

The Needs of the Hospitality Industry in Its Transition to the Circular Economy



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Abstract Tourism is one of the largest industries in Spain. Although it generates a wide range of economic benefits, it also produces a negative environmental impact. The circular economy, which includes eliminating waste and contamination, circulating products and materials and regenerating nature, is clearly the path to follow to overcome these negative impacts. The objective of this study is to analyze the needs of companies in the tourism industry regarding its transition to a circular economy. We obtained the information from three focus groups with 18 experts from hotels and restaurants as well as their suppliers and analyzed the content using QDAMiner 5 software. Three main conclusions are drawn from the analysis. First, size, management and financial resources are the main barriers to the circular economy. Second, companies do not receive real support from the public administration and they feel penalized in relation to those that do not apply these measures or to suppliers in the value chain that transfer their own waste. Third, there is a lack of a circular economy culture, which indicates the need for training at every level, so that the transition can be shared by all.

Keywords Circular economy · Tourism · Hospitality · QDAMiner

1 Introduction

Tourism moves billions of travelers every year. This is a figure that will continue to grow, according to the forecasts of the World Tourism Organization (WTO), at an average of 3.3% per year until 2030, when it will reach 1,800 million. According to the latest data (WTO), the Spanish tourism industry is currently the second most powerful in the world by income and the third in terms of tourist arrivals, with a consequent contribution to the country's gross domestic product (GDP) and its economic development. Indeed, according to Spanish Institute of Statistics (INE)

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data for 2017, Spain received 82 million visitors, who generated an income of more than 87,000 million euros, which increased the contribution of tourism to the national economy up to 14.9% of GDP. Figures from the Ministry of Employment and Social Security show that in 2017 this sector generated 2,297,331 jobs in Spain (77,501 of which were new positions). In the Valencian community specifically, the tourism sector is considered to be the main driving force of the economy and its specific weight has increased continuously since 2011, reaching 15.1% of the total employment and 14.6% of the total GDP of the area in 2017 (IMPACTUR Comunitat Valenciana Study, 2017). In this context, the tourism industry is a strategic sector for the Valencian community.

However, parallel to this growth, the environmental impacts of tourism have also been increasing. Tourism has not only physically transformed tourist areas, but has also generated significant environmental impacts, such as the destruction of ecosystems, reduction in the quantity and quality of water, impoverishment and contamination of soils, and generation of waste, as well as environmental contamination, in addition to terrestrial and maritime effects, etc. Some studies (Gómez-Martín, 2017) estimate that every million tourists that Spain receives generate 25 million kilograms of carbon dioxide, 1.5 million kilograms of waste and 300 million liters of wastewater. In addition, 11 million liters of fuel, 300 million liters of water and 2 million kilograms of food are consumed. In some locations, such as the Valencian community, the consequences of these impacts are even greater due to the regional situation, the scarcity of water resources, the erosion and the loss of biodiversity, without counting the impacts due to pollution, the consumption of energy resources or the generation of waste. It is evident that in this situation, it is necessary to promote a growth model based on sustainable development. By implementing the results of eco-innovative research, development and innovation (R&D&i), concepts and methodologies in favor of the circular economy in tourism, apart from improving the efficiency and sustainability of this industry, can contribute to raising awareness in society about the sustainable use of resources. Because of the importance of these economic, social and environmental reasons, the Spanish Tourism Council agreed to carry out a broad strategic review of the sector to assess the challenges and trends that lie ahead, which has materialized in the Horizon 2020 Spanish Tourism Plan (Secretary of State for Tourism (SETUR)).

The circular economy opens up a scenario of key business opportunities for the present and future competitiveness of companies. In this context, the InnoEcoTur project aims to promote models and strategies based on the circular economy in the Valencian community. The focus of the project is the tourism sector, for which it proposes the creation of a network involving hotels and restaurants, the result of which will be the proposal for the implementation of a “Circular Economy Strategy in the Tourism Sector of the Valencian Community”. The project also intends to transfer the results to companies in the sector. Among the different activities that are planned with key agents of the Valencian community, we can highlight:

- Carrying out an audit of the needs of the sector and detecting the potential for improvement in favor of sustainability, through the participation of the different stakeholders involved
- Analyzing the results to connect them with the R&D&i sector, which will allow the development and incorporation of eco-innovative technologies and methodologies in these fields of improvement.

The objective of this paper is to present the design and results of the first stage using focus groups in relation to the detection of barriers that hotels and restaurants encounter in their transition to the circular economy and the good practices that they have adopted in this area.

This paper is organized as follows. Section 2 is centered on the main theoretical framework. Section 3 presents the methodology of this study and includes the explanation of the profile of the focus group members and the structure of the focus group sessions. Section 4 examines the empirical evidence extracted from the content analysis of the sessions. The final section including the conclusions and policy implications completes this work.

2 Literature Review

The year 2017 was declared the International Year of Sustainable Tourism for Development by the United Nations General Assembly. According to the UNWTO, sustainable tourism takes into account all these impacts when meeting the needs of the agents that constitute it. To achieve sustainability, natural resources must be optimized and conserved, sociocultural authenticity must be respected and poverty must be reduced by creating stable employment opportunities. The state of the environment and climate change requires the adoption of clean and environmental-friendly innovations on a large scale and the proposing of a series of priorities and actions that increase the demand for environmental technologies and eco-innovations.

However, as in other technological and social transformations, there is currently a distance between the existing economic and business structures and institutions and what society needs (Spiegel-Rösing & de la Solla Price, 1977). The importance of sustainability, on the one hand, and innovation, on the other, in global development is beyond question. Although the phenomenon of eco-innovation has been studied from a strategic and economic point of view in relation to companies (Bitencourt et al., 2020), its integration is lacking at a horizontal level in an environment of inter- and intra-industrial cooperation.

The transition to a circular economy represents a systemic change, in which research and innovation, both technological and non-technological, play a key role. For the redefinition of the dominant production and consumption model, the implementation of new processes that allow for transforming waste into new inputs and products that become part of the new value chain or the recovery of raw materials to be reintroduced in the productive processes, it is necessary to improve the basis of our

scientific and technical knowledge, develop new technologies and redesign production processes as well as business and consumption models that will shape a new economy and society. Therefore, the promotion of R&D&i in these areas is a crucial element in this transition process, making, at the same time, a contribution to business modernization, development, growth and competitiveness which will also assist in advancing the competitiveness and modernization of the EU industry. Indeed, the Spanish Circular Economy Strategy highlights the importance of the awareness and participation of citizens and stakeholders, as well as the promotion of R&D&i in favor of the competitiveness of the sectors and the generation of employment and the training required for it.

2.1 *The Circular Economy Concept*

According to the Organization for Economic Co-operation and Development (2020), there are more than a hundred definitions of the circular economy, but there is a common thread between them. They summarize design without generating waste and pollution. Compared to the linear manufacturing pattern based on the extract–make–use–dispose model (European Commission, 2020), the circular economy allows companies to improve their economic results while generating positive impacts on the environment and society (Pacto Mundial de Naciones Unidas España, 2021). Current scenarios and projections indicate that by 2030 the circular economy could generate a benefit of 1.8 billion euros in the European Union as a whole, 0.9 billion more than the current linear economy model (Circular Spain 2030; Spanish Circular Economy Strategy).

“The circular economy is in fashion” affirms one of the participants in the focus groups that we present in Section 4. Indeed, the European Commission recently published a report (2018) on the advisability of migrating from a linear economy to a circular one, where “the value of products, materials and resources is in the economy for as long as possible, and in which the generation of waste is minimized”.

The Ellen MacArthur Foundation, one of the most prominent organizations in the dissemination of the circular economy, uses three principles and seven “Rs” to support the transition to the circular economy (Ellen MacArthur Foundation, 2021). The three principles on which circularity is based are:

- Eliminate waste and pollution.
- Circulate products and materials.
- Regenerate nature.

The seven “Rs” (Table 1) reflect some of the options that can be used to promote the circular economy.

It should be noted that eco-innovation and the circular economy are concepts that feed each other. Both have the same basic objective: to promote a sustainable future with a balance of the social, economic and the environmental dimensions. In fact, it is now beginning to be believed that both can favor more radical transformations

Table 1 Seven “Rs” of the circular economy for companies

Rs	Description
Reduce	Reduce the use of raw materials and design products to be more durable, repairable and recyclable
Reuse	Share, rent, lease products and buy second-hand products, to encourage their reuse and keep them in use for longer
Redesign	Design products in such a way that they can be remanufactured
Repair/Rehabilitate	Partially repair/renovate goods instead of scrapping them. Companies can create products that are repairable
Recondition/Rework	Restore products to their original functionality
Return/Recover	Return/recovery of products, materials and packaging
Recycle	Recycle materials or return them back to the production cycle

Source Ellen MacArthur Foundation (2013), Ellen MacArthur Foundation (2021) and Capgemini Research Institute (2021)

than traditional innovations, with more forceful effects on the efficiency of processes and on economic and social results. The circular economy can contribute to the establishment of networks, the formation of social capital, business cooperation and the creation of new relationship models between the public and private sectors.

2.2 The Circular Economy, SDGs and Climate Neutrality

The importance of the circular economy can be understood from its relationship with the Sustainable Development Goals (SDGs) and the 2030 and 2050 Agendas that seek climate neutrality. The circular economy is seen as the solution to current problems such as increasing waste and greenhouse gases (Pacto Mundial de Naciones Unidas España, 2021).

The SDGs are considered a reference by companies when defining objectives related to responsibility. These objectives mark what must be achieved according to the 2030 Agenda. Of the 17 SDGs, the SDGs 6, 7, 11, 12, 13, 14 and 15 are directly related to the environment and the circular economy. In particular, the circular economy is highly linked to the United Nations SDG 12, consumption and production, which aims to reduce the use of resources and pollution and analyzes the use of goods throughout their entire life cycle. For this objective to be successfully achieved, a broad cooperation between all interested parties (stakeholders), companies, final consumers, researchers, and public managers (policy-makers) is required.

The EU, through programs such as H2020, with the specific focus “Industry 2020 in Circular Economy”, has allocated 650 million euros to demonstrate the economic, environmental and social viability of specific areas of the circular economy.

In 2020, the European Commission adopted the New Action Plan for the Circular Economy (European Commission, 2020), a prerequisite for reaching the goal of

climate neutrality in the year 2050. In this plan, the commission focuses on the sectors that it estimates use the most resources, so that the measures taken in relation to them will generate a greater impact on circularity. Table 2 summarizes the sectors which the New Plan most affects, with the objectives for each one and some examples.

Another aspect to take into account at a European level is the inclusion of the circular economy among the highlighted priorities. Examples include the different research strategies for intelligent specialization (RIS3) or the European programs LIFE and COSME.

The Circular Economy Strategy in Spain (MITECO, 2020) takes as a reference the sectors included in Table 3, among which is the tourism sector, due to its importance in the Spanish economy.

Table 2 Sectors in which actions can mostly influence circularity

Sector	Goal	Examples
Electronics and ICT	Extend the life of products	<ul style="list-style-type: none"> – Right to repair – Common mobile phone charger – Improvement of waste collection and treatment
Batteries and vehicles	Increase the circular potential of batteries	<ul style="list-style-type: none"> – Improve battery collection and recycling – More circular business models for vehicles
Containers and packaging	That all packaging is reusable and recyclable	<ul style="list-style-type: none"> – Reduce waste – Design for reuse and recyclability
plastics	Fight against pollution caused by plastics	<ul style="list-style-type: none"> – Recycling and waste reduction
Textile products	Sustainable and circular textile products	<ul style="list-style-type: none"> – Separate collection of textile waste – Classification, reuse and recycling of textile products
Construction and buildings	Comprehensive sustainable built environment and circularity throughout the life cycle of buildings	<ul style="list-style-type: none"> – Improvements in durability and adaptability in line with circular economy principles applicable to building design – Initiatives to rehabilitate abandoned lots
Food, water, nutrients	Mitigate the negative impacts of resource extraction and use on the environment	<ul style="list-style-type: none"> – Food waste reduction – Replace single-use containers, crockery and cutlery with reusable products – Water reuse and water efficiency – More sustainable application of nutrients

Source European Commission (2020)

Table 3 Priority sectors in the 2030 Circular Economy Strategy of Spain

Sector	Cause	Circular economy. examples
Building	It generates 40% of waste and emits 35% of greenhouse gases	<ul style="list-style-type: none"> – Waste management, including separation and classification – Increased recycling and reuse
Agrifood, fishing and forestry	Waste of natural resources such as water and food waste	<ul style="list-style-type: none"> – Reduce food waste – Recovery of discarded food and by-products for animal feed
Industrial	The manufacturing industry generates 11% of the waste Food waste in the HORECA channel	<ul style="list-style-type: none"> – Use of technologies that favor a better use of resources, reduce waste
Consumer goods	The useful life of consumer goods has been reduced	<ul style="list-style-type: none"> – Reduce the waste generated through the reduction of single-use products and counteract premature obsolescence – Reuse of discarded products
Tourism	Intensive use of water resources, high generation of waste	
Textile and clothing	Between 2 and 10% of the environmental impact of consumption. Among the countries that discard the most amount of clothing	<ul style="list-style-type: none"> – Separate collection of containers – Textile waste management

Source MITECO (2020)

2.3 The Circular Economy in Tourism

The Spanish Circular Economy Strategy considers the tourism sector to be one of the five priority sectors and a target for its action plans. It includes programs, such as Smart Tourist Destinations, oriented to the incorporation of technologies, sustainability and innovations as well as an increase in accessibility. On the other hand, the SETUR in the 2018–2020 strategy incorporates the concept of sustainability transversally to the associated actions. Thus, the Horizon 2020 Spanish Tourism Plan defines progress in circular economy practices among its strategic lines.

To promote the reconversion of tourism in Spain and the introduction of the circular model, the ministry responsible for the environment and the Secretary of Tourism have proposed different initiatives such as the plan to promote the environment. This plan promotes the energy rehabilitation of hotel facilities, a carbon footprint registry and CO₂ absorption projects, in addition to signing an agreement

Table 4 Example actions by Marriott and Wyndham related to the circular economy

Examples	Marriott	Wyndham
Buildings	Reuse existing land and buildings by giving them new life instead of destroying them to build new ones	
Energy	Generation of renewable energy in hotels (solar panels)	Low consumption lighting. Generation of renewable energy in hotels
Water	Low-flow toilets and showers, laundry water reuse, smart irrigation controllers	Low-flow toilets and showers. Reuse sheets and towels. Irrigation control in gardens
Waste	Alternatives to plastic water bottles: refill glass bottles Reduction of food waste and separation for compost. Food donation	Minimize single-use plastic. Recycle materials. Food waste for compost
Supply	Support local farmers	Supply options without cardboard boxes

Source Wyndham (2021) and Marriott (2021)

with the Hotel Technical Institute (ITH) to develop a “Tourism sustainability model and improvement plans” in hotel establishments.

In any case, the adoption of environmental measures by the tourism sector will be determined not only because it is on the political agenda, but above all because good conservation of the environment and efficient use of resources will affect the future of the sector, both from the point of view of competitiveness and due to greater sensitivity to a demand that will increasingly require economic, environmental and social sustainability in its purchasing options.

In this line, frontrunners in the industry, such as large hotel chains like Marriott, can serve as a reference for ideas about the circular economy in the sector. For this reason, in Table 4, examples obtained from the sustainability reports of two large chains, Marriott and Wyndham, have been compiled.

3 Methodology

The method selected to obtain information on the needs of companies in the application of the circular economy in hotels and restaurants is the focus group. Through this methodology, we can involve companies in the tourism industry from the beginning of the project. The focus group is an information collection technique that seeks to know what the participants think about an idea (Krueger, 2014). In particular, the objective of these particular focus group sessions is to identify challenges and needs in relation to the transition to the circular economy by companies in the tourism sector (hotels and restaurants) in the Valencian community.

The participants in a focus group form a small group of people, around six, with a specific profile, who will discuss a topic of interest, guided by a person who

moderates the session. These participants will provide valuable information on the main difficulties they encounter when applying the circular economy, as well as on some measures that they have already applied in their companies or that they are currently developing.

3.1 Design of the Focus Groups for the Project

The design of a focus group includes decisions about the number of participants and their profiles, as well as the guide to the session dynamic, in addition to who will moderate the dynamic, how the session will be recorded, if it will be transcribed and how the analysis of the information collected will be carried out.

The selection of the participants is crucial for gathering valuable information that allows the objective of the focus group to be achieved. Groups require a certain amount of intra-group homogeneity to assure the significance of the information that is gathered. This means that focus members have similar professional situations and contexts, socioeconomic and cultural backgrounds and working experience. Members should also be from similar seniority levels to avoid one member dominating the discussion because of his/her position. In this selection, we should avoid excessive homogeneity to overcome redundancy in the discussion.

Additionally, we will ensure a certain level of intra-group heterogeneity to assure a wide variety of points of view in the information. It is necessary that members have differences and contradictions. For example, we will look for parity in the groups, so the different points of view and sensibilities of men and women can be accounted for. We will search for participants from different activities in the industry, combining profiles from different business stakeholders.

In the first stage of the project, the participants were required to be experts in the tourism sector with experience in sustainability aspects and with the capacity to make decisions about the transition of their companies to the circular economy. It was also taken into account that the age range of the participants ensured the regular use of new technologies.

Thus, the selected profile for the focus members included professionals between 30 and 50 years old, with technological skills, who belonged to a managerial level. A role such as quality, operations or commercial director with decision-making capacity would be adequate to guarantee the provision of valuable information. Finally, we selected participants from different hospitality actors: hotels with a minimum of four stars, restaurants with verifiable recognition, such as being included in a ranking or having received a gastronomy award, and hotel and restaurant suppliers.

Finally, we wanted to gather different views from the various types of tourism present in the Valencian community. For instance, Alicante area is typically focused on sun and beach tourism, with a combination of foreign and national tourists, while the Valencia area is more oriented to the urban type and the Castellon area to more rural and national and local tourism. Therefore, using the profiles, the partner universities looked for participants in their region.

Three focus groups were created, one per region, with six participants in each group, including two hoteliers, two restaurant managers, one hotel supplier and one restaurant supplier. The latter included providers of plastic products and frozen foods, as well as institutional hygiene, laundry, marketing and communication and tourism services.

3.2 *Group Dynamics*

The three focus groups conducted their sessions during a period of one week. Each focus group session was held in a controlled environment in a quiet and comfortable room at the partner university with a table and appropriate number of chairs for the number of participants and the moderator and with sufficient space for a group of two to three observers who would be recording and observing the session. Each focus session was expected to last no more than one and a half hours.

Each partner university selected a moderator for the session to assure the heterogeneity of the direction of the focus group. However, all the moderators were instructed and given the same session script, so they could redirect the session when needed. Having a guide for the dynamic is crucial, since it will facilitate the subsequent analysis of the transcripts. The research group prepared a guide listing the themes or thematic aspects and an explanation of the different steps to follow when moderating the interviews. Although the script does not have a specific sequential order, it supports the moderator in controlling the session and adapting the order of the topics to the dynamics highlighted by the participants in each focus group. The guide then serves as an orientation in the conversations. The guide included the following topics of interest:

1. BARRIERS and SUPPORT in the transition to the circular economy.
2. PRACTICES in the circular economy and industrial symbiosis.
3. DIGITAL TOOLS to measure the circularity of a company.
4. Eco-innovative RESULTS.
5. CHANGE INITIATIVES involving caring for the environment.
6. USERS raising awareness in relation to knowing about and valuing initiatives.

The UPV was in charge of the audiovisual recording, while the other universities (University of Alicante, Jaume I University and University of Valencia) that had moderated and selected the participants created the transcriptions of the focus group sessions. In addition, the UPV prepared the informed consent document, which was signed by the participants, in order to be able to work with the material generated during the course of the sessions and use it in the activities linked to the project. These authorizations by the participants are in accordance with the legislation on data protection.

Finally, the content analysis of the transcripts was carried out, by the UPV, with the qualitative analysis software QDAMiner 5. The opinions of the participants on each of the six topics were coded and grouped by related topics. However, the number of topics could exceed the six in the guide as new topics emerged in the sessions.

3.3 *Stages in the Session*

The session was structured in different stages:

1. Preparation: The session started with greeting the participants. The participants were identified and given a sticker with his/her name, so they could be identified by the other group members. There was a coffee break at the beginning, so the participants could meet and destress before the session. The participants then sat down and the supporting team began the recording. Each participant had a pen, paper, water and a copy of the authorization.
2. Presentation: The first stage in the session included the member presentations and the explanation of the objective of the focus group. The members were informed about how they had been selected, in addition to what the dynamics of the session and their role would be, as well as the duration and how the session would be recorded. They were also informed about the anonymity of their opinions and the authorizations.
3. Warm up: After the presentation, the moderator encouraged participants to talk about the theme, letting the discussion flow. In this part, it was important for the moderator to encourage the integration of all the participants in the discussion and to prevent certain members from monopolizing the discussion.
4. Development: There was no need to follow a specific order or sequence of the themes. The discussion flow was determined by the group. Using the guide, the moderator directed the participants to cover all the thematic areas.
5. Relaunch: During the sessions, it was expected that there would be some moments in which the moderator would have to participate to center or direct participants to consider a certain theme included in the guide, to encourage discussion on a theme that had emerged in the session that was not considered in the guide or to summarize or clarify the main statements that the group had discussed.
6. Closing: The session was closed by thanking the participants and indicating that they would be provided with the conclusions of this study.

4 Results

In this section, we include the summary of the most important ideas that have been extracted from the three focus groups. During the focus groups, 174 codes were generated, including the main barriers that the participants encounter when applying the circular economy approach or the practices that they support in their companies

and that can serve as an example to other hotels, restaurants and their suppliers. The focus groups also produced opinions on the incentives for the circular economy, how the circular economy influences supplier selection, on the importance of training and communication and, finally, about aspects related to waste.

4.1 Barriers to the Implementation of the Circular Economy in the Tourism Sector

The first topic that was raised with the participants concerned the barriers they encounter to the implementation of the circular economy in their companies. The barriers have been grouped into six main themes:

- Economic.
- Business.
- Knowledge.
- Cultural.
- Social.
- Administrative and institutional.

The *economic barriers* topic groups opinions on the cost of implementing measures that help businesses move toward the circular economy. The companies indicate that the necessary investments sometimes involve such high costs that they make their approval difficult. Codes for these barriers include examples such as the following:

- 20G—It implies a series of things that even when you want to go further you cannot do them because the cost of that improvement you cannot afford.
- 20H—We have a fleet with a series of vehicles, and we have done studies to change them to electric or gas, but the refueling, autonomy and infrastructure plans limit you a lot.
- 20I—Looking for a kind of return circuit, in which you have to go back for empty containers, involves a cost for which you can be penalized if your price is higher.

Business barriers refer to the fact that the higher costs for implementing improvements in circularity translate into disadvantages compared to competitors that do not apply them. Among the codes defined, the following would be an example of the concerns expressed by the participants in the focus groups:

- 20S—There is unfair competition in the sector of companies that do not meet the legal minimum, but we are in the next thing, sustainability, and the margins are reduced tremendously.

Knowledge barriers refer to the lack of knowledge about what the circular economy is. This barrier is found both in companies and in the public administration, suppliers and customers. Sometimes, those who transmit the information do

not express it in terms that can be understood by their interlocutor, who expects to be warned about the euros that can be saved if they incorporate a specific measure. Examples of the codes defined for this type of barrier are:

- 20D—There is a lot of ignorance about the circular economy, nobody really knows what we are talking about.
- 20F—Sometimes you have to fight against the element of someone who does not understand or who sees it as an extra cost.

Cultural barriers reflect the situations that make it difficult to change perspectives, so it will take time to accept the transition to the circular economy. These include, for example, companies that are not willing to change the way they work and customers that do not evolve toward more circular products. Codes defined for these barriers may include the following:

- 20T—Cultural barrier of risk aversion. Working in a different way than we are used to is difficult.
- 20Q—If the client does not evolve toward more sustainable products.

Social barriers are what hinder the integration of population groups that are more aware of sustainability issues. For example:

- 20G—Take women into account at work, with equal conditions and equal opportunities, who are highly aware of the issue of sustainability.

Institutional and administrative barriers refer to the limits that companies find in the administration's regulations that do not allow them to advance in the transition to the circular economy. Among the examples provided by the participants are barriers to applying solutions that avoid food waste:

- 20K—They want to introduce Too Good To Go in Benidorm hotels, but we have a lot of problems with the governmental health department and we cannot sell it to customers.
- 20P—The requirements for public subsidies make it more profitable not to ask for a subsidy.

4.2 Measures that Have Already Been Applied in Relation to the Circular Economy

Despite the barriers that the participants in the focus groups have pointed out, in this section, we show that their companies are already applying measures for their transition toward the circular economy. The codes shown in Table 5 that were obtained through the analysis of the information offered by the participants have been organized based on the seven "Rs" mentioned in Table 1.

It is important to note that the companies that participated in the focus groups take the SDGs as a guide for their future direction. Therefore, the fact that companies have

Table 5 Code examples of application of the circular economy in companies obtained in the focus groups

Good practice	Code
Measure to reduce	21A—Carbon footprint audit and follow the carbon footprint methodology
	21Z—Study to make truck routes more efficient, so that they consume much less fuel
Reduce	21G—The change of towels in the hotel, advising the client not to ask for it to be changed
	21O—Solar panels
	21W—Change all single-use containers
Reduce by promoting local products	21R—Proximity and ecological product
Reduce + return	21J—Minimize water waste or treat water waste that truly comply with the regulations
Reduce + recover + reuse	21ZI—We treat the water from the cisterns and showers in our treatment plant. One hundred percent of our water is purified and it is with that we irrigate the golf course along with the river water
Repair/rehabilitate	21C—Rehabilitate a building instead of building a new one

the SDGs as a guide for their day-to-day activities will make it easier for them to be open toward the circular economy and for their decisions to be aligned with the 2030 and 2050 Agendas.

The code examples in Table 6 relate to how the companies measure their impact in the environment and the actions that they take to reduce it. Among the alternatives, the calculation of the carbon footprint as well as environmental certifications and seals are among the more popular ones for proving companies’ commitment to the environment. Among the actions to reduce the negative impact of their activities, companies try to reduce the consumption of natural resources such as water, substitute energy sources for other renewable ones or limit the waste they generate. Other reduction measures are related to zero-miles food, which reduces the transport of products and favors seasonal ones, supporting local products.

Other groups of codes have been defined to show measures that go beyond reduction and encompass other “Rs” of the circular economy cited in Table 1. It is important to bear in mind that what may be redesign for one company may be recovering and reusing for another. For example, a company that develops technology for hotels and redesigns a system that allows for recovering the water that would be wasted would be applying redesign. However, the hotel would be employing recovering and reusing. By working together, the technology provider and the hotel can incorporate more “Rs” from the circular economy principles.

4.3 Incentives for the Circular Economy

Among the comments of the participants, some refer to incentives for the circular economy. Some comments indicate that there are no such incentives, while others say the opposite:

- 23A—There is a lack of incentives that reward those who do well.
- 23E—Yes, there are many lines of incentives and many lines of subsidies for environmental aspects.

There are also comments about what they expect from such incentives. The incentives should reward companies and do not penalize them:

- 23B—That they do not penalize companies for trying to be more consistent with beliefs and corporate social responsibility.

Lastly, there are comments that stress the lack of information on such incentives:

- 23L—Communication by the public administration to the companies of the public aids and subsidies because the information does not arrive.

4.4 Selection of Suppliers According to Their Effort in This Transition to the Circular Economy

This group of codes includes the comments that affirm that there is a selection of suppliers, based on whether they make the effort to incorporate circularity. In addition, some opinions are added on the reaction of suppliers when requirements are increased.

- 25A—The certification requires it.
- 25F—We are on “Ruta de Sabor” and we select suppliers from the province, rewarding the zero-miles food.
- 25E—I miss having a network of suppliers, an association or group of suppliers so you do not spend the day receiving goods from many different small local suppliers, which takes a lot of time.
- 25B—Some providers, when a certification is required, tell you that they would rather quit being your supplier.

4.5 The Importance of Training and Communication

Training and communication were cited by participants as essential to encourage the transition to the circular economy. Training is considered necessary for small businesses, workers and customers. Communication is perceived as crucial for spreading the message of what the circular economy is and its importance, but they also indicate

that selecting the appropriate communication channels will help in the transition to the circular economy.

- 29D—Training for the entire staff, not just the technical services department, on energy saving issues.
- 29G—Customers must also be educated, explaining why we do things.
- 29E—You have to find the right dissemination channels so that it reaches everyone. Reach not only those who already do it, but also the small businessman who has a restaurant or hostel, as the information does not reach them.
- 29M—The fundamental thing is to inform the components of the circle about what the circular economy is and how to make it work. It is fundamental.

4.6 Waste Management

The generation of waste is a problem that the circular economy tries to reduce. The codes created in the analysis refer to what companies do to reduce waste and the limitations they find in doing so or the costs due to waste generated from their suppliers. Among the opinions expressed, we can highlight the failure to properly control which companies in the value chain actually create such waste:

- 31D—I have managed to have my own boxes so that the suppliers can transfer them to me without leaving theirs.
- 31G—Almost all of us try to have our containers differentiated, separate glass, separate plastic, separate cardboard, organic waste, oil collection, etc.
- 31B—Segregating and recycling in our hotel costs us money. I call a company to take my cardboard and they are charging me a lot of money.
- 31A—They force the use of compostable plastic, when compostable plastic in the medium and long term is much more polluting.
- 31C—I analyze where all my waste comes from and I can tell you that I think 80 percent comes from my suppliers. But, the city council does not go to the origin to control who is really generating it. It seems totally unfair to me.

5 Conclusions

This work has collected the main results of the analysis of the focus groups in which experts from the tourism sector of the Valencian community with experience in the application of circular economy measures in their companies participated. In total, 18 experts from the three provinces shared their knowledge about the main barriers in the transition to the circular economy, the measures they have already applied in their businesses, the selection of suppliers or the importance of communication and training, among others.

As an introduction to these results, a summary of some important concepts related to the circular economy has been offered, which help in understanding the subsequent

definition of codes and the grouping by themes. This study was carried out through content analysis supported by the QDAMiner 5 software.

Three main conclusions have been reached. The first is related to the difficulties that companies encounter in their transition to the circular economy. Taking into account that a significant number of companies in the sector are small- and medium-sized enterprises (SMEs), the financial and management resources required to make this transition hinder the capability of companies to measure and introduce circular practices in their businesses. Second, the businesses do not perceive that they have real support from the administration, but instead feel penalized in relation to those who do not apply measures that reduce their environmental impact, as well as to suppliers in the value chain that transfer their own waste to them. Third, the lack of a circular economy culture indicates that there is a need for training at all levels, so that the transition is shared by all the members of the company and the supply chain.

The results of the analysis highlight that sustainability policies are not being entirely efficient in promoting the circular economy. First, the lack of capabilities and knowledge about the circular economy itself and the availability of technical solutions constrains the ability of the companies to engage in the circular economy. The circular economy is a complex concept that requires multiple actors to be involved. The conjunction of an environment with a lot of SMEs and the lack of efficient and economic ways to implement circular solutions and of a network of actors in the supply chain engaged in circularity hinder the capability of these companies to engage in circular models. In addition, public funding that should be intended to overcome the financial constraints has a lot of requirements and bureaucracy that prevents companies from applying for it. Thus, public funding should aim to create a proper ecosystem to promote economies of scale in circular solutions that can be implemented by the tourism companies and a network of solutions suppliers that can connect different industries and companies in circular models.

From the suppliers' side, companies have to deal with the waste that is generated in other phases upstream. The legislation is mainly oriented at controlling the disposal of the waste rather than its generation. For example, the way a product is packaged influences the capability of this packaging to be reused or recycled. Then, if the supplier is not efficient in providing the product, the client will have to deal with more waste that is not being generated in-house. Thus, companies are being evaluated by the non-sustainable ways in which their suppliers are supplying their products and not by how sustainable they are in providing their services. It is clear that there is a managerial role in this matter that can be used to select more sustainable suppliers. However, this is not always possible. In other sectors, such as food retail, we can see that big companies are able to force suppliers to adapt their supplies to the client's requests. However, the bargaining power of SMEs in the tourism industry is limited. When developing new regulations to promote sustainable solutions and, therefore, motivate suppliers to take action accordingly, the impact of their products downstream in the supply chain should be considered.

Finally, it appears that many customers, managers and employees do not really understand the circular economy concept and how it relates to different stakeholders. There is a need to create a common understanding of the circular economy and its

implications in the tourism industry, as well as transferring this knowledge across the industry's value chain to encourage the demand and the offer of circular tourism business models.

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