Engaging Customers in a Circular Economy

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Executive summary

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The Exeter Centre for Circular Economy and Clarasys are both committed to the creation of a Circular Economy.

A key factor in making this transition possible and achieving a less resource-intense and wasteful world is ensuring that customers are able and willing to participate in circular practices. We want to understand what is required to get customers to participate in sharing models, the return of packaging, repair schemes, and other circular models. Our ultimate goal is to enable organisations, both B2B and B2C, to design and embed circular journeys that are desirable for customers, and viable and feasible for the business.

With this report, we are pleased to present an initial framework based on a literature review that highlights some starting considerations to help you rethink your customer journeys. We intend to continue to partner and conduct primary research with organisations and customers to further investigate circular economy friction points.

Key findings

- Overall, the Circular Economy (CE)/ Customer Experience (CX) research landscape is quite scattered with a few recurring success factors in the implementation of circular products and services observed. The intersection of customers, CX, and customer effort is lacking research and is a missing component for organisations to drive their CE transition - only 10% of peer-reviewed articles associated with the CE focus on 'consumption', 'customers', or 'users'. (Camacho-Otero, J.; Boks, C.; Pettersen, 2018)

- Researchers have emphasised the role of customers or users when moving towards a circular business model (CBM) and that customers' purchase intentions and behaviour are crucial enablers of their successful implementation.

- The shift from a linear business model to a CBM needs to meet the specific needs of customers. In particular quality, price, convenience, identity, trust, hygiene and contamination, language and communication, and level of circular skills.

- In a circular economy, customers will be required to take on a new role and perform a series of behaviours that enable circular consumption. The customer effort associated with these behaviours is 'Consumption Work which refers to the labour integral to the purchase, use, re-use and disposal of goods and services'. (Hobson et al., 2021)

Introduction to CX and the Circular Economy

The Circular Economy
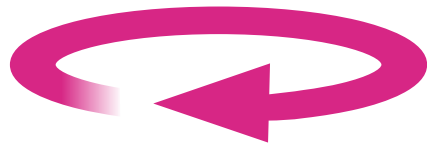
We are **shifting** to a system where we…

Regenerate natural systems

Design out waste and pollution

Keep products and materials **in use**

The circular economy is a systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles:

1 Eliminate waste and pollution
2 Circulate products and materials (at their highest value)
3 Regenerate nature

The Circular Economy Opportunity

In the last 20 years companies reporting on sustainability has increased a hundred-fold (Pucker, 2021) and businesses are feeling more pressure to move towards a sustainable business model.

"The €1.8tn opportunity revealed by the Ellen MacArthur Foundation reaffirms the economic rationale of moving towards a circular economy. Realising and capturing the benefits of this systemic transition requires a cross-industry, cross-performance, and multidisciplinary approach"

Ellen MacArthur Foundation, 2016

"Currently, only around 8.6% of the 100 billion tonnes of materials that enters the global economy is circular. If this is doubled to just 17% it has the potential to reduce resource extraction and use by 28% thus cutting GHG emissions by 39% and enabling businesses, cities, and nations to get on a 1.5-degree pathway."

Circle Economy, 2021

Circular Business Models

Circular Business Models create value for organisations in ways that are aligned to the three principles. Lacey et al., (2015) defined five key business models for the Circular Economy.

Circular supplies: Provide renewable energy, bio-based or fully recyclable input material to replace single-lifecycle inputs.

Resource Recovery: Recover useful resources and energy out of disposed products or by-products.

Product Life Extension: Extend the working lifecycle of products and components by repairing, upgrading and reselling.

Sharing platforms: Enable increased utilisation rate of products by making possible shared use access ownership.

Product as a Service: Offer product access and retain ownership to internalise benefits of circular resource productivity.

Circular economy and CX

The Role of CX in the Circular Economy

The shift from a linear business model is not as straightforward as merely making circular-driven products. Instead research emphasises the importance of the role of customers and users when moving towards a Circular Business Model.

### Why is it important to consider the customer in moving towards a CBM?

Previous studies argue that the shift from a linear business model to a CBM still needs to satisfy the specific needs of customers, rather than merely make circular-driven products available (Hankammer et al, 2019).

It indicates that customers' purchase intentions and behaviours are crucial enablers of the successful implementation of CBMs (Mostaghel, Rana, Chirumalla, Koteshwar, 2021) and that in a circular economy, customers would be expected to perform a series of behaviours that enable circular consumption (Camacho-Otero et al., 2020). Customers need to be interested and involved in resource recirculation, and customer attitudes are vital to the achievement of a CBM (Mentink, 2014) .

However, the different profiles and personal characteristics of consumers and how these change over time, make it challenging for companies to understand the full range of their expectations and behaviours. This is even more important given the drastic changes necessary when shifting from a linear to a CE (Mostaghel, Rana, Chirumalla, Koteshwar, 2021)

Today's linear customer journeys

Below is example of typical linear customer journey:
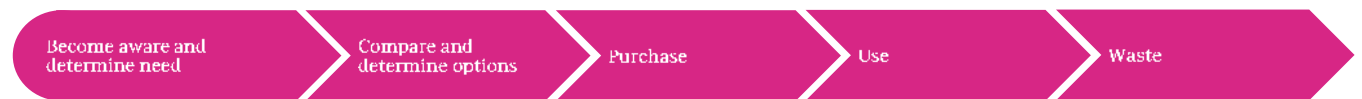
In a circular economy, customer journeys will need to evolve into continuous loops of engagement and interaction with organisations. This will ensure that products and resources retain their value and are kept within the system. This can be done through the application of circular business models. However for these circular journeys, some of these steps and activities will need to be expanded and re-imagined (Muranko et al., 2020; Zeeuw van der Laan & Aurisicchio, 2019).

Potential journey for renting a product

Potential journey for re-usable and returnable packaging
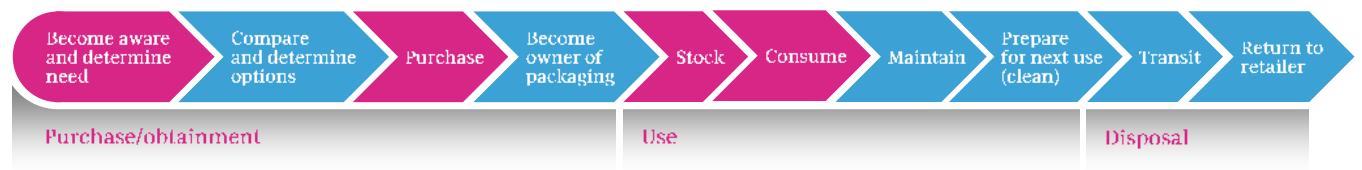
In particular, the activities in **blue** require additional insight and exploration as they expect the user to not only perform new behaviours but potentially a new role as a steward of the product.

On the next page we have modelled what an exemplar circular journey that embeds further sustainability considerations could look like.

A Circular Customer Journey

We think the sustainable B2C customer journey of the future should be more...

Focused on needs: For customer journeys to be truly sustainable, they need to move away from the promotion of endless buying and encourage mindful consumption.

Experiential: Retailers will focus more on enabling customers to explore the experience they can have with a product rather than simply purchase it.

Circular: Journeys will be designed with circular economy principles embedded. There will be a focus on reducing the resources used in products and keeping those in use for as long as possible.

Community-based: We will see even greater focus on community-based sharing of products to enhance affordability and access. Online and in-person communities will be central to providing feedback around products.

Affordable: For necessary products and services there needs to be a greater focus on ensuring they are accessible to all.

Transparent: The most critical element of a sustainable customer journey is the provision of easily comparable and accurate information about the environmental and social impact of products.

|	Become aware and determine need	Compare and determine option	Access	Use	Keep in use	Return & recycle
The step	• Customer assesses their level of need • They understand the different sustainability considerations they should have for any acquisition of a product or service • They explore the different options to fulfil their need	• Customer compares the different options for factors such as cost and convenience alongside sustainability credentials • Customer utilises community forums and relationships to get feedback about the product	Customer chooses from a range of sustainable options to access the product or service from: • Borrow • Lease • Share • Buy as a service • Buy as a virtual product • Buy as a circular product	The customer uses the product to fulfil their need while using it in a responsible way ensuring that any waste created from its use is managed appropriately.	• If the customer has accessed a physical product, they are able to continuously upgrade, repair, or refurbish the product to ensure they continue to get value from it. • If the product is no longer useful to the customer they have options to resell or share with others who will find it useful	If any physical component of the product or service is no longer functional then there is opportunity to return it so the original producer, a partner, or an infrastructure provider can remanufacture the resources or recycle them.
Example: acquiring a sofa	• Customers are able to understand the different sustainability credentials they should be applying to physical products via labels	• Customers are able to clearly see the sustainability credentials of different sofa options and compare across them • Customers are able to compare products from different online providers across sustainability and cost, convenience and quality factors	• Customers are able to access sofa as a service where they rent sofas • Customers are able to access modular sofas which can be updated as their tastes and needs change • Customers can use ethical credit options to acquire the sofa	Sofas are designed to be hard wearing and designed for long-life using quality materials	• Customers are able to access repair options if the sofa is damaged • Customers are able to resell via the parent company • Customers are able to resell a purchased sofa via a reseller	• Customers are able to return a leased sofa so it can be refurbished and resold by the parent company • For sofas that are at the end of their life they can be collected to be remanufactured or recycled so that the resources can continue to be used
Considerations for retailers	How do you contribute to recognisable labelling and not add to confusion?	• Should you stock unsustainable options? • How do you support the development of high-quality, cost-competitive, sustainable alternatives? • How do you provide information to enable customers to compare across products? • How do you collate the complex sustainability data for each product?	• How do you provision a low-waste, low-emission delivery system? • How do you model the financial viability of switching to a circular, low-consumption business model? • How do you ensure that products that are sustainable are accessible?	• How do you rework your design process to ensure products are designed with sustainability in mind? • How do you enable customers to use the products so they last?	• How do you develop platforms and work with other providers to enable sharing? • How do you develop capabilities for repair and refurbishment?	• How do you work with infrastructure providers to ensure that materials are handled appropriately at end of life? • How do you incentivise customers to manage end of life products in the right ways?

The perfect circular customer journey... easy to implement?

In a circular customer journey, customers become stewards and maintainers of value, products, and materials, fundamentally changing the way producers and customers interact and engage with each other.

This represents a shift from today's linear journeys that require circular customers to develop **'New Behaviours'** and habits to ensure the recirculation of resources within the system, **'New Relationships'** between producers, customers and products that are built on transparency, trust and emotional connection with the products they use thereby, inhabiting **'New Roles'**.

Behaviours

Roles

Relationships
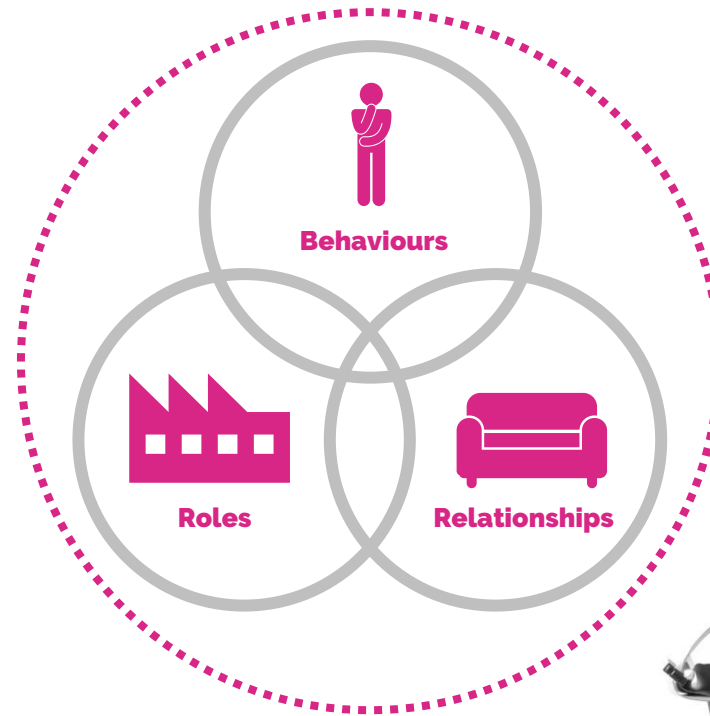
Considerations in journey design

When designing Customer Journeys there are a number of customer factors that the literature review highlighted need to be considered:

Circular design principles	What does the research say?	Considerations for journey design
Quality	"Chief among the reasons given for remanufacturing's failure to fully realize its potential is consumer perception of the quality of remanufactured goods." (Hazen et al., 2017)	How might we guarantee quality and change the perception of remanufactured goods?
Price	"It emerged clearly from the different strands of research that the price-quality ratio is the most important driver and simultaneously barrier for consumer engagement in the CE." (European Commission, 2018, p11)	What is the price point that will encourage consumers to invest in a remanufactured or leased product? What information about full life cycle costs and economic incentives do customers need organisations to provide to change their purchasing decisions?
Convenience	"From a consumer perspective the total cost of a product also includes the effort needed to acquire a product, repair, buy or to rent/lease it." (European Commission, 2018, p186). In turn, research into specific consumer practices of product care (including repair and maintenance) show that these require time, effort and competences, which can limit the involvement of some individuals. For others however, new forms of consumption work encourage participation, particularly when it is framed and felt as challenge and/or fun. (Hobson et al., pg4). While CE advocates make claims of 'hassle-free' services, studies show there is often significant effort required in doing repairs, purchasing second-hand, or participating in peer-to-peer sharing. How these all add up to helping create the 'circular consumer' (or not) remains to be seen. (Hobson et al., pg5)	How might we maintain ease of access and minimise customer effort to drive uptake in product repairs, second-hand purchases and renting or leasing products? Where circular activities feel 'less convenient', what factors and incentives make engagement worthwhile for consumers?
Trust	"...the importance paid by consumers to seller reputation and distribution are significantly related to perceived value and risk, which in turn affect attitude and the intention to purchase refurbished products." (Agostini et al, 2021)	How might we use knowledge and information to provide reassurance to the consumer that the products and services will perform and the experience will be the same level that they expect?
Identity	"In the circular economy, consumption becomes anonymous because people do not own products, they merely use them...people might not be able to define themselves by the products they have anymore." (Camacho-Otero, Boks & Pettersen, 2018)	How might we attach identity to the circular-based model and encourage users to take ownership of the products until they are returned?
Languages and communication	Anthropomorphising 2nd life materials as 'rescued' or 'heroic', for example, may help to transform customers' initial feelings of disgust or contamination at the thought of purchasing a pre-used item into feelings of interest or empathy. (Chamberlin and Boks, 2018)	What storytelling strategies can brands use to encourage customer engagement in the circular economy?
Hygiene and contamination	Customers want to feel confident that their purchases provide the same hygiene standards as those of newly manufactured products.	Is there a customer assurance process that can be developed to promote this?
Circular understanding and skills	"In turn, the ability of individuals and households to undertake such consumption work depend in part upon various, vital resources (e.g. time, skills, social capital), all of which are not distributed equally among populations". (Hobson et al., 2021)	Do our customers have the knowledge (where and how to rent, share, return) and skills needed to carry out their new circular roles (repair, maintenance, identifying quality)? How do we help build these skills in our customers? How do we remove the uncertainty and build up their confidence?

Join the loop

Our research shows that this space is ripe for disruption and has a clear underpinning revenue and cost benefit case. We are looking to expand the circle with like-minded organisations that want to make a meaningful difference to the way they serve their customers

Are you asking yourself these questions?

We want to engage in the circular economy, how do we bring our customers on board?

How can we prepare our business for circular products and services?

How can we design and deliver successful CE products and services?

The themes highlighted resonate with me or my business but where do I get started?

How can we help you answer them?

We will be...

Speaking to businesses to understand their pain points and challenges when moving towards a circular model.

Speaking to customers to better understand their behaviours and drivers

Creating a framework which looks at circular journeys through the lens of customer experience.

Sharing our findings and framework to open up the conversation and help businesses move forward.

How can you get involved?

If this has piqued your interest, join the University of Exeter and Clarasys as we lead the way in shaping desirable circular journeys that are underpinned by viable circular business models

Authors

Merryn Haines-Gadd

Dr Merryn Haines-Gadd is a Research Fellow at the University of Exeter within the Exeter Centre for Circular Economy (ECCE) and primarily engages in industry-led academic research projects on the topics of circular design, emotionally durable design, user centered research and circular business modelling. A designer by background, she has extensive experience in development of design and innovation tools that enable and support companies to improve the circularity and sustainability of their products and services.

Linked in

Sam Maguire

Sam Maguire is an experienced consultant, and our sustainability lead at Clarasys, who specialises in sustainability strategy and operating model design across multiple industries. He has particular expertise in sustainable business models and designing organisations to be more circular.

Linked in

Nellie Salter

Nellie Salter is a Research Assistant with the University of Exeter working in the field of Circular Economy. She consolidated her sustainable business knowledge through the MBA program at the University of Exeter, during which she completed her final project on customer container return habits for reusable packaging systems. She has developed an expertise on consumer roles in the circular economy with an aim to enable circular businesses to thrive.

**Linked** in

Loic Le Fouest

Loic Le Fouest is a managing consultant and one of our customer experience experts at Clarasys. He specialises in helping organisations understand the needs of their customers and leverage this insight to improve their products and services. With experience in product management and service design he understands how to design customer journeys that are viable for the business and deliver a positive customer experience.

Linked in

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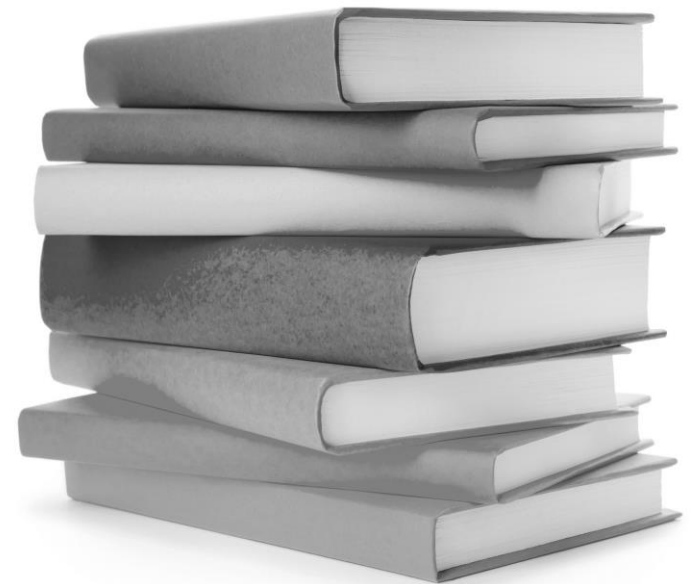
Want to find out more?

If you are interested in the areas we have covered or would like to hear more about Clarasys and Exeter University's upcoming research piece, which will dive more deeply into the topic of how to incentivise customers to take part in circular models such as product sharing, circular packaging, repair schemes and other circular practices, we would love to hear from you.

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