

"A JOURNEY" TOWARDS A SUSTAINABLE, GREEN AND RESPONSIBLE TOURISM ECOSYSTEM

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Abstract: A successful transition to a green society can be achieved through education, dialogue, awareness-raising and capacity-building. Our society's current development model has proven to be inefficient and unsustainable, with a huge negative impact on the environment. Climate change affects our economies and by extension our daily lives. Thus, we urgently need to move to a sustainable development path, with a coherent set of strategies, which will be supported by everyone. Change is needed at all levels: individual, organizational, community, national, regional and international. Hence, collaboration is essential in developing new strategies that involve all human activity: technology, production, consumption and waste. Therefore, paving the way to a green society requires collective vision, creativity, action and support from a broad cross-section of society, including governments, the private sector and consumers. This article invites the readers to learn how to prepare, design and implement a healthy lifestyle into their organization in order to strengthen resilience and competitiveness of tourism sector. Furthermore, the paper intends to raise awareness among tourism stakeholders to join their forces and develop a robust and innovative tourism ecosystem that meets local challenges, while contributing to EU's strategic priorities such as green and digital transitions, in order to address the most pressing socio-economic challenge – the climate change.

Keywords: twin transition, sustainable lifestyles, strategic planning.

INTRODUCTION

"Sustainable development" has become a very popular expression, being used in almost every discussion on environmental issues. The concept of sustainable development was born in 1987, in the summary report of the World Commission on Environment and Development – "Our Common Future". Since the publication of that report where sustainable development was defined as "*development that meets the needs of the present generation without compromising the needs of future generations*", the concept evolved and was defined in many different ways in the specialized literature.¹ In 1992, with the occasion of the United Nations Conference on Environment and Development, known as well, as the Rio Earth Summit, the concept of sustainable development was set up in the conference outcome document "Agenda 21" as "*a priority item on the agenda of the international community*" and, consequently the national strategies following to be designed and developed on the objective of sustainable development.² Every 10 years, since the first Rio Summit (Rio+ 10 – "Johannesburg Plan" and Rio+ 20 – "The Future We Want") the theme of "sustainable development" becomes more real being identified as one of the key priorities on United Nations (UN), becoming part of "*international and national development policies, programmes and agenda*".

"Sustainable tourism" was defined by the UN Environment Program and UN World Tourism Organization as "*tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities*". The increasing volume of academic research on sustainable tourism could demonstrate the extent of the tourism sector's engagement with sustainability challenges.³

¹ Lele 1991; Basiago 1999; Cerin 2006; Benaim, Raftis 2008; Ukaga, Maser, Reichenbach 2010; Browning, Rigolon 2019; Mensah 2019.

² Allen, Metternicht, Wiedmann 2018.

³ Ruhanen et al. 2015.

The European Union is committed to becoming the first climate-neutral bloc in the world by 2050, so "green" becomes the colour of our future. The EU political agenda is focused on fostering the green transition and digital transformation. Beyond global megatrends such as climate change, globalization, demographic and technological changes, the tourism sector has been severely affected by the outbreak of the pandemic, and yet tourism, as an important industrial ecosystem of the EU, plays a key role in supporting societal transitions towards sustainable models, which are multi-faceted processes with multi-layered and interconnected aspects.

This research aims to encourage positive change to tourism ecosystem which brings together a broad cross-section of society (producers, consumers, public and private institutions) from different sectors, such as: food and beverage services, on-line information and services providers, travel agencies and tour operators, accommodation suppliers, destination managing organizations, attractions and passenger transport.

This article hopes to capture the interest of relevant stakeholders to urge change in the entire tourism ecosystem that needs to become resilient and flexible to the new challenges of a hypermobile and digital society.

This research paper intends to find some answers to the following two questions:

- *How will climate technology impact organisations and industries?*
- *What strategies can help leaders leverage growth opportunities and manage challenges?*

Providing a sample of how organizations in the tourism sector could best implement and reactively adapt their strategic priorities to address development needs and opportunities effectively and in synergy with the EU's twin transition, the final statement of this research reaffirms the need for a collective vision, creativity, action and support from all relevant stakeholders to help decision makers choose the best way forward for a sustainable, green and responsible tourism ecosystem.

STUDY DESIGN

This study is structured into three main sections that provide a comprehensive overview of the current state of tourism ecosystem and highlight emerging trends and opportunities, as well as the "how to" building block that describes some aspects of the transformative and desired move to a more resilient tourism ecosystem.

After the introduction part, this study presents a series of specialized concepts and terms to facilitate the understanding of the discussed aspects, and in the conclusions part, it summarizes and highlights the most relevant aspects derived from the conducted research.

CONCEPTS AND TERMINOLOGY

A new transformational approach is needed to take full advantage of the opportunities provided by new technologies. Under these circumstances, it is helpful to understand various technical terms and use the terminology correctly.

The ecological footprint measures the amount of biologically productive land and water that a person, population or activity needs to produce all the resources it consumes and absorb the waste it generates using existing technology and resource management practices.

The term "*green*" is very popular and it is used in different expressions as follows:

- A green building focuses on ecological aspects, being designed and built with energy and water efficiency in mind and minimizing any negative impact on its inhabitants as well as the environment.
- A green economy is one whose income and employment growth is driven by public and private investments that reduce carbon emissions and pollution, increase energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services. The green economy results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcity.

- Green growth defines environmentally sustainable economic progress that fosters low-carbon and socially inclusive development, realizing synergies of climate action with development goals.
- Green jobs are activities in various sectors of the economy (agriculture, industry, construction, transport, services and administration) that contribute to preserving or restoring the quality of the environment, reducing the environmental impact of businesses and economic sectors to levels that are sustainable.
- Green technology, also called *clean technology*, improves the use of resources (predominantly using non-polluting renewable resources) and the energy efficiency of production to sustainable levels and reduces waste.
- Greenhouse gases are atmospheric gases that trap heat and are responsible for global warming and climate change. (e.g. carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆)).
- Greenwashing defines the practice of firms misleading consumers about their environmental policies by spending more time and money in advertising and marketing claiming to be green than actually implementing business practices that minimize the environmental impact of their products or services.

The low-carbon economy is a new economic, technological and social system of production and consumption based on energy conservation and the reduction of greenhouse gas emissions.

The term renewable energy defines those energy sources that are sustainable and include carbon-free technologies (e.g. solar, hydropower and wind power and biomass, as carbon-neutral technology).

The expression "*sustainable lifestyles*" refers to the creation of a way of life ensured by both efficient infrastructures, goods and services; it also includes individual choices and actions that minimize the use of natural resources and the generation of emissions, waste and pollution, while supporting equitable socio-economic development and progress for all. Basically, it means rethinking what and how much we buy and how we organize our daily lives, while reducing our human impact on the natural world. It is also about changing the way we socialize, exchange, share, educate and construct identities. To sum up, sustainable lifestyles is about transforming our societies and living in balance with our natural environment.

CONTEXT

Based on the 2023 edition of the "World Tourism Barometer", a publication of the World Tourism Organization, a total of 917 million international tourists travelled the world in 2022, marking a 102% increase in international tourism compared to 2021, which represents a 63% recovery from pre-pandemic levels.

Europe recorded 585 million international tourist arrivals in 2022, reaching almost 80% of pre-pandemic levels (-21% compared to 2019). Europe is the world's leading tourist destination, hosting to the most visited country from the world: France. Based on UNWTO's scenarios for 2030, international tourist arrivals to Europe could reach 744 million.

As this data show, tourism is one of the most important economic sectors in Europe and, on average, contributes 11% of EU GDP. But according to the Tourism and Travel Council, beyond its direct economic impact, the tourism industry has a significant indirect impact (measured by GDP and jobs supported by travel and tourism investment spending, "collective" government spending and domestic purchases of goods and services on sectors that directly deal with tourists) and induced impact (measured by GDP and jobs supported by the spending of those who are directly or indirectly employed by the tourism ecosystem), making its total contribution to GDP almost three times greater than its direct contribution. So, the travel and tourism industry contribute to GDP and employment in many ways.

According to the World Travel & Tourism Council, in terms of employment, the tourism sector supported 34.7 million European jobs in 2021, which represents 9.1% of all jobs in the economy and an increase of 1.6 million jobs compared to 2020. Despite the various difficulties faced by the entire tourism ecosystem due to the COVID-19 pandemic (e.g. travel bans, lockdowns, safety concerns) and the challenges faced by some destinations (e.g. terrorist attacks, political instability, natural disasters), the change in EU travel and tourism GDP, 2021 *vs.* 2020, was approximately 25.4%.

Regarding Romania, the 2022 Annual Research of World Travel & Tourism Council, reveals a contribution of 3.8% of tourism sector in total GDP, in 2021. In terms of employment, the tourism sector supported 6.3% of all jobs in Romania in 2021, which represented an increase by 6.7% compared to 2020. Currently, 1 in 11 jobs in Romania are in tourism sector.

Obviously, the tourism ecosystem plays a key role in the economy of local/regional communities and can support the transition to a more circular and sustainable economy. At the same time, companies in these interconnected industries can also improve their competitiveness and business resilience.

TRANSFORMING THE EU TOURISM ECOSYSTEM FOR A SUSTAINABLE FUTURE

Our society transforms very fast and the nature becomes very furious on us. Our daily life has an increased negative impact on the planet. Without knowing, we are putting ourselves in danger and also the future of the next generations. Thus, it is very important to raise awareness about these aspects and the need of building a low carbon, resource efficient and socially inclusive economy. A *fair transition* to a sustainable future may be achieved only by adopting a more *sustainable lifestyles* and by changing the way we perform some daily activities, using resources more efficiently and without overexploitation of the natural resources. In this regard, the whole tourism ecosystem should follow a more sustainable trajectory, becoming in time a source of action and ideas that will create innovation, stimulate a rapid and sustainable recovery of the economy, but protect the planet.

At the European level, there are important steps towards this desideratum.

For instance, the EU guidelines for the tourism ecosystem is represented by:

- ✓ European industrial strategy;⁴
- ✓ Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe's recovery;⁵
- ✓ Tourism in Europe for the next decade: sustainable, resilient, digital, global and social;⁶
- ✓ Green Business – EMAS and the tourism sector Environment Case Study;⁷
- ✓ A European Strategy for more Growth and Jobs in Coastal and Maritime Tourism.⁸

But the tourism industry is interconnected with several other industries and their policies (e.g. aerospace; agri-food; construction; cultural and creative industries; digital industries; health; mobility, transport and automotive; proximity, social economy and civil security; retail). In this context, whole-of-government coordination across policies is a must, and open and collaborative dialogue between all relevant stakeholders becomes a priority. In addition, EU guidelines for these related industries should be taken into account when designing tourism development strategies and policies:

- ✓ A European Green Deal – Striving to be the first climate-neutral continent;⁹
- ✓ A route to net zero European aviation;¹⁰
- ✓ European Climate Law;¹¹
- ✓ Delivering the European Green Deal;¹²
- ✓ Mobility Strategy;¹³
- ✓ Mission Climate-Neutral and Smart Cities: Info Kit for cities;¹⁴

⁴ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en.

⁵ COM (2021) 350 final.

⁶ The Council of the European Union conclusions adopted on 27/05/2021.

⁷ <https://ec.europa.eu/environment/emas/pdf/other/EMAS-casestudy-tourism-V3.pdf>.

⁸ COM/2014/086 final.

⁹ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en.

¹⁰ <https://www.destination2050.eu/>.

¹¹ https://climate.ec.europa.eu/eu-action/european-green-deal/european-climate-law_en.

¹² https://climate.ec.europa.eu/eu-action/european-green-deal/delivering-european-green-deal_en.

¹³ https://transport.ec.europa.eu/transport-themes/mobility-strategy_en.

¹⁴ https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/mission-climate-neutral-and-smart-cities-info-kit-cities-now-available-2021-10-29_en.

- ✓ A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives;¹⁵
- ✓ Circular economy action plan;¹⁶
- ✓ Zero pollution action plan;¹⁷
- ✓ Sustainable blue economy.¹⁸

This guideline list is not exhaustive, it is just an example to emphasize that the road to *greener, digital and more resilient tourism* is extremely complex and requires a broad vision covering the diverse and interconnected process that influences sustainability in tourism.

Furthermore, last year, the European Commission’s Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs published a report entitled "Transition Pathway for Tourism"¹⁹ which describes the ambitions and desired objectives for the transition, as well as some action recommendations for tourism stakeholders across the tourism ecosystem and EU member states.

CHALLENGES

Strengthening EU tourism ecosystem requires changes to the legislative frameworks on different levels: European, national and in some cases, local. These implies *coordination* at all levels involved and *synchronization*.

Digital transition to the tourism sector means, among other things, the *access to data* both publicly and privately held. Thus, the legislation in this field should be very clear, taking into consideration also the cybersecurity aspects.

The access of tourism providers to new technologies implies funds and qualified personnel.

For tourists, the *multimodal journey planning and ticketing through digital services* is very important. This requires the development of online intermediation service platforms, which connect various tourism operators with providers of touristic products and services, from different countries (from EU and abroad).

Green transition of tourism services and activities means, among other things, digitalisation of cultural heritage, the development of innovative tourism services using advanced technologies, such as: virtual reality, augmented reality, artificial intelligence, digitalizing the travel documents across EU. It also involves synergies with other ecosystems in order to "green" the infrastructure and services provided.

Mitigating the effects of climate change is very provocative for tourism industry. Natural catastrophes together with some other extreme phenomena like heatwaves, heavy rainfall, rising water levels, etc. are affecting tourism destinations not only from remote regions but also from the large cities. Under these circumstances, *preserving biodiversity*, while developing economic activities and *safeguarding cultural heritage* to meet the demands of twin transition, becomes very challenging. Therefore, measuring the social, environmental and economic impacts of climate change on the tourism industry is very important in building the long-term **resilience** of the tourism ecosystem through better use of new green technologies.

In addition to all this, the Covid-19 pandemic has effectively frozen **tourism-related investments**.

OPPORTUNITIES

Reforms for a sustainable, resilient and digital tourism ecosystem are supported by the EU in the 2021-2027 programming period through a set of technical and financial instruments. Resetting European tourism ecosystem implies to benefit of EU funding opportunities for this sector:

- ✓ Recovery and Resilience Facility – 723.8 billion euro;
- ✓ European Regional and Development Fund (ERDF) and Cohesion Fund – 274 billion euro;
- ✓ European Social Fund Plus (ESF+) – 99.3 billion euro;

¹⁵ COM/2020/662 final.

¹⁶ https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en.

¹⁷ https://environment.ec.europa.eu/strategy/zero-pollution-action-plan_en.

¹⁸ https://oceans-and-fisheries.ec.europa.eu/ocean/blue-economy/sustainable-blue-economy_en.

¹⁹ <https://ec.europa.eu/docsroom/documents/49498>.

- ✓ European Agricultural Fund for Rural Development (EAFRD) – 95.5 billion euro;
- ✓ European Maritime, Fisheries and Aquaculture Fund (EMFAF) – 6.1 billion euro;
- ✓ Programme for environment and climate action (LIFE) – 5.4 billion euro;
- ✓ Horizon Europe – 95.5 billion euro;
- ✓ Creative Europe Programme – 2.5 billion euro;
- ✓ ERASMUS+ – 26.5 billion euro;
- ✓ Just Transition Fund (JTF) – 19.3 billion euro;
- ✓ Digital Europe Programme – 7.6 billion euro;
- ✓ Single Market Programme (SMP) – 4.2 billion euro;
- ✓ Invest-EU Fund – 10.3 billion euro;
- ✓ REACT-EU – 50.6 billion euro;
- ✓ European Globalisation Adjustment Fund (EGF) – 1.5 billion euro.

In addition, an online instrument ("Guide on EU funding for tourism")²⁰ is available for helping tourism stakeholders to find funding opportunities under the available EU programmes and calls for proposals. It also presents several examples of projects that have received funding under different programmes.

Moreover, there is an EU program that provides tailor-made technical expertise to EU Member States to design and implement reforms – "Technical Support Instrument".²¹

Support is also available to tourism operators and SMEs under the national recovery and resilience plans, which provide specific support for the twin transition for SMEs.

Furthermore, there are some on-line platforms that offer specific information and best practices in areas relevant to tourism sector:

- ✓ Tourism business portal, which offer information and advice for SMEs in the tourism industry.²²
- ✓ European Capitals of Smart Tourism which provides a collection of best practices in terms of Accessibility, Sustainability, Digitalisation, Cultural Heritage and Creativity, and also it establishes a framework for the exchange of best practices between cities and creates opportunities for cooperation and new partnerships.²³
- ✓ Circular Economy Stakeholder platform which brings together stakeholders active in the broad field of the circular economy in Europe and furthermore, it goes beyond sectorial activities and highlights cross-sector opportunities.²⁴
- ✓ EU Platform on Food Losses and Food Waste.²⁵
- ✓ Urban mobility observatory, which facilitates the exchange of information, knowledge and experience in the field of sustainable urban mobility in Europe.²⁶
- ✓ Eco-Management and Audit Scheme which is a premium management instrument developed by the European Commission for companies and other organisations to evaluate, report, and improve their environmental performance.²⁷

By ensuring good linkages with existing fora, the "journey" towards a sustainable, green and responsible tourism ecosystem would be simplified, without duplicating efforts. More than that, there are support mechanisms for SMEs and companies active in tourism:

²⁰ https://single-market-economy.ec.europa.eu/sectors/tourism/eu-funding-and-businesses/funding-guide_en.

²¹ https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/technical-support-instrument/technical-support-instrument-tsi_en.

²² https://ec.europa.eu/growth/sectors/tourism/business-portal_en.

²³ https://smart-tourism-capital.ec.europa.eu/leading-examples-smart-tourism-practices-europe_en.

²⁴ <https://circulareconomy.europa.eu/platform/>.

²⁵ https://food.ec.europa.eu/safety/food-waste/eu-actions-against-food-waste/eu-platform-food-losses-and-food-waste_en.

²⁶ <https://www.eltis.org/>.

²⁷ https://green-business.ec.europa.eu/eco-management-and-audit-scheme-emas_en.

- ✓ Enterprise Europe Network where tourism SMEs can locate local contact points, which can give advice and provide links to experts and resources on topics regarding innovation, intellectual property rights and digitalisation.²⁸
- ✓ European Cluster Collaboration Platform which includes several clusters relating to tourism industry, supporting partnerships on regional, national and European level.²⁹
- ✓ European Digital Innovation Hubs which provides innovation services, such as financing advice, training, and skills development that are needed to respond to digital challenges and become more competitive.³⁰
- ✓ European Innovation Council Accelerator which provides financial support, guidance, mentoring and access to SMEs for investors and corporates.³¹
- ✓ Your Europe portal which helps SMEs to find information on loans and venture capital supported by the European Union.³²
- ✓ European Investment Fund which helps European SMEs to improve access to finance through a wide range of selected financial intermediaries.³³

HOW TO GREEN THE TOURISM ECOSYSTEM?

Starting from the three pillars of sustainable development (economic vitality, social justice and environmental sustainability), transforming the tourism ecosystem involves understanding *how to make it real* – locally, nationally and internationally.

Another approach concerns the *share of responsibilities* between the public and private sectors, establishing their roles and defining the major channels of public and private investments. In a green and digital tourism ecosystem, income and employment growth are driven by public and private investments that reduce carbon emissions and pollution, increase energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services.

Tactical engagements in adopting greener practices in daily life activities is another important step to optimise the environmental, social and economic impacts of tourism.

Transformative change is needed at all levels (e.g. individual, community, organization, national, regional and international) and requires everyone to collaborate and support new development strategies that can change technology, industry behaviour and products, to pave the way for a green and digital tourism ecosystem.

These can be achieved through open dialogue and active discussions between relevant stakeholders to set direction (the appropriate course of action).

Governments' tasks are to establish regulatory changes in line with EU policy reforms and set public spending at national, regional and local level. In this regard, governments should pay attention to the following aspects:

- to address these global changes in a timely manner and not to increase disparities between different touristic areas;
- to use in a SMART scheme (effectively and efficiently), the EU technical and financial assistance to meet the needs identified by tourism stakeholders;
- to support job creation, business competitiveness, economic growth, twin transition, and improvement of citizens' quality of life in all touristic resorts;
- to investigate the "good practice" in programming the new policy objectives for the tourism ecosystem in order to deliver optimal benefit for the people (visitors and residents);

²⁸ <https://een.ec.europa.eu/>.

²⁹ <https://clustercollaboration.eu/>.

³⁰ <https://digital-strategy.ec.europa.eu/en/activities/edihs>.

³¹ https://eic.ec.europa.eu/eic-funding-opportunities/eic-accelerator-0_en.

³² <https://europa.eu/youreurope/business/finance-funding/getting-funding/>.

³³ <https://www.eif.org/>.

- to strengthen the policy synergies, ensuring the coherence and the complementarity with other policies/instruments created and managed in practice, which can stimulate the transformation of tourism industry;
- to strengthen public administration and the effective management of the funds in order to ensure sustainability of any type of tourism activities and businesses.

All human activity is involved in this change: *technology, production, consumption and waste*. Thus, a successful transition towards a sustainable, green and responsible tourism ecosystem requires a collective vision, creativity, action and support from a broad cross-section of society, including governments, the private sector and consumers. Beyond governments that can introduce policies for stimulating green investments in tourism ecosystem, the **business sector** (public and private) can also introduce internal policies that allow companies to systematically integrate sustainable development in their corporate strategy, as follows:

- investing in renewable energy technologies, waste management and the green building sector;
- developing creative ways of informing tourists about unnecessary waste of water and energy;
- monitoring water consumption every day and exploring ways of reducing and reusing water;
- using cleaner fuel in the case of transport companies;
- reducing traffic and improve the conditions for pedestrians and cyclists;
- encouraging waste sorting and collection among tourists;
- adopting greener agricultural practices;
- changing food production methods by promoting environmentally friendly soil management and encouraging the merging of modern technologies with traditional knowledge;
- redesigning products and changing the processes that make them by reducing energy and materials consumption;³⁴
- developing on-the-job training programs to cope with changing technology;
- reskilling and upskilling of workers for green jobs.

Tourists can exercise their purchasing power by demanding goods and services that foster a green tourism and by adopting more sustainable lifestyles. It is important that tourists respect the natural and cultural heritage and reduce as much as possible the consumption of water and energy and also their *ecological footprint*.

Therefore, everyone is considered to be a key changemaker.

To develop a robust and innovative tourism ecosystem that responds to local challenges while contributing to EU strategic priorities, there are two cross-cutting levels of action: macro and micro.

Reforming the tourism ecosystem at the macro-level implies that decision-makers, together with experts from academia, business and civil society, identify the challenges that influence the future of tourism, analyse the perspectives from which to look at in order to solve the problems, develop a monitoring framework that regularly collects and makes available data on the progress made, implement integrated policies to ensure sustainable tourism development models and evaluate and adapt the process accordingly. Basically, the algorithm consists in going through the following 4 phases:

- I. *Diagnostic Phase* (▪Define purpose and goals; ▪Identify key stakeholders; ▪Get the commitment of key stakeholders; ▪Analyse major constraints; ▪Analyse the capacity to implement the reform; ▪Collect and analyse baseline data);
- II. *Solution Design Phase* (▪Development of a high-level reform design; ▪Involve the private sector, public authorities and other stakeholders; ▪Agree on the overall design; ▪Develop and agree detailed legal, institutional, procedural and technological solutions; ▪Develop and agree the implementation plan);
- III. *Implementation Phase* (▪Provide expertise in developing new or amending existing laws and regulations; ▪Train of civil servants; ▪Launch reform procedures; ▪Carrying out outreach and information campaign; ▪Adjust reforms based on the user);

³⁴ The overall vision is to establish a global circular economy where material use and waste generation are minimized, which involves an ecological design approach that promotes the production of diverse items that are easy to manufacture, repair, maintain and recycle, compared with the prevailing culture of making disposable products and difficult to repair.

IV. *Evaluation and Sustainability* (▪ Conduct program evaluation; ▪Ensure that assessment recommendations are incorporated into new procedures; ▪Prepare program reports; ▪Carrying out impact assessments; ▪Fine-tune reforms based on user).

At the micro-level, **designing a digital net-zero institution**, even if it is from the tourism industry or related organizations, which carries out a variety of activities related to the tourism sector (accommodation, food and beverage services, travel agents and tour operators, theatres and opera, theme parks entertainment and marinas, fairs and cultural events) is an important leap that involves educating leaders with a green future in mind.

In terms of readiness for accomplishing this mission, there are 3 dimensions that should be analysed at the institutional level: *organizational*, *functional* and *technical*.

At the *organizational* level is significant to understand the organization culture: if there is an interest for this initiative; how the green-digital transition may affect the stakeholders; which fields of activities will be affected by the changes that will be implemented?

With respect to *functionality*, an analysis of the availability of internal and external resources is required, together with an inventory on human resources that have the expertise to design, develop and carry out the dual transition of the institution.

Regarding the *technical* diagnosis, an inventory of the tools and technologies currently used within the organization is needed to measure the gap between where the organization is today and where it will be after the implementation of various measures.

In this context, it is critical to host strategic conversations at every level to ensure the alignment of all individuals and units around the institutional mission, vision and goals.

The algorithm steps for implementing twin transition within an institution consists in establishing the context (a clear picture of the current situation of the organization), clarifying the state-of-art in terms of twin transition (what is the level of knowledge and expertise in this field), designing the directions for further development and engaging all stakeholders (internal and external, as well).

CONCLUSION: EVERYONE IS A KEY CHANGEMAKER

Tourism industry has serious spill-over effects on the EU economic outlook. Thus, shaping the global and regional agendas of tourism industry is a priority for EU member states.

In this "journey", *multi-stakeholder collaboration* seems to be crucial to foster large-scale change on tourism ecosystem. Leaders at different levels should *collaborate, create, and share best practice*. *Coordination and synchronization* in action are also very important, in order to design creative environments with a high level of adaptive capacity building to current societies' challenges. To design the proper pathway towards a sustainable, green and responsible tourism ecosystem implies to connect with experts and practitioners on specific topics, to enable discussion on *adapting different approaches to various environments*. Therefore, *engaging* the public and private-sector organisations, local producers and services providers, cultural and creative sectors and industries, local authorities, tourism management organisations and local community is essential for *exchange ideas* on tackling challenges and leveraging opportunities for tourism industry. *Academia* could be the perfect space to network and create together a common path to address problems affecting the tourism ecosystem: renewable energies, sustainability, space and security and innovative engineering, investments opportunities, training and skills development, and many more. Also, the other *educational institutions* should be involved in educational activities and raising awareness of local communities.

From my point of view, accelerating "twin" transition of tourism ecosystem requires, among many other things, *transnational sharing of good practice, collaboration* between institutions and states, *innovation* (especially for the public sector), *long-term partnerships* between important actors in the field of tourism and related industries.

Taking everything into consideration, the road to a sustainable, green and responsible tourism ecosystem seems to be a very interesting "journey" filled with lessons and adventures alike. So, everyone is invited to join!

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