

How to mobilize knowledge-based Innovations in Service Industries? A Tourism Example.

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Abstract: Service industries as tourism, cultural industries, finance, and retail are considered as under-represented in the trade and industry portfolio. This paper centres on the tourism industry and pay particular attention to Small and Medium Enterprises (SME). The purpose of the project was to identify SMEs' need for research-based knowledge, relevant topics, and to prioritize R&D ideas suitable for innovation and/or as a cooperation between academic and industry partners.

Three virtual workshops were arranged in the period May – September 2020. All participants represented Norwegian destination associations, regional businesses, and SMEs. As a result of reflections in groups and plenary, specific tourism challenges and knowledge needs were identified. The tourism industry is characterized by many small businesses with few employees, tight finances, and limited resources for development. Challenges are related to seasonal employment, high workforce turnover, lack of strategically market insight, and limited ability to exploit new technology. Businesses are generally vulnerable to changes in demand from the market, which was reinforced by the outbreak of COVID-19.

Three topics were emphasised for developing mutual project concepts and joint applications as a collaboration between the industry and scientific partners: (1) Partnership collaboration, (2) Virtual Tourism, and (3) All-Year Destinations. This paper discusses potential theoretical perspectives and empirical approaches for creation of future joint innovations and studies. Discussions are related to: How suitable are virtual workshops for joint reflection on common challenges and cocreation of prioritized actions? Which challenges and needs are tourism confronted with? What should the tourist industry emphasise in face of the Covid19 pandemic?

An additional result of the workshops is the establishment of a tourism network among the participants, and with an intention to incorporate even more relevant actors. Further, the project has been significant for developing a program for SMB innovations, including both the service industries and additional sectors.

Keywords: Knowledge creation, Service Industries, Tourism, Resilience, Communities of Practice

1. Introduction

During the last 50 years, people have become considerably more physical and virtually connected due to a more modern and mobile world, and new technologies for collaboration and communication (Stene and Fjørtoft, 2020). By increased global mobility and increased transport, people are more connected. At the same time, challenges related to digital transformation and societal interconnectivity, may imply potential new risks. Global trends and changes are affecting and influencing all sectors.

The paper presents a project financed by The Research Council of Norway in 2020. The call was aiming to mobilise service industries for research. Service industries as tourism, cultural industries, finance, and retail was considered as under-represented in the trade and industry portfolio. The accepted projects should contribute to strengthening coordination, planning, and networks with the aim of developing long-term R&D activity. This paper centres on the tourism industry. The purpose of the project was to identify SMEs' need for research-based knowledge, the most relevant topics, and to prioritize two R&D ideas suitable for innovation and/or R&D project as a cooperation between academic and industry partners in 2020 – 2021.

2. Theoretical perspectives

The project is based on three workshops. Theoretical perspectives relevant for the project are related to the questions like: (1) How can the SMEs identify the industry's common challenges and needs based on the actors' experiences? Here theories on knowledge creation and construction will be used as a basis. (2) How can the industry adapt to known challenges and surprises? Resilience perspectives will highlight this question. (3) How can the tourism industry create common strategies for knowledge-based research and innovations? Theories on strategical planning and innovation may put light on this question.

2.1 Knowledge construction and creation – Identifying common challenges and needs

Knowledge creation or construction in an organisation involves individual, social and collaborative processes (Alavi and Leidner, 2001).

(1) Social constructivism theory argues that individuals learn and develop when participating in social activities in the world. Human beings learn and develop in these mutual processes between the individual and society. An early version of social constructivism is represented by Vygotsky's cultural-historical theory (1978). Later, four approaches of this theory have appeared: cultural-historical activity theory, situated learning, distributed cognition and socio-cultural theory (Moen, 2004).

According to Vygotsky, human learning and development occur in social and cultural shaped contexts. As historical conditions are constantly changing, this results in changed contexts and opportunities for learning. Socially developed artefacts are highlighted as mediators between individuals and the social context. *Artefacts* are usually understood as cultural tools, and a part of the material world that modifies throughout history.

Language is perceived as the most significant artefact in thinking, reflection, and learning. Thus, the *dialogue* is essential and spoken communication is a way to take part in the dynamics between the individual and the surrounding world. However, even if language is the primarily artefact, other artefacts are also important in knowledge creation and interaction between people, e.g. writing, schemes, diagrams, pictures, maps, or other conventional signs. In this perspective, computers and digital meetings today may also be important elements in the appropriation of knowledge.

In social constructivism theories, concepts like *zone of proximal development* and *scaffolding* are used to describe how a person can learn alone, and by assistance of or together with others. The zone of proximal development represents the notion that problem solving tasks should be just beyond a participants' current level of development, not too difficult or not too easy. Scaffolding implies what a person can learn by assistance, guide, or help from others. Others may provide scaffolding that support persons until they become competent, and it can be removed.

(2) Knowledge management. Insights from knowledge management literature could offer theoretical and applied possibilities for innovation studies (Asimakou, 2009). She argues that in contrast to theories on knowledge in organisations, the innovation literature is still dominated by the rational cognitivist discourse. However, a fundamental basis for organizational knowledge-creation should focus on the active, subjective nature of knowledge (Nonaka and Takeuchi, 1995). This perspective contrast to the rationalistic information processing paradigm, which dominated organization theory at the end of last century, and their view of the humans as more passive (Nonaka, 1994).

In the knowledge management perspectives, knowledge transfer is considered as occurring between individuals, from individuals to groups, between groups, across groups, and from the group to the organisation (Alavi and Leidner, 2001). For example Nonaka (1994) argue that knowledge implies a meaningful, action-oriented commitment, and describes organisational knowledge creation as a spiral with possible transfer between individuals, groups, organisations and inter-organisational. Individuals may share experiences (and contribute to the social and cultural knowledge construction) in face-to-face interactions, through dialogue and collaboration, and/ or in virtual space interaction and corresponds.

Reflective skills are needed to turn an experience into learning (Boud et al. 1996). Schön (1998) divides reflection in two processes: reflection-on-action and reflection-in-action. *Reflection-on-action* is a process in which the individual reflects on his or her past experiences. In *reflection-in-action*, the individual reflects on what the experience while being engaged in the activity.

According to knowledge management theories, communication processes and information flows drive knowledge transfer in organisations. The concept includes elements like perceived value of the source unit's knowledge, motivational disposition of the source (i.e. willingness to share knowledge), transmission channels, motivational dispositions of the receiving unit (i.e. willingness to acquire knowledge from the source), and the ability to use knowledge. Transfer may use formal (e.g. training) or informal (e.g. coffee breaks, meetings) mechanisms.

2.2 Resilience – How to meet challenges in a changing world?

A proactive approach is important when facing future challenges and knowledge needs, building awareness both regards external (as natural disasters and catastrophes) as well as intern (as own management, capabilities, and culture) factors (Stene and Fjørtoft, 2020).

Resilience Engineering (RE) is a relatively new paradigm that focuses on management of normal daily operations, in addition to management of surprises and changes. Recently, the perspective emphasized the benefits of cooperation and communication in networks. This perspective is relevant as our project focuses on

success (or potential dysfunctional) criteria of network cooperation in normal situations prior to the pandemic, and additional criteria that may be important to handle changed demands as a result of drastically changed circumstances. New criteria and models are needed to handle the future "the new normal".

As society becomes more complex and interrelated, *communities of practices* and networks help single actors overcoming brittleness. To be resilient, the society must adjust its functioning and sustain operations prior, during and after major changes and disasters. Hence, improving resilience in a region requires researchers and practitioners to identify and understand the ways network of stakeholders and local communities may constitute resources for acting and handling in face of surprises and change of contextual conditions. This includes developing knowledge and measures to improve the ability to prevent and managing changes and surprises.

Resilience Engineering (RE) focuses on management of normal daily operations, in addition to management of surprises and changes. RE is the capacity of systems and organizations to anticipate and adapt to changes and the potential for surprise and failure (Woods and Hollnagel, 2006). The *four cornerstones* of resilience to sustain operations include the ability to monitor, respond, anticipate, and learn. Adequate processes depend on providing operators and managers with information about vulnerabilities and the ability to develop new means for meeting them. Resilience theory and concepts development cover the development of tools to ensure that the system keeps (and recovers to) a stable state (Azadeh and Salehi, 2014).

The resilience concept is broad encompassing all individuals and the whole society (European Commission, 2017). Thus, RE perspectives are applied in several research disciplines and sectors (Stene, 2019) covering several society aspects, e.g. risk awareness, culture, socio-economic and geographical conditions. A variety of definitions are used, including resilience as (1) *rebound* from trauma and return to equilibrium; (2) synonym for *robustness*; (3) *graceful extensibility* (opposite of brittleness) when surprise challenges boundaries; (4) *network architectures* that can sustain the ability to adapt to future surprises as conditions evolve (Woods, 2015). Woods distinguish resilience and robustness. While robustness refers to being able to deal well with *known unknowns*, resilience refers to being able to deal well with *unknown unknowns* and handle troubles that were not foreseeable. An increased realization of complexity and how systems adapt to manage complexity, the two latest definitions have recently emerged. Empirical results begin revealing how some systems overcome the risk of brittleness, e.g. the risk of a sudden failure when events push the system up to and beyond its boundaries for handling changing disturbances and variations.

The concept of *polycentric governance architecture* (PGA) is lately introduced in RE to increase the knowledge of how networks cooperate, adapt to future challenges and how it is possible to facilitate adaptive responses as a challenge unfolds (Woods, 2020). The concept is based on an economic approach in the public service industry. A PGA may exist if the decision-making centres take each other into account in competitive and cooperative relationships and are capable of resolving conflicts (Ostrom et al 1961). All systems pursue multiple goals that interact and can conflict (Wood and Branlat, 2011).

Meetings, like CoP, encourage stakeholders to reflect on how goals are being managed. Due to complexity, there will always be gaps between network partners' perspectives on goals and cooperation. The principles in PGA may be used to manage human adaptive systems to recognize signs of operating on the limits and how to have the capacity to move as conditions change.

Despite the popularity of the concept in interdisciplinary contexts, there has been limited systematic development of polycentricity in the common literature (Carlisle and Gruby, 2019). In the RE area, research is building up a set of critical properties of polycentric systems: Reciprocity, commitment to build common ground and to align goals across centres and levels, ability to shift forms of coordination across centres, anticipate bottlenecks ahead, and how initiative is delegated and regulated (Wood and Branlat, 2011). They point at two critical challenges: How to regulate the interactions across centres, and what underlying architectural principles lead to resilience in polycentric systems, i.e. the ability to adapt the system's position in the trade space.

2.3 Innovation and Strategic planning

(1) **Innovation.** Numerous perspectives and research are related to innovation. However, there is no clear definition of what innovation is. The field of innovation is multi-disciplined (economics, finance, organisational behaviour, etc.), studied from many different epistemic traditions, and hence characterised by high inconsistency in terms of assumptions and findings (Asimakou (2009). It is argued that some perspectives may fails to capture the complex nature of innovations and creates a belief that innovation can be managed, if all factors (individuals and contexts) are controlled. Firms are becoming even more complex. Research and theories from the dominant rational cognitive paradigms cannot capture these complexities but aim to control

and manage the unpredictable character of innovation (Asimakou (2009). Further, insights from knowledge management literature could offer theoretical and applied possibilities for innovation studies.

Lim (2000) argue for to use theoretical perspectives from *organizational and system theory*, especially regarding the creation of innovations, processes that deal with coordination, dissemination, and specialization. Knowledge in organisations traditionally distinguishes three types of knowledge: '*knowing how*', which refers to the skills one develops, and is most of the times tacit; propositional knowledge or '*knowing that*', which resembles information, since it is de-contextualised; and '*knowing things*', which is the knowledge of acquaintance.

(2) The strategic perspective of small businesses may affect the motivation for and interest in involving and investing in collaboration with research societies. Even though the literature primarily covers large enterprises (De Wit and Meyer 2014), the fundamentals of strategy for Small and Medium Enterprises (SME) will be the same. *Strategy*, as a discipline, is about understanding why some companies are successful in the long run while others are not. Knowledge of what create long term survival may help organisations through planned or essential changes. Theories on *strategic planning*, including definitions and models focus almost entirely on challenges of creating change across organizational borders and levels. Often the targeting organisations are large companies, having rigid structures, and imply many people involved in the change process.

Change and development may be easier in smaller companies than in larger. In an even more interconnected world, it will also be important to highlight how network of organisations and actors together may contribute to success in change processes and innovations. On the other hand, challenges of making necessary changes or realizing opportunities are probably different in SMEs compared to the large corporations. Some change efforts may be easier than larger companies due to less complex hierarchies and more operative flexibility. At the other hand, change efforts may be more difficult due to lack of competence and capacity to know and make use of available public resources.

Weber et al (2014) notice the need to make clear strategic choices at the right time. Actors "working strategic or with strategy" are fundamentals of strategy (De Wit & Meyer, 2014). Leadership and management competence are vital to achieve desired goals (Ølberg, 2014). New business models for cooperation are developed in several innovation projects based on partnership. Partnership can make project management more efficient, improve risk reduction, and promote technological innovation (Grasman, Faulin and Lera-Lopez, 2008). Partnership barriers may be found in e.g. laws and regulations, political values on which services and responsibility that should be public, private, or voluntarily (Ølberg, 2014). *Communities of Practice* (CoP) is an approach for sharing information, collective learning and knowledge development (Pohjola and Iskanius, 2014).

3. Methodology

The project was accomplished in the period May – September 2020 and comprises three workshops.

3.1 Sample

The participants in all three workshops represented Norwegian destination associations, regional businesses, and SMEs. Few of the participants knew each other beforehand. A separate invitation to each workshop was sent to Norwegian enterprise by e-mail. The number of registered participants was about 20 for each of the workshops. However, only 8-12 logged on at each workshop.

3.2 Procedure

Due to the Covid19 pandemic, the workshops had to be arranged as virtual meetings. Each workshop took place in the morning and lasted for four hours. The registered participants got and Outlook invitation with a link to a Teams meeting.

The schedules for the three workshops were based on the same procedure plan:

1. Welcome – (a) Information about of the project, (b) Presentation of participants.
2. Objective of workshop – participants' expectation compared to the defined objectives.
3. Agenda
4. Teamwork (1) – Individual reflection, teamwork, and plenary presentation
5. Teamwork (2) – Individual reflection, teamwork, and plenary presentation
6. Summary of workshop and follow up actions.

The workshop goals were deviant but were linked to each other. One *common objective* (OI) between all three workshops was related to the workshop process – (a) Experience exchange, (b) Active participation including suggestions, reflections, and dialogue, in addition to (c) Building networks for creating collaboration projects.

Specific objectives related to the particular workshops were respectively – Workshop 1 (OII) (a) To identify Small and Medium Enterprises' (SME) challenges and knowledge needs, (b) Suggest areas and measures targeting the development and strengthening of R&D activities, Workshop 2 (OIII) (a) To suggest specific measures aiming at develop and strength R&D activities in the tourist enterprises, (b) To identify businesses that may be involved in competence and collaboration projects financed by the Norwegian Research Council, Workshop 3 (OIII) (a) To suggest measures aiming at developing and strengthen joint R&D activities and innovation projects between tourism industry enterprises and academical partners, (b) To identify SMEs interested in innovation implementation as a cooperation with academical partners.

The teamwork topics for were related to the tourism industry – Workshop 1: (1) Challenges and knowledge needs and (2) Adaptability and improvements, Workshop 2: (1) Potential measures and (2) Ideas to competence and collaboration projects, Workshop 3: (1) Potential measures and (2) Ideas to innovation projects.

4. Results

4.1 The tourist industry – Challenges and knowledge needs

One purpose of the of the tourism project was to identify knowledge need as a basis of developing innovations and R&D projects as a cooperation between potential partners.

Workshop 1 identified future challenges and knowledge needs. The participants described the Norwegian tourism industry as characterized by many small businesses with few employees, tight finances and limited resources for competence development and innovations. Many are often located in rural areas.

Challenges are related to seasonal employment, high workforce turnover, lack of strategically market insight, limited ability to exploit new technology, in addition to logistics and transport of products due to their rural location.

Small businesses, as SMEs, are generally vulnerable to changes in demand from the market. One comment here is that the workshops were arranged in the early stage of COVID-19, and it later became obvious that the tourism industry was brittle in facing challenges as the outbreak of the pandemic.

Knowledge needs mentioned in the workshop are related to SMEs' limited resources for investments in innovation, competence, and strategic development. To participate in R&D activities and competence-based innovations, all three workshops called attention to SME's need for collaboration in networks and/or with other enterprises, in addition to support and relationship with academical partners.

4.2 Creation of scenarios and prioritizing topics

Even though they have several common challenges, small tourism businesses rarely make time to connect with similar or relevant actors. Thus, the workshops were mainly dedicated to experience exchange, teamwork, and discussion. Usually, workshops are well suited to enhance dialogue, reflection and creating a common understanding based on the individual experiences. These workshops were originally meant to be arranged as physical face-to-face meetings. However, the pandemic made it necessary to use digital technology – and Teams as a platform - as an artefact for communication, information and experience exchange.

The reflections in groups and plenary included both successes, failures, improvements, and new measures. In addition to prior challenges and knowledge needs, the Covid19 pandemic resulted in a radical and unexpected change to the industry. Scenario creation understandably was influenced by this new situation.

All workshops pointed at the usefulness of collective reflections, exchange of competence and experience, in addition to create collaborative networks including operational practices and academical institutions. Several existing clusters were mentioned to be included in future Communities of Practice (CoP).

4.3 Relevant tourism measures

In challenging times, the ability to innovate and collaborate across regions and sectors, can be a valuable strategy. The workshops have created a basis for developing relevant tourism measures. The workshop participants together created a common understanding of challenges and needs, and prioritized measures suitable for knowledge-based innovations and R&D studies. *Three topics* are central in all three workshops: (1) Partnership collaboration, (2) Virtual Tourism, and (3) All-Year Destinations. The participants in the workshops

underline that the challenges must be met by uniting efforts through increased *strategic cooperation*. More knowledge is needed on how cooperation can contribute to the development of the tourism industry. This includes how a local tourism company can strengthen the travel destination by collaborating with other regional companies offering tourist services – such as culture, food and traditional commodity-producing industry.

The first workshop included challenges and knowledge needs and prioritized the following subjects: (1) Education and competence enhancement by means of digital tools and technologies, (2) Business models for destination associations, and (3) Models for collaboration across regions and sectors. *Workshop 2* – focusing on construction competence projects – in a prioritized order pointed on the following subjects: (1) Collaboration models for product and service development, (2) Sustainable transformation and adaptability, and (3) New technology related to marketing and communication strategies. Further, *workshop 3* – focusing on creating innovation projects – prioritized these topics: (1) Virtual Tourism, (2) All-Year Destinations, and (3) Business development by trainee and mentoring programs, (4) Trend and marketing analysis, in addition to (5) Network collaboration.

5. Discussion

5.1 How suitable are virtual workshops for joint reflection on common challenges and cocreation of prioritized actions?

When the first theories on knowledge creation and construction presented in this paper was developed, the main communication took place in face-to-face meeting and education, in addition to books, and to a smaller extent by telephone. The artefacts supporting these processes were spoken and written language. With the digitalisation, other media is becoming more usual. Common artefacts in early social media were written language and pictures. Today the interface also includes one-way communication by sharing films and videos. Lately, two-way communication and virtual meetings have become possible by the introduction of internet and a rapidly developing infrastructure supporting web communication. One question is how suited these channels are for knowledge creation and construction.

At the time of sending the invitation to the workshops, it was unclear whether they could be arranged as physical or digital events. The arrangements were free of charge. Of the registered participants about half of them joined the virtual meetings. This may partly be due to being unfamiliar with how to join virtual meetings and lack of sufficient technological equipment. However, since then, virtual meetings have been a far more normal way of arranging seminars, conferences, and workshops.

All theoretical perspectives presented in this paper, emphasize dialogue and reflection as important processes. The persons in charge of the arrangements, were to some extent unfamiliar as facilitators of digital discussions and work processes. As the workshops was planned as considerable active involvement and user participation both in the teamwork and plenary sessions, we were quite curious about how the processes would turn out. Beforehand, the registered participants were divided in two groups based on geographical belonging and type of enterprise. In some cases the purpose was to create homogeneous groups, and in other cases the intention was to base the work on more heterogenous groups. The intention was to remix the groups from teamwork 1 to teamwork 2. However, this was changed during the presentation session because several did not show up, in addition to the fact that some were quite unfamiliar with virtually switching between groups. After rearranging the groups in the plenary session, the structure in two group remained unchanged the rest of the day. The facilitators were responsible for each of the groups.

The facilitator's role and responsibility made additional demands on the competence as a process manager. Originally, one of the participants was planned to summarize the discussions and another present the group's work in a following plenary discussion. Also this was changed. To obtain a relaxed atmosphere and focus on experience exchange and reflection, the facilitator became also responsible for taking notes and summing up. In most cases one of the participants represented this in a following plenary session.

Another aspect regarding facilitator competence, was challenges leading a virtual group. It may be hard to catch individual's gestures and non-verbal language as indicators of engagement or catch the chairman's eyes. As a result, the participants agreed on having microphone and camera on. A virtual meeting require that the facilitator involve all participants and controls the order of speakers. In addition to using the voice to ask for a comment or contribution, one agreed on also using the virtual sign of raising the hand. To have a good process, this also require some participant competence and discipline.

Virtual meetings must be more structured than face-to-face meetings. One advantage is that all participants follow the same dialogue and speak one at a time. Other advantages may be that virtual meetings are also

time and cost efficient by avoiding travel, in addition to being independent of geographical location. On the other hand, one of the drawbacks in creating processes are the absence of common breaks. Here people may mingle with anybody, the subjects are not fixed and defined, and they are freely to exchange experiences, stories, and propose ideas and possible solutions.

At the end of the day, the process was evaluated by the participants. How did they experience the process? How did they consider the virtual workshop as an arena for discussion and reflection? Were their expectations and the goals of the workshop met? The feedbacks were generally positive. The workshops were regarded as useful as an arena for creating future scenarios and to reflect upon how the tourism industries together may meet foreseen or unexpected changes and challenges. Several of the participants chose to join more than one of the workshops.

5.2 Which challenges and knowledge needs are tourism confronted with?

Relatively few SMEs are engaged in knowledge-based learning and continuous development. The cause of arranging the workshops was to mobilise service industries for innovations and R&D studies. This project should contribute to strengthening coordination, planning, and networks with the aim of developing long-term R&D activities.

During the last 50 years, people have become considerably more physical and virtually connected due to a more modern and mobile world, and new technologies for collaboration and communication, such as mobile phones, satellites and internet (Stene and Fjørtoft, 2020). The development implies challenges due to continuous technological, context changes and increased complexity.

Based on the workshops, SMEs may be characterized by having limited resources for investments in innovation, competence, and strategic development. Resilience is a response to the increased complexity in interconnected and interdependent complex socio-technical systems, organizations and society.

The resilience perspective emphasizes the benefits of cooperation and communication in networks. Due to complexity, there will always be gaps between network partners' perspectives on goals and cooperation.

The concept of polycentric governance architecture (PGA) may be used to increase the knowledge of how networks cooperate to be flexible as a network and to support each other to meet current and future challenges. Critical properties of polycentric systems are e.g. reciprocity, to develop common goals across participants, and to develop an ability to shift forms of coordination across centres.

After the workshops, most of the participants have together with SINTEF established a Community of Practice. More SMEs and related enterprises are invited. The purpose is to continue the workshop processes, create project proposals and find financial support for joint activities. However, one challenge is to maintain and develop this *Tourism-Community of Practice* (T-CoP). The T-CoP is an arena for the partners to discuss actions and results to ensure relevance to the tourist industry. Future cooperation requires partner engagement, coordination and development of R&D and innovation project.

SMEs are generally vulnerable to changes in market demands, which was reinforced by the outbreak of COVID-19. From the resilience perspective, the principles in PGA (polycentric governance architecture) may be used to manage human adaptive systems to recognize signs of operating on the limits and how to have the capacity to move as conditions change.

5.3 What should the tourist industry emphasise in face of the Covid19 pandemic?

During the last year numerous projects and arrangements have targeting how to handle challenges related to Covid19. Some concerns are about the competence on handling rare and sudden changes, others are concerned health, financial and societal effects. Globally, several sectors and functions are highly influenced, including medical supplies, transport, information, and communication. The tourism sector has turned out to be very vulnerable. Both theoretical perspectives on resilience and strategical planning may be useful as a basis for creating studies and innovations to meet such challenges.

The results from this project indicate that challenges SMEs in the tourism industry are related to e.g. lack of strategically market insight and limited ability to exploit new technology.

Various sectors have special characteristics and must develop targeted strategies to manage future changes, whether they are surprises or expected. The tourism industry should base their measures on sector knowledge regarding challenges. This comprises the effort to create a variety of scenarios and to develop strategies to be prepared, handle them, and learn from successes and failures.

Further, the world is becoming more global, interconnected, and complex. Facing globally challenging events like the pandemic, cannot be managed in silos by each sector. There is a need for more cross-sectorial and multidisciplinary approaches. More empirical evidence is necessary regarding lessons learned from the current

pandemic, in addition to develop models, methods and theoretical perspectives on future regional, national and international innovation activities.

Horizon Europe (HE) empathizes that it becomes even more relevant to study our ability to cope with and thrive despite difficulties. HE strategic plan 2021 – 2024 point out four key strategic orientations for research and innovation, among them resilience: (A) Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains to accelerate and steer the digital and green transitions through human-centred technologies and innovations. (B) Restoring Europe's ecosystems and biodiversity, and managing sustainably natural resources to ensure food security and a clean and healthy environment. (C) Making Europe the first digitally enabled circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems. (D) Creating a more resilient, inclusive and democratic European society, prepared and responsive to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions.

Based on challenges and knowledge needs called attention to in the workshop, three topics are later chosen for developing project common proposals: (1) Partnership collaboration, (2) Virtual Tourism, and (3) All-Year Destinations. The project proposal related to "Partnership collaboration" is already developed and includes some of the originally workshop participants in addition to some new partners. Theoretical and empirical perspectives are based on knowledge management, organisational development, and resilience engineering. The project focuses on facing both expected challenges to the tourism industry and unexpected challenges as e.g. the Covid19 pandemic.

Drafts regarding the two other topics are created, but at present not as complete proposals. However, in both partnership, theoretical perspectives form knowledge management, resilience and strategic planning are relevant.

6. Conclusion

The workshops identified challenges, knowledge needs and proposed relevant topics for developing common innovations and R&D studies between SMEs in the tourism industry. An additional result of the workshops is the establishment of a tourism network among the participants, and with an intention to incorporate even more relevant actors. Further, the project has been significant for developing a program for SMB innovations, including both the service industries and additional sectors. Perspectives on resilience, knowledge management and strategic planning may be useful as a basis for future innovations and R&D projects, empirical experiences, and theoretical development. HE Strategic plan 2021-2024 (page 12): "*Creating a more resilient, inclusive and democratic European society, prepared and responsive to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions.*"

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