Digital pathways in project communication: A process study of community engagement

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ABSTRACT

Community engagement is fundamental for project success. However, establishing genuine connections with community members is hindered by limited project time and the variety of interests involved. In this context, social networking sites (SNS) have been shown to be a powerful engagement tool as long as they are strategically leveraged by project organizations. Yet key features of these platform dynamics remain underexplored in the PM literature. To advance our knowledge, this study aims to understand the communication process enacted on SNS by project organizations for community engagement. To this end, we conducted a process study on a sports event where such platforms are consistently exploited for engaging the online community. The internal perspective enabled the underlying organizational processes to be detected. Our findings revealed that project communication acted in practice as a dynamic process relying on the discursive patterns with the online community and affected by the external context.

1. Introduction

Community engagement assumes the active involvement of community members, collaborative relationships, and personalized interactions throughout the project lifecycle, providing key knowledge about needs, preferences, and concerns which is essential to realize a project aligned with their expectations and values (Dresser, 2017; Nguyen et al., 2019; Teo & Loosemore, 2017; Ziek & Anderson, 2015).

Understanding and addressing the needs of community members during the project life cycle requires a dynamic and multifaceted process, encompassing careful planning, continuous evaluation, and adaptive strategies to ensure meaningful and effective participation (Aaltonen et al., 2024; Olander & Landin, 2005). If achieved, it can significantly increase the likelihood of project success by gaining community support, cooperation and long-term loyalty (Chung et al., 2023; Eskerod & Vaagaasar, 2014; Eskerod et al., 2015).

However, community engagement faces several challenges in temporary and unique organizations due to the tension existing between the limited project time, its long-term consequences, the variety of community members' expectations, cultural differences and social dynamics (Chung et al., 2023; Cuppen et al., 2016; Missonier & Loufrani-Fedida, 2014).

In this context, effective project communication is essential to establish a relationship with its members through interactions across multiple channels, thereby obtaining an effectively engaged community (Aal, 2025; Ameer et al., 2025; Shawky et al., 2020). A transparent, interactive and personalized communication about project unfolding helps community members understand its goals, reduce misunderstandings and resistance to the project (Butt et al., 2016; Zulch, 2014).

Among the many available project communication channels, social networking sites (henceforth SNS) have boosted the growth of community engagement and paved the way for becoming active co-creators with project organizations (Lehtinen & Aaltonen, 2020, 2024).

These Internet-based platforms have been shown to be a powerful engagement tool also with underserved communities: SNS facilitate both real time and asynchronous communication between project organizations and community members, and spur interactions among the users, thereby creating genuine connections and shared values (Kanagarajoo et al., 2020; Missonier & Loufrani-Fedida, 2014).

SNS may enhance project communication transparency, timing, and personalization to relevant community members, thus accommodating even conflicting interests (Lobo & Abid, 2020; Remidez & Jones, 2012). Further, these platforms may be an extremely rich source of information,

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as data from SNS (e.g. analysis of online conversations with artificial intelligence) can inform managers about the overall community sentiment toward a specific project, providing valuable information to better target activities and meet the needs of different actors (e.g. Chung et al., 2023; Hysa & Spalek, 2019).

Despite being a project constitutive element, the online communication of projects has been so far neglected in PM literature (Aal, 2025). Existing studies have focused on examining the relationship between SNS use and community engagement levels from the users' perspective to assess, e.g., the type of content that generates more connection and engagement (Lehtinen & Aaltonen, 2024). Rather, what is particularly lacking is the study of the "act of communicating" from the "inside" of a project organization, that is how SNS are strategically leveraged over time for genuine community engagement (Aal, 2025; Ameer et al., 2025; Ram & Titarenko, 2022).

At the moment, this internal perspective has been largely uncharted in research with few exceptions. Among these, Chung et al. (2023) investigated the use of Facebook to engage the community interested in the construction of the Sydney airport. This study found that proactivity in using SNS (i.e. Facebook) is crucial for meaningful project community engagement: this implies a continuous dialogue, feedback, and interaction between the project organization and its audience to demonstrate that their voices are valued and considered.

However, relevant features specific to the online dynamics project communication process still need to be investigated. In order to nourish this debate, we pose the following research question:

RQ: How do project organizations enact the communication process on SNS for community engagement?

To fill this knowledge gap, we conduct a process study on a specific type of project -i.e., sports event- in which these Internet-based platforms represent a tool increasingly used for engaging the community (i.e. spectators). By privileging an internal perspective, we entered the black box to understand the organizational processes underlying the project communication on multiple SNS, specifically Facebook, Instagram, and X (formerly known as Twitter).

The main theoretical contribution of this study is to the PM literature, enriching knowledge on project communication by leveraging new technologies, namely social media, expected to play an increasingly important role in communicating the present and forthcoming projects. In so doing, we adopted the process theorizing to think outside the box (Brunet et al., 2021; Langley et al., 2013) and investigated the online communication for community engagement, from an internal perspective, in a type of project, i.e. sport events, so far neglected in the PM literature (Schnitzer et al., 2020; Unterhitzenberger et al., 2024). We evidenced that digital platforms reshaped engagement practices and roles and project communication enacted in practice as a dynamic process of narrative construction.

The study is structured as follows. First, we present the theoretical background, combining the literature on project management and digital communication. Second, we describe the qualitative research method adopted for the empirical investigation followed by the main findings emerging from the empirical study. Lastly, after discussing the findings in light of the existing literature, we make some concluding remarks while stressing the main limitations.

2. Literature review

In this section, we review studies in project management involving communication through SNS for community engagement. This background knowledge has been integrated with the rich literature on digital communication which provides the key concepts and constructs to understand this multifaceted phenomenon.

First, we review the existing body of knowledge on how project community members appropriate and engage with social media platforms, and then examine the literature on the use of SNS by project organizations (Daemi et al., 2020). The key concepts are graphically reported in Fig. 1. In the last part of this section we integrate both perspectives to provide an overview of how interactions between project organization and community members unfold on SNS.

2.1. Project community perspective

As a multidimensional concept, community engagement entails a psychological and cognitive process, along with behavioral response to project online communication which is also influenced by other users' behaviours (Lim & Rasul, 2022). Engagement may be manifested online through the like, share and comment on posts on project accounts, which are affected by their stimulus on various senses and the content novelty (Dow & Taylor, 2010; Farook & Abeysekara, 2016). It also manifests through online conversations and discussions about the projects that may be enacted by users on different SNS, blogs, forums, etc. (J. Ninan & Sergeeva, 2022a).

In line with a dynamic interpretation, the interactive nature of SNS facilitates the process of moving project community members from one level of engagement to another to establish enduring relationships (from engaged, to loyal, to customer advocacy) (Chung et al., 2023; Sashi, 2012). Intensity and frequency of community engagement is intended as changing over time, ranging from the lowest level (e.g., post impressions) to the highest engagement level (e.g., tagging others), because of the activities implemented by the social media team (henceforth SM team) and other users (Eskerod et al., 2015). Converse situations are also plausible, that is moving from the highest engagement level to the lowest frequently due to other users' online activities (Annamalai & Varshney, 2019).

2.2. Project organization perspective

In order that the project community engages in greater depth, previous studies have pointed out the importance of drawing up a social media communication plan, maintaining a relevant presence with adequate content on the SNS used by different groups, and monitoring their online conversations thanks to specific applications (e.g., Google alert) to manage their online reputation (Dow & Taylor 2010; Pritchard, 2013).

Indeed, certain features of online communication have been shown to be crucial in order for community engagement to be effective. In this regard, the content type (e.g. Images and/or videos), the platform used (e.g. Instagram) and its features (e.g. ease of use, functions for users' active involvement) can significantly impact the emotional connection with the audience and thus the engagement levels (Lehtinen & Aaltonen, 2024; Silvius, 2016). Other relevant features pertain to the immediacy and authenticity of communication enabling the building of trust and connection with project community members even through a screen (Kilgour et al., 2015; Tajudeen et al., 2018). Immediacy matters to keep conversations alive and community groups constantly informed about what is happening in the project. Authenticity matters: showing the organizers as honest and human makes users more willing to interact, share feedback, and advocate for the project (Coker et al., 2018). Finally, providing project community members with constant feedback, incorporating interactive elements in social media posts, such as polls and questions, and encouraging users to create and share content related to the project enhance engagement and foster a sense of community (Sutherland, 2024).

The growing popularity of social media and the importance gained in project stakeholder interactions has highlighted the need for new skills and competencies for social media people. These are first and foremost technical skills, thus familiarity with the social media platforms and tools (e.g., paid advertising, influencers), along with competencies in creation contents (i.e. writing, graphic design, video production) for engaging storytelling (Sutherland, 2024). Skills in data analysis tools are important as well to measure community engagement over time. This includes social media analytics, i.e., continuous monitoring of social
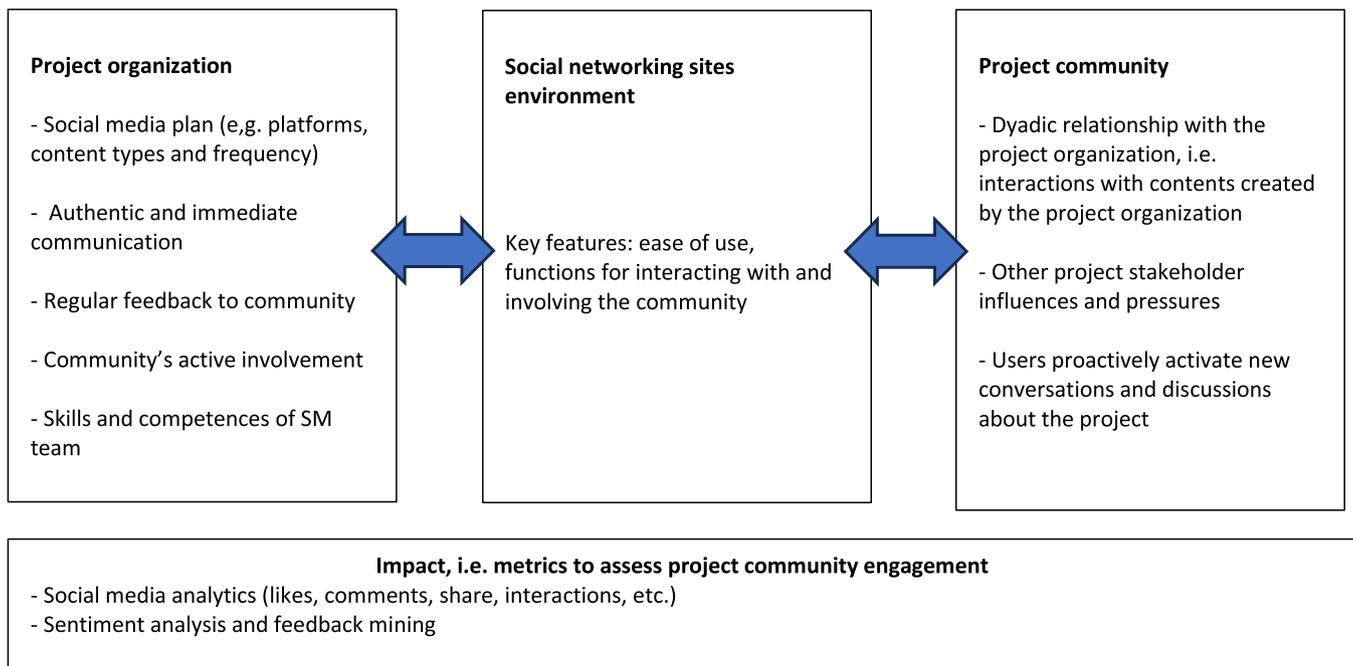
Project organization	Social networking sites environment	Project community
- Social media plan (e,g. platforms, content types and frequency) - Authentic and immediate communication - Regular feedback to community - Community's active involvement - Skills and competences of SM team	Key features: ease of use, functions for interacting with and involving the community	- Dyadic relationship with the project organization, i.e. interactions with contents created by the project organization - Other project stakeholder influences and pressures - Users proactively activate new conversations and discussions about the project

Impact, i.e. metrics to assess project community engagement
- Social media analytics (likes, comments, share, interactions, etc.)
- Sentiment analysis and feedback mining

Fig. 1. SNS interaction dynamics between project organization and community members.
Source: our elaboration.

media activities (e.g., likes, shares, comments and general interactions), together with sentiment analysis and feedback mining that analyze users' comments and feedback on social media platforms to gain insights into community sentiment and engagement (Pianese et al., 2022).

Beyond technical skills, previous studies have underlined the importance for SM teams to develop and implement a social media communication strategy aligned with organizational goals, and to respond effectively to potential crises on social media such as controversies and viral negative posts (Papadaki et al., 2019; Veil, 2011; Vignal Lambret & Barki, 2018). Some individual abilities have been demonstrated to be important for effective online communication such as creativity, i.e. stands out in a crowded social media landscape, cultural awareness, i.e. being sensitive to social and cultural differences, and self-regulation, i.e. managing stressful social media environments (Manuti et al., 2016; Shen et al., 2010).

2.3. Integrating project organization and community stakeholder perspective

By integrating both perspectives, it has become apparent that SNS have made the process of community engagement more complex and dynamic. J. Ninan and Sergeeva (2022a) show the importance of mobilizing a favorable narrative around a project through stories, labels and comparison, and then implement actions to maintain and stabilize this narrative so that the meaning and the vision of the project is appropriated and shared by the community. Narrative is persuasive as people become absorbed in a story rather than an analytic illustration of the project (J. Ninan & Sergeeva, 2022a). In this sense, language helps construct a project as a social construction that is produced and reproduced through temporal discourses (Iftikhar & Sergeeva, 2024).

Other studies have also explored its negative manifestations, such as disengagement and negative engagement behaviors. They point out that, even with a perfectly designed narrative, the diffusion of these platforms has imposed a radical rethink of the traditional organization-centric process of communication (Macnamara & Zerfass, 2012). Communication on SNS deals with openness; continuous interactions with stakeholders implying dialogue, conversation, and collaboration for value co-creation; trust and authenticity instead of pre-packaged

contents (Kilgour et al., 2015; Tajudeen et al., 2018). In the case of controversial project interests, being open may be challenging as evidenced by Pizzi et al. (2021) who documented the failure of philanthropic actions and projects promoted online by oil companies. In these cases, minor groups may exploit SNS to organize rapidly and with minimal financial resources effective protest actions that could influence project outcomes (Lecoeuvre-Soudain & Deshayes, 2006). In this vein, the study of Lobo and Abid (2020) investigated how the local community, and specifically the different interest groups, appropriated the SNS to represent their stakes against a new metro station in the city of London. SNS thus enable an ongoing battle between narratives and counternarratives. In this online battle, project managers have different reaction options, i.e. they can actively reject, delay or passively accept the counternarrative (Chung et al., 2023; J. Ninan & Sergeeva, 2022b).

This overview shows that a substantial body of literature that has examined the use of SNS for engaging project community and researchers privileges an external perspective, i.e. how online interaction occurs between the "project" and "its community". Although this research contributes to understanding some key issues, further theoretical conceptualizations and empirical investigations are needed to comprehend exactly how online project communication occurs internally, going into a more detailed look at how the online communication of a temporary organization takes place over time and what specifics are needed to get the community engaged. Considering the relevance of the temporal dimension in community engagement, the approach of process studies is particularly suited to studying how project communication evolves over time by considering the pattern of events, activities, and choices underlying its evolution as well as the specific context in which they take place (Brunet et al., 2021; Langley, 1999). Despite its value, to the best of our knowledge, no previous study has adopted this approach to study the project communication process.

3. Research method

The above literature review indicates our limited knowledge regarding the communication process enacted on SNS by project organizations for community engagement. To gain insights into this under-explored phenomenon, we adopted the process studies approach

(Langley & Tsoukas, 2010) to examine online project communication in a professional sport event, that meet the features of a project due to its complexity and time-criticalness to offer a unique service and experience (Schnitzer et al., 2020).

Process studies recognize the importance of time in organizational life: they are interested in temporally evolving organizational phenomena, to understand how they unfold over time (Langley, 1999, 2007). This approach is valuable to understand the essence of how projects are managed, by capturing the sequence of events, activities, and choices but also relationships, feelings, and interpretations underlying changes in project management practices (Brunet et al., 2021; Huemann, 2022). Process studies go beyond a surface description to penetrate the logic behind temporal progressions. In so doing, they address questions about how a project starts, develops, and terminates over time by focusing on the "process" to understand how the transition from situation A to situation B takes place (Langley et al., 2013).

Process studies also emphasize the importance of a rich contextual understanding as the context is relevant to shaping trajectories of changes. According to Langley (1999), changes may not be fully understood through cause-and-effect models. Rather, the tracking of the sequences of events within their real world is essential for a holistic understanding of change dynamics and the contextually detailed stories by researchers are important to capture the actions of different actors, the unfolding of events, and the influence of external forces.

By considering the continually evolving context, process studies enable obstacles of accomplishing project changes to be captured, while they offer guidance on how such obstacles may be successfully managed (Brunet et al., 2021; Engwall, 2003; Langley, 1999; Saxena & McDonagh, 2022).

We chose as our empirical domain a multi-sports event, i.e. the 30th Summer Universiade held in Naples, Italy in 2019, which took place from July 3rd to July 14th. This choice was dictated by several factors. First, there are a number of studies that have used events as a field of investigation for PM theories and the need for further empirical studies to explore their application has been emphasized due to the variety of features of existing events (Gillett & Tennent, 2017; Pisotska et al., 2022; Schnitzer et al., 2020; Turkulainen et al., 2015; Unterhitzenberger et al., 2024). A second motivation was purposive. As our research objective concerns online communication with the project's community, it was essential to select a project for which digital interaction with the community was substantial, which is not always the case for many projects. Rather, in international sports events, communication through social media is essential, especially in the case of events like the Universiade which targets young people from Gen Z who are particularly familiar with technology and SNS. Finally, there was a convenience factor. The authors contacted the Director of Digital Media Broadcasting (henceforth DMB) by an official email to explain the research objectives together with a detailed plan for data collection. Following a meeting during which authors emphasized the importance of accessing a large quantity of data to grasp all the nuances of the phenomenon, the DMB Director granted one of the authors accreditation as a digital media reporter, enabling all spaces and events to be accessed. The Director also introduced the researcher and the project to the members of the SM team to ensure support and openness in sharing information about the digital communication strategy.

A variety of stakeholders revolve around a sports event and Internet-based platforms are exploited by event organizers to strategically communicate and opportunistically interact, either in real time or asynchronously with them (Carr & Hayer, 2015). We restricted our analysis to a specific community group, i.e. the spectators as primary stakeholders and essential to the event success (Sorrentini, 2010; Wallace & Michopoulou, 2019). Specifically the focus is on "online spectators", that is the international audience interacting with the event through SNS users regardless of whether they were present in the city of Naples to physically attend the event.

The literature has shown that SNS are exploited by event organizers

as a powerful tool to engage spectators, that is establishing, maintaining, and enhancing relationships with them through ongoing bidirectional communications (e.g. Abeza et al., 2013; William & Chinn, 2010) in a dynamic and interactive environment (Santomier et al., 2016). Spectator engagement also takes place with the implementation of online actions designed to strengthen the event image and brand so that, recognizing its "uniqueness", fans' social identification is facilitated (Delia & Armstrong, 2015; Filo et al., 2015; Hughes et al., 2012; Pianese, 2021; Thompson et al., 2018).

3.1. Research context

The World University Games, or Universiade, is a multi-sports event promoted by the International University Sports Federation (henceforth FISU) for university students/athletes, and held every two years in rotating countries. Following the resignation of Brasilia, the city of Naples - in the Italian region Campania- was chosen on March 5, 2016, to host the 30th edition of the event in 2019.

The Universiade Regional Agency (henceforth ARU) was a temporary public agency funded by Regione Campania established to organize the event. The bureaucratic pressures and several commissioners alternated as head of the agency, along with the limited expertise in the project management tools for the organization of international sports events, caused a slowdown of activities which started only ten months before the event began.

As for the organization chart, digital communication was part of the activities of Digital Media Broadcasting (henceforth DMB). The DMB director took over responsibility 100 days before the event began, without taking part in preliminary training sessions organized by FISU. However, he had significant experience in mega sports events. The DMD director assigned digital communication to the SM team, that is a temporary group of people working on a time-limited project with specific scope and transitional human resources. The team consisted of a social media manager (team supervisor), two professional video makers, and an expert in communication. They were all Italians with experience in international projects, but not in professional sport events. The team worked from June 1st to September 30th, 2019. During the event, ten volunteers supported the SM teams, including undergraduates in sports communication.

The SM team managed the event account/page on Facebook, Instagram, X, that is "Napoli 2019 Summer Universiade", along with the tags/hashtags #napoli2019 #universiade2019 #tobeunique.

Facebook was created in 2004 and according to recent statistics is still the largest SNS in terms of number of monthly active users (Statista 2024). Photos, videos, news, etc. can be uploaded on the profile page and shared with other users that can like, comment, share posts, thus contributing to generate word of mouth. "Like" is an affectively driven behavior: users click on "like" for photos/videos stimulating any of the five senses. Users are likely to "comment" posts that solicit responses and/or have logic information (cognitively driven behaviors), while they usually "share" posts considered in line with their desired self-presentation.

Instagram is a photo-sharing SNS. Images and videos may be uploaded on the profile as permanent content or as "stories" lasting 24 h. Users' behaviors can be consuming (only watch), contributing (i.e., click on like and comments), or creating their own contents (i.e., photos, videos) shared with other users using the function "tags".

X (formerly known as Twitter) is a microblogging platform for the quick dissemination of news and personal opinions through "tweets", which are 140-character messages organized around "hashtag", i.e., a word/s preceded by a # that identifies a specific theme/interest. It is an immediate channel to reach people, who could start and/or take part in a discussion acting as connectors with diverse populations. Users can "like", "comment" or "retweet" posts.

The success of the digital communication of the 30th Summer Universiade became apparent from the data provided by the SM team and

reported in Appendix A. Going beyond the increasing number of followers, it is important to consider the spectators' activities and behaviors (i.e., views, mentions, interactions) that actually reflect their engagement with the event project (Vale & Fernandes, 2018).

3.2. Data sources and collection

We implemented a rigorous procedure in collecting data from multiple sources to support the understanding of the communication process enacted on SNS by project organizations for community engagement (Baxter & Jack, 2008; Miles & Huberman, 1994).

As mentioned above, we had extensive access to the media areas of sports venues and to the International Broadcasting Center (henceforth IBC) in Naples where the SM team was based. One author, directly collecting data, built interactional expertise and provided close access to the field. To ensure reliability of the study, she repeatedly compared notes with the DMB director to receive feedback about the correctness of her interpretations. At the same time, the exchange with the co-author and colleagues offered a means to balance differing perspectives, combining intimacy with local settings and the potential for distancing (Langley et al., 2013). This is in line with the research philosophy most widely adopted in PM studies according to which researchers are contributing observers, that engage with practice and construct subjectively a picture of reality (Martinsuo & Huemann, 2021).

Table 1
Data sources and details.

Interviews and informal conversations
Time span: from June 3rd to September 30th, 2019Info: 41 interviewees, 56 interviews, about 49 h recorded and transcribed.Key Informants from Social Media team (total length about 42 h):
• 12 interviews with the DMB director (tot. 26 h);
• 8 interviews with the 4 members of the SM team (10 h);
• 12 interviews with the volunteers appointed to the Social Media team (6 h);
Other relevant informants from Event Communication (total length about 3 h):
• 2 interviews with two members of the institutional communication team (1 hour);
• 2 interviews with two official photographers (1 hour);
• 2 interviews with two members of the team in charge of managing official photos (1 hour);
Others (total length about 4 h):
• 3 conversations with 3 venue managers;
• 3 conversations with 3 managers of the Italian Public Broadcasting Company (RAI);
• 1 conversation with an official interpreter;
• 1 conversation with a legal manager;
• 1 conversation with a food and beverages manager;
• 2 conversations with 2 safety officers;
• 1 conversation with a policeman;
• 5 conversations with 5 journalists;
• 1 conversation with a taxi driver.
Focus groups
Time span: July 16–17th, 2019Hours: 3.30 h
• Focus group with all members of the SM Team (two hours fully recorded and transcribed);
• Focus group with 10 volunteers (one hour and a half fully recorded and transcribed)
Field observations
Time span: from June 3rd to July 17th, 2019Hours: about 67 hLocations and/or attended events:
• International Media Press Centers (12 h);
• Social Media Team Office (21 h);
• Visits at several sport venues with DMB Director and one member of the SM team (13 h);
• Opening and closing press conferences (3 h);
• Media Briefing (2 h);
• Event of the International Sport Press Association (2 h);
• One stop of the torch release (1 h)
• Stadio San Paolo Naples: opening and closing ceremony
• (from press box, 6 h);
• Circolo del tennis Naples, tennis (1 h, media area);
• Palavesuvio Arena Naples, gymnastics (1 h, media area);
• Palabarbuto Arena Naples, basketball (1 h, media area);
• Piscina Mostra d'Oltremare, Naples, diving (1 h, media area);
• Stadio Adelchi Salerno, football (1 h, media area);
• Palasele Arena, Salerno, volleyball (1 h, media area);
• Organizer Broadcasting Van (1 h).
Archival data
Time span: from May 1st to September 30th, 2019Types of documents:
• 9 press articles and contents on Universiade published on the FISU website;
• 22 press articles on the organization of the 30th Summer Universiade Naples 2019;
• 3 Press notes from the Regional Agency for Universiade (ARU);
• 1 FISU official press release;
• Media guide about the opening and closing ceremony;
• 3 promotional videos;
• 5 brochures;
• FISU social media guidelines;
• Internal documents of the social media team (e.g. template, statistics, data analytics);
• Photos and videos while attending competitions;
• contents published on Facebook, Instagram, and X through the account Napoli 2019 Summer Universiade;
• contents published on Instagram and X using the hashtag #tobeunique, #napoli2019, #universiade2019;
• contents published on the event website;
• contents published on app for smartphone (from July 1st);
• Journal on sport science focused on the 30th Summer Universiade Naples 2019

Source: our elaboration.

In line with the process approach, we collected primary (from interviews, focus groups and on-field observations) and secondary data (i. e. archival and online data) in the period between June 3rd to September 30th, 2019 as explained below (see Table 1).

3.2.1. Interviews and informal conversations

We interviewed a large number of informants. During interviews, we emphasized the social construction of meanings, i.e. informants described their individual and collective views of reality based on which researchers generated interpretations and constructed meanings (Baxter & Jack, 2008; Myers & Newman, 2007).

We used a protocol guide for the first semi-structured interview with the Director DMB, aiming to obtain a general overview of the increasing use of social media in sports events, of how the assumptions of traditional communication have been changed, and how social media have impacted the dynamics of spectator engagement as well as the required competences and underlying communication processes (see Appendix B). Following this discussion, we agreed that understanding the process of digital communication for spectator engagement was a major question needing further investigation.

Subsequent interviews were conducted throughout the entire duration of the event with the director DMB, the four members of the SM team and the twelve volunteers. We could not follow a structured protocol guide because we realized that, as soon the event started, the SM team members were deeply involved in operational tasks and preferred to share information spontaneously through informal conversations in their office and press boxes. These were aimed at obtaining an in-depth understanding of the digital communication process, to grasp its dynamic evolution considering both the role of SNS users and external context factors. In all, we conducted 32 interviews with 17 people for a total of 42 h which provided significant information about the unfolding of the communication on SNS for spectator engagement during the 30th Summer Universiade.

Further interviews and conversations concerned those who revolved around communication: two official photographers, two members of the team in charge of managing official photos, and two members of institutional communication. These conversations pointed out the different timing between official photos and SNS contents: the former had editing times and were subjected to formal approval before publishing which was not compatible with the real-time approach of SNS communication.

We also enriched these data through informal conversations with three managers of the Italian Public Broadcasting Company (RAI); five journalists; three venue managers; one officer from the interpreting service; a legal area manager; a food and beverages manager; a taxi driver; three safety officers; one policeman. These conversations allowed us to reconstruct the general contextual sentiment. For example, the taxi driver had been involved by the event organizers for the transportation of the athletes while the policeman was involved in the new urban traffic plan.

In all, the first author interviewed and/or had informal conversations with 41 people involved in various roles for a total of 49 h. These were recorded with the consent of the person concerned and then transcribed. During the data collection period, the information was noted down every day by the researcher directly involved in the field and once a week she met the co-author to discuss the most interesting insights emerging from the data collected. Preliminary results were discussed with colleagues during internal seminars and, at the last meeting with the entire SM team, we asked them to comment and confirm the data correctness and the fit between their views and our interpretations and meanings (Rubin & Rubin, 2011).

3.2.2. Focus groups

After the closing ceremony, we organized two focus groups. A focus group is a "group interview" which aims to generate collective knowledge, going beyond the individual views and capitalizing on the dynamic interactions of opinions occurring within the group (Coule,

2013). It encourages spontaneity, with informants feeling empowered by a sense of group membership.

We organized a first focus group with the four members of the SM team. When the event had finished, the team was willing to devote time to retracing digital communication from the very beginning. They explained the use of each SNS (e.g. purpose, frequency, language), highlighted challenges, and stressed the importance of empathy, synergy and a positive climate for team success. The organization of such focus groups at the end of the event was beneficial for several reasons. First, SM team members looked back at their experiences offering thoughtful insights without time constraints and distractions. Then, they provided a holistic understanding of the entire digital communication strategy and their contributions. Finally, they captured the lesson learnt and felt comfortable in openly discussing success, frustrations and recommendation. A second focus group was organized with the volunteers as well, to analyze their roles, challenges, and what they had learnt in a more structured and comprehensive manner.

3.2.3. On field observations

We spent about 67 h as a non-participant observer at the SM office, the IBC, at the press box during opening and closing ceremonies, and we attended four competitions with the Director DMB and one SM team member. This allowed us to have an unbiased understanding of the dynamic of the SNS communication, and observe behaviors, interactions, and contexts without directly influencing them and without disrupting ongoing processes. The rich contextual data obtained during these non-participating observations enabled us to provide a more comprehensive understanding of the research topic.

3.2.4. Archival data

Finally, we gathered a comprehensive dataset related to the organization of the Summer Universiade in Naples, with specific regard to the SNS communication. This dataset covered the period from May 1st to September 30th 2019 to ensure thorough examination of the event's digital presence and communication strategies. It included official guidelines from FISU, press releases, as well as the contents on official SNS accounts. We obtained information as direct provision from the event's SM team and independent retrieval from public platforms. This allowed us to capture both the structured communication strategies set by organizers and the engagement that unfolded across SNS channels.

3.3. Data analysis

We integrated the transcription of interviews and focus groups with the day-by-day notes and coded these data relying on a "temporal bracketing strategy", i.e. a qualitative approach that divides a process into distinct sequential events, actions, choices to identify patterns, causal relationships and transitions between different phases over time (Langley et al., 2013). It also enables context-specific drivers of change to be identified and the role of institutional influences to be recognized.

The temporal bracketing strategy is particularly useful in process studies, allowing in-depth understanding of how projects unfold within specific temporal boundaries (Brunet et al., 2021). Each bracket contains a bundle of events, actions, and choices that are internally coherent. These are identified based on the thematic coding (Miles & Huberman, 1994) of collected data which enabled us to fill in contents within or across each time bracket and identify recurring patterns and relationships to explain the communication dynamic and its intrinsic meaning. At first, each author independently coded a dataset sample; then, they compared their interpretations, discussed discrepancies and resolved through consensus; finally they refined the codebook that applied for the manual coding of the whole dataset (see Table 2).

4. Findings

Our empirical findings evidenced a pattern in the digital

Table 2
Thematic coding map.

1: Define pre-event online communication
Code: Social media strategy
Choose platforms
Communication scope
Communication frequency
Visual interfaces
Code: Social media architecture
Internal communication process
Online networks to engage
Code: Cultural awareness
Contents tailored to participating countries
2: Start online event communication
Code: Hype Building
Hashtag creation
Countdown campaigns
Athlete introductions
Code: Promotional Content
Voluntary recruit
Ticket selling
Territory promotion
Code: Community Engagement
Polls, trivia, UGC invitations
3: Communication crisis
Code: Online communication crisis
Social media blackout
Inadequate FISU eco-chamber
Analytic tools deficit
Code: Counternarrative
Contested event legacy
Contested impact on local community
4: Responses to the communication crisis
Code: Crisis management
Unstructured storytelling
Mixed contents
Redefine platforms scope
Redefine internal communication process
Code Communication resilience
Authentic communication
Spectator engagement
Undervalued contents

Source: our elaboration.

communication of the 30th Summer Universiade Naples 2019 that internally unfolded over time through three sequential phases that we termed 1) defining communication through SNS; 2) from the social media plan to its disruption; 3) redefining the SM team's norms and procedures to perform an unstructured communication. The first phase referred to the period before the event, while the two subsequent phases occurred during the event. Despite their richness, the available data do not allow us to follow the evolution of digital communication in the phase following the conclusion of the event, since online communication activities were limited and did not provide major insights. This is a common problem with one-off events and more generally with projects that are inherently temporary in nature (Pisotska et al., 2022; Schnitzer et al., 2020; Turkulainen et al., 2015). Fig. 2 below synthetically reports the social media communication flow in the 30th Summer Universiade including the key events, actions, and choices for each phase.

4.1. Defining communication through social networking sites

Before the event, the SM team made a significant effort to define the social media plan, i.e. an intelligent agenda consistent with the event scope and developed in line with the editorial plan, aiming to optimize how SNS deliver value at different stages of the event, and thus maintain a prolonged connection and obtain conversions of fans, i.e. the call to action is turned into a definitive action (e.g. buying a ticket).

The team agreed about the importance of valuing online platforms that play a prominent role in engaging the project spectators, i.e. young people who the Universiade mainly targeted. They sought to position the event not merely as a spectacle but as a participatory event. To this end, they would focus on visually engaging contents and on emotionally resonant storytelling. A positive image depicted on SNS account pages together with a user friendly interface would further promote the sharing of information and experiences by online spectators.

Considering the features of the main SNS, along with the recipients and specific messages, Facebook, Instagram and X were chosen as the digital platforms to reach and engage spectators. In this regard, the team agreed that contents on X with 140 characters would be leveraged to drive event conversations around desired topics and to share event updates directly with spectators, who could experience the event through real-time quick online text-based communication. In this sense, X feeds and hashtags differed from visual posts on Instagram and contents on Facebook. The aesthetic appeal of Instagram would be leveraged to create an attractive image of the event, also engaging athletes in content creation and exploiting the interactive features of this platform. Facebook would serve the community-building purpose, as it allows users to interact easily with other spectators in the same community, making the experience shared and participatory.

Lastly, the SM team stressed the importance of being inclusive with the diverse online spectators. This implies getting preliminary information on the different cultural values, symbols and sensitivities of participating countries, so that the messages are respectful of everyone and do not come across as discriminatory and offensive while making sure to resonate with the local and global audience.

As for the scope, before the event, communication on SNS had to be informative but attractive, to increase event awareness and the
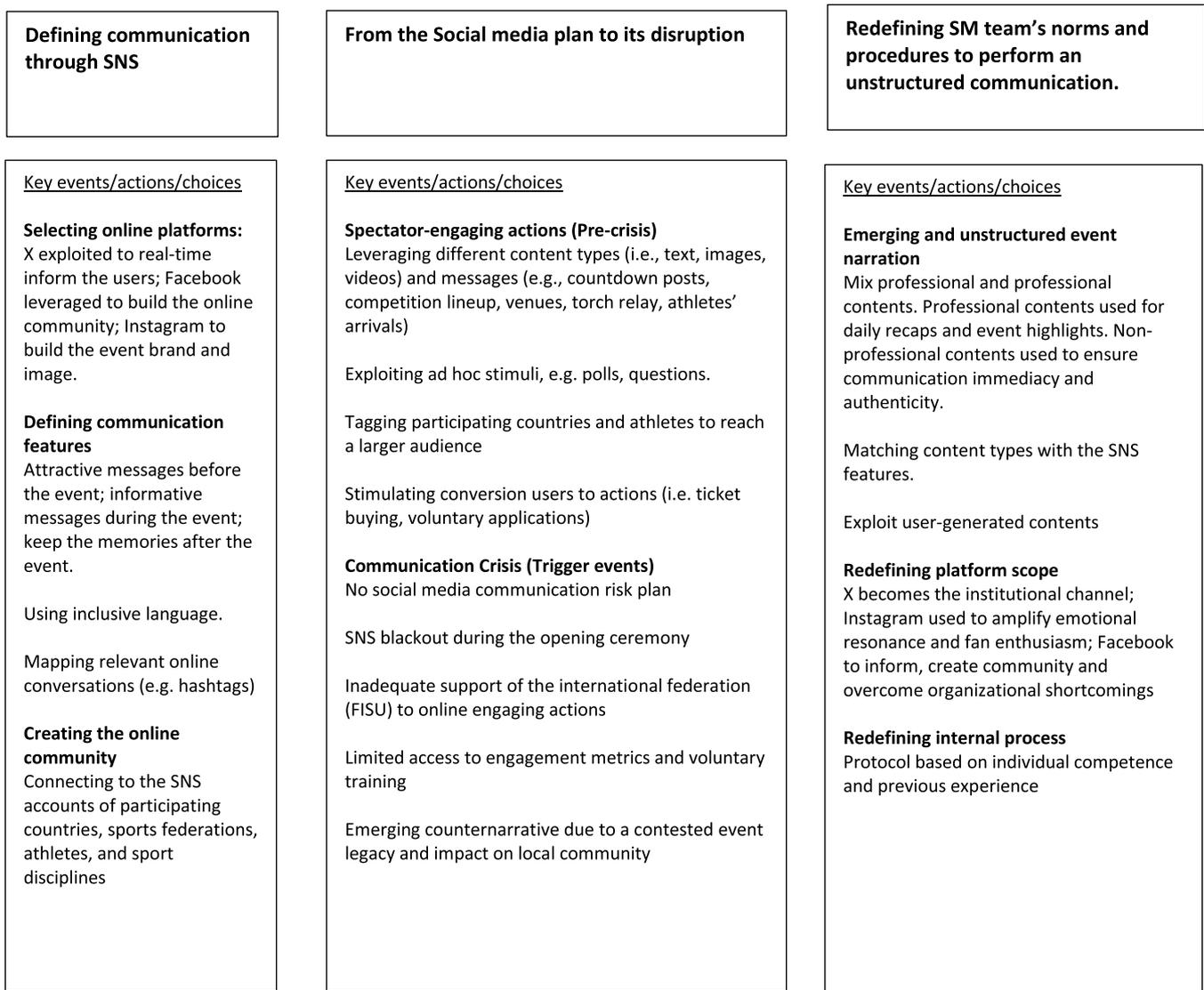
Defining communication through SNS	From the Social media plan to its disruption	Redefining SM team's norms and procedures to perform an unstructured communication.

Key events/actions/choices	Key events/actions/choices	Key events/actions/choices
Selecting online platforms: X exploited to real-time inform the users; Facebook leveraged to build the online community; Instagram to build the event brand and image.	**Spectator-engaging actions (Pre-crisis)** Leveraging different content types (i.e., text, images, videos) and messages (e.g., countdown posts, competition lineup, venues, torch relay, athletes' arrivals)	**Emerging and unstructured event narration** Mix professional and professional contents. Professional contents used for daily recaps and event highlights. Non-professional contents used to ensure communication immediacy and authenticity.
Defining communication features Attractive messages before the event; informative messages during the event; keep the memories after the event.	Exploiting ad hoc stimuli, e.g. polls, questions. Tagging participating countries and athletes to reach a larger audience	Matching content types with the SNS features.
Using inclusive language.	Stimulating conversion users to actions (i.e. ticket buying, voluntary applications)	Exploit user-generated contents
Mapping relevant online conversations (e.g. hashtags)	**Communication Crisis (Trigger events)** No social media communication risk plan	**Redefining platform scope** X becomes the institutional channel; Instagram used to amplify emotional resonance and fan enthusiasm; Facebook to inform, create community and overcome organizational shortcomings
Creating the online community Connecting to the SNS accounts of participating countries, sports federations, athletes, and sport disciplines	SNS blackout during the opening ceremony Inadequate support of the international federation (FISU) to online engaging actions Limited access to engagement metrics and voluntary training Emerging counternarrative due to a contested event legacy and impact on local community	**Redefining internal process** Protocol based on individual competence and previous experience

Fig. 2. Social media communication flow in the 30th Summer Universiade.
Source: our elaboration

engagement of spectators. During the event, the purpose was to communicate the sports competitions, hence the athletes' warm-up, results, and post competitions. After the event, they would direct communication to keep the memories of the event by reproducing images and videos of significant moments.

The communication objectives for the local organizing committee (e. g. frequency of online activities) had been set in the FISU social media guidelines, e.g., from 10 to 13 posts a day on Facebook, at least 5 photos and 2 videos on Instagram. The international federation would accompany the local organizing committee through promotion of the event on its online channels. As simultaneous communication was fundamental, the SM team connected with the accounts of participating countries, sports federations, and disciplines to create an online community and speed up the upload of contents on SNS. They prepared a template with hashtags as well to connect with mainstream online conversations immediately. Finally, the team members mapped the process and clarified the roles, tasks, workflows, and expectations for each of them to ensure project success.

4.2. From the social media plan to its disruption

Two weeks before the event, the team exploited SNS to generate buzz

around the event and obtain followers with whom to engage over time. They used countdown posts to remind followers of the upcoming event on social media, thereby driving, at the same time, excitement, and fear of missing out on the event. They introduced online the competition lineup and disclosed details about the venues, along with participating countries and athletes. Online communication also aimed to recruit volunteers, selling tickets, and - to a lesser extent - promoting the region of Campania for visiting athletes and delegations.

Following the social media plan, they uploaded an increasing number and variety of posts on SNS aimed at providing users with curiosity about the 18 sports (e.g., have you ever played badminton? Do you know who invented it?). The SM team also uploaded 30- and 60-second-long videos on Twitter and Facebook and created hashtags for celebrating the athletes' arrival on Instagram (i.e., #myroadtouniversiade) and documented the torch relay online. Ad hoc stimuli (e.g., posing questions) were crucial for user enjoyment and for motivating interaction with both event organizers and other spectators: that is producing, publishing, and sharing contents – also in real-time through smartphones- in a dynamic and interactive environment. Hashtags and the function of tagging athletes and participating countries favored event visibility and the reach of a larger international audience.

As soon as the event began, some circumstances called into question

the overall communication strategy and the SM team realized they had no communication risk plan which could significantly compromise the customer trust and event success.

First, there was a blackout of SNS during the opening ceremony: neither the SM team members nor athletes and spectators could upload photos and videos of the ceremony and behind-the-scenes contents in real time. They lost a crucial launching pad for establishing a sense of connection with the event which is a prerequisite for online spectator engagement.

Secondly, FISU did not actively support the digital campaign of the 30th Summer Universiade. FISU should give world visibility to the opening ceremony and event competitions through its own SNS pages. Anyway, it actually uploaded few posts, which had low user interactions (e.g., like on Facebook). Further, while initially the federation had to stream the event on FISU.TV, i.e. a hub for free access from the website and/or app to university sports video contents, it then decided to broadcast only the finals and semi-finals. This reduced the overall visibility and reach of the event.

Further factors compromising the online communication concerned the local organizing committee. Specifically, the suboptimal allocation of resources contributed to operational inefficiencies, particularly in the domains of technological tools. In this regard, the SM team had no analytic tools to monitor real-time engagement metrics, anlyze user sentiment and optimize their communication strategies. Likewise, despite the strategic importance of volunteers in the online event communication, the OC failed to implement sufficient training measures, thereby constraining their effectiveness due to limited experience and competences.

Furthermore, the communication of a sports event starts from the legacy intended to leave and builds around it. By legacy we mean structural changes (e.g. infrastructures) that outlast the event itself. In other words, how the renovated 58 sports venues will be exploited once the event concludes can have a major social impact, which has to be communicated. It may also involve an economic and social dimension, with a potential positive economic impact (e.g. job creation, tourism) and community participation (Preuss, 2007). ARU did not really bother to define the legacy of the 30th Universiade, thus losing the opportunity to send a positive message to the local community. As SNS offer open channels for speaking and sharing opinions, a counter-narrative emerged online from the local media that claimed that there would be no lasting legacy in Naples or the surrounding area despite the large public funds invested. Citizens joined the online conversations and complained online about some organizational issues as well (e.g. road network changes in Naples). An emerging counter-narrative gained momentum, presenting alternative interpretations that diverged from the official discourse desired by the event organizer.

4.3. Redefining the SM team's norms and procedures to perform an unstructured communication

The SM team members collectively sought strategic solutions to deal with all the above-mentioned issues. In the absence of a predefined crisis communication plan, they relied on a combination of crisis management, spontaneity, and creativity. This "storming" led them to agree on new norms and communication procedures, which would value individual competences (e.g., on videos) and previous experience (e.g., as a journalist). They also redefined internal roles and responsibilities: everyone would work on all SNS (and not on a single one as previously established) and would set up in a certain language and align themselves to ensure unified messaging to be delivered online.

In maintaining a significant and constant presence on SNS, they adopted an innovative approach to online narration of the event, that became emerging and unstructured. In this phase, available contents affected the choice of the social media platform so that they would be matched to the most suitable digital environments to optimize engagement. Live tweeting was used for real-time competition updates;

Facebook for long videos and/or rich text; and Instagram for self-explanatory images and videos, including those shared by followers to engage them.

Further, they carefully mixed professional contents and (predominantly) non-professional ones, which ensured "immediacy" and "authenticity", as well as a distinct tone of voice from official channels so that spectators perceived they were co-creating the event digital experience.

Official event photos were available not before 24 h, but real-time representation was fundamental to give immediate information about results and future competitions. For this reason, non-professional images taken by team members and volunteers, along with contents from athletes and spectators who used the event tags, were used for documenting the matches online in real time. In contrast, professional photos were used for daily recaps and event highlights that summarized the event in one post with a video or photo compilation of the highlights.

The absence of a clearly articulated and prestructured linkage among contents (e.g., stories on Instagram) in some cases undermined the communicative impact but conveyed the desired authenticity, thus contributing to spectator engagement.

The team also began to use each platform in unexpected ways. Twitter became the institutional channel, but also the most flexible and effective SNS. It was used to report different contents, from highlights of a match to institutional events. Instagram targeted young athletes and spectators and was used to excite followers, also using "emoticons", i.e., stylized reproductions of human facial expressions. Followers – mainly Italians, Brazilians, and Mexicans - contributed daily through the event tags, and the "stories" uploaded on the event page were like a live commentary.

Facebook was used to inform. Team members documented competitions from different venues and the SNS served other purposes as well. Interestingly, it was used to provide users with information which was found difficult to retrieve from the event website (e.g., competition grid). Further, when spectators asked (in online comments) to see some sports competitions, Facebook was used to broadcast the live image recorded through their smartphones, thus favoring interactions and comments. Delivering the service took priority over maintaining the quality of the image. Listening to what online spectators had to say and resolving their issues, showed transparency, openness, and readiness to adapt which improved customer engagement.

5. Discussion

This study aimed to understand the communication process enacted on SNS by project organizations for community engagement. To this end, we conducted a process study on a specific type of project, i.e. a sports event, to ascertain how online communication unfolded over time to communicate with, involve, and develop relationships with online spectators. The process approach allowed us to penetrate the digital communication process and obtain a complete view of the patterns of events, activities, and choices underlying project communication in the digital realm (Brunet et al., 2021; Langley, 2007).

In so doing, we contribute to the advancement of existing knowledge by investigating how new digital communication tools, such as social media, have changed the overall landscape of project stakeholder engagement, a research area largely overlooked in existing studies (Aaltonen et al., 2024; Chung et al., 2023). Our perspective is original as we investigated the phenomenon from "inside" the temporary organization to establish the organizational processes underlying the online project communication paired with a rich contextual analysis which is essential to leverage digital platforms strategically and foster genuine community participation. This study provided the following three theoretical contributions.

5.1. Online project communication accomplished as an ongoing compromise to engage the relevant community

The process perspective enabled us to converge opposing views and find an explanation for different positions in the literature. A group of studies were prescriptive. They proposed social media guidelines, along with a strict list of rules and activities varying across the project life cycle to ensure community engagement in the digital realm. These organization-centered studies assume that a social media strategy, if correctly planned, can be successful in engaging customers because managers control the messages sent to their audience through SNS (cfr. Chung et al., 2023; J. Ninan & Sergeeva, 2022, J. 2022a b).

Another group of studies suggest abandoning the paranoia to control the project narrative for community engagement due to user participation in generating contents (cfr. Lecoeuvre-Soudain & Deshayes, 2006; Lobo & Abid, 2020; Pizzi et al., 2021). Such user-centered studies attribute to the community a leading role in driving conversations towards themes they want to discuss. These themes may be affected by individual preconceptions and bias varying over time as the event unfolds and can differ from those established in the agenda setting and can even alter the original messages or desired image of the project, thus compromising its credibility (Corney et al., 2014; Kirilenko & Stepchenkova, 2017; J. Ninan & Sergeeva, 2022b). This challenged the gatekeeping theory (Shoemaker & Vos, 2009): although the event accounts are controlled environments, where the SM team self-present the desired event image, and inhibit or even limit the publication of user comments and interactions, they cannot filter the information circulating online, thus not impeding the diffusion of a parallel event narrative (Santomier et al., 2016; Thompson et al., 2018). According to an extreme position, the event communication process through SNS depends only on user contents and the agenda setting was unnecessary in the wild west that is the Internet (Hambrick & Pegoraro, 2014; McGillivray, 2014).

We do not seek to advocate one vision or the other. This empirical study on an international sports event gave us the opportunity to glimpse a third nuanced view. At the 30th Summer Universiade, online project communication evolved over time. In particular, the flux of communications depended on the discursive patterns between the SM team and SNS users (i.e., spectators), but it was also affected by the context and by the need to respond to contingent situations (Carr & Hayes, 2015; Engwall, 2003; Lobo & Abid, 2020). The online storytelling became emerging and unstructured, which is counterintuitive as a communication crisis usually results in a stricter narrative control of the message (J. Ninan & Sergeeva, 2022b).

SM team members had to strive to find a balance between the social media plan and the user-generated contents, along with addressing problems and taking the opportunities emerging from the external context. The digital communication process was accomplished as an ongoing pragmatic compromise (Macnamara & Zerfass, 2012), where SM teams were open to users and careful to interpret whether and in what way ongoing interactions with the environment affected the event narrative. This did not end at a single instant, but it was a continuous process, repeated over time. SNS created persistent online places for messages with a ubiquitous nature, i.e., the channel was persistently available whether or not a user was active, and users could access wherever they were (Carr & Hayes, 2015) with disparate platforms considered as an ecosystem (Go & You, 2016; Hanna et al., 2011; Kaplan & Haenlein, 2010; Kietzmann et al., 2011).

This recalls the Rational Adaptive Approach (RAA) which seeks to combine rational planning (i.e. formal, comprehensive, and systematic) and adaptive planning (flexible and participatory) in project management (Papke-Shields & Boyer-Wright, 2017). In our study, rational planning provides a structured approach to properly communicate project goals to the targeted community. Adaptive planning ensures rather that communication can be adapted in timely fashion and effectively, and react to any unexpected situations or controversies. It also evidence that management of (communication) crisis, as response to unforeseen events, is grounded in the specific contextual issues where the exogenous disruption triggers may emerging, frequently not occurring in isolation (Unterhitzenberger et al., 2024).

5.2. Critical abilities to manage project narrative

Another theoretical contribution to the PM literature concerns the abilities required by the project organization to effectively dominate the online narrative. Specifically, this study adds to the debate on project narrative and counternarrative (e.g. J. Ninan & Sergeeva, 2022 a, b) by shifting the focus from the external to the internal dimension and suggesting that certain team and individual skills along with shared values and experimental culture enacted during this ongoing process of negotiation were critical to managing the different narratives that emerge online.

Specifically, our case showed that the SM team had not envisaged this unstructured communication process, but it emerged as an immediate response to the subversion of the initial plan. In this context, we found some cognitive and behavioral capacities to be crucial in processing SNS communication flow and making sense of bottom-up and external pressures. Existing studies have already evidenced that technical skills together with creativity, cultural awareness, and self-regulation are essential for effective online communication (cfr Papadaki et al., 2019). Our case further shows the relevance of their ability to "improvise" (Crossan et al., 2005; Cunha et al., 1999; Vera & Crossan, 2004), generate collectively novel ideas (i.e., "collaborative creativity", Sonnenburg, 2004), and learn consciously (i.e., "mindful learning", Veil, 2011). "Improvisation" was a strategic skill to respond to external tensions and to re-direct the flow of events quickly. Time pressure did not freeze the team. It led individuals to use their creativity, knowledge and expertise spontaneously to tackle problems and opportunities, and explore new pathways (Crossan et al. 2005; Henderson et al., 2016; Vera & Crossan, 2004). This occurs through processing individual contributions in a pattern that speeds up collective idea generation in an ongoing dynamic (Sonnenburg, 2004). The team also enacted changes in the routine process. They abandoned the formal division of roles and opted for fluid collaboration. This took advantage of team members' experimental culture (Vera & Crossan, 2004) and mainly of their shared values, beliefs, and behaviors for which there would not have been time during the event for enacting socialization activities (Tosi & Pilati, 2008). This mindful learning was relevant to digital communication, mainly when managed by temporary SM teams that had to manage the unexpected events mindfully (Veil, 2011).

5.3. Social networking sites play a role in overcoming project shortcomings and engaging the international community

Further knowledge is added to the PM literature by establishing that SNS may serve not only as a source of information for project managers about preferences and needs of project customers (e.g. Hysa & Spalek, 2019). This study also evidenced that SNS may play a role in overcoming project shortcomings, thus preserving its public image and ensuring a positive experience.

Our study revealed that SNS served to overcome shortcomings in the organization of the Summer Universiade in Naples. In this regard, the event website represented the communication "hub", providing the media, sponsors, sport organizations, athletes, and spectators with information on date, locations, and results. It linked closely with SNS, which are conceived to document what happens in the field. Rather, our study pointed out that SNS -mainly Facebook and X- acted as an alternative to the event website. They provided users with information when found hard to retrieve from the website (Abeza et al., 2013; Santomier et al., 2016; Thompson et al., 2018). X had an informative purpose and did not act as a blog to discuss the event (Kietzmann et al., 2011). Likewise, the live video on Facebook was used by the SM team to

broadcast competitions not available on the official TV channel.

With regard to the specific project selected for the empirical investigation, this study enriched the literature on international events by highlighting the potential of SNS to engage a large audience of spectators (Thompson et al., 2018). The 30th Summer Universiade represents a relevant case as it attracted relatively few on-site spectators. Consequently, SNS played a vital role in increasing the global visibility of the event and fostering the international engagement of online spectators as emerged from the online interactions with the event accounts (see data in Appendix). These platforms served as dedicated spaces for participating in competitions and discussing sport (Di Gangi & Wasko, 2016; Vale & Fernandes, 2018). A series of top-down actions stimulated spectator participation, that is questions, live match coverage, and multimedia sharing, together providing a compelling narrative and behind-the-scenes contents (Cruz et al., 2017; Harb et al., 2019; Nisar et al., 2018).

6. Conclusions, limitations and future research

This study aims to further our understanding how best to apply new technologies, namely social media, to engage the project community. Social media encourage new forms of interactions in the digital world, which are crucial for effectively accommodating conflicting community interests and establishing enduring loyal relationships.

Using a sports event as the context of empirical investigation, this study has major implications for research in PM as it offers a new perspective of project community engagement through SNS. We found that the digital communication process was accomplished as an ongoing pragmatic compromise, where SM teams must be open to users and, at the same time, careful to interpret whether and in what way the interaction with the environment affects the narrative. Some cognitive and behavioral capacities of the SM team were thus essential to manage the communication patterns between the SM team and SNS users effectively and timely, in light of the contextual situations.

This study is not without its limitations. First, our study referred to a sport event, which may limit the generalization of findings to this specific project type. We thus offer a middle-range theory, which is a theory that generalizes beyond a particular case but within a particular context (Bourgeois, 1979). Similar investigations in other types of projects would enable comparative research and generalizability. Secondly, we focused on a single category of stakeholder, i.e. spectators, neglecting the other relevant actors and favored the internal perspective over the external one. Our analysis focused on the internal perspective and qualitative data enabled a detailed description of how the digital media

strategy unfolded over time (McKenna et al., 2017). Rather, we referred to quantitative data on user engagement as outside evidence of how such communications were received in the online community. As we only accessed analytical data at event conclusion, we invite future studies to incorporate more sophisticated data that track real-time changes in followers and profile interactions. Thirdly, we considered the SNS (i.e., Facebook, Instagram and X) used by the social media team while the world of social media is constantly coming up with new tools. As social media theories hold as long as the technology remains stable and users do not change the way they use it (Carr & Hayes, 2015), further research is needed to understand the role of other SNS for project customer engagement.

Finally, this study has practical applications for project organization as it provides an original perspective to decipher how to manage crisis communication with the project community due to unexpected situations or controversies which are frequent and common in the social media environment.

CRediT authorship contribution statement

Tommasina Pianese: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization. **Walter Vesperi:** Writing – review & editing, Visualization, Formal analysis.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix

Appendix A

Appendix A
Data about SNS updated at July 16th, 2019 (2 pm).

Facebook	Instagram	X
● 9 million users covered; ● 2 million users interacted; ● There were slightly more male fans of the page (54 %), but more women interacted and commented posts (52 %); ● 7.5 million views of video for at least 3 s. ● Popular countries: Italy by far, followed by Mexico, USA, Germany, UK, France, Canada, Australia and Spain. Thousands of views in countries like Azerbaijan, Thailand, Peru,	● 35,086 followers (+ 5015 compared to July 8th); ● 2829,046 accounts reached and 10,375,843 impressions in the period from 9th to 16th July. ● Popular countries: Italy, Mexico, Argentina, Brazil, Russia.	From June 19th to July 16th ● 552 tweets ● 2.41 million tweet views ● 71,100 profile visits ● 7079 mentions ● 4583 followers June 2019 ● 122 tweets; ● 486,000 tweet views; ● 13,100 profile visits; ● 1641 mentions ● 975 new followers

Source: Data provided by the SM team.

Appendix B Interview guide for the Director DMB

Section A – General information

Q.1. General information about the sports event

Q.2. General information about background and previous experience in this role in other sports events.

Section B – Key questions

Q.3. How has the diffusion of social media changed the communication of sports events with their spectators?

Q.4. What are your expectations regarding the role that social media will play in the engagement of spectators at the 30th Summer Universiade?

Q.5. How is social media used at different stages to engage spectators and what are the expected opportunities and challenges?

Q.6 How has the diffusion of social media impacted online communication processes and skills needed for effective spectator engagement?

Section C – Final question

Q.7 Is there anything you would like to add or are there aspects of the role of social media in sports events for customer engagement not covered by the previous questions?

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