

CIRCULAR ECONOMY IN TRAVEL AND TOURISM

A conceptual framework for a sustainable,
resilient and future proof industry transition



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About the authors

The **CE360 Alliance** is a global team of qualified professionals with a vast mix of skill sets and industry backgrounds, combined with unique post-graduate business training on Circular Economy and innovation. We work with organisations to help them transform towards sustainable business practices through the Circular Economy framework. Born out of the Bradford University pioneering Innovation, Enterprise and Circular Economy MBA, the network uses its expertise across various industries and geographies to provide organisations with sensible and adaptive Circular Economy tools and strategy guidance.



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Foreword

By Ladeja Godina Košir

It was hard to imagine that the travel and tourism industry would be almost paralysed in 2020. Environmental studies, reports, foresights and other documents published before the COVID-19 outbreak were focusing mainly on the high level of greenhouse gas emissions and increasing carbon footprint of this vast and complex industry. Making the industry greener and more sustainable was the increasingly central issue -how to keep it alive was not a part of the discussion.

Shocking forecasts from the WTTC and OECD projecting 100 million jobs losses and 60-80% decline in the global tourism economy in 2020, highlight the sheer scale and scope of the crisis affecting the industry. Recovery scenarios will depend partly on how long the pandemic lasts as well as on potential long-term changes in travellers' behaviour.

Therefore, this publication by the CE360 Alliance comes just at the right time! It proposes to apply the Circular Economy as a new conceptual framework for guiding a sustainable, resilient and future proof recovery of the travel and tourism industry.

This report offers great insights into the essence of the Circular Economy. It provides in-depth understanding of where opportunities for implementing circular solutions can be found within the travel and tourism industry. It also encourages different stakeholders in the tourism eco-system to rethink their existing (most often linear) business models, value chains and capacities for value creation.

No matter if you are directly engaged in the tourism industry or in any other sectors, I am inviting you to dive into the report and explore the opportunities the tourism industry's Circular Economy transformation is offering right here, right now!

By engaging different mindsets, thinking outside of the box, feeling free to create and innovate, existing dots can be connected in new ways to rethink the industry's purpose and "modus operandi". Systemic approach and collaboration among different stakeholders must be the starting point of a green, circular recovery journey focusing on the environmental, social and economic dimensions.

Let me share with you 5 challenges worth exploring together with the authors when deciding how to make the travel & tourism industry thrive post-COVID-19:

- 1 Instead of aiming to return "back to normal" rethink the tourism industry values, purpose, competences, potential, business models, value chains in a more holistic, systemic way – who, why, how - wants to travel and spend time away from home?
- 2 Global vs. local – question how to operate within the planetary (and local) boundaries, assuring wellbeing for everyone and bridging citizens everyday quality of life with tourists needs and aspirations.
- 3 How to be a tourist in our new post-COVID-19 reality? How to feel safe, secure and welcome in foreign places? How can the implementation of Circular Economy principles contribute to more positive impacts in the tourism ecosystem?
- 4 Existing competences, resources (including human) and assets (heavy and light) to be used and connected in new ways – providing answers to emerging needs in local environments (for example conference facilities to be transformed into co-working spaces / hotels to be used as temporary hospitals).
- 5 Principles of Circular Economy as compass for daily decision-making – for example: circular procurement, circular design, providing services instead of products, repair & reuse & renovate, using existing infrastructure (not building new ones), digitalisation ...

This report offers a lot of food for thought on how to redefine the tourism ecosystem so that it actively contributes to a sustainable and prosperous future and positively influence visitors and local populations quality of life. In doing so, new opportunities for tourism professionals and for those dependent on the industry can arise.

Is it possible for the tourism industry to thrive in the post COVID-19 times? Although the current situation seems almost desperate in many destinations, the answer has to be yes. As sung by Leonard Cohen: "There is a crack in everything, that is how the light gets in". Let us apply the circular economy approach as the guiding light for achieving a resilient and sustainable tourism ecosystem.



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Executive summary

The COVID-19 crisis is challenging our established worldviews and socio-economic constructs and as a consequence, the tourism industry was the first to face a sudden, global and abrupt demand shock. The future and form of the industry post the pandemic is uncertain.

There is an understandable desire to return 'back to normal' as soon as possible. Yet, this crisis offers a unique opportunity to reflect and ask important questions about the future, including those related to the industry's adverse environmental and social impacts, overall resilience, risks and opportunities amidst 21st century sustainability challenges.

On this note, this paper introduces and explores the potential of Circular Economy inspired ideas and practices to guide a more sustainable, resilient and future-proof development of the travel and tourism industry.

The Circular Economy has been gaining momentum in recent years, for its potential to significantly optimise resource use, reduce production and consumption related GHG emissions, while at the same time offering competitive advantage opportunities for businesses. This publication contributes to the conceptualization of common Circular Economy and circular value creation concepts within the travel and tourism industry context.

In a 'business as usual' scenario, the travel and tourism industry's underlying socio-economic and environmental challenges will remain and be further exacerbated as the number of global tourism consumers increases.

Overtourism, GHG emissions and biosphere degradation issues will not automatically disappear once the COVID-19 crisis is under control. More than ever, those challenges will need to be actively addressed to rebuild a more resilient, economically and environmentally sustainable tourism industry.

The current focus is understandably on dealing with the pandemic's immediate health and economic consequences. However, the following medium to long-term economic recovery efforts affecting the travel and tourism ecosystem may fall into two distinct paths:

- **A business as usual**; resource and GHG intensive linear 'take, make, waste' growth model predominantly based on volume growth.
- **A circular model**; intentionally designed to be regenerative of natural, human and social capital, operating within the earth's and local destinations' sustainable boundaries.

This report suggests that implementing the Circular Economy regenerative vision for the tourism industry offers a pathway to follow the second path; towards a resilient and sustainable, tourism ecosystem. It also suggests that travel and tourism has an important role to play in the Circular Economy transition, as the industry is deeply interlinked with and dependent on multiple key resource flows, asset and commodity value chains in society – including agriculture and food, built environment and transport industries to name a few. Travel and tourism actors can act as enablers of circularity and benefit from shared circular value creation and value capture within relevant value chains.

Through a system thinking approach based on collaboration, business model innovation and value co-creation, travel and tourism actors could increase their organisations' and overall industry resilience, lower their natural ecosystem impacts and provide enhanced economic and societal value to the tourism ecosystem's direct and indirect stakeholders.

This report suggests Circular Economy transformation pathways applicable for key tourism industry sectors; accommodation, transport, activities, food and beverages, event organizers and distribution. Different organisation sectors and market contexts will generate different circular transformations. In terms of key circular value creation levers, a key distinction can be made between 'asset heavy' and 'asset light' industry actors:

- For **asset heavy businesses**, those operating physical assets such as accommodation and transport operators, **circular procurement** is a key lever for enabling circularity in the upstream supply chain, sourcing materials fit for a circular flow (non-toxic, designed for maintenance, reuse, remanufacturing, recycling). This enables initiatives to extend and optimise material and asset use and avoid waste. Asset sharing (within and/or across organisations), sourcing 'products-as-a-service' and innovative mobility-as-a-service (MaaS) platforms, are potential sources of lower lifecycle GHG emissions, CAPEX and OPEX savings and/or new revenues. Furthermore, such initiatives can be turned into a compelling purpose driven storytelling, contributing to stronger brand value and differentiated market positioning.
- For **asset light businesses** delivering non-tangible services, such as travel agencies and distributors, a market positioning, market differentiation through a circular, collaborative and **purpose driven business propositions** and a 'triple (PPP) bottom line approach' would likely be a powerful circular transformation lever. Purpose driven story telling will be founded in activities aiming to enable sustainable and circular initiatives upstream and downstream in the travel value ecosystem. This may include providing resources, raising awareness and capacity for change through solutions or dialogue with customers, destinations and other key stakeholders with the aim to deliver a positive impact.

To help start their circular journey an increasing number of guidance, tools and support are available to evaluate organisation's circular value creation, capture and distribution potential as well as deployment options.

An organisation's circular transformation journey is by definition an iterative prospect underpinned by a process of trial and error, constantly evolving and striving for continuous improvement. To be successful, any changes made must take due consideration of e.g. the business context, external trends, desired market positioning, target customers, core capabilities, strengths and weaknesses of each organisation.

Yet, a first step in a circular transformation is to explore and build employee awareness about the circular economy; key principles, concepts, practices and value creation potential.

This publication aims to contribute to this step by exploring the Circular Economy in a travel and tourism context. It aims to initiate and stimulate a

discussion within the travel and tourism ecosystem on how the industry could look in a future-proof and resilient Circular Economy.

The need for a new positive travel paradigm is pressing. The Circular Economy offers a compelling concept and set of tools to guide an innovative, resilient and sustainable tourism industry development that is fit for the 21st century.

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."

— Buckminster Fuller

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01

Introduction

Our world is experiencing a health and economic crisis unseen since the early 20th century. The COVID-19 crisis is turning our socio-economic models and lifestyles upside down.

As this pandemic has unfolded, it has been increasingly challenging to imagine, predict and model the post pandemic economic and social world order.

While in the midst of the crisis, it is easy to lose sight of the importance and scale of other current global risks and challenges.

Growth in income inequalities, global biodiversity loss and the climate crisis are some of the most pressing underlying global risks that will supersede the COVID-19 crisis. Addressing those risks and challenges continues to remain essential for businesses, public actors and citizens' long-term well-being. Therefore, building economic and ecological resilience is more than ever of fundamental importance.

As one of the largest global industries prior to COVID-19, travel and tourism still has an important role to play in the economic recovery.

The tourism industry is embedded and interlinked with all other major industries from construction to finance, retail and agriculture [1]. The industry's global scale, projected growth and visitor volume growth model provides positive economic contributions for source and destination markets. However, it also creates increasingly potent negative consequences on the economic, social and environmental ecosystems of destinations.

Given its economic importance, there is an understandable desire that the industry returns to 'business as usual' soonest possible.

However, it is pertinent to ask whether a post COVID revival of the travel and tourism industry, based on a traditional 'linear growth' focused model, can be sustained in the long run? The emerging consensus tends to answer in the negative [2]–[4]. Although a short-term recovery effort could push industry actors towards pursuing a 'business as usual' linear growth at all costs, travel and tourism stakeholders will have to articulate long-term business strategies with economic, environmental resilience and sustainability as core objectives to future proof the industry.

The travel and tourism industry has only recently started to seriously acknowledge its environment and social impacts, as well as the associated implications for the industry's long-term viability and risk profile [4], [5].

Domestic and inbound visitors' positive economic impacts are increasingly weighted against the negative externalities generated from visitors' GHG emissions, resource consumption and local ecosystems' social, economic and environmental degradation. The carrying capacity of destinations and generation of negative externalities are acute, real challenges that need serious, level-headed considerations from all tourism industry stakeholders [4]. Consequently, these discussions must sit at the top of the industry's list of priorities [5]–[7].

Within the travel and tourism industry, there is a growing sense of urgency to find long-term, resilient, sustainable tourism industry development pathways respectful of destinations' natural and local social

ecosystems [4], [7]. While the industry's long-term sustainability challenges are acknowledged by the majority of stakeholders, effective solutions and strategies are complex.

The notion of a new Circular Economy framework is gaining momentum for its potential to significantly optimise resource use and reduce production and consumption related GHG emissions while at the same time offering competitive advantage opportunities for businesses. These opportunities come from positive arbitrage and deployment at scale in corporate, business and public spheres.

So far, industries with substantial production and waste streams have been at the forefront of propagating Circular Economy strategies. However, this focus on tangible product manufacturing industries tends to underestimate service dominated industries, such as travel and tourism, and their role in the CE transition.

Even though the tourism industry has been one of the largest global industries, there is limited academic and practical research available on the relevance, applicability and value creation potential of the Circular Economy to the tourism industry.

This publication introduces the Circular Economy framework and associated value creation potential in key tourism ecosystem sectors. The aim of this paper is to raise awareness of the Circular Economy framework value creation potential amongst travel and tourism operators, and to contribute to the conceptualization of common Circular Economy and circular value creation concepts within the travel and tourism industry.

The paper also suggests possible circular business practice transition pathways. In doing so, the paper explores questions such as:

- ? Can the Circular Economy framework create economic, social, environmental value for travel and tourism actors?*
- ? How and at which supply chain touchpoints can the framework create value in each segment?*
- ? How can travel and tourism actors kickstart such circular value transformation?*



02

The Circular Economy: a resilient and regenerative economic model

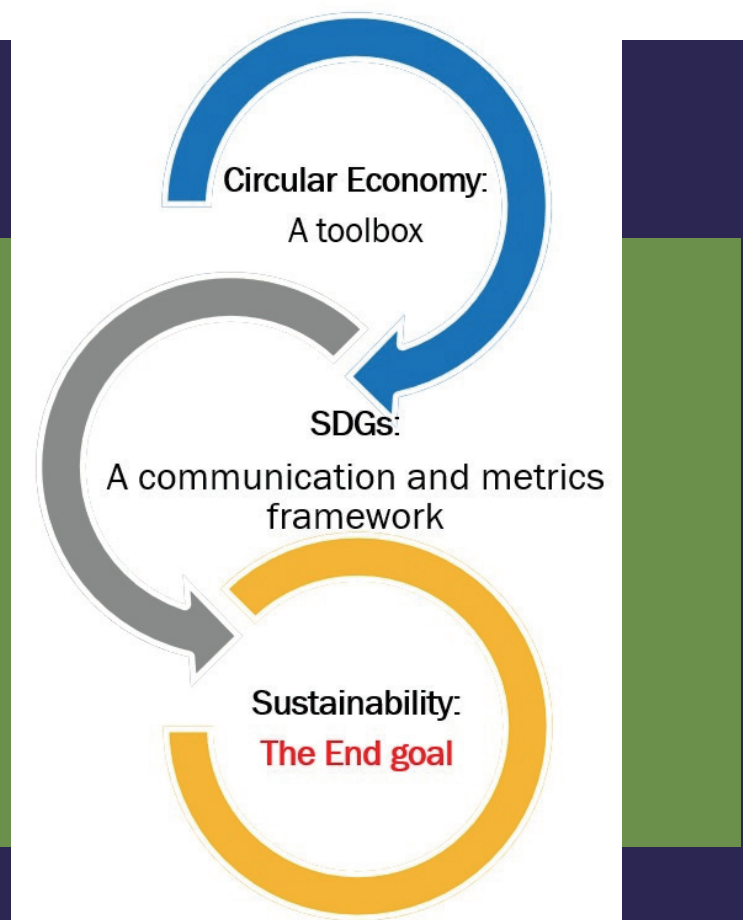
2.1. An economic model with sustainability as its purpose

The notion of a Circular Economy (CE) has been gaining widespread attention in recent years [8]–[10]. CE initiatives are increasingly being pursued actively by companies, NGO's and a diverse range of public and private stakeholders worldwide [11].

A Circular Economy (CE) can be defined as a purposefully designed “*socio-economic system inspired by natural systems, regenerative of human and natural capital that works long term for all stakeholders*” [12].

In a CE the notion of waste has been eliminated, and inefficiencies of the current ‘take-make-waste’ linear economy are turned into business value by keeping materials, resources and products in use for as long as possible. **Natural capital** is regenerated by stopping leakages of waste and pollutants into natural systems, minimising the need for virgin resources and by returning valuable organic nutrients back to nature as fertilizers for new growth. Similarly, a CE can be seen to restore **human and social capital** through the creation of meaningful jobs and through more equal and fair distribution of resources and financial capital [12]–[14].

As such, adopting CE practices can be seen as a necessary **prerequisite** for sustainable development for reaching the Sustainable Development Goals (SDGs) [15] and ultimately a fully sustainable society, where an equitable and prosperous socio-economic system can be sustained within the planet’s carrying capacity, for present and future generations (figure 2-1) . The CE approach offers an essential toolbox to implement, measure, adjust and deliver sustainable production and consumption patterns and to drive innovation and competitiveness at the same time.

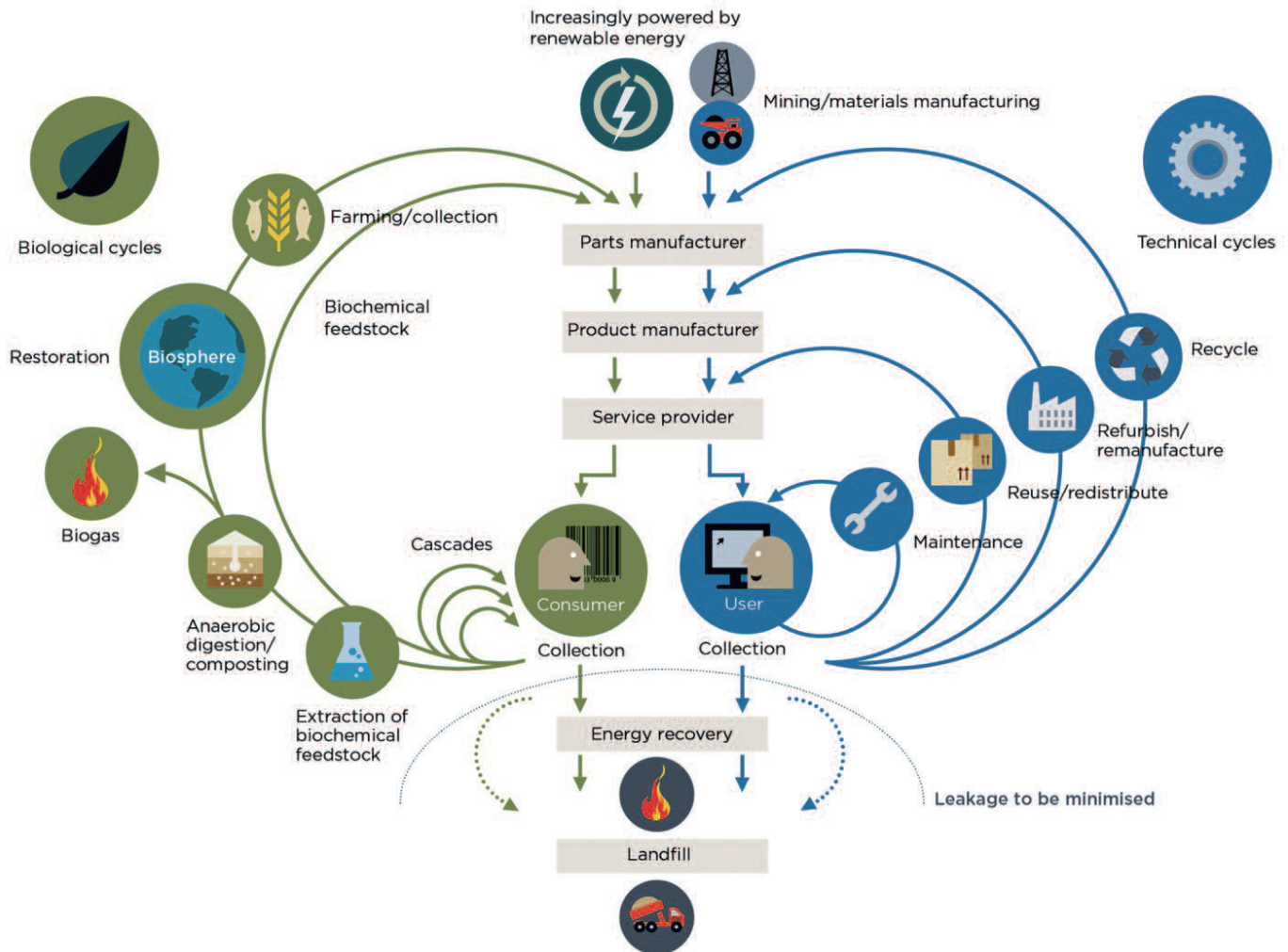


Source: Authors

Figure 2-1 Relationship between Circular Economy, the SDGs and sustainability as the end goal

The most publicised illustration of the CE framework is the Butterfly diagram published in 2012 through pioneering work of the Ellen MacArthur Foundation [12]. It describes resource flows in an economic system driven by **energy from the sun** (renewables), where linear product and material flows are replaced by **circular flows in two separate cycles** - a biological cycle and a technical cycle, and where value is generated through 'circular business models' .

Figure 2-2 Resource flows in a CE - the EMF Butterfly diagram



Source: [12, p. 24]

2.2. Creating more value through circular business models

Traditionally, the boundaries of **value creation** in a business context have been limited to financial value and the transactions taking place between a supplier and customer. I.e. a company generates value for a customer in the form of a product and/or service, which is exchanged for money with the primary aim to generate profits.

In line with CE's 'regenerative goal' the notion of **value creation in a Circular Economy** has a broader connotation and stakeholder base, implying that doing business should contribute to positive outcomes in a broader perspective; for the **planet** (by regenerating natural capital and avoiding all forms of waste), for people (satisfied employees, healthy local communities, equality, etc.), and for businesses through competitiveness and **profits** that eventually get fairly distributed and contribute to overall social wellbeing (also known as 'planet, people, profit' (PPP) principles).

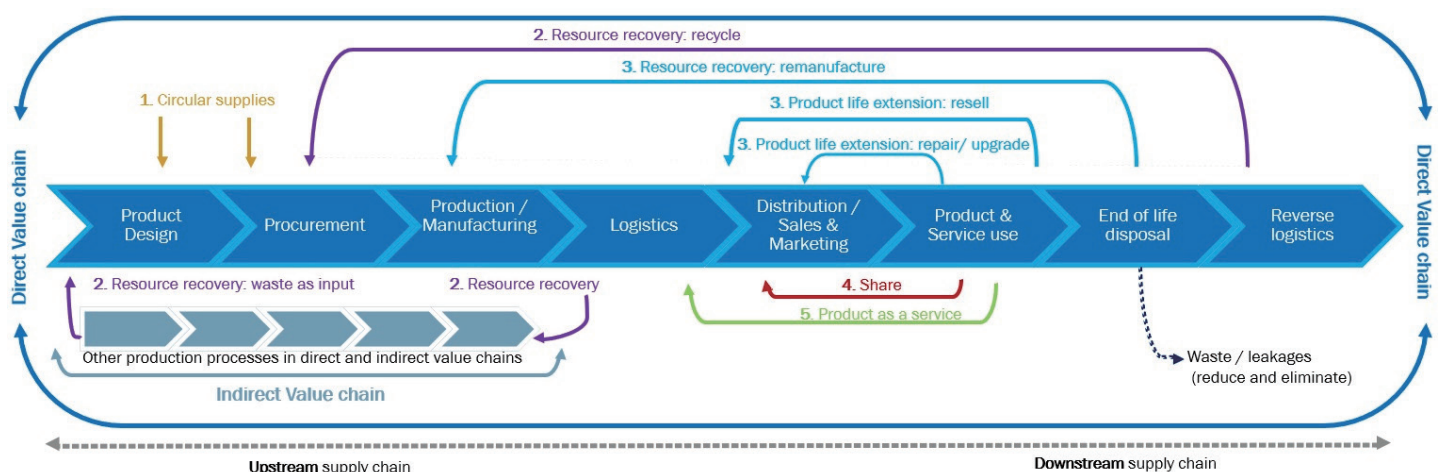
In more practical business terms, a CE approach is about turning linear value chain inefficiencies into business value. Such linear inefficiencies may include [16]:

- > **Unsustainable materials** that cannot be regenerated / circulated;
- > **Underutilised capacities** - e.g. products or assets not fully functional or not operating at full capacity;
- > **Premature product lives** – products not used at full potential for a full working life, e.g. due to 'designed obsolescence' or lack of maintenance and repair;
- > **Wasted end-of-life value** – valuable products/components/materials or energy not recovered at end-of-life;
- > **Unexploited customer engagement** – missed opportunities to engage customers throughout product or service lifecycle, e.g. through selling functionality instead of products;

These linear inefficiencies can be transformed into business value through **circular business models (BM)**. Key circular economy business model categories include [16], [17]:

- 1 Circular supply chains** > Source materials that are fit for a CE (pure, non-toxic, tolerating long and multiple lifecycle with low value depreciation);
- 2 Recovery & recycling** > Recovering embedded energy and resources from waste streams or by-products;
- 3 Product life extension** > E.g. through repair, maintenance, upgrades, resale or remanufacturing;
- 4 Sharing platforms** > Collaborative models to increase material and product utilization ratios and asset recirculation;
- 5 Product as a service (PSS)** > Offering access over ownership, selling product functionality without change of product ownership.

Figure 2-3 Circular business model types



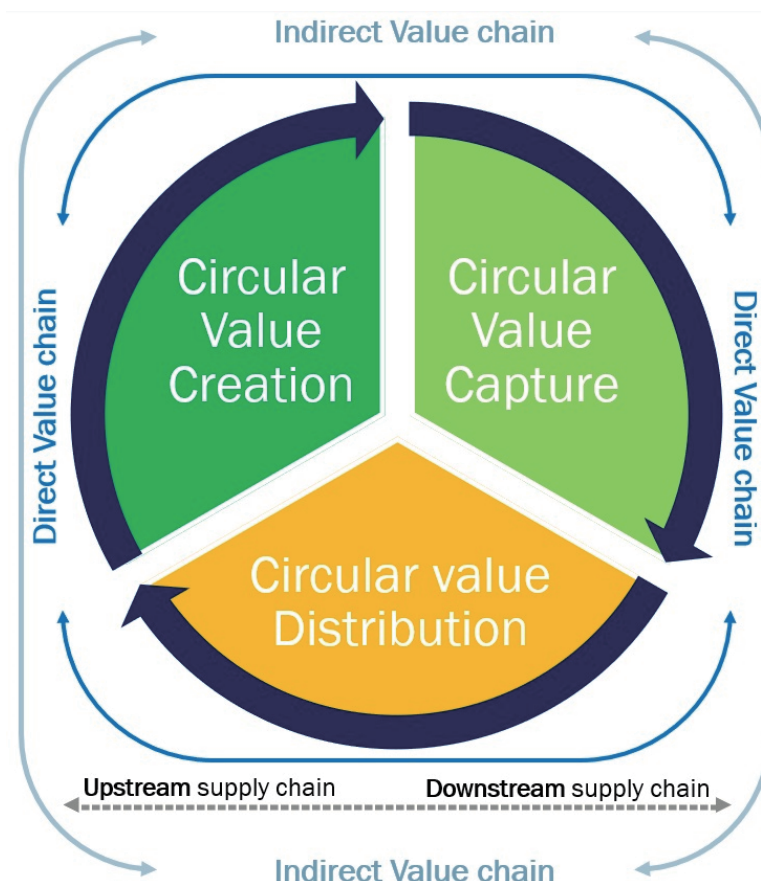
Source: Authors compiled from [16], [17]

What all these CE business model types have in common is the potential to help drive **significantly higher resource productivity** than alternative linear concepts – i.e. a significant **decoupling of resource use** from economic value creation and a positive contribution to the regeneration of natural (by eliminating waste and negative ecosystem impacts) and human capital (through e.g. innovation, learning and meaningful jobs). In turn, the business value of higher resource productivity can be captured across value chains in the form of cost reductions, reduced risks, new product / service innovations and new revenue streams.

For businesses to harness the value of circularity, it is important to consider the concepts of **value creation, value capture and value distribution** [18] (Figure 2-4)

Value creation	>	Is about generating economic and customer value following the 'planet, people, profit (PPP)' principles and in a manner aligned with a circular value creation approach; increasing resource productivity through product/material/ component circulation beyond their first use phase;
Value capture	>	Is about turning the circular and PPP 'value created' into profits or competitive advantage. You may be creating societal and environmental benefits through your business activities, but are these benefiting the business case? If not, the approach is probably not viable in the long run;
Value distribution	>	Is about how new value from 'circular business models' is distributed in the value ecosystem and broader operational environment of the business. I.e. who will benefit from your circular value creation? Who wins and who loses? Which value chain actors or stakeholders are affected? This is important to understand and guides who to work with (collaboration and co-creation) to share costs, risks and benefits of circular initiatives.

Figure 2-4 Value Creation, Capture & Distribution



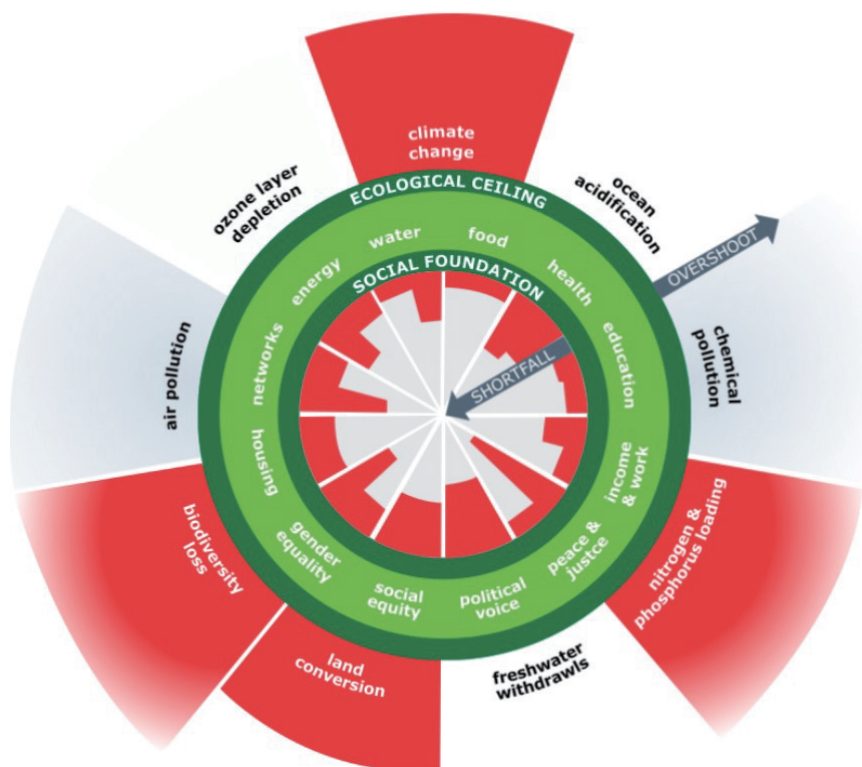
Source: Authors based on [18]

2.3. The Social dimension – contributing to thriving societies

While the general CE discourse so far has focused on resources, material flows and regeneration of natural capital, there is an underlying acknowledgement that this transition must also lead to more prosperous and equitable societies [19]. This is highly relevant in a tourism industry context, which is largely centred on communities, people and their experiences and interactions.

The Circular Economy refers to the economy as a whole. Accordingly, it would not be sustainable to design an economy regenerative of biological and technological stocks, if this would not simultaneously strengthen human and social capital. The 'doughnut framework' shown in figure 2.5 captures the social foundations required for a regenerative Circular Economy to function as intended.

Figure 2-5 The Doughnut of social and planetary boundaries



Source: [20]

In a Circular Economy, social capital represents the resources embedded in the relationships between individuals expressed through non-monetary exchanges. Social capital within a Circular Economy can be described as the degree to which citizens interact with each other on the basis of pleasure, duty, compassion, cultural and religious beliefs outside of monetary transactions. Building Social Capital refers to nurturing flourishing and resilient, equitable, inclusive communities; with good education and jobs, health and wellbeing, reduced inequality, democracy, inclusion and social justice as illustrated in figure 2.5 and 2.6 [19] [21] [22].

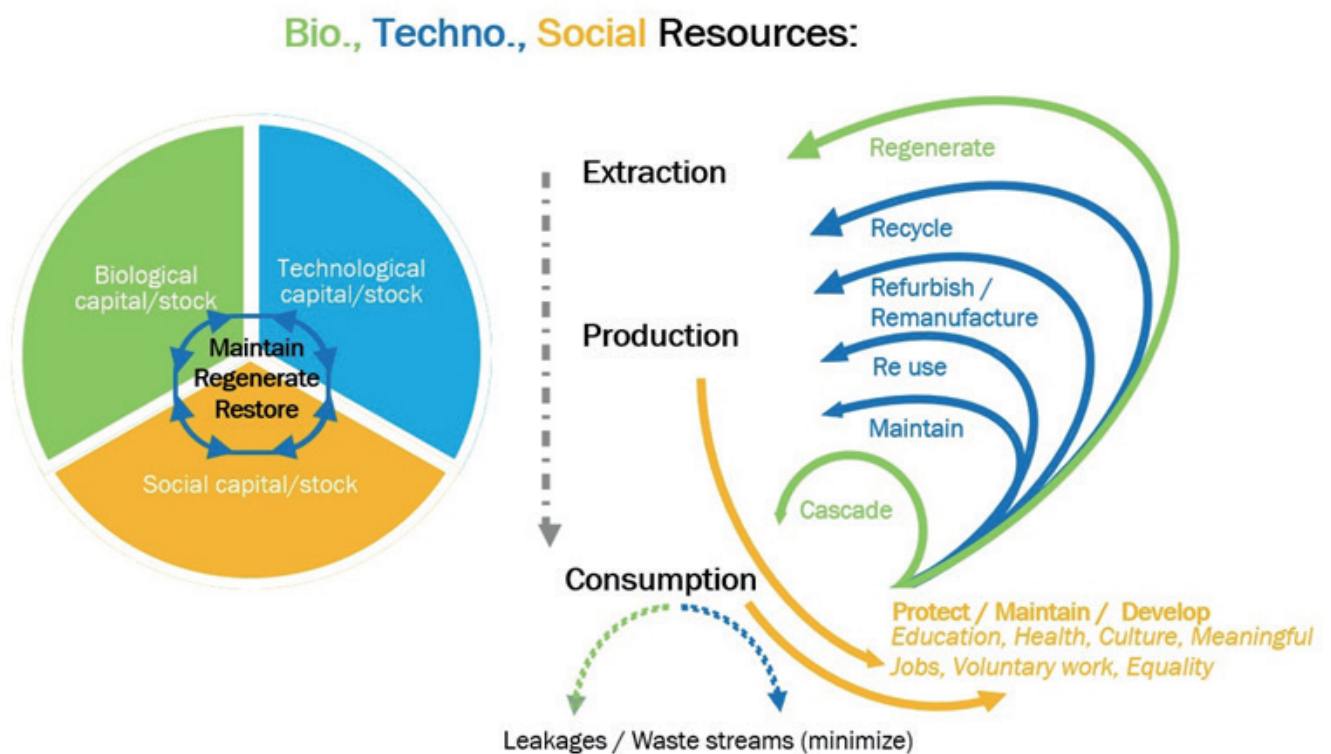
For instance, an example from one of the tourism sector's indirect value chains, the textiles industry, sets out how the Scottish Government have established a 17 million GBP fund to 'catalyse innovative approaches for the circular economy which support closed-loop systems'. An important approach to support this agenda is through applying participatory design approaches and workshops which facilitate

diverse groups of people in 'circular conversations' around environmental and social-cultural issues. Such inclusive platforms strengthen communication, promote creative action and embed collaborative ways of working. Processes which are necessary to support ethical, responsible and sustainable material futures [23].

Another good illustration of how a Circular Economy could regenerate and maintain optimal conditions for social capital is through labour taxation shift. A well-researched fiscal strategy, the fiscal switch reverses the intensity of taxation from labour to resources [24], [25]. Shifting taxation from labour (sustainable resource) to materials (non-sustainable resource) would increase employment, raise wages and living standards, especially for non-graduate, low skilled labour forces and provide adequate funding to finance and support key components of social capital as listed below [25]:

- Education/Knowledge; e.g. affordable and equal access to higher education, lifetime training access;
- Health; e.g. resilient, affordable and high-quality public health services;
- Culture; e.g. public funding guarantees, equal representation of minority groups;
- Meaningful Jobs; e.g. with above basic living standard wages, universal basic income schemes;
- Voluntary work; e.g. NGO, civil duties, household duties;
- Equality; e.g. equal pay, gender equality.

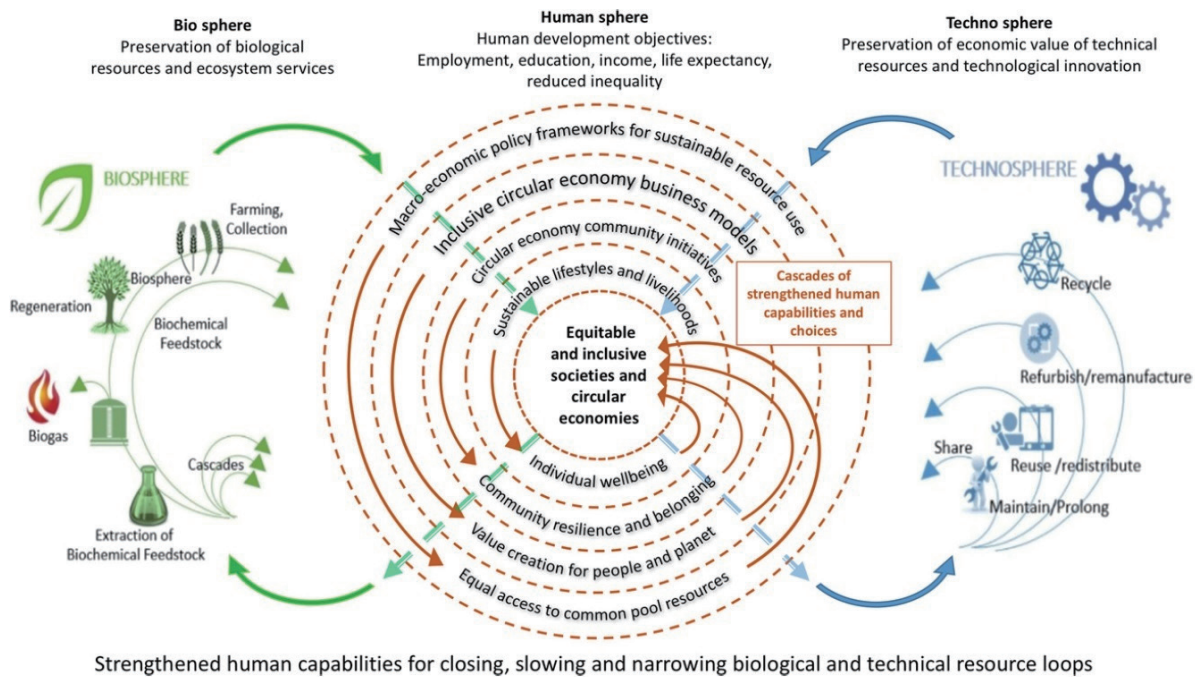
Figure 2-6 Biological, Technological and Social Capital in a CE



Source: Authors

Figure 2.7 summarizes the social dimension of the Circular Economy. It articulates how the biological and technical resource loops interact with human development objectives defined as the Human sphere. It articulates how regenerative production and consumption loops facilitate equitable societies operating inside the earth's ecosystem boundaries. The tourism industry creates a local multiplier effect through flow of capital in multiple value chains and sectors and can in that way positively contribute to developing human capabilities to achieve fair and inclusive societies translating into attractive places to work, live and to visit.

Figure 2-7 The Human sphere in a Circular Economy



Source [19]

The link between CE practices and the Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs), comprising of 17 goals and 169 targets, have been described as “the blueprint to achieve a better and more sustainable future for all” by 2030 [26]. The SDGs are increasingly being adopted by both public and private sector actors, as a framework for organising and pursuing sustainability initiatives.

There is growing recognition that employing CE practices is fundamental for achieving many of the SDGs. A study in the Journal of Industrial Ecology [15] highlights this relationship, and finds that:

“CE practices can be applied as a 'toolbox' for achieving a sizeable number of SDG targets”

For example, the study finds strong and direct benefits from CE practices related to *clean water and sanitation (SDG #6), affordable and clean energy (#7), decent work and economic growth (#8), sustainable consumption and production (#12) and life on land (#15) and positive indirect relationship to reducing poverty (#1), hunger (#2), help achieve sustainable cities and communities #11) and for protecting life below water (#14).*

The abovementioned relationship illustrates the importance of the CE transition for sustainable development and shows that:

“Adoption of CE practices will be necessary to achieve many targets outlined under the SDGs”

For further elaboration of the relationship between CE practices and the SDGs please visit:

<https://www.linkedin.com/pulse/what-link-between-circular-economy-ce-sustainable-goals-einarsson/>

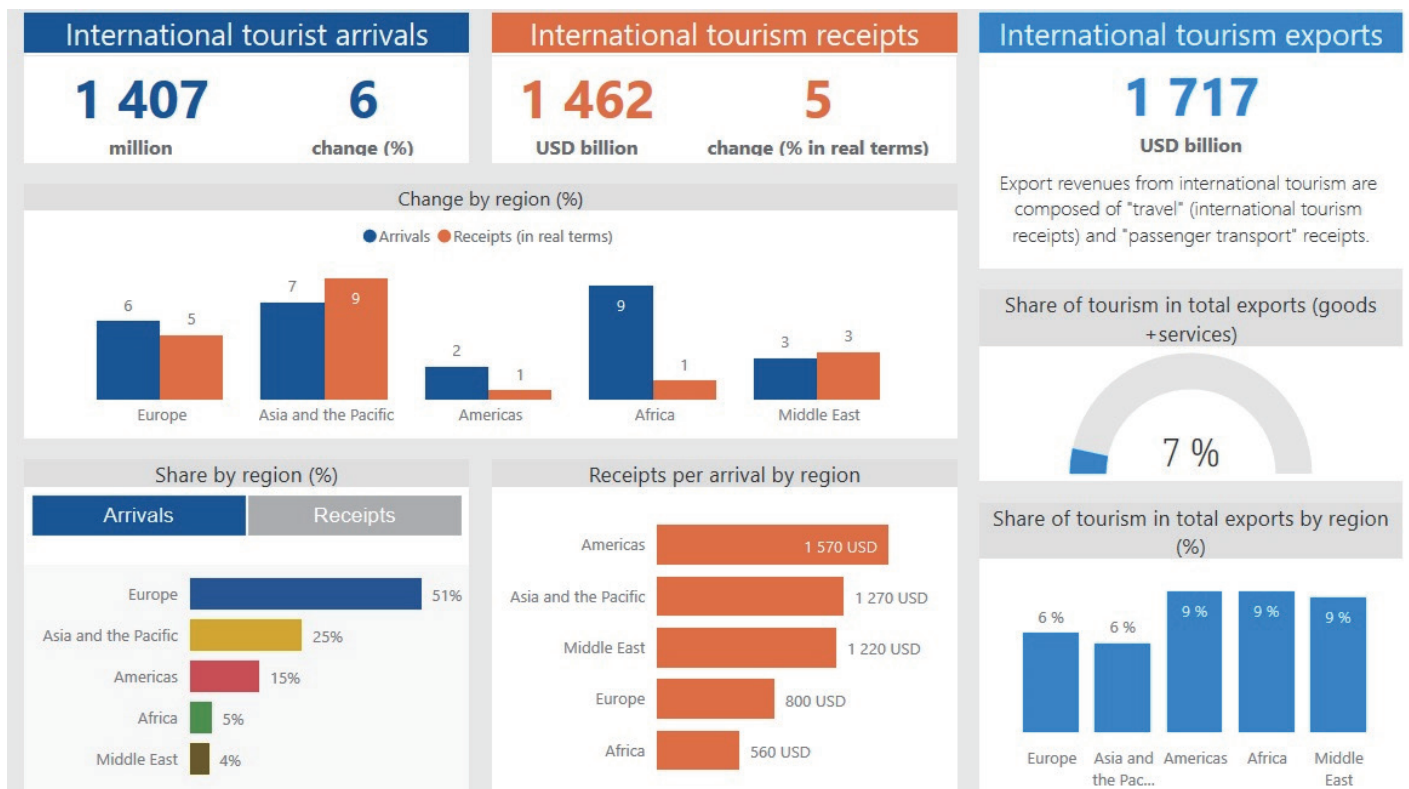
03

The tourism industry

3.1. Connecting multiple industries and value chains

The tourism industry is a vast complex industry covering a variety of sectors and connecting with multiple other industries and value chains. A snapshot illustration in Figure 3.1 below provides a powerful illustration of the industry's scale prior to the COVID-19 crisis.

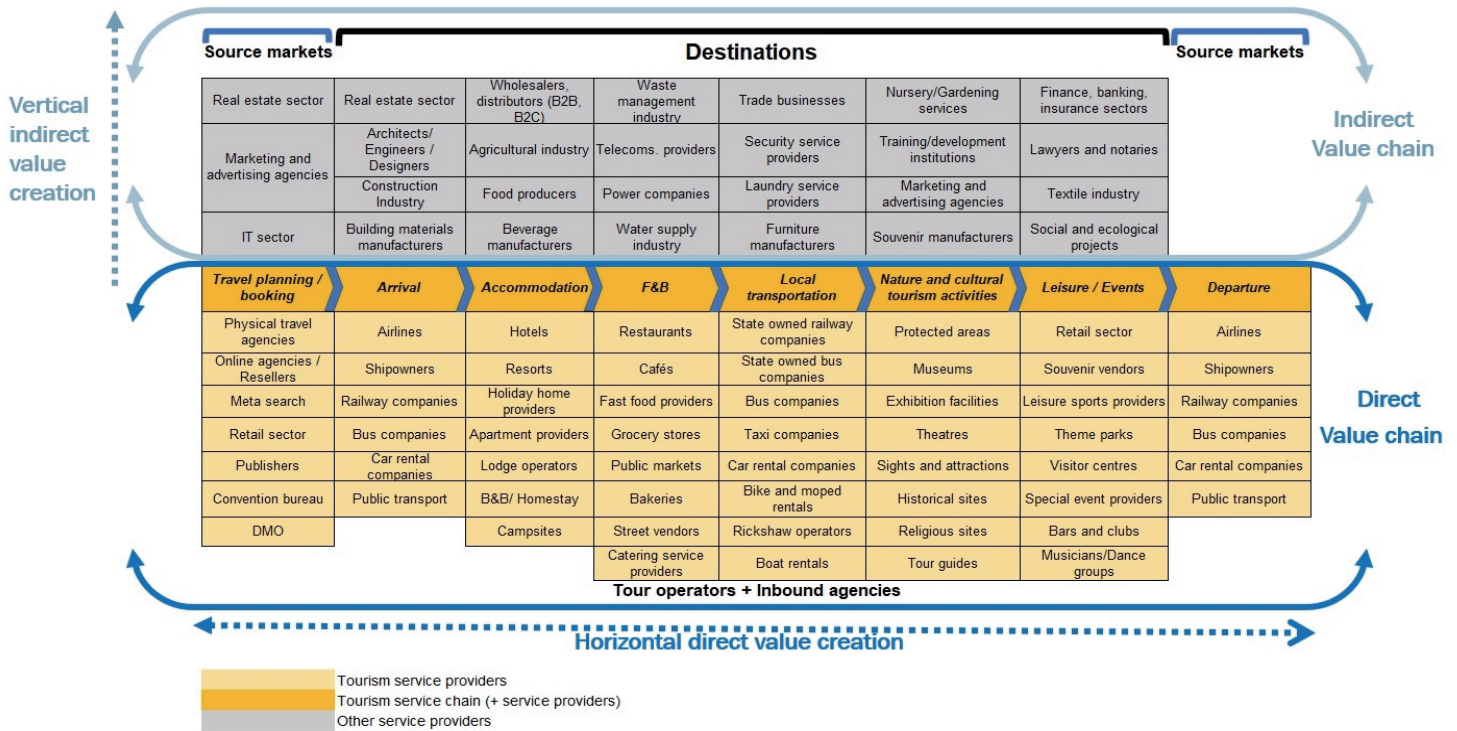
Figure 3-1 UNWTO 2018 International tourism results



Source: [1]

Picturing the true impact of the industry is even more challenging, as tourism is deeply interlinked with every major industry. Figure 3.2 reflects the complexity of the travel industry ecosystem, showing the **direct travel value chain**, its **key travel stakeholders** and the various **travel related activities**, as well as the complex interconnectedness with a range of **indirect value chains**; activities and sectors, for source and destination markets.

Figure 3-2 Tourism industry value chains



Source: Authors based on [27]

3.2. An industry in transition – major trends and drivers

As this is written, the global travel and tourism industry is facing unprecedented economic and existential challenges due to the COVID-19 pandemic. How the industry will look in the future, and how this crisis will affect travellers’ perceptions and behaviour is still very uncertain. What appears to be increasingly certain however, is that things will not be the same as before [28]. A great level of rethinking and innovation will be required to adapt to a new reality, regulatory and customer demands.

While in the process of reconfiguring tourism post COVID-19, it is also important to remember that the trends and challenges affecting the industry’s approach and viability in the medium and long term, are not limited to the implications of COVID-19.

There are numerous long term social and industry trends that will be affecting travel and tourism industry actors in the years to come, on both the supply and demand side, as summarised below [5]–[7], [29]. These trends highlight the growing need for innovation, robust sustainability, health and safety performance and cost optimisation as important elements of differentiation and competitiveness in the coming years.

Supply side trends

- **Commoditisation** of products and services in most sectors (accommodation, pure service actors, tour operators, online travel agencies (OTA), transport segments);
- Opportunity for **positive arbitrage in differentiating value propositions** towards sustainability storytelling and purpose / impact driven business models;
- **Increasing costs reduction focus**; including Customer Acquisition Cost (CAC), Customer Conversion rate and Operational Expenditures (OPEX);
- Growing **regulatory pressure**, including related to security, climate, environment, resource use, health and safety (post COVID-19).

Demand side trends

- **Travel 'to change'** – desire to live like a local, search for authenticity, participatory travel, transformative experiences and **travel with purpose**; – post COVID-19 rethinking of visitors relationship to the cultures they visit;
- **Travel 'to Show'** - quest for peer validation and experiences;
- **Pursuit of a healthier (and more sustainable) lifestyles** – e.g. slow travel, sports and wellness tourism, health tourism;
- **Increased interest in domestic travel** – post COVID-19 rediscovering of local attractions and local cultures in less crowded destinations;
- **Emergence of the 'access/on demand economy'** – emerging consumers groups are more concerned with access to services rather than ownership of products;
- **Omni channels travel services consumption** – consumers increasingly demand 'mobile first', 'content driven', and expect 'instant pricing and availability';
- **Solo travel and multigenerational travel** - correlating to aging demographics and single households;
- **Rising sustainability awareness** – driven by global challenges around plastic waste, climate crisis, climate strikes etc., making **sustainability as key buy in trigger** for Generation Z and upcoming consumer groups;
- **Safety** – post COVID-19 increasing demand for **clear and strict hygiene measures**, as well as **health and safety credentials, guarantees** from private and public actors.

These trends reflect a rapidly growing need for travel and tourism actors to respond to global sustainability challenges and to reduce their own impacts. At the same time, this also highlights opportunities for forward thinking service providers to position themselves as responsible and purpose driven adopters of sustainable and circular business practices.

Focusing on sustainable Circular Economy driven initiatives, mixed with transparent and credible storytelling, is a potential source of differentiation. It also offers an opportunity to actively search for cost reductions and to drive product and service innovation. While the approach offers a source of differentiation for 'first mover' tourism service providers, the demand for sustainability performance and 'purpose' is also fast moving from 'nice to have' to 'need to have', as reflected in the box on 'New generations' demand for (sustainable) purpose.

New generations' demand for (sustainable) purpose

Much has been written about the characteristics of different generation groups. Active generation types are often described as the 'silent generation', 'baby boomers', 'generation X', 'the millennials (generation Y)' and the upcoming 'generation Z (post-millennials)'. The different preferences of these generations, largely defined by the social and technological context they have grown up in, have implications for companies [30] related to everything from human resource management to how they best position their products to compatible customers through psychographic marketing segmentation.

All age groups participate in tourism [31]. However, the largest age group in international travel are the millennials (born from 1980 to mid-1990s). The millennials have been described as a "key force and their travel behaviour leading to significant shifts in the tourism market" [32]. Similarly, the post-millennials (gen Z, born from mid/late-1990s to 2015) are fast emerging to become the largest group of consumers worldwide, with their own unique travel preferences [33].

Although millennials' and post-millennials' characteristics differ in many ways, both exhibit preferences for 'purpose driven companies'. More than older generations, these groups highly value work that is meaningful and "products that align with their values" [34]. Although millennials exhibit traits that may support sustainable development goals [35] the demand for sustainability is perhaps strongest amongst the post-millennials (gen Z).

Gen Z are raised in an era of global warming and massive ecosystem degradation. Studies show that a majority is "worried for the environment and the planet" and also that "companies must drive action on social and environmental issues". Gen Zers associate with and are willing to reward companies that "demonstrate authentic purpose" [36]. Other studies indicate that "the majority of Generation Z (54 percent) state that they are willing to spend an incremental 10 percent or more on sustainable products, with 50 percent of Millennials saying the same" [37].

Purpose and sustainability are thus important elements that must be increasingly reflected in travel and tourism service offerings.



3.3. Sustainability challenges facing the tourism industry

As summarised in [Figure 3.1](#), tourism is a vast industry with significant economic impacts. The total contribution of tourism and travel related activities to worldwide GDP was estimated as 10.4% in 2019 [38]. This has brought with it a range of positive socio-economic impacts for relevant nations and communities, in terms of e.g. employment and export revenues and highlights the importance of tourism for economic recovery post COVID-19.

On the other hand, travel and tourism activities have also contributed to a range of negative environmental and social impacts. With international visitors forecast to reach 1.8 Billion by 2030 (from 669 Million in 2000) [4], these negative impacts are bound to increase substantially assuming post COVID-19 recovery of the industry in a 'business as usual' scenario. The capability to address sustainability impacts and simultaneously align with general industry / business challenges will be key determinants of competitiveness for private operators and public destinations management actors in the coming years.

Environmental issues and pressure on 'natural capital'

In a post COVID-19 recovery, tourism industry actors will need to address the various environmental impacts associated with their activities and adopt actions that help 'regenerate' rather than 'deplete' natural capital:

- Travel and tourism related activities are associated with diverse impacts on natural capital; ranging from CO₂ emissions (see box) and resource consumption, to local ecological / habitat destruction or titanium oxide chemicals from sunscreen affecting corals.
- The tourism industry is an important consumer and/or user of materials, energy and other resources; land (destinations), buildings (construction materials), furniture, vehicles, fossil fuel, food, textiles, a range of consumables, etc.
- In this context, all major tourism sectors' operators are facing increasing demand side pressure to report, account for and reduce their natural and social ecosystem impacts. Airlines, cruise operators, hotels, inbound/ outbound land operators, ground transport operators, ground activities operators will face increased demand side pressure for accountability and transparency on the true costs of travel services, while regulators will sooner rather than later enforce stricter GHG emissions and resource use regulations.

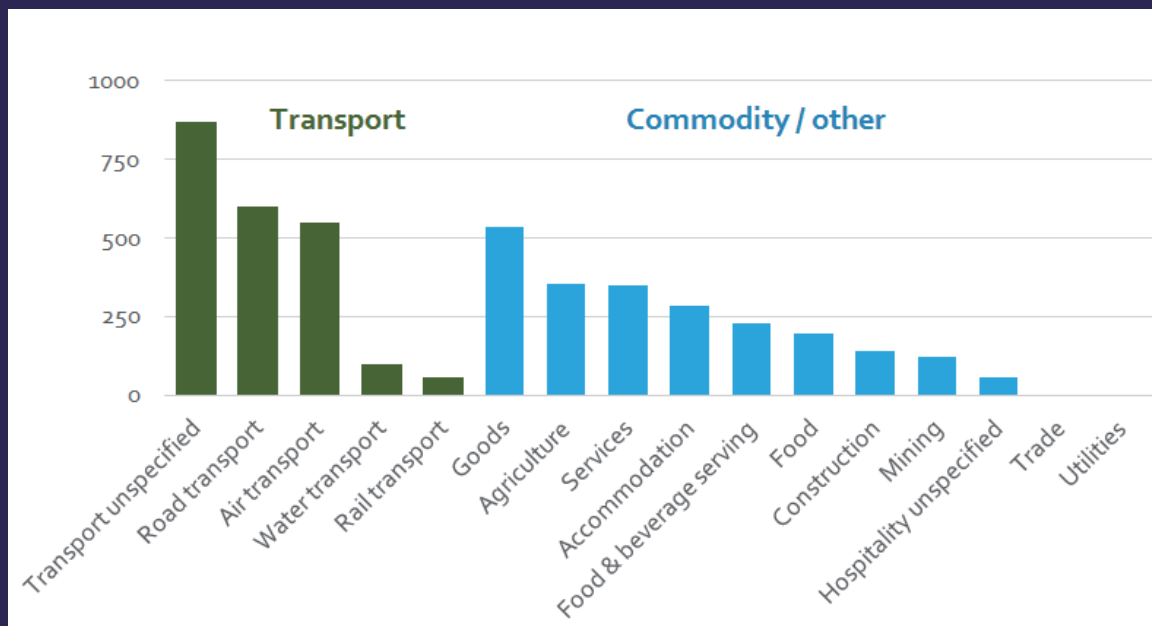
What to avoid: Climate impacts of travel and tourism pre COVID-19

Before the COVID-19 crisis, travel and tourism was responsible for almost one tenth of global greenhouse gas (GHG / CO₂e) emissions, according to a study published in the journal 'Nature Climate Change' [39], [40]. The study looked at traveller spending habits in 160 countries in the period 2009 – 2013 and quantified associated GHG emissions across a number of activities, including "travel by air, rail and road and by consuming goods and services, such as food, accommodation and souvenirs". The study considered all upstream supply chain activities associated with tourism spending, quantifying the total carbon footprint as increasing from 3.9 to 4.5 bn tonnes in the period. This made tourism a larger GHG emitter than the construction industry [41].

Additionally, tourism has a relatively high 'ratio of carbon emitted per dollar spent' by the consumer (known as 'carbon multiplier') or around 1 kg CO₂ per USD spent on tourism. This is higher than for manufacturing (0.8) and construction (0.7) [42].

Although transport plays a large role in tourism emissions, a significant part of the emissions has been associated with consumptions of goods and services (see graph) [41]. This seems to indicate that circular economy practices have an important role to play in lowering the carbon footprint of tourism activities. Studies have shown that almost half (45%) of global carbon emissions are associated with the “cars, clothes, food, and other products we use every day”. To significantly lower these goods’ related emissions, CE practices have been shown to be essential. CE practices aim to optimise and extend the use of commodities, assets and materials and thereby lower their associated embedded GHG emissions [9].

Figure 3-3 Tourism carbon footprint by purchased commodity (2013)



Source: Based on [41]

Social issues and 'licence to operate'

Various **social externalities** associated with tourism activities can over time contribute to **diminishing 'licence to operate'** for tourism operators, negatively affecting their long-term viability and competitiveness within the affected communities:

- The **income** generated from inbound tourism activities tends to be **unevenly distributed** nationally and regionally within tourist destination economies [3], [4]. Consequently, the income generated locally isn't always proportionate to the corresponding environmental and social costs borne by these communities;
- **Uneven distribution of visitors** between many tourism hotspots has brought some European destinations to their carrying capacity limits, from both ecosystem and social perspectives. These are acute challenges for operators and regulators alike that can reemerge and will not go away on their own [7], [43], [44];
- Transportation, water and waste management **infrastructure costs have been increasing concerns** facing destinations, in urban centres (e.g. Amsterdam, Venice, Dubrovnik, Barcelona) and in seaside, mountain, island resort locations. Ground transport operators are faced with **increased congestion and access issues in key destinations** and urban centres with cities such as Paris, Amsterdam, Rome, London increasingly limiting and forbidding coaches to enter city centres and setting up bans on petrol or diesel powered vehicles in the coming years [4], [45].

Industry challenges affecting companies' competitiveness

Prior to COVID-19, well documented [digitalization](#) and [commoditization](#) megatrends were already challenging the competitiveness of established actors. Increasingly the changing demand hierarchy was challenging both established and new entrants' price-based dominant value propositions:

- [Profitability challenges](#); travel product commoditization resulting in downward pricing pressure especially for [pure service players](#) such as B2C/B2B tour operators, high street retailers, online resellers, whole sellers.
- [Digitalization](#); tour operators continuing struggle to compete with pure digital players was exemplified by the Thomas Cook bankruptcy. This highlights the increasing weight of distribution costs (customer acquisition/ conversion costs) for operators large and small. Bricks and mortar retailers, pure digital players and omni channel actors increasing distribution costs trend is compounded by Google's evolution as a dominant one-stop-shop travel services aggregator, at the top of consumers' travel sales funnel [29].
- [Evolution of demand hierarchy](#); the evolution in consumer buying triggers has continued to accelerate, from a price dominant buying trigger to a mix of price, value and purpose triggers [7], [29].
- The rapidly growing awareness of the climate crisis is [increasing the demand side pressure](#) on operators and regulators to address the linear, growth centric contradictions of tourism development and promotion [5], [7].

As reflected above, a travel and tourism model based on unlimited volume growth, is not sustainable. The current COVID-19 crisis offers a unique opportunity for industry actors to reflect and ask important questions about the future, including those related to the industry's adverse environmental and social impacts, overall resilience, risks and opportunities amidst 21st century sustainability challenges. The following section explores travel and tourism in the context of a Circular Economy, suggesting a CE inspired approach for guiding the industry development in the years to come.



04

Circular Economy value creation – a conceptual framework for travel and tourism

4.1. Towards a circular economy inspired travel ecosystem

The goal of a Circular Economy is to regenerate stocks of natural, human and social capital through production and consumption models and strategies that can operate within social and planetary boundaries (see Figure 2.5).

This publication suggests that a [Circular Economy inspired travel industry](#) can ultimately lead to a more resilient industry ecosystem, that is optimised for all its actors without exceeding social and ecosystem carrying capacities.

Tourism and travel ecosystem – key sectors

When referring to the tourism and travel ecosystem, this report refers to and makes a distinction between the following key sectors:

- **Passenger air transport** operators
- **Ground Transport** operators (private coach, private car/bike rental, train)
- **Cruise** operators (open sea and river cruise)
- **Accommodation** providers (hotels, vacation rentals)
- **Ground Activities** operators (museums, attractions, activities operators)
- **Food and Beverages** operators (restaurants, hotels)
- **Event organizers** (congress and events venues, meetings and event organizers)
- **Distribution / Pure travel service players** (tour operators, leisure travel agents, travel management companies, meeting and events planners, online travel agencies, online and offline resellers, travel technology companies)

These sectors are likely to exhibit some key differences in type and intensity of asset and material use (e.g. ranging from asset light to asset heavy), level of servitization, type of customer engagement etc. and thus type of circularity and circular business model potential.

For sake of conciseness, this publication has a focus on the destination part of the travel ecosystem. Consequently, passenger air transport and cruise sectors have not been given particular consideration, e.g. in the examples provided.

In current academic literature and discussions, the Circular Economy framework is predominantly associated with product manufacturing or resource intensive industries and value chains, and less so with service dominated industries such as tourism. However, a Circular Economy refers to the economy as a whole, with requisite circular transformation requiring the active participation of the full range of actors across each industry and sector.

Additionally, service dominated industries, like the travel value chain and ecosystem, are important consumers and/or users of materials, energy and other resources such as land (destinations), buildings (construction materials), furniture, vehicles, fossil fuels, food, textiles, a range of consumables, etc.

The travel industry is interlinked with a host of other key industries from agriculture to the built environment and transport industries. Thus, travel industry actors have an important role as enablers within the circular transition – largely through how they source, use or consume products, materials and resources, and how they support and enable product, material and resource recovery at the end-of-use.

The Circular Economy narrative presents a timely opportunity for travel actors in various segments and market contexts. Based on the 'regenerative objective' of the Circular Economy framework, there is an opportunity to shift focus:

- From private travel actors' shareholder focused model that only prioritises short-term core financial objectives (EBITDA, ROI, ROIC, ROCE) to a stakeholder optimisation model, taking a holistic approach to measuring success. Employees, suppliers and local communities will become core stakeholders and partners, nurturing an organisation's long-term viability;
- From Competitive advantage to Collaborative advantage, aiming at creating mutually beneficial outcomes by maintaining strong, deep, effective and fair partnerships with other supply chain actors [46];
- From a siloed 'winner-takes-it-all' competitive approach to a network-based value co-creation approach [47].

A Circular Economy transformation is likely to push different levers and result in different returns for different organisations in different sectors, geographies and market contexts.

However, driven by for example growing policy and regulatory pressure, environmental, social and governance (ESG) reporting requirements and demand side pressures, first movers can expect rewards through for example

- Lower CAPEX, through asset optimisation and upstream supply chain servitization
- Lower OPEX through resource and waste stream optimisation
- Lower OPEX through higher staff engagement and retention
- Additional revenue streams through asset sharing and recirculation
- Increased resilience through localised upstream side supply chain
- Strengthened innovation culture resulting in new revenue streams
- Optimised risk profile and brand value

For travel and tourism actors, two key levers are likely to stand out for two distinct categories of business model and organisational setups:

- For **asset heavy businesses**, those operating physical assets such as airline, cruise operators, accommodation and ground transport operators, **circular procurement** is a key lever as it enables circularity in the upstream supply chain, sourcing materials fit for a circular flow (non-toxic, designed for maintenance, reuse, remanufacturing, recycling). This furthermore enables organisational initiatives to extend and optimise material and asset use and avoid waste;

- For **asset light businesses** delivering non-tangible services, such as travel agencies and distributors, a market positioning, market differentiation through a circular, collaborative and **purpose driven business propositions** and a 'triple (PPP) bottom line approach' would likely be a powerful circular transformation lever. Purpose driven story telling will be founded in activities aiming to enable sustainable and circular initiatives upstream and downstream in the travel value ecosystem.

4.2. Opportunities for 'asset heavy' travel and tourism operators

Travel actors operating physical assets, such as accommodation operators, might benefit from more vertically integrated business models, as illustrated below.

Hotel operators and hotel assets owners could work more closely. The hotel asset operational phase value creation potential, would be greatly influenced by circular and sustainable considerations and arbitrage set during the design, construction and renovation phases.

Falling hotel occupancy ratios, as well as increasing use of home and/or remote working setups by organisations, accelerated under COVID-19, could lead to decreased real estate occupancy ratios. This might present opportunities for commercial real estate built capacity to transform into mixed-use real estate combining office space with retail and residential use. Mixing shared workspace, meeting spaces, hotel services, local services such as kindergarten, delivery pick up points, F&B outlets, gym, etc. under mixed use asset development, presents new market segments opportunities, especially in urban centres. Guided by circular and modular design principles, this could increase flexibility in asset-use, spread risk and increase asset-owners' resilience towards demand shocks such as the one triggered by COVID-19.

Mid to long-term value creation opportunities could emerge through business model innovation with models retaining physical asset and material value through multiple use cycles as illustrated in the hypothetical scenario below:

- Hotel asset owners would benefit from using existing built capacity and focusing on assets renovation, transformation using local materials and local workforce. The cycling of building materials into other hotel development and real estate transformation projects, retaining materials ownership would provide the asset owner with reusable materials at substantially discounted input costs compared to sourcing new raw materials at present market prices. The reduction in GHG emissions and primary resource use would also be substantial [9];
- A hotel built with high value materials and designed with construction / deconstruction / raw material multiple life cycles from the start will prove cheaper to operate, renovate, expand and dispose;
- Such an approach could translate into lower operating phase OPEX through waste stream optimisation, asset recirculation via sharing platforms and servitization of the supply chain through Product Service System agreements, particularly on the upstream side;
- Designing the hotel interior for modularity, for example with swappable, easy to repair, upgradable, customized materials and products for modular public partitioning, and flexible room partitioning solutions would allow for increased flexibility in adapting the property layout, reflecting and responding quickly to demand changes;
- Short and local supply chains enable waste stream optimisation and potential additional revenue streams for example in transforming organic waste flows into income/revenue flows.

The **Greet** hotel brand by **Accor** may be seen as an early interpretation of this approach.

By using local, second-hand materials for its furniture procurement, the physical assets potentially benefit from lower input CAPEX costs while reducing primary raw material use, ultimately lowering GHG emissions at extraction, production and transport touchpoints. A partnership with local NGO's focusing on low skilled jobs development contributes to local, human capital regeneration [48]. This requires 'sharing/distribution' of the CE value generated between suppliers and hotel operators and illustrates the need for closer, longer term collaboration between the supplier base and the hotel operators.

This approach could yield multiple environmental, social and economic benefits for hotel operators, their customers, hotel consumers, local economy actors and society at large.

- Sustainability sensitive consumer target groups would benefit from a product matching their expectations of quality, location, safety while addressing their concerns around environmental and local, social impact;
- For **Accor** it is also a large-scale hotel product positioning test case to address the rapidly growing 'purpose sensitive' consumer segments.

All ACCOR
LIVE
LIMITLESS



Source: [48]

4.3. Opportunities for ‘asset light’ operators

Travel actors operating limited physical assets and pure service players could see the value creation and value capture mechanisms focusing mainly on the downstream side of their supply chain.

For pure service players, operating in mature, online and offline commoditized market contexts, it is increasingly crucial for operators to differentiate their services, value proposition and to reduce their distribution costs.

One way of doing so could be to position an organisation as a purpose, impact driven business. Setting a clear, coherent environmental and societal purpose for an organisation is a way of differentiating against competitors whose unique selling points (USPs) are based primarily on pricing and service levels.

The Danish online hotel reseller [Goodwings](#) provides a good example of this approach:

- Registered as a B corporation with a clear purpose “to be a catalyst for sustainable change” and to “turn the travel industry into a force for good”, the company offsets all customers booking GHG emissions by default. Importantly, from a market positioning standpoint, it also finances a selection of NGOs delivering services that contribute to achieving the UN Sustainable Development Goals (SDGs) [49], [50].
- Goodwings’ customer acquisition costs (CAC) are kept low as marketing communications activities are covered in part by the network of NGO’s acting as free brand ambassadors, substantially reducing distribution costs. The niche positioning and first mover advantage of being a B Corporation, impact driven hotel reservation platform, also contribute to reducing the overhaul distribution costs to a fraction of what competitors spent in acquiring, converting customers and increasing repeat business [49].

Faced with consumers’ rapidly growing sustainability expectations, pure service operators could benefit from a coherent, clear, transparent, truthful market positioning built around strong sustainability objectives and delivered by the active deployment of the Circular Economy narrative to their operations.

For [Events organisers](#) as well as [destination management organisations](#), the Circular Economy regenerative purpose fits a new meetings and events development approach that requires accounting for natural and human capital needs and destinations’ natural and social carrying capacities [4].

The events sector may be the first tourism industry sector to explore how the Circular Economy framework could be implemented into the production and delivery of events. Through sustainability certifications processes, the sector has developed measurement tools to evaluate its natural, economic and social impacts. A good example is set by the pioneering work of IMEX, ICCA, MCI and ECM with the launch of the [GDS Index](#) reporting framework. Through a system thinking approach, the index evaluates and ranks the impacts of the events sector on a destination’s supply chain, through stakeholder mapping, operations impact evaluation and optimisation [2].

As pioneered by the event sector, such an innovative, holistic approach puts collaboration and systems thinking as central implementation levers for a thriving, balanced, resilient and viable travel ecosystem in destination markets.

4.4. Circular procurement and market positioning as value levers

As highlighted in the previous examples, depending on their business model and organisation setup, travel actors could focus their Circular Economy value exploration and implementation on [two related key levers](#):

- **Procurement policies (upstream supply chain):**
Sustainable and circular sourcing/procurement: For example, by adopting circular/sustainable criteria; functional tendering; transparency and validation of circularity/sustainability claims; revenue models that incentivise circularity; supply chain cooperation to promote closed-loop supply chains; innovation procurement; sharing; next-life sales, etc.
- **Distribution / Positioning / Marketing communication / (downstream supply chain):**
Strategic market positioning as a purpose / impact driven business with focus on sustainability and circularity.

Identifying the appropriate Circular Economy deployment levers for each business, demands a thorough examination of operators' business models, value propositions and market contexts. Transitioning operators' business models towards circularity is an equally challenging task and not without [risks](#).

In the [downstream supply chain](#): there is a high risk of being perceived by supply chain partners and customers of carrying 'greenwashing' if there is no coherence between the revised value proposition, positioning and the actual circular transformation strategy implementation. This can be highly counterproductive and potentially damaging for the brand.

Developing and communicating a transparent, iterative transformation process, can highlight the coherence, long-term value proposition and business model evolution. It could also provide a rational explanation for the possible short-term contradictions between the organisation's current value proposition and the newly prioritized resource use optimisation and mid to long-term sustainability agenda.



4.5. Case study: Circular Economy applicability to hotel operators

Case study: Circular value creation potential for accommodation operators

Can a Circular Economy approach create value and competitive advantage for hotel operators?

This case study was conducted as part of a Circular Economy MBA management project from Bradford university in 2019 [51]. The study interviewed hotel chain operators covering Denmark, Finland, Norway and Sweden. A panel of executives in corporate, operations, sustainability, commercial positions representing close to 50% of the Scandinavian hotel market total bed capacity participated in this research.

The research indicated that the circular economy framework was understood primarily as a waste management framework by the respondents, whereas CE's system level dimension along with the focus on regenerating social as well as natural capital, were not viewed as key objectives by the stakeholders. Nevertheless, the research confirmed the applicability of the Circular Economy framework to hotel operators and its value creation potential, through leveraging OPEX reduction in procurement as well as gaining competitive advantage with customers and end consumers, through circular or sustainability market segmentation.

A shortlist of key recommendations was provided to hotel operators based on the study, focusing on how to implement the Circular Economy framework in their operations:

- Develop deeper supply chain cooperation aiming for value co-creation within the extended local hospitality network;
- Identify circular value creation opportunities and deployment pathways through supply chain mapping;
- Consider servitization of high / mid value asset expenditures, such as bedding, furniture, F&B equipment through Product Service System agreements;
- Consider the mutualisation of resources, materials and of idle assets (E.g. asset recirculation, sharing 'intra-organisations' sharing platforms, etc.);
- Focus on market positioning and marketing communications through a coherent Circular Economy hotel storytelling and brand message;
- Deploy environmental impact and Circular Economy action monitoring tools to measure the 'resource productivity' of assets i.e. the 'asset material productivity' ;
- Implement Environmental Management Systems (EMS) to monitor energy consumption, resource use, emissions, food waste and associated operational cost savings opportunities;
- Increase cooperation with private sustainability certification organisations and government regulatory bodies;
- Use the United Nations SDG framework as a marketing communication framework;
- Explore the framework value co-creation opportunities with real estate assets owners and construction industry stakeholders through innovative business models such as building as materials bank (BAMB) and building as a service (BAAS) models [52];
- Use Circular Economy specialist third party expertise to provide staff understanding of CE opportunities and practices while not diverting existing labour resources;

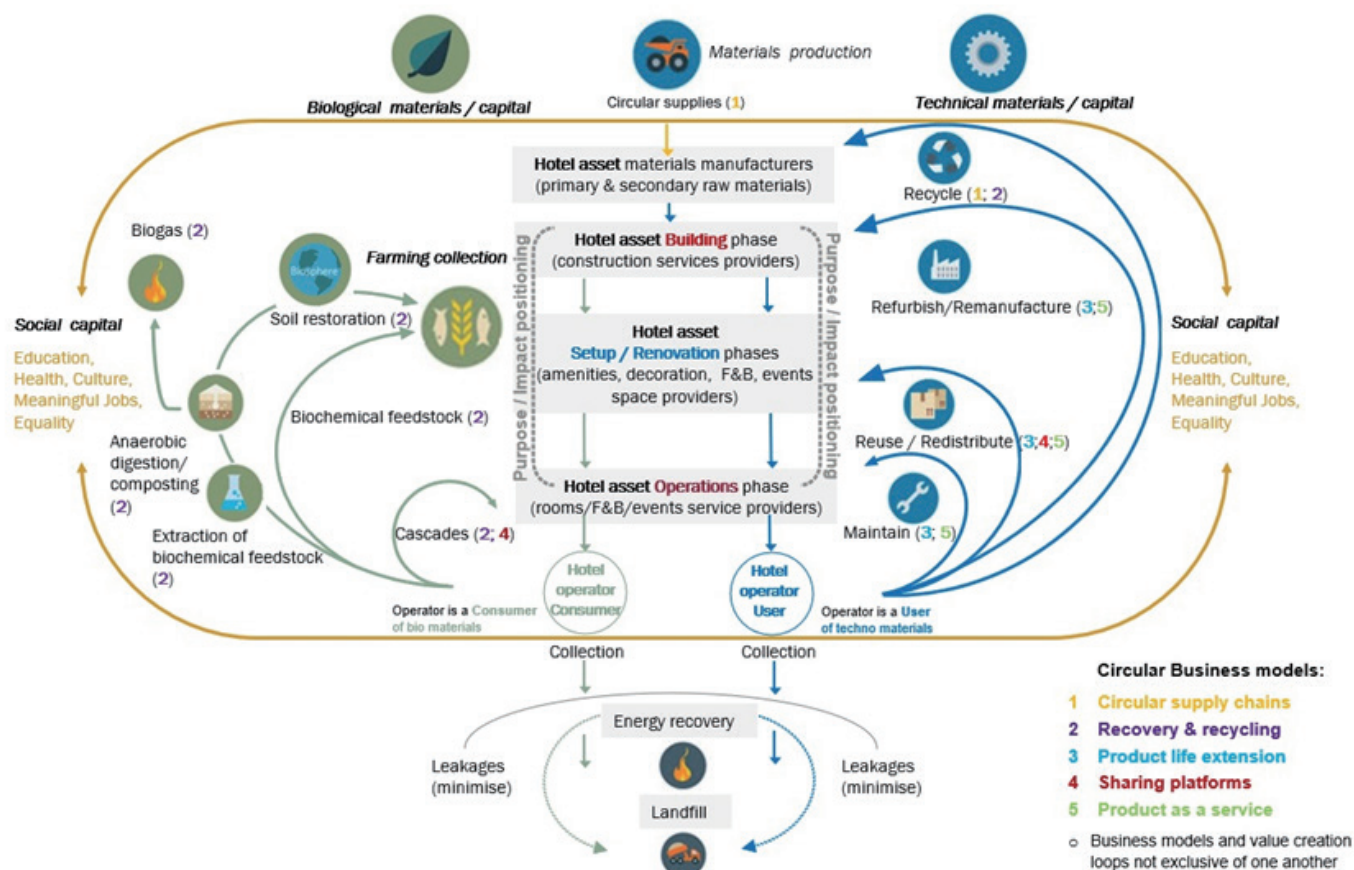
As introduced in figures 2.1, 2.2, 2.3, the Circular Economy proposes to transform linear value chain inefficiencies into business value. Service dominated industries have an important role to play in this transition, by leveraging their activities, influence and capabilities to enable circularity upstream and downstream in their respective value chains and ecosystem.

Resource leakages (waste flows) embedded in a linear system are replaced by feedback loops, driving circular value creation, capture and value distribution through circular business models.

Figure 4.1 illustrates a conceptual framework for a circular hotel operator, and the circular value creation loops based on a revised version of the Butterfly diagram (figure 2.2).

The central part of the diagram highlights the main linear stages of a hotel asset life cycle from manufacturing, building, setup and operations. The right-side details technical materials circular flows and value creation loops linked to the various circular business models introduced in figure 2.3. The left side offers the same illustration for biological materials. The hotel asset life cycle stages, biological and technical materials value creation, value capture and distribution loops should be designed within the overarching social capital regeneration objective.

Figure 4-1A conceptual CE framework for a circular hotel operator



Source: Authors based on [12, 19]

The conceptual hotel framework proposed in figure 4.1 illustrates how a hotel operator and a hotel asset owner could design a circular hotel asset from the building phase to the setup, operation, renovation and deconstruction stages, with potential value creation, capture and distribution at each stage. This conceptual example is a good illustration of a possible asset heavy circular transformation pathway, where technological and biological material are circulated to lower environmental impacts, in a manner that simultaneously reinforces social capital regeneration. This circular approach can be articulated in effective communication that supports market differentiation and positioning as a purpose driven service provider.



4.6. Collaboration and value co-creation: a new competitive advantage

Active collaboration and co-creation of value between value chain actors is a key enabler of every successful circular and sustainability initiative. With the aim to optimise the travel ecosystem's direct and indirect value chains, value co-creation should therefore be the default relationship setting for tourism actors including amongst public and private travel actors.

These relationships would be especially important in destination markets. For example:

Pro-active and concerted discussions between local communities, trade bodies, Destination Management Organisations (DMO's) and inbound tour operators to explore product development opportunities, within a destination's social and environmental carrying capacity thresholds. This should have the aim to result in more diversified and resilient travel products, while lowering social and environmental negative impacts. In turn, this would help safeguard the long-term environmental, societal and cultural attraction of a destination and ultimately preserve the destination asset value. Implementing such a system thinking approach to inbound destinations management, highlights the potential enabling role of the tourism industry as a driver of innovation and sustainable practices within the wider value chain.

For the purpose of conciseness, possible scenarios for key tourism sectors' value co-creation are not detailed in this report. Such scenarios will be looked at in depth in future sector specific publications. However, the hypothetical scenario below provides an illustration of how such collaborative value co-creation for tourism product development could take place.

'Value co-creation for Tourism product development' – A possible scenario

1

- A tour operator decides to develop the group touring segment for lower middle-class Asian source markets. The tour operator product development and procurement teams analyse the demand and supply side requirements (coach transport sourcing, accommodation, guides, optional services offer, itinerary planning, distribution channels, etc..).
- Starting at the ideation stage, the product development process engages a wide range of stakeholders in the direct and non-direct value chains aiming at reaching consensus between the private operator's commercial interests, destinations' social and economic interests, while generating buy in from local communities.

2

- The DMO setup, mission and funding has evolved from a destination promotion mission, funded by an even mix of private and public funds, to a destination asset optimisation mission funded by a majority ratio of national, regional and city level public funding. Such changes in funding and mission allow for impartial and fair decision-making processes in advising, assessing, co-creating and promoting private operators' tourism products while evaluating their social, natural and economic impacts on destinations.
- The DMO acts as a coordinator between the tour operator's commercial requirements, local communities and tourism non-direct value chain stakeholders, facilitating a fair, open and transparent dialogue between the operators and the local communities regarding social, environmental and economic interests. Importantly, the tour operator, its suppliers, DMO and local communities acknowledge the need to collaborate in good spirit to preserve the natural, cultural and social aspects of the destination asset.

3

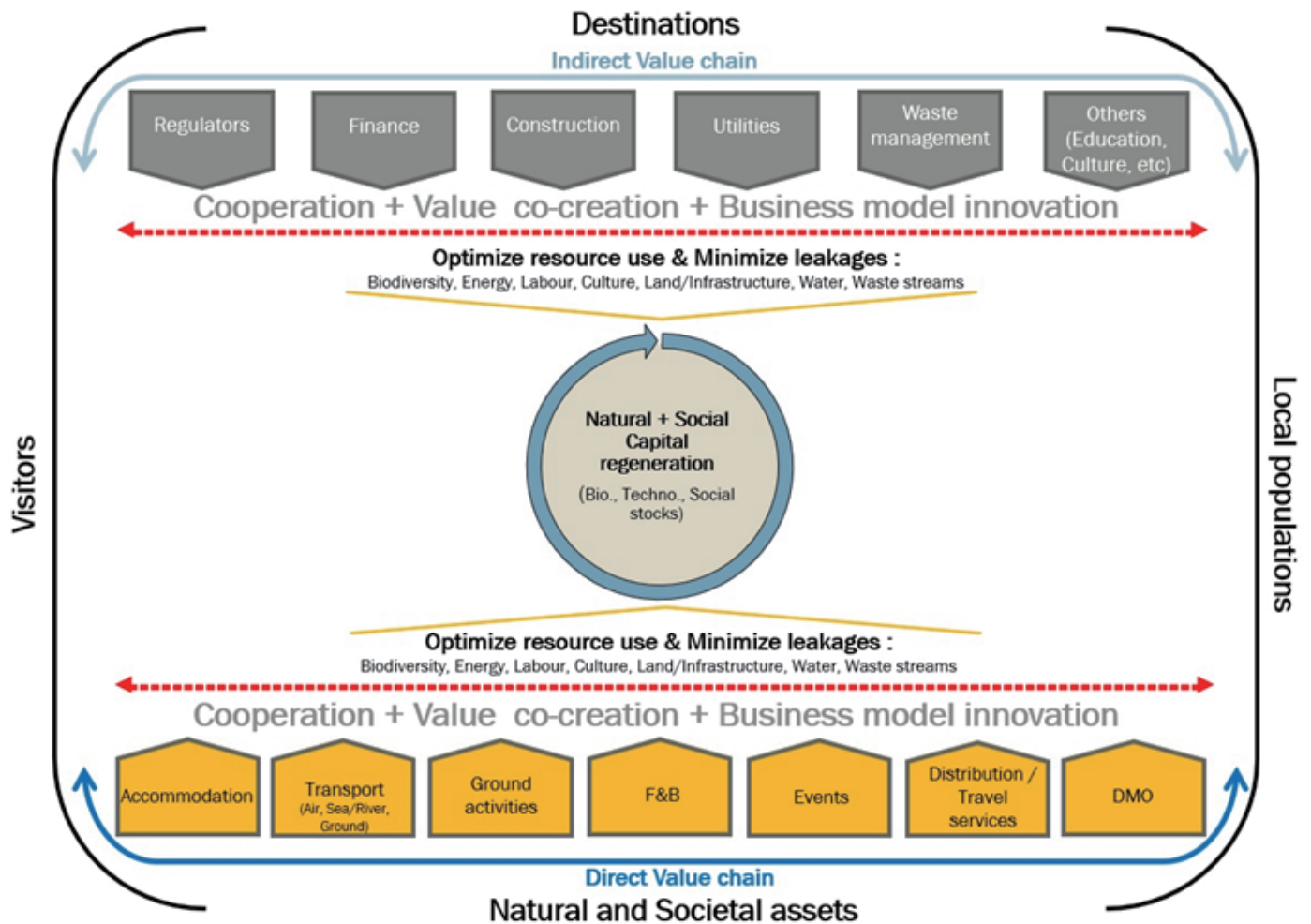
- The tour operator, possibly assisted by representative trade bodies, presents to the DMO the product, its targeted segment specifics, consumer expectations, distribution, volume expectations, contributions and impacts on destinations, following a set process adhered to by all private tourism operators.

4

- The DMO, following the city/region/country economic development strategy, and with due consideration of key value chain stakeholder interests, provides feedback to the tour operator. The feedback could be either positive (a) or negative (b) depending on the selected product gathering support from local communities, and fitting into the area economic development plan, including destination carrying capacities.
 - a. In such case, the DMO's could actively contribute in marketing such products.
 - b. The operators could be asked to limit the specific segment overall volume production and/or amend the product components, itineraries, duration, volume to better match local communities and destination carrying capacity requirements, needs and expectations.
- The DMO's and regulators could decide to not support the specific product by either not including it in the DMO's marketing plan and/or by more actively controlling its growth through taxation, for example.

Figure 4.2 provides a comprehensive illustration of a CE travel and tourism ecosystem. The diagram highlights the ecosystem's regenerative objective within the direct and indirect value chains. This is enabled by long-term cooperation, value co-creation and business model innovation between the ecosystem actors. Regulators, finance, construction, utilities, waste management, education actors are key stakeholders within the indirect value chain to build the ecosystem's long-term resilience and sustainability. These value chain relationships aim at optimizing the whole ecosystem to achieve its core purpose of natural and human capital regeneration.

Figure 4-2 A Circular Economy tourism ecosystem



Source: Authors, [7]

05

Going circular – how to make it happen?

The outlook and shape of the tourism industry post COVID-19 is very uncertain. So is the future of the industry amidst a growing societal demand for a sustainable and Circular Economic transition.

Furthermore, the immediate response to COVID-19 may have both positive and negative environmental consequences. For example, a foreseeable increase in the use of single use (disposable) personal protective equipment (PPE), and sanitation products will, if not actively mitigated, increase resource use, waste generation and leakages across most tourism sectors.

Responses to higher hygiene, health and safety standards, including sourcing and disposal of single use masks, gloves, disposable plastics for food packaging, etc., will reinforce the need for cooperation under a Circular Economy approach in e.g. cleaning, food & beverage (F&B) and textiles products supply chain touchpoints from manufacture to distribution, use and disposal.

With a substantial increase in waste stream volumes, all operators will have to rethink their sourcing / waste management approach as well as relationships within the supply and value chains and move towards more circular business models.

- Under a circular approach, can pooled sanitary equipment procurement with local competitors become a source of value co-creation by reducing OPEX?
- Can waste streams be optimised through shared processes and cost sharing schemes between competitors in a given geographic area?
- Can the hotels, restaurants, convention bureaus, transport and ground operators join forces to source, design, optimise the procurement, delivery and disposal of personal protective gear and cleaning equipment?
- Can Environmental Management Systems offer resource, emissions, waste stream mapping capabilities to measure, evaluate and optimise these supply chains?
- Can public actors, DMO's, regulators join private operators to co-design the health and safety protocols, prioritize local production and optimise resource streams?
- Can such discussions lead to more local, resilient supply chains beneficial to local economies and communities?

These are some of the questions to consider when embarking on a circular transformation journey post COVID.

Once the Circular Economy paradigm and associated key practices are understood, and its applicability to tourism actors acknowledged, moving to the deployment phase poses a new set of challenges. This raises questions such as:

- ? Where and how to start?
- ? How to initiate this circular transition?
- ? How to implement the Circular Economy framework?

An increasing number of tools are available to evaluate circular value creation, capture and distribution potential as well as deployment options. However, the majority of these tools focus on input resource optimisation and waste stream valorisations for tangible asset producers and operators.

Given the inherent complexity of engaging in a systemic rethink of organisation, including its business models and value chains, partnering with qualified Circular Economy practitioners is advisable.

An organisation's circular transformation journey is by definition an iterative prospect underpinned by a process of trial and error, constantly evolving and striving for continuous improvement. A sensible approach, applicable to all organisations and industries, is to break down the circular transformation journey into key stages.

- 1 A first stage could focus on the [Circularity Exploration](#); Introducing the framework, its rationale, potential impacts on the organisation and value chain to key stakeholders. This would also raise awareness of circular transformation's competitive advantage potential amongst staff;
- 2 Secondly, through a [Circularity Assessment](#), analyse the organisational context, circularity drivers and barriers, material flows, strengths, weaknesses, opportunities and threats in the context of circular value creation, capture and distribution. This will establish the circularity potential within the organisation and its value chain and identify key stakeholders and potential collaborators;
- 3 A third stage would elaborate an action plan and propose a [Circular Transformation roadmap](#). This stage would further analyse the circular value creation, capture and distribution options and business models to propose a circular strategic roadmap and highlight the key stakeholders to involve;
- 4 The Circular transformation road-mapping stage would be followed by the [Circular Strategy implementation stage](#) deploying a defined action plan throughout the business operations, supported by key circular performance indicators adapted to the organisation.

This report presents a generic, conceptual vision for a resilient, sustainable tourism industry built upon Circular Economy principles. The authors acknowledge that circular transition roadmaps will be different in each sector and for each actor. Detailing such roadmaps for specific sectors and organisations require in depth operations, business model, supply and value chain analysis as well as knowledge of organisation's business contexts. An effective approach to facilitate such a process, is by engaging qualified expertise through appropriate business service contracting.

06

Conclusion

The global travel and tourism industry stands at a major crossroad. In face of steady tourism growth in recent years, concerns have been growing about the industry's negative environmental and social impacts as well as its social licence to operate in some locations. Shadowing these and other medium to long-term challenges, the scale, scope and spread of the COVID-19 pandemic has now brought the industry effectively to an almost complete standstill, requiring a complete 'tourism restart'.

When, how and in what form the industry will recover are the most pressing questions for all private and public tourism actors. What is as certain as the industry's ultimate recovery, is the urgent need to address its underlying sustainability and resilience challenges.

Destination carrying capacity saturation, environmental degradation, hostile destination regulations, health and safety credentials as well the animosity which certain local populations may feel towards visitors, are all business risks that must be integrated in travel operators' and DMO's decision-making processes and assets' evaluation and risk profiles.

A combination of demand and supply side megatrends are strong incentives for travel actors to embed social and environmental externalities into their operations, risk profiles and value propositions:

- Are visitors aware of the full costs of their travel spending?
- Will travel consumers stop, reduce, change their leisure and business travel expenditures and habits if accurate societal, ecosystem costs, GHG emissions were disclosed transparently?
- Will consumers look for and favour travel service providers with a positive, coherent story to tell - driven by a holistic purpose which considers equally social, ecological and financial objectives, as well as a desire to have a positive societal impact on the destinations in which they operate and markets they serve?

These are some of the key questions travel and tourism private and public stakeholders must focus on with a renewed sense of urgency.

As proposed in this report, a Circular Economy travel ecosystem regenerative of natural and social capital by intent; respectful of the ecological boundaries within which it operates; whilst also optimised for all stakeholders, could be part of a comprehensive answer to those complex industry challenges.

The need for a new positive travel paradigm is pressing and the Circular Economy framework can provide such an innovative, resilient and sustainable tourism industry development paradigm.

07

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08

Abbreviations and acronyms

CAPEX	Capital expenditure
CE	Circular Economy
CVB	Convention bureau
DMC	Destination management company
DMO	Destination management organisation
EBITDA	Earnings Before Interest Depreciation Amortisation
EMS	Environment Management System
GDP	gross domestic product
GHG	greenhouse gas
LCA	life-cycle assessment
NGO	non-governmental organization
OECD	Organisation for Economic Co-operation and Development
OPEX	Operational expenditure
ROCE	Return on Capital Employed
ROI	Return on Investment
ROIC	Return on Invested Capital
SCP	Sustainable consumption and production
SDGs	United Nations Sustainable Development Goals
UN ECOSOC	United Nations Economic and Social Council
UN Environment	United Nations Environment Programme
UN IAEG	UN Inter-Agency Expert Group on SDG Indicators
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNWTO	United Nations World Tourism Organization
VNRs	Voluntary National Reviews
WEF	World Economic Forum
WTTC	World Travel & Tourism Council



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