How do stakeholders co-create value in a service ecosystem? Insight from mega-events

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Abstract
Purpose – This paper looks at how stakeholders co-create value at mega-events from a service ecosystem perspective. Despite the growing interest, little is known about how value is co-created through such initiatives for individual stakeholders and the community.

Design/methodology/approach – Drawing on institutional and stakeholder theory, the study focuses on Cortina 2021, the World Ski Championships held in Italy in February 2021. It investigates how multiple actors co-create value within a service ecosystem through qualitative interviews with key stakeholders combined with the analysis of official documents and reports.

Findings – The research established that key stakeholders were willing to get involved with Cortina 2021 if they recognised the value which could be co-created. Such an ecosystem requires a focal organisation with a clear regulative and normative framework and a common cultural basis. The latter helped resilience in the extraordinary circumstances of Cortina 2021 and safeguarded long-term impacts, even though the expected short-term ones were compromised.

Practical implications – From a managerial point of view, the evidence from Cortina 2021 shows how a clear strategy with well-defined stakeholder engagement mechanisms can facilitate value co-creation in service ecosystems. Moreover, when regulative and normative elements are blurred because of an extraordinary circumstance, resource integration and value creation processes need to be entrusted to those cultural elements that characterise an ecosystem.

Originality/value – The study takes an ecosystemic approach to mega-events to explore value creation for the whole community at the macro level, not only at the individual or organisational level, even during a crisis, which greatly impaired the preparation and running of the event.

Keywords Stakeholder engagement, Institutions, Value co-creation, Event management, COVID-19

1. Introduction
Mega-events have the power to capture global public attention and often require significant financial investments in infrastructure and services (Getz, 2008). They can both enhance the image of destinations with significant short-term benefits, such as boosting tourism in host communities and leaving long-lasting positive or negative legacies (Hogg et al., 2021; Müller, 2015). Since they serve as platforms for creating value involving various actors working together to achieve specific goals (Pera et al., 2016), they can be conceptualised as service ecosystems, that is, communities of “hierarchically independent yet interdependent heterogeneous participants who collectively generate an ecosystem output and related value offering” (Thomas and Ritala, 2022, p. 3). Despite that much literature has focused on service ecosystems in recent years (see Gölgeci et al., 2022), there is still limited
understanding of what value is co-created for whom and what the co-creation processes and mechanisms are within the ecosystems (Bentzen, 2022).

In more detail, scholars have emphasised the need for further examining actors' characteristics and salience (Buser et al., 2022) together with their engagement (Viglia et al., 2023; Wang et al., 2023). Engagement has primarily been studied at the individual level, i.e. at the consumer level (Hollebeek et al., 2021a, b), while there is a need to consider it within multi-actor contexts, addressing the question of what makes stakeholders engaged (Loureiro et al., 2020). More than that, previous research has outlined the role of institutions and institutional arrangements within ecosystems (Koskela-Huotari et al., 2016); nonetheless, only a few studies have focused on the specific institutional elements governing stakeholder interactions and engagement (Kleinaltenkamp et al., 2018; Razi et al., 2022). Even fewer studies have examined how they change in response to external forces (Kleinaltenkamp et al., 2018; Thompson-Whiteside et al., 2023). Hence, exploring stakeholder interactions during external shocks may yield new insights into how service ecosystems adapt, recover, and ensure service continuity (Brodie et al., 2021; Kabadayi et al., 2020) and the resilience of relationships (Runfola et al., 2023). Lastly, while the significance of value co-creation is acknowledged in general in industries emphasising experiences such as tourism (Mohammadi et al., 2021), there is scant evidence regarding the nature of the value co-created and the underlying mechanisms in specific sectors such as mega-events, whether cultural or sports-related (Cook et al., 2023; Dameri and Demartini, 2020; Pera et al., 2016). Hence, mega-events offer a unique setting to explore the research gaps outlined above and delve into the co-creation mechanisms and the value generated in service ecosystems.

Following the above, this study addresses three main research questions:

RQ1. What is the nature of the value created within mega-event service ecosystems?

RQ2. How is value co-created, that is what are the value co-creation mechanisms and what determines the importance of the stakeholders within such an ecosystem?

RQ3. How can service ecosystems grant the continuance of value co-creation during extraordinary times?

The study applies a qualitative methodology focused on the exploratory case study (Langley and Abdallah, 2011; Yin, 2014) of the Cortina 2021 FIS Alpine World Ski Championships, a mega sports event held amidst the 2019 pandemic crisis. The originality of this work lies in its innovative approach to mega-events adopting a service ecosystem perspective to appreciate value co-creation processes (Buser et al., 2022) with their impacts and legacies (Preuss, 2015). The study draws its theoretical foundations from institutional theory (Scott, 2014) and stakeholder theory (Freeman, 1984) since service ecosystems must align with stakeholder expectations and prevailing institutional pressures to access critical resources, attract investments, and ultimately facilitate value creation and co-creation processes (Qi et al., 2023).

This study’s findings offer valuable insights for stakeholder and ecosystem management, particularly during difficult times, as the Cortina ecosystem had to navigate and overcome the challenges posed by the COVID-19 pandemic to continue creating value.

2. Theoretical background

2.1 Service ecosystems

The concept of service ecosystems has emerged with the theoretical developments brought forward by the service-dominated logic and the broadening of business boundaries beyond a single organisation to an interconnected set of actors (Vargo and Lusch, 2004, 2016). There are several definitions of service ecosystems (see Brozović and Tregua, 2022, for a complete review). For Adner (2017), service ecosystems are “the alignment structure of the multilateral set of partners that need to interact for a focal value proposition to materialise” (p. 42). Instead,
Vargo and Lusch (2016) define service ecosystems as “a relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange” (pp. 10–11). Likewise, Brozović and Tregua (2022) define them as “a set of social and economic actors in a context shaped by institutions, with actor-to-actor structures continuously recreated for mutual value creation” (p. 10). Within service ecosystems, multiple actors at different levels (i.e. macro, meso, and micro) interact, matching and integrating resources to obtain valuable outcomes (Carida' et al., 2022). Several authors refer to “actors” as “stakeholders” to reflect their individual contributions and ecosystems’ dynamic aspects (Frow et al., 2015; Pera et al., 2016).

Although there has been a growing interest in service ecosystems (Brozović and Tregua, 2022; Gölgeci et al., 2022; Mustak and Plé, 2020; Thomas and Ritala, 2022), there are still several issues that require further investigation. The literature studying service ecosystems focuses on aspects such as actors’ motivations (Pera et al., 2016), resource integration and service ecosystem orchestration (Breidbach et al., 2016; Carida' et al., 2022), institutions and institutional arrangements (Koskela-Huotari and Vargo, 2016; Vink et al., 2021).

However, as Bentzen (2022) observed, co-creation studies are more concerned with identifying the conditions for the emergence of co-creation rather than analysing its specific mechanisms and outcomes. Additionally, only a few investigations have framed the question of which institutional elements influence behaviours within the ecosystem (Scott, 2014). Examples of such research include the studies of Kleinaltenkamp et al. (2018), which examined the development of institutions in three different service ecosystems; Razi et al. (2022), which studied the institutional performance of salespersons in a B2B setting; and Thompson-Whiteside et al. (2023), which observed how the emergence of proto-institution in-between actors contributed to the formation of a new service ecosystem. This gap in research becomes even more important when ecosystems are under the pressure exerted by profound external developments, which stimulate changes in institutional arrangements that are inconsistent with those that previously governed the ecosystem (Kleinaltenkamp et al., 2018). Investigating such changes may help appreciate how service ecosystems react, recover, and ensure service continuity after an external shock (Kabadayi et al., 2020).

Finally, the existing literature on service ecosystems leans heavily toward conceptual works and requires empirical investigations, as highlighted by Brozović and Tregua (2022). Empirical studies, especially within culture and sport-related ecosystems (Cook et al., 2023; Dameri and Demartini, 2020; Pera et al., 2016), can provide valuable co-creation-related evidence in this domain and help, for instance, address the questions raised by Buser et al. (2022) regarding the characteristics of actors within ecosystems.

2.2 An institutional perspective

An ecosystem is formed, shaped and redefined by the performance and development of the institutions that characterise it. Institutions are “systems of established and prevalent social rules that structure social interactions” (Hodgson, 2006, p. 2) and “comprise regulative, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life” (Scott, 2014, p. 56). Thus, institutions are prescriptive social elements that rest on three main pillars: regulative elements (i.e. rules and laws by governing bodies), normative elements (i.e. social values, norms, and obligations), and cultural-cognitive elements (i.e. common societal beliefs and shared understanding). The three pillars encapsulate the gamut of aspects that, in a non-mutually exclusive fashion, shape social interactions between actors. Specifically, regulative institutions have a coercive nature and are accompanied by rule-setting, monitoring, and sanctioning activities. Normative institutions define objectives and the proper way to pursue them, while their infringement is not legally sanctioned but is related to a sense of shame or disgrace connected to the inappropriateness of
the performed behaviour. Lastly, cultural-cognitive institutions are “the most informal, taken-for-granted rules and beliefs [...] that guide behaviour” (Desa, 2012, p. 729). Compliance with such institutions is related to certitude, confidence, and non-compliance to negative feelings such as confusion or disorientation (Scott, 2014).

Institutional theory has been used to explain the governance of organisations and firms even before the emergence of service ecosystems (Mason et al., 2007). In a service ecosystem, the value co-creation process is governed by institutions, as these rules, norms, meanings, symbols, and practices (Vargo and Lusch, 2016) stir interactions (Russo-Spena et al., 2017), enabling or constraining individual actors’ behaviours and interactions, consequently dictating how the value generative process in an ecosystem occurs (Tregua et al., 2021). Thus, multiple institutional arrangements coexist within the ecosystems, adding to the complexity of value creation (Koskela-Huotari and Vargo, 2016). Some authors have investigated how institutions work within service ecosystems and how these define the overall outcomes (Frow et al., 2019; Gao et al., 2022; Polese et al., 2018). However, previous analyses do not offer a detailed analysis of the cardinal elements (i.e. pillars) on which the institutions which shape actors’ behaviours are based. The different actors of service ecosystems may structure social interactions around compliance with different regulative, normative, and cultural-cognitive elements. Given that the ecosystem’s performance is also determined by the capacity of its actors to interact and co-create value (Tsou et al., 2019), it appears crucial to have a deeper understanding of the elements defining actor-to-actor interactions.

2.3 A multi-stakeholder perspective

Stakeholder theory claims that an organisation’s core purpose is to create the maximum value for its stakeholders by embracing joint interests, advocating a cooperative strategic posture, and rejecting a narrowly economic view of organisations (Freeman, 1984). Over time, stakeholder theory has evolved to view multi-actor networks as ecosystems and has come to appreciate the importance of creating value for individuals and organisations with their assets, relationships, and interactions (Chang, 2020; Frow et al., 2015). This understanding is well-captured by recent developments in stakeholder theory (McGahan, 2021, 2023), which primarily uses economic and legal arguments to explain why stakeholders maintain their connections with an organisation. The premise is that stakeholders remain engaged if they anticipate and receive suitable returns for their contributions (Popovic et al., 2024), an insight which can easily be extended to ecosystems and their actors.

In general, stakeholders can be internal, such as employees and shareholders or external, such as customers, suppliers, public entities, and community associations. Organisations should understand how their interests align with those of their stakeholders so that they can work together, appreciating that business success depends on long-term cooperation that satisfies relationships that create value (Best et al., 2019). This also applies to mega-events, as such service ecosystems are characterised by numerous mutual interactions among actors like organisers, international sponsors, local businesses, public entities, and residents that foster business development and value creation (Hjalager and Kwiatkowski, 2018; Pera et al., 2016).

In such a multi-faceted environment, organisations need to appreciate stakeholder salience, which is the degree to which organisations should prioritise competing stakeholder claims according to attributes such as power, legitimacy, urgency, responsiveness, and feedback (Best et al., 2019; Mitchell et al., 1997). Stakeholder motivation, resources, governance, organisational structure, and engagement are also important drivers of value co-creation (Mohammadi et al., 2021). Additionally, contextual factors such as political-legal, economic, social, and technological aspects can influence stakeholder engagement (Loureiro et al., 2020).

Recent research has focused on different types of stakeholder engagement (behavioural, cognitive, and emotional) and highlighted that they relate to specific stakeholder actions,
such as cooperation, collaboration, and co-creation (Viglia et al., 2023). The intensity of stakeholder engagement can vary from emotionally indifferent to enthusiastic and from cognitively uninterested to fully absorbed, which has implications for their resource investments in terms of efforts, duration, and activeness (Wang et al., 2023).

2.4 Value in mega-events

Over time, the conceptualisation of value co-creation has overcome the provider-user relationship initially envisaged by service-dominated logic (Vargo and Lusch, 2004) to embrace a wider “joint, collaborative, concurrent, peer-like process of producing new value, both materially and symbolically” (Galvagno and Dalli, 2014, p. 644). Thus, the recent value co-creation frameworks (Chang, 2020) consider interactions across multiple actors and provide a basis for understanding the roots of value co-creation from a service ecosystem perspective (Best et al., 2019), where value co-creation describes a collaborative and collective process generating shared value among multiple stakeholders engaged in the same service provision process (Vespestad and Clancy, 2019). Resource integration is considered a precondition of value creation and comprises all those interactions between an ecosystem’s actors (Peters et al., 2014). Value co-creation can occur through four mechanisms, which correspond to the four stages of service provision (Nabatchi et al., 2017): co-commissioning during the resource allocation stage, where resources and outcomes are determined; co-design during the planning phase; co-delivery when the service is provided to users; and co-assessment during service evaluation (Best et al., 2019; Garlatti et al., 2019).

The value created can be either internal or external (Mason et al., 2020). Internal value can take the shape of associational value, which enhances visibility, awareness, and support; transferred value, which involves increased resource allocation; interaction value, offering learning opportunities and network access; and synergistic value, fostering innovation or prompting organisational and behavioural change (Austin and Seitanidi, 2012; Best et al., 2019). External value can be perceived as service efficiency through cost reduction or increased outputs, service quality reflected in coverage, differentiation, or customisation, and service outcomes measured by stakeholder opt-in, loyalty, and retention (Hollebeek et al., 2019; Jaakkola and Alexander, 2014).

Concerning specifically mega-events, numerous authors have explored the prerequisites necessary for them to generate value and yield positive impacts and legacies. These prerequisites encompass effective collaboration and engagement among relevant stakeholders (Getz, 2008), robust strategic planning and event management (Jones et al., 2022), ensuring infrastructure and venues are prepared in time to avoid hastily applied “quick fixes” (Burbank et al., 2002; Müller, 2015), and, crucially, garnering social and community support. Generally, local communities are willing to bear the costs associated with hosting an event as long as they perceive the benefits to outweigh them (Jackson, 2008; Pappas, 2014).

2.5 Impact and legacies of mega-events

Events can be seen as transformative processes, a catalyst for change. Specific inputs – encompassing all the necessary elements for events to unfold, including bidding, facility development, and marketing costs – are canalised into the event, producing diverse outcomes (Getz and Page, 2016). These outcomes encompass both desired and undesired effects, including externalities. While economic benefits serve as the primary driving force behind events, it has become crucial to closely examine additional outcomes, commonly referred to as social (or socio-cultural) and environmental impacts (Andersson and Lundberg, 2013; Musgrave, 2011; Musgrave and Raj, 2009). This shift in event impact assessment reflects a move towards holistic evaluations incorporating multiple aspects, known as the triple-bottom-line approach (Fredline et al., 2004). This approach frames both positive and negative outcomes, recalling value co-creation and co-destruction processes (Lumivalo et al., 2024).
Economic aspects concern the returns generated by an event because of an increase in tourists, new business opportunities, and a rise in tax revenues. Social impacts involve an appraisal of the mega-events influences on individual stakeholders’ and hosting communities’ quality of life. Such effects may regard the creation of social cohesion, creating more accessible destinations, improving sports participation and health, or even improving locals’ employability and skills thanks to their volunteering (see Mair et al. (2023) for a recent review). Moreover, events may generate higher environmental awareness or be bound to preserve natural environments (Death, 2011; Li and McCabe, 2013), thus having a positive impact on the environment. Notably, there may also be negative economic, social, and environmental impacts, such as a rise in inflation, a resident exodus, more waste, resource abuse, pollution and carbon emissions, vandalism cases or an increase in antagonism between those who benefit from a mega-event and those who are left out or lose out (Liu and Wilson, 2014; Wood, 2006).

Many studies have adopted the triple-bottom-line evaluation models to assess events, employing varied methodological approaches. For instance, both Baroghi et al. (2021) and Singh et al. (2020) adopted a qualitative approach to analyse events’ impacts by relying on the opinions of panels of experts. Conversely, Andersson and colleagues (Andersson et al., 2016; Andersson and Lundberg, 2013) used a quantitative methodology, integrating survey data with other sources, while Bandi Tanner et al. (2018) proposed and tested a synthetic index for assessing events’ economic, social, and environmental impacts. Other scholars relied on frameworks other than the triple-bottom-line. They used specific methodologies (e.g. econometric modelling, cost-benefit analysis, return on investment assessment, computable general equilibrium models, contingent valuation, and life-cycle assessment, including carbon footprint analysis) to measure specific events’ impacts. Some recent examples of value assessment studies are Bronzini et al. (2020), who studied the short and long-term economic impact of Rome’s 2000 Great Jubilee via econometric modelling; Fourie and Santana-Gallego (2011), who used a standard gravity model to study the impact of several mega-event on tourism flows; Cavallin Toscani et al. (2022), who focused on the environmental impact of four events using life-cycle assessment; Zhong et al. (2021), who relied on contingent analysis offered an estimated of the traffic-related social cost of 2018 Canton Fair; or, finally, Davies et al. (2019), who used the social return on investment framework to evaluate the participation in sports in England in the 2013–2014 period.

The leitmotif behind the study of mega-events impact is that these undoubtfully affect the surrounding context in the long run (Thomson et al., 2019). On the one hand, mega-events are often viewed as a chance for urban renewal and regeneration due to significant investments in venues and infrastructure, which can be an opportunity for redevelopment and revitalisation of local communities by creating internal and external value for stakeholders and the ecosystem. On the other hand, mega-events may become a squandering of public funds and resources (Hogg et al., 2021). This value destruction phenomenon is usually referred to as “mega-event syndrome” (Müller, 2015). This may be appreciated by looking at the so-called “white elephants” – such as the semi-abandoned Olympic Villages symbolising the wastefulness of money and the deterioration mega-events can lead to. These long-term impacts are referred to as legacies and are the “planned and unplanned, positive and negative, tangible and intangible structures created for and by a sports event that remains longer than the event itself” (Preuss, 2007, p. 211). As per Preuss’s (2007) definition, it is important to notice that not only infrastructures but also other elements such as improved destination image, culture, health and education at the community level may be considered as legacies of an event. The same author recently proposed a broader definition of legacy, stating that these are outcomes that affect people and space caused by structural changes that stem from the event. Hence, a legacy may be considered “not the structural change, but is rather the consequence of this change” (Preuss, 2019, p. 4).
This study also explores the Cortina 2021 mega-event’s impacts and legacies. For its impacts, i.e. the short-term effects, this investigation adopts the triple-bottom-line approach, shedding light on their nature and framing them into economic, social, and environmental categories. Instead, for analysing the legacies, i.e. the long-term effects, this paper relies on the categorisations of event-driven structural changes suggested by Preuss (2019), which differentiates among seven typologies: urban development, environment enhancement, policy and governance, human development, intellectual property, and social development.

3. Methodology
This research adopts a qualitative approach to examine how various stakeholders involved in a service ecosystem collaboratively create value. An exploratory case study permits the analysis of a phenomenon in its setting and enables exploring and accessing context considering the perspectives of all actors involved, which might not be fully discerned or framed through quantitative methods (Marshall and Rossman, 2014; Yin, 2014).

The analysis focused on a single case study, the Cortina 2021 mega-event, and it investigated how the multiple actors’ interactions at different ecosystem levels fostered the emergence of a service ecosystem in a mega-event setting (Carida’ et al., 2022). Several in-depth qualitative interviews were carried out and combined with secondary materials, such as the Foundation’s Memorandum and Articles of Association, planning and progress reports to converge towards an overall illustration to be discussed in light of the extant literature (Mele et al., 2018).

3.1 Setting
This study focuses on the Cortina 2021 World Ski Championships, a sporting event organised in February 2021. Cortina d’Ampezzo has been a UNESCO World Heritage Site since 2009. Cortina is a place for major winter sporting events with ski slopes of all types and degrees of difficulty. In 1956, it hosted the Winter Olympics Games, the first broadcast via television, making it world famous.

The Cortina 2021 Foundation, the organising committee of the World Ski Championships, was founded in December 2015 by FISI (the Italian Winter Sports Federation), the Municipality of Cortina, the Province of Belluno and the Region of Veneto. The founding members aimed to create a body that would bid for the Championships, and once the event was awarded, it would catalyse all local, national, and international stakeholders to organise the event and promote Cortina. As a result, over 100 million Euros were invested in Cortina 2021 from European, national, regional and local funds, primarily administered by the Foundation and used to improve ski slopes, related services, local infrastructures and hospitality and recreation facilities. A mega-event such as the 2021 World Ski Championships was important for Cortina to revitalise its image as a prime winter sports destination and an innovative and sustainable tourist destination.

3.2 Qualitative interviews
Data collection occurred between 2019 and 2021. The study employed in-depth interviews, each lasting 40–60 min, with key stakeholders involved in organising the Cortina 2021 event. Eleven interviews were conducted in 2019, capturing the pre-pandemic planning stages.

Fifteen interviews took place in late 2020 after the COVID-19 pandemic significantly impacted Cortina 2021’s organisation. Following the event, four “control interviews” were conducted in May 2021 to assess its outcomes and lasting effects on Cortina.

Due to pandemic restrictions, interviews with athletes, team members, or event attendees were impossible during the event. Eleven of the fifteen interviewees during the pandemic had
already participated in 2019. Similarly, all four participants in the control interviews were previously interviewed. This approach enabled researchers to compare how the evolving situation, including the pandemic’s emergence, influenced the Cortina ecosystem. Details about the respondents are provided in Table 1.

The study employed a purposive sampling approach to select interviewees. This approach targeted stakeholders directly involved in the event organisation (Maruster, 2013). To ensure a high-level perspective, we selected participants holding managerial or equivalent decision-making roles within their specific activities within the ecosystem. Additionally, our sampling strategy involved stratification, distinguishing between internal and external stakeholders. The former comprised representatives from the Cortina 2021 Foundation, its four founding members, and the Dolomiti DMO, i.e. the marketing agency of Belluno Province responsible for promoting Cortina 2021. All other participants were categorised as external stakeholders.

The questions were derived from previous literature on multi-stakeholder engagement for value co-creation (Best et al., 2019; Hjalager and Kwiatkowski, 2018; Pera et al., 2016). Three separate interview protocols were developed: one for internal stakeholders, the second for external stakeholders, and the third for post-event interviews to appreciate what had been achieved, considering positive impacts and critical issues. Most interview questions before (2019) and during the pandemic (2020) were kept the same to compare the results (see Appendix).

3.3 Content analysis and data classification
All interviews were recorded with the respondents’ consent and then manually transcribed. The transcripts of interviews were analysed using NVivo 12 software (Lumivero, 2017). NVivo assists in organising, coding, and analysing large amounts of data to identify and define key themes and concepts (known as “nodes” within NVivo). Hence, the interviews with internal stakeholders were first separated from those with external stakeholders. Then, the emerging themes were coded into separate nodes, which then were grouped into key nodes, which allowed the exploration of processes and mechanisms that led to value co-creation from the point of view of the discussants. Seven key nodes were eventually singled out.

4. Results
The Cortina Foundation aimed to leave a legacy built on an improved local area with state-of-the-art facilities and innovative services and to position Cortina as a sustainable and modern sports and tourist destination. It established the essential preconditions for generating such value and leaving a lasting positive impact. It ensured an effective collaboration and engagement among relevant stakeholders (Getz, 2008). It adopted robust strategic planning and event management (Jones et al., 2022), guaranteed by its infrastructure. Venues were ready and just needed updating (Burbank et al., 2002), and community support was ensured early on Pappas (2014).

Results concerning the value co-creation process are presented in seven distinct sections that look at salience to identify key stakeholders, what value was co-created, how stakeholders were engaged, how the value was co-created, which institutional elements shaped stakeholders’ behaviours, the event’s impacts, sustainability and legacy, and, finally, what changed with the pandemic. Table 2 reports the complete nodes’ structure used in the content analysis and the number of stakeholders mentioning a specific aspect.

4.1 Stakeholder salience
Stakeholder salience at Cortina 2021 was about power and legitimacy, not urgency, responsiveness, or feedback. Power is the unique resources or activities carried out by stakeholders, while legitimacy is the rights stakeholders hold to be included in an ecosystem
<table>
<thead>
<tr>
<th>Before COVID-19</th>
<th>During COVID-19</th>
<th>Control interviews (after world championship)</th>
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<tbody>
<tr>
<td>Group</td>
<td>Organisation</td>
<td>Participant role, year of birth, gender</td>
</tr>
<tr>
<td>P1</td>
<td>IS Belluno Province</td>
<td>Governor, 1970, Male</td>
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<tr>
<td>P2</td>
<td>IS Cortina Foundation</td>
<td>Accreditation Manager, 1981, Male</td>
</tr>
<tr>
<td>P3</td>
<td>IS Cortina Municipality</td>
<td>Urban Planning and Commerce Councillor, 1965, Male</td>
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<td>P4</td>
<td>IS Cortina Foundation</td>
<td>Venue Manager, 1990, Male</td>
</tr>
<tr>
<td>P5</td>
<td>IS Belluno Province</td>
<td>Destination Manager, 1971, Male</td>
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<td>P6</td>
<td>ES Collective heritage association</td>
<td>General Secretary, 1969, Male</td>
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<td>P7</td>
<td>ES Private Radio</td>
<td>Journalist, 1974, Female</td>
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<tr>
<td>P8</td>
<td>ES Ski slope and lift company</td>
<td>Marketing Manager, 1968, Female</td>
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<tr>
<td>P9</td>
<td>ES Ski slope and lift company</td>
<td>Engineer, 1977, Male</td>
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<td>P10</td>
<td>ES Department store</td>
<td>Manager, 1973, Female</td>
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<td>P12</td>
<td>ES Hotel association</td>
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<th>Before COVID-19</th>
<th>During COVID-19</th>
<th>Control interviews (after world championship)</th>
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<td>Group</td>
<td>Organisation</td>
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<td>P13</td>
<td>ES</td>
<td>Private Radio</td>
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<td>P14</td>
<td>ES</td>
<td>Cableway and lift association</td>
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<tr>
<td>P15</td>
<td>ES</td>
<td>Hotel association</td>
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**Note(s):** “IS” stands for “Internal Stakeholders”. “ES” stands for “External Stakeholders”.

**Source(s):** Authors' own elaboration
being endowed with funds, having acquired the rights from FIS to run the event, and representing hotels), were equally mentioned by internal and external stakeholders, before and during the pandemic. Moreover, in terms of importance, evidence from the interviews

<table>
<thead>
<tr>
<th>Analytical nodes</th>
<th>Internal stakeholder (13)</th>
<th>External stakeholder (13)</th>
<th>Interviewees mentioning the node</th>
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<tbody>
<tr>
<td></td>
<td>Before COVID (5)</td>
<td>During COVID (8)</td>
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<tr>
<td>Legitimacy</td>
<td>4</td>
<td>3</td>
<td>5</td>
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<td>Power</td>
<td>4</td>
<td>3</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Other motivations</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td><strong>Value definition</strong></td>
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<td><strong>Total external value</strong></td>
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<td>Service efficiency</td>
<td>4</td>
<td>2</td>
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<td>Service quality</td>
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<td><strong>Total internal value</strong></td>
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<td>Association</td>
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<td>Interaction</td>
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**Source(s):** Authors' own elaboration

(e.g. being endowed with funds, having acquired the rights from FIS to run the event, and representing hotels), were equally mentioned by internal and external stakeholders, before and during the pandemic. Moreover, in terms of importance, evidence from the interviews...
suggests that the Cortina 2021 Foundation was the key stakeholder within the Cortina 2021 ecosystem. Such a central position was justified by the high legitimacy and power held by the Foundation, a privately held company that participated by public shareholders, each with its specific role. FISI was responsible for financing the different projects and establishing rules and deadlines for sports events. At the same time, Cortina Municipality and the Belluno Province managed the requalification interventions for infrastructures and facilities, and the Veneto Region coordinated funding collection and allocation. As declared in the interviews, public shareholders had a leading, controlling, and coordinating role: the Foundation served as a means to implement the various interventions, monitoring and aligning external stakeholders towards its objectives in a top-down logic.

Basically, the Cortina 2021 Foundation takes care of all the organisation directly related to the event (Participant 5, Before COVID-19, IS).

The Foundation, depending on what is needed, puts in contact one stakeholder with another (Participant 11, Before COVID-19, ES).

The involvement of external stakeholders was largely functional: they dealt mainly with the practical aspects of organising the event. Internal stakeholders defined these as “operational” or “territorial” stakeholders. Hence, their salience was primarily determined by their power, that is, their resources and ability to carry out specific activities, such as the company in charge of most ski slopes, or their legitimacy in coordinating other stakeholders, as in the case of the hotel association.

4.2 Value definition

The analysis confirmed that both internal and external value (Mason et al., 2020) was co-created. Most internal and external stakeholders recognised the great visibility that Cortina would receive during the World Ski Championships and the potential of such associational value. Moreover, they were aware of the resources such a mega-event could mobilise and the transferred value they could benefit from, mentioning that such financing would draw further investments. Besides higher visibility and more resources, some respondents recognised they would benefit from increased interactions, access to beneficial networks, and more synergy.

There will be high visibility for us. In those two weeks of competition, 500 million people will watch the television and see our mountains (Participant 4, Before COVID-19, IS).

Thanks to the World Championships, money came in from the Region, the Government and Europe. We were able to fix the ski slopes, build new facilities, create new road connections, and this has led to a virtuous circle of direct and indirect investments (Participant 2, During COVID-19, IS).

Since 1956, when the first Olympics took place in Cortina, nobody has ever made a restoration plan or anything similar. This is the occasion for Cortina to wear a new dress [. . .] not only the ski resorts but also the hotels and roads (Participant 8, Before COVID-19, ES).

Both internal and external stakeholders anticipated that Cortina 2021 would generate external value. This included increased efficiency (lower costs or increased outputs) and improved service quality (better or new services). Notably, however, there was no mention of enhanced service outcomes. While most external stakeholders recognised opportunities associated with Cortina 2021, not all shared this optimism. Some stakeholders were hesitant to participate, believing they would gain minimal benefit. For example, the heritage association expressed concerns about potential environmental threats and adopted a passive role within the project. Similarly, hoteliers initially voiced apprehension through their association, fearing the fixed-price policy imposed by the organising Foundation would lead
to lower room revenues than in a typical season. However, these concerns became irrelevant due to the pandemic. The World Ski Championships attracted event-related guests, filling hotel rooms that would otherwise have remained vacant.

We do not participate in the project [...] there is no benefit for us. The benefit may be indirect – for the local economy, if there is one – but from our point of view, there is no advantage (Participant 6, Before COVID-19, ES).

We contacted the associates multiple times to clarify the room situation [...]. Some hoteliers began suggesting they could make more money by renting rooms to agencies x or y. However, if they went ahead with that, no rooms would be left to support the event. So, initially, the most challenging aspect was calling the associates and saying: Listen, we need to support the event. [...] the benefits that the World Cup will bring are long-term. (Participant 11, Before COVID-19, ES)

Finally, the stakeholders interviewed after the World Championships confirmed that the event brought great visibility to Cortina and that the investments made by public and private entities helped requalify its touristic appeal. The control interviews unveiled that the value generated for external stakeholders was contingent on the nature of their operations. For individuals in the retail sector, the World Championships represented a near return to typical business, marked by robust merchandise sales. Conversely, those in the hospitality sector faced stringent safety measures, resulting in increased expenses, reduced bookings, and an overall loss, albeit mitigated by the influx of event-related guests and through the opportunity to enhance the quality of their offerings.

4.3 Stakeholders engagement
The Foundation deployed a two-pronged strategy to influence, align, and engage stakeholders: on the one hand, to obtain financial resources, it lobbied public entities, including its internal stakeholders; on the other, it actively involved salient stakeholders in project management and start-up operations by making them exchange resources and interact over shared interests in different ways to co-create value at the mega-event. Different behaviours characterised the interaction process, from accommodating stakeholders’ requests to managing conflict, from problem-solving to dealing with risk management, and from reciprocity to acting ethically.

There were two tenders for grants of about 20 million euro [...] many local entrepreneurs applied, and all those that applied have been admitted to funding. The Region has done everything possible to finance everyone, so this was a real stimulus for the entire hotel sector (Participant 11, Before COVID-19, ES).

The Foundation does not renovate hotels or take on requalification projects. They are a facilitator, in the sense that if a private entrepreneur decides to invest in taking part in the event, the Foundation facilitates his access to calls for regional grants to receive funding (Participant 7, Before COVID-19, ES).

Nevertheless, from the interviews, it emerges that the Foundation always maintained the largest share of decisional power over all operations. Some stakeholders complained that there could have been a more open collaboration.

Our role is to control and coordinate, and above all support [stakeholders; A/N] when there are critical issues (Participant 4, Before COVID-19, IS).

Another tool employed by the Foundation to control and coordinate activities was to exploit some external firms to integrate local expertise and resources with more extensive networks through regional, national, or international connections. In addition, these external stakeholders managed some rather specialised aspects of the organisation of the Championships, such as hotel bookings, transport arrangements to and from airports, and TV rights to incorporate the event into established international circuits.
The Foundation brought in an international company [specialised in travel management] that would act as an intermediary between the Foundation and the hotels (Participant 11, Before COVID-19, ES).

4.4 Value co-creation
Several insights have emerged from the interviews about the value co-creation mechanism within the Cortina 2021 ecosystem: co-commissioning, co-design, co-delivery, and co-assessment, as outlined in the literature. First of all, in a set-up where the Foundation was the key stakeholder controlling all relationships, the type of co-creation mechanism depended upon the role and activity of other stakeholders.

Only the founding members are part of the Foundation’s board of directors, and every few months, an assessment of activities that we have carried out is done, including a review of costs and revenues (Participant 2, During COVID-19, IS).

The Foundation called us as a hotel association to figure out the best system to contract with hotels during the event (Participant 11, Before COVID-19, ES).

We are not part of the Foundation […] We have just given our availability and have only modified some slopes and lifts according to their plans (Participant 14, During COVID-19, ES).

This means that, as illustrated in Figure 1, internal stakeholders were mainly involved in co-commissioning, co-assessment, and some co-design. In contrast, external stakeholders were mostly involved in co-designing and co-delivering activities and services. For example, the Foundation co-designed the general hospitality plan with representatives from Cortina’s hotel association and merchandising products with the local department store. Nevertheless, no actual co-delivery was envisaged, even among external stakeholders, as each stakeholder was supposed to produce and deliver its output independently.

4.5 Institutional pillars
Different types of institutions may be identified in the Cortina 2021 ecosystem. First, the interactions between the Foundation and the stakeholders participating in the service ecosystem were mainly regulated via regulative elements: laws, regulations, public procurement, and contract-regulated resource collection and allocation, as well as the management of specific aspects.

The Foundation is a tenant for us. At [Hotel name], we rented them some spaces that they use as offices […] yet we are not involved in the organisation of events nor share any objective with them (Participant 6, Before COVID-19, ES).

Figure 1. Cortina ecosystem and co-creation mechanism

Source(s): Authors’ own elaboration
The National Ski Federation makes the assignments. They have everything in their hand: they give us most of the contributions, finance the projects, and dictate almost all the rules via manuals, contracts, deadlines, etc. (Participant 4, Before COVID-19, IS).

However, important traces of normative institutions may also be found within the Cortina 2021 service ecosystem. These are present, especially between the Foundation and external stakeholders. Most of these, fully aware of the returns regarding value creation, emphasised their “role” (Scott, 2014) inside the ecosystem.

Our involvement started two years ago. The Foundation called us, as a trade association, to understand which the best contract was to deal with the hotels in view of the event (Participant 11, Before COVID-19, ES).

We have been involved from the beginning [...] for our main activity, which is that related to commerce. We participated in the design phase of merchandising, in deciding the price range, the quality [...] to ensure that the merchandising line is successful (Participant 10, Before COVID-19, ES).

Lastly, cultural-cognitive institutions started appearing during the pandemic crisis. The absence of clear laws and roles forced stakeholders to search for a shared logic of action and seek a common understanding about what to do (Scott, 2014).

With the COVID scenario, it was necessary to go to all the stakeholders to understand their opinions on the matter, which costs to cut having fewer revenues, which services to prioritise (Participant 2, During COVID-19, IS).

Now we have to talk with everyone even several times a day. Problems arise and are generated quickly [...] we are living day-by-day now (Participant 1, During COVID-19, IS).

Now, about the ski implants, we do not know anything, why we must wait for the others [Stakeholders, A/N] and the DPCM. I would rather not say anything about that (Participant 10, During COVID-19, ES).

4.6 Impacts, sustainability and legacy
In defining the value created by the event, the stakeholders clearly stated that holding the mega-event would have an economic, social and environmental impact.

Considering the short term, the influx of tourists and associated revenues was an anticipated economic impact. Stakeholders initially expected around 100,000 visitors, but there was no public due to the pandemic, and actual attendees were at most a tenth of that initial estimate. Most were athletes, accredited workers, volunteers, police officers, and other staff members. In addition, the pandemic caused a cost increase due to the implementation of several safety measures. Regarding the long-term event’s impact, internal and external stakeholders affirmed that the World Championship mobilised public and private resources to regenerate Cortina’s infrastructure. The event encouraged private operators to upgrade and modernise their facilities, such as hotels and ski slopes. Furthermore, it prompted public authorities to improve roads, rail connections, parking lots, and the public swimming pool. Finally, it is important to note that only a few new infrastructures were built from scratch, namely a new road connection and a new cableway, so there were no heavy legacies, such as white elephants.

This event is undoubtedly a driving force and an opportunity to carry out important interventions in Cortina, including internal roads, cable car systems, ski slopes, internet connection, and the swimming pool. These interventions are backed by municipal, private and other public funds. I believe this would not have been possible without hosting a global event. (Participant 1, Before COVID-19, IS).
We participated because we believed that hosting such an event would be an opportunity to bring a more radical renewal to our ski area. [...] We replaced the old chairlift, and next year, in preparation for the Olympics, we are adding a new cable car. (Participant 8, During COVID-19, ES).

A long-term effect perceived by all stakeholders, both before and during the pandemic hit, was the enhancement and improvement of the “Cortina” brand, which the Cortina Municipality owes, thus a long-term promotional benefit for such intellectual property. The televised Championship showcased Cortina’s stunning scenery and highlighted what it offers tourists. Additionally, another lesser-mentioned long-term and societal-centric impact included the creation of long-lasting relationships between Cortina operators and residents. Ultimately, the event generated job opportunities for locals and, even if in a reduced manner, it had a positive short-term social impact.

There will be major impacts in terms of visibility for our mountains [...]. These mountains have unique specificities that should be known worldwide. So, if we are able to organise events like this properly, we can bring great value to the territory and returns from several perspectives (Participant 9, Before COVID-19, ES).

We have been hosting the World Cup for many years, which is a significant event, so we know the great advantage that events of this magnitude bring: great visibility. The image of Cortina gets televised worldwide. The resulting promotion will undoubtedly be positive if the event is organised at its best (Participant 6, During COVID-19, IS).

Some stakeholders mentioned the theme of environmental impacts. Even if not outspoken, a general awareness regarding the fact that holding the event would cause some immediate environmental damage was present. Internal and external stakeholders stated that, as far as they were concerned, they tried to follow the most up-to-date procedures and standards to lower the environmental footprint and thus act in a compensatory manner. However, the limited number of attendees and the fact that no major infrastructures were built from scratch might explain why negative environmental consequences were less critical than other mega-events.

We decided to sign an agreement with [a company] which certifies major hotel chains. It is an international brand recognised abroad and has strict rules, in the sense that to have this certification, the hotel must adhere to several parameters [...] zero-km products, water saving, energy saving, waste separation and customer education to an eco-sustainable approach (Participant 11, Before COVID-19, ES).

We tried to organise the infrastructural works in such a delicate context, keeping in mind environmental aspects. This is because we are a skiing area, and the product we sell is the environment. It is important to remember this since tourists choose us because there is an environment that has been preserved and well maintained (Participant 9, Before COVID-19, ES).

Traces of this environmental sensitivity are also evident in the Foundation’s official statements and press releases. These inform about the Foundation’s commitment to achieving a 70% separate waste collection rate, offsetting 100% of direct carbon dioxide emissions through agriculture and forestry projects, and ensuring that 60% of purchases are made with green criteria.

In conclusion, even though hosting the mega event did not produce the expected short-term impacts, especially in economic terms, it was a way to create important legacies, helping Cortina reposition itself as a modern and appealing sports destination.

In Cortina, the event is not an end in itself; the idea is to leave something for the future. [...] After the World Championships, a beautiful, functional municipality will be there, and the infrastructure it brought about will continue to be used (Participant 11, During COVID-19, ES).

A major event ultimately leaves a significant legacy on the territory, not only in terms of infrastructure but also in terms of communication and promotion. Far beyond the narrow timeframe of the World Championships, the latter will constitute a much broader and long-lasting advantage for a tourist destination (Participant 15, During COVID-19, ES).
4.7 COVID-19 disruption

Respondents confirmed that COVID-19 dramatically impacted the event and the community. During the World Championships, an urban mobility plan was in place in Cortina to guarantee health conditions and safe access to the race areas. Negative effects were largely perceived, especially regarding uncertainty and fewer people attending the event, which meant fewer revenues for stakeholders and the community. However, several participants highlighted that adapting to the new scenario of moving the event online was the true challenge. Stakeholders exploited various digital technologies, and scenario-planning processes were implemented with options available to suit different circumstances. In addition, internal COVID-commissions were established to coordinate health and safety-related issues.

The absence or the reduced public will certainly imply less revenue for firms, hotels, B&Bs, the territory, and the surrounding areas. Another aspect is the implementation of health measures, which imply additional costs (Participant 1, During COVID-19, IS).

We are working to make it happen both with the public and behind closed doors. [...] We must work with utmost flexibility [...] with multiple scenarios (Participant 13, During COVID-19, ES).

Another aspect that emerged from the analysis is that predominantly internal stakeholders mentioned potential solutions to the health emergency. External stakeholders were mainly worried and complaining about the absence of visitors and reduced revenues. This latter aspect was also emphasised during the post-World Championships interviews. External stakeholders complained about the close-door policy and the additional costs they had to bear to comply with the measures adopted in Italy during the pandemic.

It's true, some hotels have renovated themselves because of the World Championships, but these were also private investments. [...] Ultimately, we did not have great returns (Participant 4, After World Championships, ES).

Lastly, a general consistency is observed when comparing the interviews conducted with participants before and during the pandemic. The ecosystem structure, parties involved, and agreements were already established before the onset of COVID-19. Moreover, several interventions, such as hotel renovations, ski slope improvements, and cable upgrades, had already been completed, while many others were at an advanced stage when the first interviews were conducted. However, as mentioned earlier, the major differences identified between the interviews can be mainly attributed to the event’s short-term economic impact: the absence of a live audience, coupled with the expenses associated with complying with new COVID-19 laws and regulations, prompted stakeholders to lament about the decline in revenue and the increased costs resulting from the pandemic.

5. Discussion

5.1 Theoretical contributions

The study of the Cortina 2021 service ecosystem yielded valuable theoretical insights. Addressing the first research question, the findings suggest that the Cortina ecosystem generated external and internal value. External value included increased service efficiency and quality and creating a lasting legacy to enhance the Cortina tourism experience. Internal value creation for individual stakeholders focused primarily on associational value (increased visibility) and transferred value (access to investments and funding). These findings align with previous studies highlighting how mega-events can enhance stakeholder reputation (Pera et al., 2016), facilitate access to resources not typically available (Norman and Nyarko, 2021), and improve destination image (Arnegger and Herz, 2016). Interestingly, developing synergies and network access appeared less crucial for Cortina 2021 than other
events (Grohs et al., 2020; Pera et al., 2016). This could be attributed to existing strong local partnerships and collaborations. Additionally, the pandemic likely limited the formation of international networks due to the reduced number of physical attendees.

Partially addressing the second research question, the study identified various mechanisms employed for value co-creation. Internal stakeholders were involved in co-commissioning (resource and outcome decisions) and co-assessment (evaluating service effectiveness). Conversely, external stakeholders participated more in co-designing activities and services, which they delivered independently. Instances of co-delivery were less frequent (Nabatchi et al., 2017). Figure 2 illustrates the co-creation model emerging from this analysis.

The findings revealed that the crucial factor for engaging stakeholders in an ecosystem is that they recognise the potential value that can be created through joint efforts. This value can be internal (such as increased visibility), external (such as revenue growth), tangible (such as infrastructure improvements) or intangible (such as enhanced reputation) and is not necessarily reducible to financial or pecuniary terms (McGahan, 2023). This insight complements Loureiro et al.’s (2020) research on the antecedents of stakeholder engagement. While their work identifies various factors influencing engagement in value co-creation, this

![Cortina 2021 value co-creation model](image_url)

**Source(s):** Authors’ own elaboration
study suggests that acknowledging the significant value derived from participation is necessary for stakeholders to be engaged. In summary, paraphrasing McGahan (2021), the Foundation was sustained because it could create enough value through its actions to compensate stakeholders sufficiently to retain their participation in the collective effort of Cortina 2021. Furthermore, the level of stakeholder engagement appeared to be directly related to the perceived value they could gain from the ecosystem (Wang et al., 2023). The initial hesitancy of hoteliers and heritage associations exemplifies this. Some stakeholders just cooperated with the Foundation, while others, who highly identified with Cortina 2021 and its mission, actively co-created (Viglia et al., 2023). To synthesise this:

**Insight 1 – Service ecosystem engagement:** stakeholders must recognise the value co-created to be engaged and willing to commit to a service ecosystem.

At Cortina 2021, a clear organisational structure was established, with the Foundation formed by national and local public entities serving as an *ad hoc* organising committee. This entity was pivotal in fostering relationships and interactions among diverse stakeholders, aligning their expectations and ultimately facilitating value creation and co-creation processes (Qi et al., 2023). This structure mirrors experiences observed in events held in larger venues with extensive public participation, such as Expo 2015 or the 2012 Cultural Olympiad (Jones et al., 2022; Pera et al., 2016), but also smaller-scale events (Chang, 2020; Norman and Nyarko, 2021). Central to effective value co-creation within a multi-stakeholder ecosystem is the presence of a focal organisation that is instrumental in shaping stakeholder salience through its combination of power and legitimacy while also facilitating value co-creation with other key stakeholders through resource complementarity and shared interests (Austin and Seitanidi, 2012; Best et al., 2019). This can be summarised in a further learning:

**Insight 2 – Service ecosystem relevance:** The relevance of a stakeholder for value co-creation in a service ecosystem is a matter of power, legitimacy, resource complementarity and shared interests.

Hence, in response to the question raised by Buser et al. (2022), findings suggested that the key actors within an ecosystem are those that wield the greatest power and legitimacy, thereby influencing the actions of other actors through a variety of strategies. Consequently, it can be argued that the Foundation was able to act as the service orchestrator (Breidbach et al., 2016; Carida’ et al., 2022) for its power and legitimacy as the primary decision-maker. In the case of Cortina, orchestration primarily entailed managing funds and supervising the output and interactions among internal stakeholders.

Not surprisingly, most relationships were designed around regulative institutions (Vink et al., 2021). Nevertheless, during the interviews, some stakeholders emphasised their role (i.e. normative elements) rather than the legal constraints defining their actions and behaviours. Thus, the co-action of regulative and normative pressures contributed to aligning Cortina’s stakeholders towards creating value for the overall ecosystems (Scott, 2014).

Moreover, it is interesting that cultural-cognitive elements emerged during the pandemic. Once the crisis struck, the absence of clear laws, regulations and norms led stakeholders to operate according to a common understating of what to do. Culture shapes individuals’ norms, values and cognitive processes, influencing ecosystem functioning (Gölgeci et al., 2022). The evidence from the Cortina 2021 case supports a perspective suggesting that actors within the ecosystem engage in interactions dictated by regulatory and normative frameworks under normal circumstances, while cultural elements assume greater significance in an unstable environment. This insight extends beyond the scope of the pandemic as it suggests that such cultural-cognitive elements play a pivotal role in shaping interactions and responses in crises, influencing the adaptability and resilience of the
ecosystem (Brodie et al., 2021). Hence, linking back to a question posed by Kabadayi et al. (2020) and to the third research question, one of the elements contributing to service ecosystems to move quickly, respond, and adapt to external shock may be the sharing of a common understanding. This cultural background dictates the proper action when legislative and normative elements are blurred and may be salient in determining if and which new institutions will emerge following an exogenous disruption prompting adaptation such as the 2019 pandemic (Kleinaltenkamp et al., 2018; Thompson-Whiteside et al., 2023). This recalls one of the conditions fostering resilience in business relationships highlighted by Runfola et al. (2023), that is the “informal bonds”, which may be based on cultural closeness and increase resilience because they generate a process of socialisation of the issues created by a disruptive event within an ecosystem. To summarise the above:

**Insight 3 – Service ecosystem governance:** A service ecosystem’s optimal functioning requires a focal organisation and a clear regulative and normative framework.

**Insight 4 – Service ecosystem resilience:** Sharing a common cultural basis increases the ability of a service ecosystem to survive when confronted with shocks, turbulences, or gaps in normative and regulatory elements.

Further, in the case of Cortina 2021, it is undeniable that contextual factors, that is, both the international nature of the sporting event and the health emergency related to the COVID-19 pandemic, influenced value co-creation. Moreover, as confirmed by previous studies (Grohs et al., 2020), the complexity inherent in heterogeneous stakeholder networks also demanded the establishment of an “event-in-event logic” at Cortina 2021. Such a logic splits a mega-event into sub-events catering to specific needs, using specific resources, encouraging specific practices, and targeting values idiosyncratic to different stakeholders. At least five sub-events can be identified in Cortina 2021: (1) the sporting event with its ski competitions, (2) the requalification of local structures, (3) the development of the road network and transport system, (4) the communication management, and (5) the COVID-19 management. From this, the following insight emerges:

**Insight 5: Service ecosystem complexity:** The larger the ecosystem and the more the unforeseen, the greater the call for dividing it into many smaller sub-ecosystems.

Lastly, concerning the effects of the event, short-term impacts were predominantly economic, even though not nearly as high as expected. Social and environmental short-term impacts were minimal. This differs from other events with clear short-term impacts (Andersson et al., 2016; Andersson and Lundberg, 2013; Singh et al., 2020). Undoubtedly, this is a consequence of the extraordinary conditions which characterised the Cortina 2021 World Championship. However, examining the event’s long-term impacts revealed what Preuss (2015) describes as acceleration, political, and financial effects. Thanks to the event and its actions – involving both public and private actors – the Foundation swiftly secured funds and political consensus for infrastructural projects, accelerating such interventions. In line with Preuss’s (2019) perspective, the enduring effects of the event primarily resulted from two structural changes: urban development and intellectual property. The former consisted of improvements to road and rail connections, hotels, and ski slopes, prolonging the lifespans of these facilities and providing the Cortina community with upgraded and modern services for future use. Crucially, no structural changes solely attributed to the mega-event and unrelated to the town’s long-term development were undertaken, avoiding the creation of burdensome legacies such as white elephants. The other major long-term impact regarded strengthening the “Cortina” brand. Stakeholders anticipate a lasting promotional advantage from successfully hosting the event, especially as it marked Italy’s first major event during COVID-19. Nevertheless, assessing this “promotional legacy” will not be immediate (Preuss, 2019). Thus, it can be said that:
Insight 6: Mega-event ecosystems legacies: Shocks may lessen the short-term impacts produced by a mega-event ecosystem, but not necessarily its long-term ones.

5.2 Managerial implications

The Cortina 2021 case provided valuable insights for managers navigating the complex landscape of mega-event ecosystems. It emphasised the importance of considering stakeholder dynamics, governance structures, and cultural elements to ensure sustained success.

Firstly, evidence suggests that stakeholder commitment is dependent on recognising the value created for them. Therefore, it is crucial to emphasise and communicate the value co-created by the event to engage stakeholders effectively. In service ecosystems, the focal organisation should ensure that all relevant stakeholders recognise the benefits of participating and adopt a systemic vision of value co-creation.

Secondly, understanding power dynamics and legitimacy within an ecosystem is crucial to building positive interactions. Prioritising collaboration with influential stakeholders and aligning interests based on resource complementarity can significantly enhance the success of value co-creation initiatives. Value co-creation requires the engagement of diverse stakeholders, such as local firms, public authorities, associations, and communities in the Cortina 2021 case. Engagement strategies can consider establishing regular communication channels, actively seeking feedback, and integrating stakeholder perspectives into decision-making processes. Clear governance is also essential, with a designated focal organisation with decision-making authority. A lack of clarity regarding roles and an inefficient design may hinder overall ecosystem performance. Thus, ensuring that the focal organisation is equipped to manage funds, coordinate activities, and control outputs facilitates the value co-creation process. In practical terms, mega-event promoters should rely on a clear framework with a focal organisation, as co-creation demands a strategic approach supported by regulative and normative institutions that maintain focus, leverage leadership, and enable stakeholders with power, legitimacy, complementary resources, and linked interests to become co-creators.

Thirdly, fostering a shared cultural background among stakeholders cultivates resilience, enabling quick adaptation to unexpected challenges. During emergencies or when regulatory and normative frameworks lag behind immediate needs, the adaptive co-creation process may rely on cognitive-cultural elements inherent to the ecosystem. Managers must consider these cultural-cognitive elements shared across stakeholders, as they can ensure ecosystem resilience even in turbulent times.

Lastly, breaking down a mega-event into manageable sub-events aligns with the practical reality of complex ecosystems. Tailoring strategies and resources to specific sub-events ensures efficient resource utilisation and targeted value delivery.

Implementing these practical insights can enhance the overall success and legacy of mega-events while mitigating potential challenges.

6. Conclusions and limitations

This paper explored how mega-events can co-create from a service ecosystem perspective. The study relied upon institutional and stakeholder theory to offer insights into engagement, governance, resilience, relevance, complexity, and legacies. It also contributed to the theory and practice of value co-creation during extraordinary times. This poses important challenges to interaction modes, business models, and service logic, whether caused by a pandemic, another type of crisis, or any situation where regulatory and normative frameworks lag behind present contingencies.
The Foundation’s website claims that Cortina 2021 is a global event that aims to leave a positive legacy and become a reference model for the big winter events of the future. Cortina 2021 was a massive challenge that has become a symbol of resilience and hope. It will surely be remembered as an event carried out during a pandemic, yet it is too early to say whether its legacy will live beyond this. In any case, the Cortina 2021 model seems destined to be tested at least once more. Cortina and Milan will host the 2026 Winter Olympics, and the Milano Cortina 2026 Foundation has already been established as the organising committee for the event. This offers the possibility to apply and improve the model used for Cortina 2021, hopefully overcoming some limitations that this study has.

As with any case study, it may not provide generalizability beyond its unique setting. Further, this exploratory study focused on the engagement of a broad range of stakeholders, but it failed to include spectators, who are vital for value co-creation at sports events because of the health emergency. Hence, further applications of the model developed for this study to analyse the 2026 Winter Olympics would allow testing it to a fuller extent.

Stakeholders were engaged by sharing specific resources in interactions tightly controlled by the Foundation. If stakeholders could interact more freely at Cortina 2021, more value might have been co-created with more learning opportunities, innovation, and organisational change. Studying the tensions between focal organisations and other actors may constitute a promising stream for future research.

Another limitation regards the assessment of the impact of the event. Even if this study frames the expected impacts and legacies, it offers only a qualitative evaluation. A quantitative appraisal of these may help measure the value created and destroyed at mega-events.

Future research may also want to investigate more in-depth service ecosystem resilience. This means understanding whether, when there is a major crisis that upsets regulative and normative institutions, stakeholders tend to organise and conform their behaviour based on cultural-cognitive elements so that the service ecosystem can continue at least to operate, if not to flourish.

References


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## Appendix

<table>
<thead>
<tr>
<th>Internal stakeholders</th>
<th>Timing</th>
<th>External stakeholders</th>
<th>Timing</th>
<th>Post-event interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why and how are you involved in the Cortina 2021 Championship?</td>
<td>BC</td>
<td>Why and how are you involved in the Cortina 2021 Championship?</td>
<td>BC</td>
<td>What are the main benefits you received from the creation of the event?</td>
</tr>
<tr>
<td>How are relevant stakeholders identified?</td>
<td>BC DC</td>
<td>What role do you have as a stakeholder?</td>
<td>BC DC</td>
<td>What value was created for the Cortina d’Ampezzo community?</td>
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<tr>
<td>Which stakeholders are the most important and why?</td>
<td>BC DC</td>
<td>Which stakeholders are the most important and why?</td>
<td>BC DC</td>
<td>Did you receive additional funds to face the pandemic situation?</td>
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<tr>
<td>What does value mean to you?</td>
<td>BC DC</td>
<td>What does value mean to you?</td>
<td>BC DC</td>
<td>How did the COVID-19 pandemic change the prospected revenues and expenses?</td>
</tr>
<tr>
<td>What value will be created by the Cortina 2021 Championship?</td>
<td>BC DC</td>
<td>What value will be created by the Cortina 2021 Championship?</td>
<td>BC DC</td>
<td>What impact had the change of the event from live to online?</td>
</tr>
<tr>
<td>Which expectations/benefits are you achieving from creating the Cortina 2021 Championship?</td>
<td>BC DC</td>
<td>Which expectations/benefits are you achieving from participating in the Cortina 2021 Championship?</td>
<td>BC DC</td>
<td>Do you want to add something?</td>
</tr>
<tr>
<td>What factors influenced the most value creation?</td>
<td>BC DC</td>
<td>What factors influenced the most value creation?</td>
<td>BC DC</td>
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<tr>
<td>How do you engage and interact with other stakeholders? (e.g. roles, contracts, norms, or via more informal ways)</td>
<td>BC DC</td>
<td>How do you engage and interact with other stakeholders? (e.g. roles, contracts, norms, or via more informal ways)</td>
<td>BC DC</td>
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<tr>
<td>How do you cooperate with other stakeholders?</td>
<td>BC DC</td>
<td>How do you cooperate with other stakeholders?</td>
<td>BC DC</td>
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</tr>
<tr>
<td>Do stakeholders have conflicting interests, and how are these managed?</td>
<td>BC DC</td>
<td>Do stakeholders have conflicting interests, and how are these managed?</td>
<td>BC DC</td>
<td></td>
</tr>
<tr>
<td>What kind of relation/interaction occurs between stakeholders?</td>
<td>BC DC</td>
<td>What kind of relation/interaction occurs between stakeholders?</td>
<td>BC DC</td>
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<tr>
<td>What are your expectations concerning both the event and your organisation?</td>
<td>BC DC</td>
<td>What are your expectations concerning both the event and your organisation?</td>
<td>BC DC</td>
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</tr>
<tr>
<td>What are the most significant changes caused by the pandemic?</td>
<td>DC</td>
<td>What are the most significant changes caused by the pandemic?</td>
<td>DC</td>
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</tr>
<tr>
<td>Did the pandemic affect the value-creation process?</td>
<td>DC</td>
<td>Did the pandemic affect the value-creation process?</td>
<td>DC</td>
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<tr>
<td>Do you want to add something?</td>
<td>BC DC</td>
<td>Do you want to add something?</td>
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</tbody>
</table>

**Note(s):** BC: questions made before the COVID-19 pandemic; DC: questions made during the COVID-19 pandemic

**Source(s):** Authors’ own elaboration

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Table A1. Interview questionnaire adapted from Best et al. (2019), Hjalager and Kwiatkowski (2018), and Pera et al. (2016)