmental standards at the core of their business model

When mapping each initiative's sphere of influence and impact on a local and global scale, and within the social foundation and ecological ceiling, participants placed most circular initiatives on a global scale and at the intersection between the social foundation and ecological ceiling.

3. The main challenges identified were finding a balance between economic needs and environmental best-practices, and linking the design phase with the post-use ecosystem phase

Another challenge that was pointed out by participants was determining the sphere of influence of initiatives, and whether their impact was related to London. Most circular initiatives were placed on the global sphere of influence on the Doughnut Unrolled framework, and participants wondered if these initiatives were sufficiently London-specific.

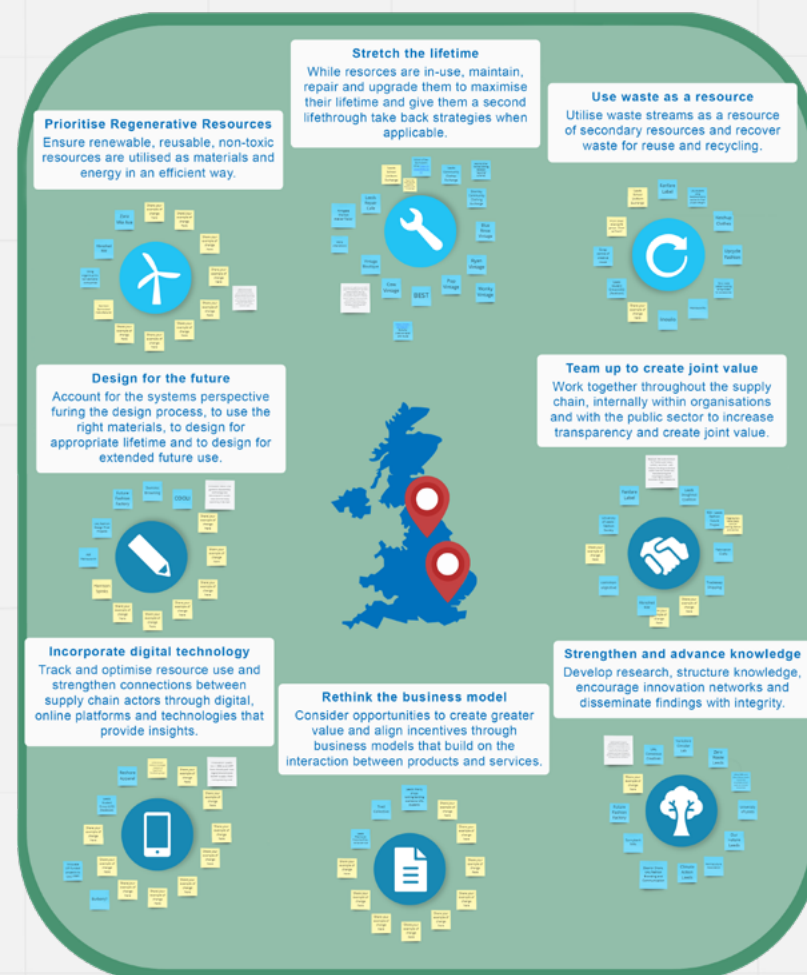
4. An opportunity mentioned was the large volume of initiatives and circular solutions happening and being offered in London

Participants believed that London, as a renowned fashion capital, had the potential and responsibility to drive change across the industry.

ONLINE Hackathons

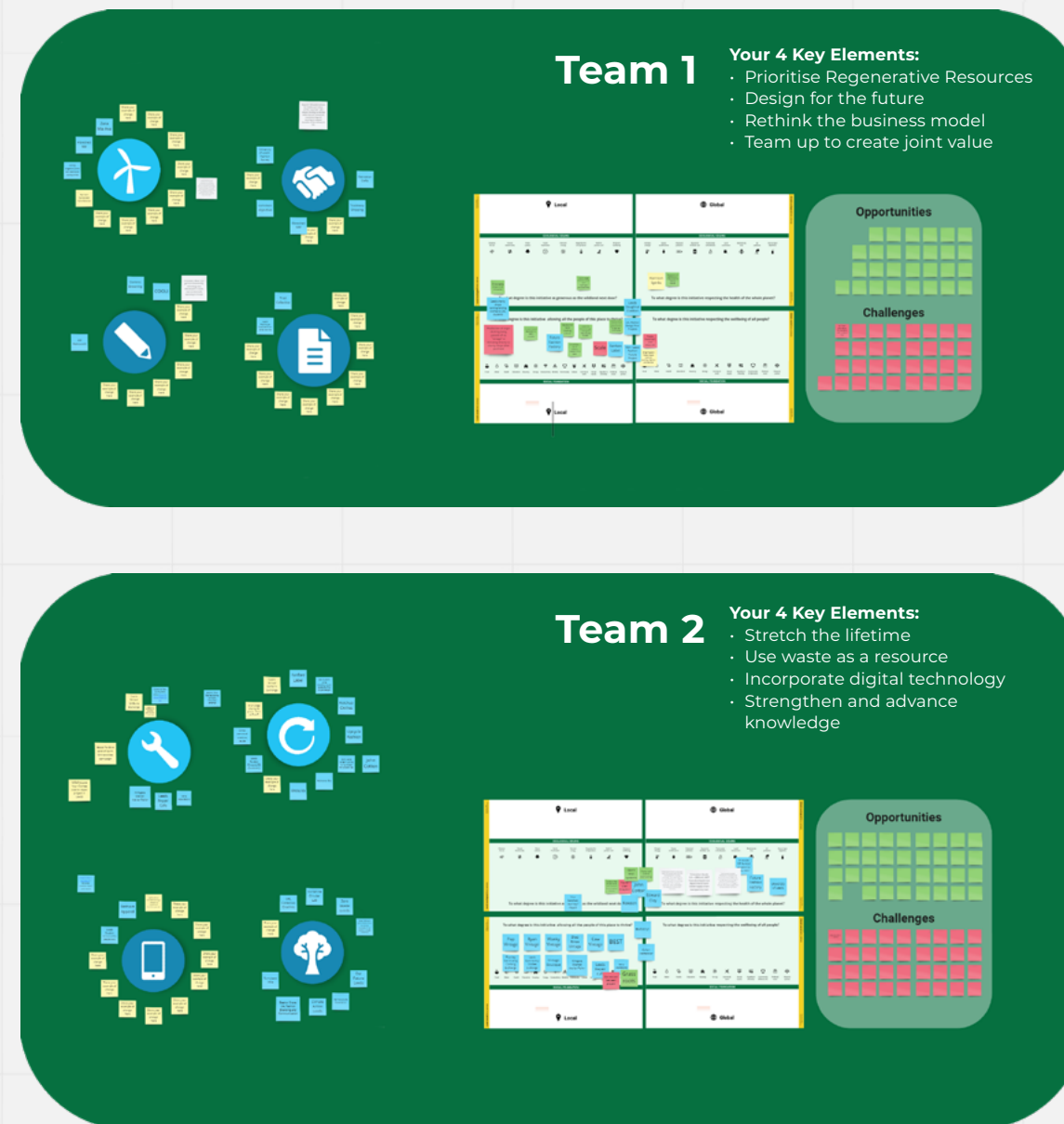
STEP 1

What circular activity is happening in our city?



STEP 2

What kind of impact does it have?



STEP 3

What does this tell us?

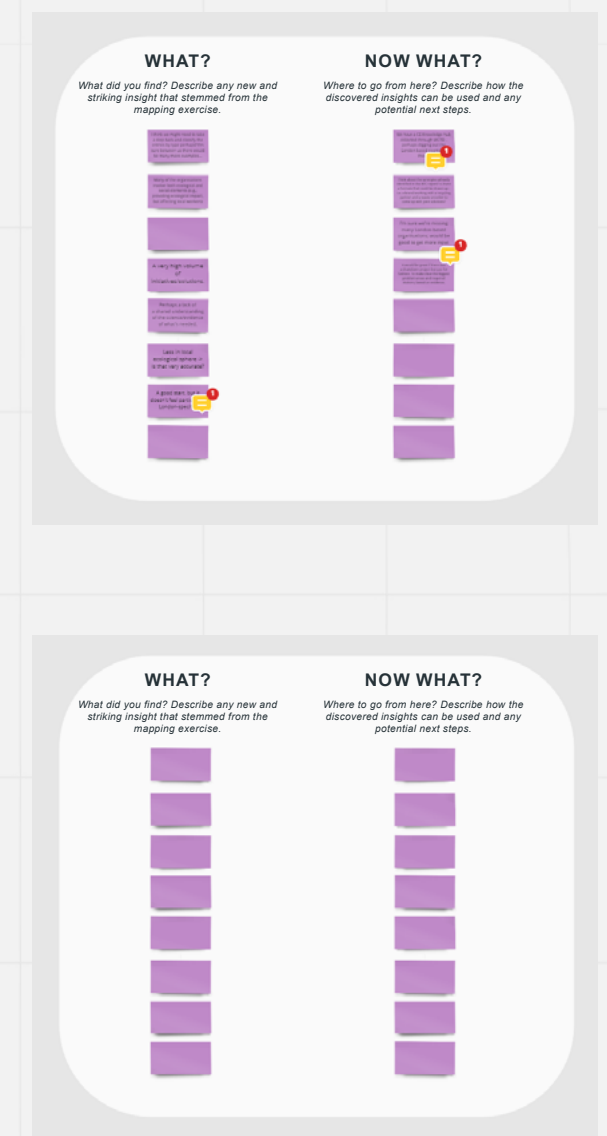


Figure six - Collaborative mapping exercise of initiatives across the Key Elements framework and by impact against the Doughnut Unrolled four lenses. Screenshot taken from the online Hackathons. Source: Circle Economy (2022).

2.2 BUILDING A NETWORK OF CIRCULAR FASHION CHAMPIONS

To inspire action, a group of Circular Fashion Champions was established for stakeholders to get involved and work together to form a City-Level CFE. This group consists of leading experts and change makers in both London and Leeds. The Circular Fashion Champions engaged in brainstorming sessions to explore where the fashion sector across UK cities connected with Doughnut Economics, and how the ecosystem could contribute to creating a safe and just space for the people of London and Leeds, as well as their global counterparts, to live. The Champions were invited to participate in an online session and an in-person workshop held during the IPF Forum in London. The insights that emerged from these sessions have been integrated in the following sections.

2.3 PLOTTING OPPORTUNITIES AND CHALLENGES FOR THE FASHION ECOSYSTEMS ON THE DOUGHNUT

Workshop: fashion industry meets the doughnut

During a workshop led by Circle Economy, in collaboration with DEAL, and held at the IPF Forum in London, members from the Circular Fashion Champions group explored a vision for the CFEs in London and Leeds. The workshop had two parts: a collaborative Doughnut Economics model mapping exercise and a group discussion where key insights emerged and were shared in plenary.

The aim of the workshop was to create a shared understanding of the current UK fashion landscape, its related opportunities and challenges, and the potential tensions between the four lenses of the Doughnut model (Unrolled Doughnut). The desired outcome was to align the Circular Fashion Champions group towards a unified vision of the CFEs, and inspire them to dive deeper into the open questions that were triggered by the workshop.

The workshop included a rapid Doughnut Economics model mapping exercises, which led participants to explore:

- The positive contributions of a CFE, for people and the planet.
- The ecological pressures generated by the fashion industry, that CFE(s) could tackle.
- The social pressures related to the fashion industry that could be addressed by CFE(s).
- The business model pressures that CFE(s) could respond to.

Key insights from the IPF Forum workshop were gathered from the mapping exercise and the group discussion (Table one). Table one describes the observations made by participants and lists the potential effects of CFE(s). Additionally, it highlights the general themes addressed by each observation.

KEY INSIGHTS FROM THE WORKSHOP

1 POSITIVE CONTRIBUTIONS OF A CFE		
Observations	Effects of CFE(s)	Themes
New and improved enterprise design, such as business models related to reuse, repair, rental and recycling, can provide extensive opportunities for the job market in a city-level CFE.	Driven by education and training, improving or reviving the skills needed for circular activities can create new employment for specialised workers.	<ul style="list-style-type: none">• Enterprise design• Circular jobs• Training• Social foundation
Extending the lifetime of a garment can become a core CFE circular strategy.	Both circular product design and repair services should be established and available at scale in CFEs.	<ul style="list-style-type: none">• Circular design• Enterprise design• Ecological ceiling
Avoiding the extraction of new raw materials can reduce the environmental footprint of the fashion industry.	In CFEs, secondary markets and closed-loop recycling processes provide new business opportunities for the fashion sector, while lowering its footprint.	<ul style="list-style-type: none">• Recommerce• Recycling• Social foundation• Ecological ceiling
Through decentralised and distributed leadership, the fashion industry can instil innovation within communities.	Grassroots and pioneering initiatives are central to the advancement of circular design, research and development, and new circular technologies. To identify and scale circular solutions, partnerships with, and leadership from, large industry players and governmental organisations is needed in CFEs. Joint training and accelerator programmes for SMEs can provide them with the necessary support and funding.	<ul style="list-style-type: none">• Circular design• Enterprise design• Innovation Investment• Ecosystem modelling• Training• Social foundation• Ecological ceiling

Continues on the next page →

Table one. Key insights from the IPF Forum 2022 workshop, Fashion Industry Meets the Doughnut.

1 POSITIVE CONTRIBUTIONS OF A CFE

Observations	Effects of CFE(s)	Themes
The fashion sector employs a large number of workers from underrepresented groups across global value chains.	Current supply chains often witness social inequalities and underrepresentation of workers' rights, especially present within vulnerable communities. CFEs must take underrepresented groups into account and be inclusive, providing equal access to social and living standards across global supply chains.	<ul style="list-style-type: none"> • Inclusivity • Safety • Social foundation
In current systems, access to wealth and prosperity is often related to socioeconomic status, which in turn can be affected by citizens' place of residence.	Building CFEs align with the UK <i>Levelling Up</i> agenda. It aims to boost and create equal work opportunities, raise living standards, address skills shortage and increase accessibility to the industry for marginalised parts of society. Through decentralising CFEs, for example from capitals such as London, CFEs' positive contributions achieve national, regional and global reach.	<ul style="list-style-type: none"> • Prosperity • Inclusivity • Circular jobs • Decentralisation • Social foundation

2 ECOLOGICAL PRESSURES OF THE FASHION INDUSTRY

Observations	Effects of CFE(s)	Themes
Due to outsourcing and end-of-use processes, most of the ecological pressures are seen at a global scale.	Fashion supply chains are fragmented and the environmental and social impacts that occur during production are often experienced in low- and low-middle income countries, where raw materials and fashion products are produced. Additionally, textile waste is often sent overseas and ends up in landfills beyond UK borders.	<ul style="list-style-type: none"> • Responsibility • Post-use ecosystem • Social foundation • Ecological ceiling
Trend-driven fashion has led to an increase in consumer demand, leading to overconsumption and overproduction and subsequent wastage, putting excessive pressure on the ecological ceiling.	Businesses within CFEs can reduce the environmental footprint of fashion by limiting production, moving away from trend-driven and consumerist systems, and finding alternative ways of creating value.	<ul style="list-style-type: none"> • Responsibility • Consumerism • Ecological ceiling

Table one: Key insights from the IPF Forum 2022 workshop, Fashion Industry Meets the Doughnut.

Table one (continued): Key insights from the IPF Forum 2022 workshop, Fashion Industry Meets the Doughnut.

3 SOCIAL PRESSURES OF THE FASHION INDUSTRY		
Observations	Effects of CFE(s)	Themes
Lack of transparency in the sector creates social inequalities globally.	Implementing traceability systems across CFEs could hold producers responsible for the environmental and social impacts of their product at all stages of the supply chain, in each location, and when entering and leaving an ecosystem.	<ul style="list-style-type: none"> Enhanced identification and tracking Responsibility Social foundation Ecological ceiling
Citizens have low levels of awareness of best-practices to extend fashion products' usage phase and of how to sustainably dispose of them.	Trend-driven fashion has led to an increase in consumer demand, leading to overconsumption and overproduction, putting further pressure on the ecological ceiling. Awareness and education will be key activities within CFEs, which should also include guidance on maintenance, repair and eventual disposal.	<ul style="list-style-type: none"> Consumer empowerment Awareness and education Social foundation Ecological ceiling
The growth-driven fashion industry encourages overconsumption by inducing psychological pressure on people to buy more, to fit the norm within the larger fashion system.	Emerging young leaders and activists, as well as the development of new concepts for measuring growth, could prove essential for the realisation of CFEs, and for changing current cultural mindsets and the political landscape.	<ul style="list-style-type: none"> Ecosystem modelling Consumer empowerment Social foundation Ecological ceiling

Table one (continued): Key insights from the IPF Forum 2022 workshop, Fashion Industry Meets the Doughnut.

4 BUSINESS MODEL PRESSURES OF THE FASHION INDUSTRY		
Observations	Effects of CFE(s)	Themes
The lack of efficient local collection and recycling infrastructure across UK cities contributes to the environmental footprint of the global fashion system.	These pressures can be counteracted by further development and investment in collection and infrastructure systems.	<ul style="list-style-type: none"> Post-use ecosystem Sorting and recycling Innovation investment Ecological ceiling
The lack of availability of skilled workers to perform repair and upcycling services can be a barrier to circular businesses who wish to offer these services.	Repair and upcycling activities, and the people and structures behind them, need to be supported, for these activities to be normalised and scaled, and become a competitive business model.	<ul style="list-style-type: none"> Entreprise design Circular jobs Training Innovation investment Social foundation Ecological ceiling
Limited access to finance for support and innovation—especially for micro, small and medium-sized businesses—leads to a lack of development of new systems and infrastructure.	To scale innovation in new materials, design and technology SMEs and grassroots initiatives require financial support. CFEs can help implement incentivisation and tax breaks for responsible business behaviour.	<ul style="list-style-type: none"> Policy and regulation Innovation investment Social foundation Ecological ceiling

Table one (continued): Key insights from the IPF Forum 2022 workshop, Fashion Industry Meets the Doughnut.

3 THE JOURNEY AHEAD: CO-CREATING CIRCULAR FASHION ECOSYSTEMS

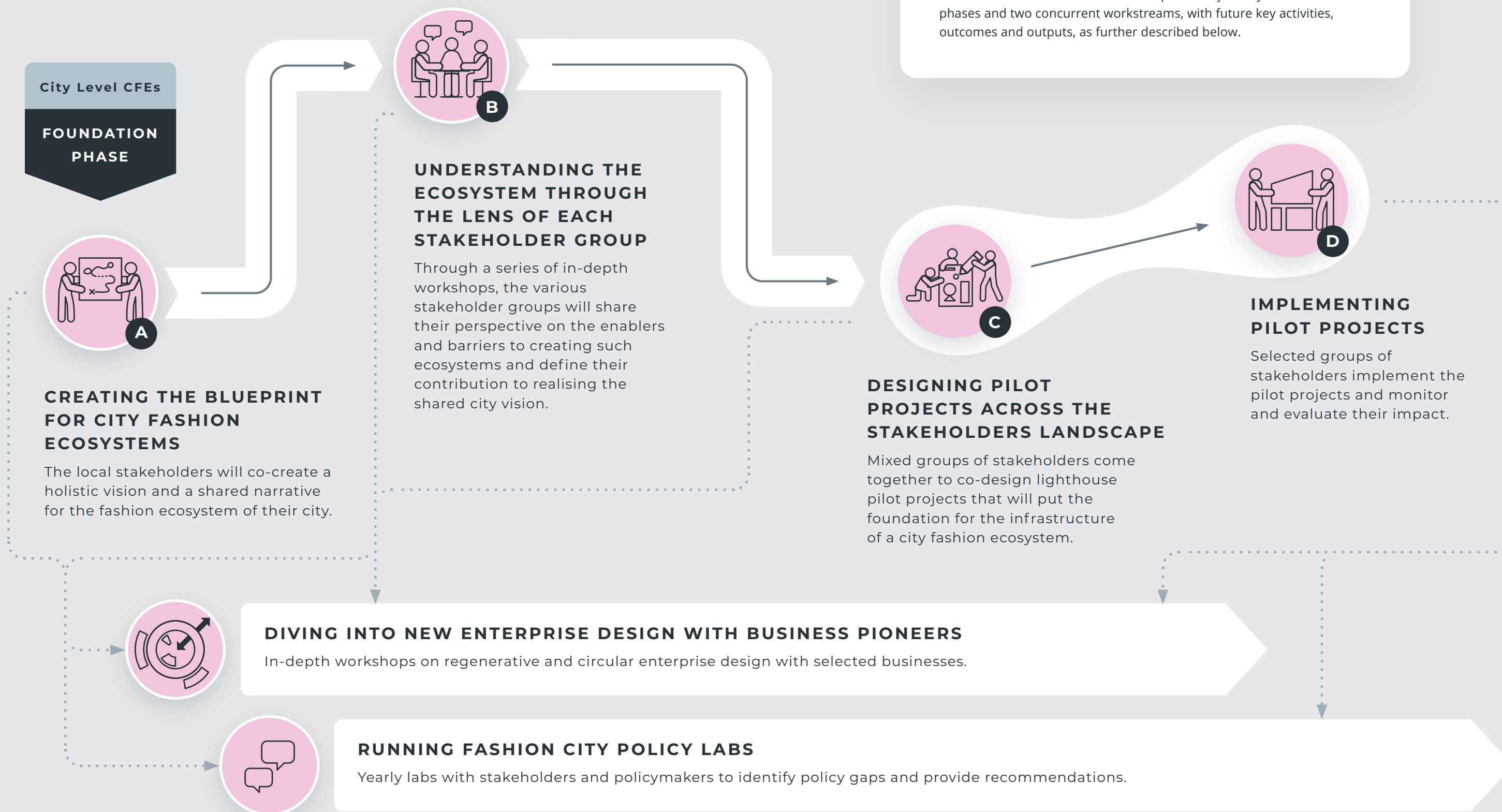


Figure seven. The journey ahead: co-creating circular fashion ecosystems. Source: Circle Economy (2022).

PHASE A

CREATING THE BLUEPRINT FOR CITY ECOSYSTEMS

Phase A will use the three target outcomes identified in Phase one of the IPF report (Section one) as a starting point. It will add two additional layers: the pathway presented in the *Textiles 2030 Roadmap*,²³ which includes the activities *Design for circularity*, *Implement Circular business models* and *Close the loop on materials*; and the Doughnut Unrolled framework, which will provide a city-level perspective that will help create a unified and aspiring vision to reach the CFE target state.

Activities

- Preparatory work is conducted to connect the current state of the fashion industry with the Doughnut Economics model, building on the initial foundation phase led by Circle Economy.
- Knowledge gaps (such as for material flows) are identified and research on the current policy landscape is conducted.
- A baseline analysis of employment profiles and skills available is conducted or included, if available. This analysis is built on the methodologies developed by Circle Economy's Circular Jobs Initiative.²⁴
- An initial stakeholder and circular initiatives mapping in case-study cities is conducted, or included, if available.
- A co-creative workshop with stakeholders is designed and conducted.

Outcomes

- The concept and vision of a city-level CFE are co-developed by participants.
- Increased awareness of potential synergies for joint action by stakeholders.
- Renewed commitment by stakeholders towards a joint vision of a CFE.

Outputs

- A.1** Connections between circular initiatives and relevant stakeholders in a city are mapped.
- A.2** List of relevant knowledge gaps and research needs.
- A.3** Aspirational and holistic vision for a city-level CFE.
- A.4** Unified narrative for all stakeholders.
- A.5** Indicative overview of potential policy changes, which will be refined and reviewed in the subsequent phases, and through the ongoing phase of Fashion Policy Labs.



Photograph: Shaun James Cox,
Fashion Industry Meets the Doughnut
Workshop at IPF Forum, 2022

PHASE B

DEVELOPING THE ECOSYSTEM BLUEPRINT THROUGH THE LENS OF EACH STAKEHOLDER

This phase will focus on an in-depth exploration of the different stakeholder types, and their roles and relationships within a city-level CFE. It will create a pre-competitive space where key stakeholders can share and discuss their perceptions of the enablers and barriers to achieve a CFE, and the perceived operational effects that implementing a CFE will have on their businesses. It will combine the Doughnut Unrolled framework with the five layers of enterprise design. Enterprise design focuses on the design of an organisation, and how it can be shaped to be regenerative and distributive. Through the five layers of *Purpose, Networks, Governance, Ownership* and *Finance*, enterprise design explores what an organisation 'can do and be in the world'.²⁵

Activities

- A co-creative workshop is designed and conducted using the Doughnut Unrolled and the five layers of enterprise design frameworks.

Outcomes

- Increased understanding by participants of the enablers and barriers to build a CFE.
- Deeper understanding of the interconnections between CFE stakeholders.
- Increased empowerment and sense of agency by stakeholders through awareness of their role and contribution in a CFE.

Outputs

- B.1** Completed Unrolled Doughnut framework per stakeholder role in the ecosystem.
- B.2** List of enablers and barriers to reach a CFE.
- B.3** List of operational effects a CFE will have on each stakeholder.
- B.4** Live document compiling key learnings updated, to feed discussions during the Fashion City Policy Labs, which will be running simultaneously.

PHASE C

DESIGNING PILOT PROJECTS ACROSS THE STAKEHOLDER LANDSCAPE

Phase C will translate the city-level CFE as envisioned by stakeholders during the previous phases into action. Stakeholders will take a proactive role and identify opportunities for collaborations and develop a scaling pathway for these opportunities to be turned into collaborative pilot projects across the city. To assess and select existing or future project ideas, a local advisory board will be established. The board will create a list of selection criteria, taking into account the size of businesses, complementary circular activities, and potential for scaling. Additionally, a design process will be outlined for the feasibility assessment, and implementation and monitoring of the projects.

Activities

- A list of existing and future city-level project ideas is compiled.
- A local advisory board is established.
- A selection criteria to choose collaborative projects is created, taking into account the types of partners, roles and responsibilities.
- Several collaborative projects are selected.
- A design process for the selected projects is created. It includes:
 - An evaluation of the business case to ensure long-term economic viability.
 - An action plan for implementation.
 - A roadmap for monitoring, evaluation and learning (ME&L) activities, which will be activated once the projects are implemented, and their related social and ecological effects can be assessed.

Outcomes

- Increased collaboration within stakeholders.
- Deeper commitment by stakeholders to implement actionable solutions.

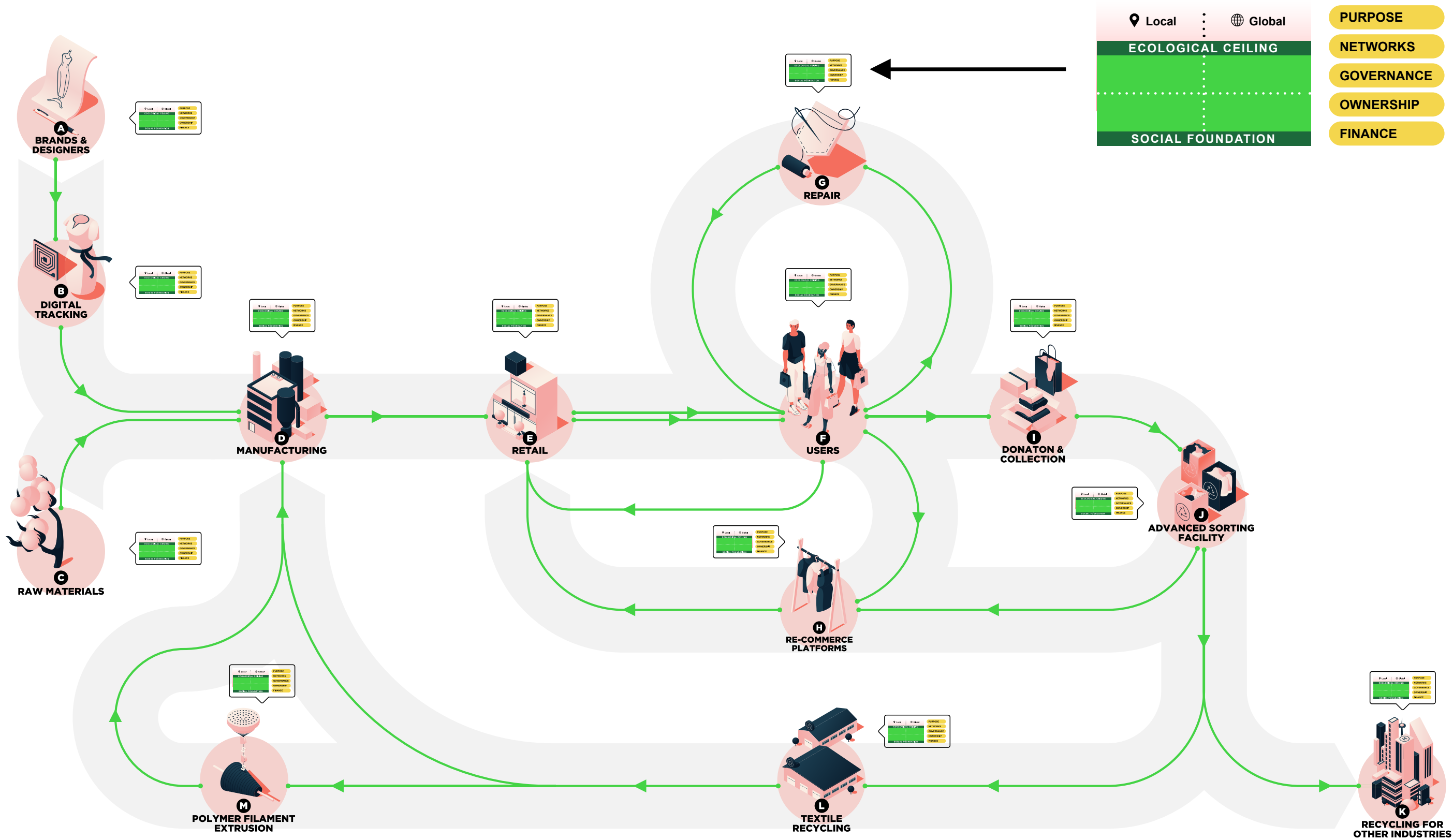
Outputs

- C.1** List of co-designed collaborative projects informed by outputs A.1, B.1 and B.3 and approved by stakeholders.
- C.2** Viability assessment of the selected projects and analysis of investment and financing opportunities.
- C.3** Co-designed process and roadmap, including ME&L tools, for the implementation and monitoring of the collaborative projects.
- C.4** Live document compiling key learnings updated, to feed discussions during the Fashion City Policy Labs, which will be running simultaneously.

THE CIRCULAR FASHION ECOSYSTEM MEETS THE DOUGHNUT

All players of the CFE will work with the four lenses of the Doughnut to understand their impact on the ecosystem, and will dive deeper into their own enterprise design by analyzing their purpose, networks, governance, ownership and finance models.

Figure eight. The Circular Fashion Ecosystem Meets the Doughnut. Source: Kate's Raworth keynote presentation at IPF Forum, London, 30 June 2022. (2022)



PHASE D

IMPLEMENTING PILOT PROJECTS

This phase builds on Phase C and runs in parallel to Phase E. It includes all the implementation activities related to the collaborative projects. Relevant to this phase is identifying the developments necessary in the post-use infrastructure and private and public sectors' efforts, to effectively scale textile collection, sorting, reuse, repair and recycling activities.

Activities

- The selected collaborative projects are implemented, or scaled, if already created.
- The ME&L activities designed in Phase C are conducted and inform the implementation process as well as the future iterations of the projects.

Outcomes

- Deeper understanding of the post-use infrastructure and private and public sectors' involvement.
- Increased awareness of the areas in which more attention should be given to.

Outputs

- D.1** Implementation, or scaling, of selected collaborative projects.
- D.2** Report of key insights stemming from the projects, to inform future stages of development.
- D.3** Live document compiling key learnings updated, to feed discussions during the Fashion City Policy Labs, which will be running simultaneously.

CONCURRENT PHASE 1

PARALLEL WORKSTREAM ONE: DIVING INTO CIRCULAR ENTERPRISE DESIGN WITH BUSINESS PIONEERS

This workstream will focus on enterprise design with business pioneers that have volunteered to deep-dive into their own organisation, and will start after Phase A. DEAL and Circle Economy will conduct the first-of-their-kind workshops from the soon-to-be-published suite of tools on enterprise (re)design. Two modules will be run in parallel: one for established businesses, which will find solutions for the challenges they are facing to transform their current business, and one for circular start-ups that wish to scale their impact.

Activities

- Two parallel deep-dive modules for circular enterprise (re)design are conducted.

Outcomes

- Increased commitment from established businesses to deep-dive into their own organisational design and challenge the status quo.
- Empowerment of circular start-ups towards scalability.

Outputs

- PW1.1** Commitment from key business pioneers in the city's ecosystem.
- PW1.2** Actionable roadmap for each business pioneer to transform their Purpose, Networks, Governance, Ownership and Financial organisational layers.
- PW1.3** Compiled key learnings to feed discussions during the Fashion City Policy Labs, which will be running simultaneously.

CONCURRENT PHASE 2

PARALLEL WORKSTREAM TWO: RUNNING FASHION POLICY LABS

Policy-making is key to systemic transformation. This concurrent workstream focuses on establishing networks for collaboration and identifying policy and regulations barriers to the implementation of a city-level CFE. The Policy Labs will start during Phase B and will take place every year until the completion of all phases. The sessions will include workshops and discussions, with the goal to link businesses with policy-makers to inform existing policy and shape new policy recommendations for the fashion industry.

Activities

- The process of Fashion Policy Labs is designed.
- Selection of participants from case-study cities is conducted and invitations are sent.
- Fashion Policy Labs workshops and discussions are co-developed.
- Key learnings are analysed and compiled in a report.

Outcomes

- Increased engagement from the private and public sector, including policy-makers.
- Deeper understanding of policy gaps and potential development of new policy instruments.

Outputs

- PW2.1** Designed and tested Fashion Policy Labs processes.
- PW2.2** Report summarising key learnings to inform and shape policy and regulations.

4 CONCLUSION

In this report, Circle Economy has assessed the feasibility of developing city-level CFEs in London and Leeds. First, key players and circular initiatives were mapped via desk research. This overview was further expanded via two collaborative online City Fashion Ecosystem Hackathons.

LEEDS

A total of 90 initiatives in Leeds were mapped across Circle Economy's Key Elements framework and placed against the Doughnut Unrolled four lenses framework. The key insights from the Hackathon in Leeds were:

- The circular initiatives landscape appears to be predominantly focused on clothing reuse.
- The majority of circular activities operate more locally and have social objectives at their core.
- The main challenges the city faces relate to fragmented and siloed work between players in the ecosystem.
- The main opportunities identified referred to optimising and innovating the city's post-use ecosystem, and boosting circular design across the city's manufacturing activities.

Two overarching recommendations stemmed from the Leeds Hackathon:

1. Create a wider impact through collective action by building a network, and to clarify value and benefits in collaboration.
2. Build on the historical relevance and know-how of the city's textiles industry to improve and scale post-use infrastructure.

LONDON

A total of 93 initiatives were mapped across Circle Economy's Key Elements framework and placed against the Doughnut Unrolled four lenses framework. The key insights from the Hackathon in London were:

- The stakeholder landscape seems to be predominantly focused on rental and re-commerce retailers, and brands.
- Most of the city's circular activities operate more globally and have social objectives as well as environmental standards at the core of their business model.
- The main challenges identified were finding a balance between economic needs and environmental best-practices, and linking the design phase with the post-use ecosystem phase.
- An opportunity mentioned by participants was the large volume of initiatives and circular solutions happening and being offered in London.

Three overarching recommendations stemmed from the London Hackathon:

1. Identify existing mapping work done on the circular initiatives landscape and build on that acquired knowledge.
2. Create a shared understanding, based on science and evidence, of what types of circular initiatives are needed.
3. Identify synergies and possible collaborations between stakeholders to find joint solutions.

In addition, the workshop Fashion Industry Meets the Doughnut was held at the IPF Forum in London, bringing together members from the Circular Fashion Champions group. Led by Circle Economy, in collaboration with DEAL, the workshop explored opportunities and challenges in building a CFE in London and Leeds.

Participants viewed the main contributions of the CFEs to the current systems as: increased circular activities and professional training, new circular business models, including reuse, rental and recycling, reduced environmental footprint, leadership and innovation, and inclusivity.

Participants considered that the main environmental pressures to prioritise were climate change, freshwater withdrawals and biodiversity loss. These pressures were believed to be reduced by CFEs through improved environmental management and infrastructure, such as collection, sorting and recycling, more fair management of waste, and a reduction in consumer demand and production.

Several social pressures were identified by participants, who believed that these should be addressed by CFEs. These social pressures included lack of access to financing by SMEs and grassroots initiatives, a lack of transparency along the supply chain, and a lack of education and professional training in the skills needed for circular activities. Another social pressure mentioned was the trend-driven nature of fashion and the current culture of consumerism, which should be tackled by CFEs.

During her opening keynote at the IPF Forum, **Kate Raworth**, founder of the Doughnut Economics model, posed the question:

“HOW IS MESSAGING DESIGNED TO REDUCE DEMAND FOR NEW CLOTHING?”

Additional social pressures were perceived at the international level across all global value chains that could potentially impact and disrupt CFEs.

These pressures included social inequity, global events, such as pandemics or natural disasters leading to migrations or political instability in certain regions.

A transformation journey was developed by integrating all learnings from the Leeds and London Hackathons and the IPF Forum workshop. It described a roadmap of four phases and two parallel workstreams that were needed for the transformation of the UK fashion sector, and to drive the fashion sector from the current state to a city-level CFE target state that is fully circular.

A Creating the blueprint for city ecosystems

Local stakeholders will come together to co-create a holistic vision of and a unifying narrative for a CFE in their city.

B Developing the ecosystem blueprint through the lens of each stakeholder

Through a series of in-depth workshops, the city ecosystem will be explored by multiple stakeholders, who will share their perspective on the enablers for and barriers to achieving a CFE.

C Designing pilot projects across the stakeholder landscape

Stakeholders will select and co-design collaborative existing and future pilot projects that will be implemented as a foundation for a city-level CFE.

D Implementing pilot projects

Selected stakeholders will form working teams to implement the collaborative pilot projects and monitor and evaluate their impact.

PW1 Diving into circular enterprise design with business pioneers

Businesses in the CFE will dive deeper into their own business models through a series of workshops on enterprise (re)design and circular fashion led by DEAL and Circle Economy.

PW2 Running Fashion Policy Labs

Stakeholders and policymakers will participate in yearly Fashion City Policy Labs to identify policy gaps and provide recommendations for new legislation on city, regional and national levels.

These phases and workstreams were further detailed via related activities, outputs and outcomes, and summarised in a visual. The multi-phased transformative journey is a scalable model that can be used to meet the UK government policy agenda, while reaching the CFE target state.

FINALLY, THREE CONCLUSIONS CAN BE DERIVED FROM THIS REPORT, TO ENABLE A CITY-LEVEL CFE, AND TO INFORM FUTURE METHODOLOGY:

- Building a CFE is crucial to incite and scale grassroots initiatives and the development of a network of new joint-solutions between large multinationals and SMEs.
- Each city has a different core focus and way in which it operates, and there isn't one solution that fits all. Thus, the methodology should be agile to be replicable.
- Collaborative and cross-sectoral research is needed to model the CFE to drive innovation investment. This investment will create long-lasting changes in the policy landscape and empower citizens to rethink their relationship with their clothes.



Photograph: Bethany Williams, All Our Stories, SS22

5

NEXT STEPS

To build a resilient city-level CFE, the transformation journey and methodology should consider the local context and mimic nature's diversity, plurality and interconnected ecosystems. A city-level CFE should reflect on how it relates to the global sphere, and answer the question *'what will work and be right for this place and contribute to the bigger picture?'*.²⁶ On the other hand, CFEs' agile nature and science-based targets could further contribute to building resilient ecosystems.

Access to finance and finding suitable schemes will be the first step of the transformation journey and beginning of Phase A. Additionally, and building on the findings from this initial foundation phase and the experience with the Circular Fashion Champions, the development of a formal advisory board will be central to developing a city-level CFE.

The next steps of the transformation journey will respond to several guiding questions, which resulted from this report, that will help reach a target state:

- How can a city-level **CFE better assess** the social foundation and ecological ceiling?
- How can a city-level **CFE provide access** to circular choices for all citizens?
- How can a city-level **CFE drive partnerships** and co-creation between SMEs and large organisations?
- How can a city-level **CFE empower citizens** to make better data-informed decisions and enable more circular behaviour?
- How can a city-level **CFE influence policy** and the introduction of new legislation?

In the future, matured CFEs should be prepared for and resilient to potential large-scale global events, such as pandemics and climate change-triggered migrations, as well as political instability, and create appropriate measures to mitigate their impact on their activities.

We invite all those who have a stake in the cities of London and Leeds and keen to drive meaningful change in the fashion ecosystem, to contact the Institute of Positive Fashion.

www.instituteofpositivefashion.com

REFERENCES

1. UN. (2021). *Fashion industry charter for climate action*. Retrieved from: [UN website](#)
2. IPCC. (2021). *Intergovernmental panel on climate change. Summary for policy-makers*. Retrieved from: [IPCC website](#)
3. UNFCCC. (2018). Fashion industry, UN pursue climate action for sustainable development. Retrieved from: [UNFCCC website](#)
4. UN. (2018). Sustainable development goals. Tackling climate change. Retrieved from: [UN website](#)
5. Institute of Positive Fashion (IPF). (2020). *The circular fashion ecosystem: a blueprint for the future*. Retrieved from: [IPF website](#)
6. Doughnut Economics Action Lab. (2022). About Doughnut Economics: meet the Doughnut and the concepts at the heart of Doughnut Economics. Retrieved from: [Doughnut Economics website](#)
7. BBC Reel. (2020). How the Dutch are reshaping their post-pandemic economy. Retrieved from: [Youtube website](#)
8. UK Government. (2020). *The ten point plan for a green industrial revolution*. Retrieved from: [Gov.UK website](#)
9. UK Government. (2022). *Levelling Up the United Kingdom: executive summary*. Retrieved from: [Gov. UK website](#)
10. United Nations SDG: Learn. (n.d). Kate Raworth on Doughnut Economics. Retrieved from: [UN SDG: Learn website](#)
11. Circle Economy. (2019). *Building blocks for the new strategy: Amsterdam Circular 2020 - 2025*. Retrieved from: [Circle Economy website](#)
12. Circle Economy. (2019). *The Amsterdam City Doughnut: a tool for transformative action*. Retrieved from: [Circle Economy website](#)
13. Climate Action Leeds. (2022). *The first Leeds Doughnut City Portrait: towards a safe and thriving city for all*. Retrieved from: [Climate Action Leeds website](#)
14. London Doughnut Economic Coalition. (2022). Doughnut Economics in London. A City portrait and call to action. Retrieved from: [Doughnut Economics website](#)
15. Doughnut Economics Action Lab. (2022). Doughnut Unrolled: exploring a topic. Retrieved from: [Doughnut Economics website](#)
16. IPF. (2020). *The circular fashion ecosystem: a blueprint for the future. 10 priority action areas for realising the target state* (p. 50). Retrieved from: [IPF website](#)
17. Circle Economy. (2021). The key elements of the circular economy. Retrieved from: [Circle Economy website](#)
18. Yorkshire Textiles. (2022). Heritage. Retrieved from: [Yorkshire Textiles website](#)
19. Zero Waste Leeds. (2021). The Leeds textile trail. Retrieved from: [Zero Waste Leeds website](#)
20. Zero Waste Leeds. (2021). Zero Waste Leeds map. Retrieved from: [Google Maps](#)
21. Encyclopedia. (2019). History, United Kingdom, trading companies of the early modern era. Retrieved from: [Encyclopedia website](#)
22. Biddle Sawyer Silks. (2021). London fashion: the history of the British capital. Retrieved from: [Biddle Sawyer Silks website](#)
23. World Resources Action Programme (WRAP). (2021). *Textiles 2030 circularity pathway*. Retrieved from: [WRAP website](#)
24. Circle Economy. (2019). Circular Jobs Initiative: We maximise the employment opportunities offered by the circular economy. Retrieved from: [Circle Economy website](#)
25. Doughnut Economics. (2022). Why design matters. Retrieved from: [Doughnut Economics website](#)
26. The Royal Society of Arts (RSA). (2021). Place: the missing key for unlocking a circular economy. Retrieved from: [RSA website](#)

