



How performance measurement can support achieving success in project-based operations

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ABSTRACT

This paper investigates the existing and missing connections between the concepts of project management success and organizational success. We build a theoretical framework of the concepts and elaborate on it by examining three innovation project cases—a smart-city project with little organizational success-driven performance measurement, a product development project with overly ambitious project management goals but an overall positive organizational impact, and an R&D project involving practically no project management performance measurement since organizational success was considered paramount. Our unit of analysis in these cases is performance measurement in terms of its alignment or misalignment of success. We contribute to the literature by (1) examining the linkage between organizational success and project performance criteria, (2) exhibiting the interrelations, dominance, and use of certain project performance measures in determining whether a project is successful, and (3) offering a framework for understanding how performance measurement can support success in project-based operations.

1. Introduction

Combining project management success with wider organizational success is not without problems, since determining what ‘success’ itself means is not always well-defined (Ika & Pinto, 2022; Pinto, Davis, Ika, Jugdev & Zwikael, 2022). This is partly because success and performance are not the same thing—a project can fail in terms of its management but might still be considered a success by stakeholders in the end; alternatively, a project may be managed well in terms of expected time and cost but fail to accomplish its wider objectives that are meaningful to its stakeholders (Turner & Xue, 2018). While project management success can often be considered the accomplishment of a project according to certain predetermined metrics (e.g., Berssaneti & Carvalho, 2015), understanding a project’s contribution to wider organizational success is a more difficult task. Overall, organizational success can be pragmatically understood as long-term performance that stems from operational activities that are based on and adhere to organizational missions and values (Nørreklit, 2017). A practical way of looking at wider organizational success would be to analyze whether a project helps achieve the initially established business case targets or if it eventually ends up being comprehended as a valuable investment

(Turner & Xue, 2018; Zwikael & Meredith, 2021). However, it is still unclear how the social construction of ‘success’ takes place in different stages of a project’s lifecycle in “messy” project management realities (Pinto et al., 2022; Volden & Welde, 2022). Furthermore, it is unclear how different project success dimensions are interrelated (Ika & Pinto, 2022; Kaufmann & Kock, 2022) and how they can be measured in a way that is valid from the contextual perspective (Abdallah et al., 2022; He, Tian & Wang, 2022; Laine, Korhonen & Suomala, 2020). Providing such clarity, however, would require embracing the complexity and dynamism that are often present in projects (Abdallah et al., 2022; Ika & Pinto, 2022; Kaufmann & Kock, 2022; Tsoukas, 2017), meaning that some ambiguity regarding project ‘success’ still remains in the end (Laine, Korhonen & Martinsuo, 2016). Therefore, the question arises—how do we address this ambiguity?

Innovation projects are a particularly challenging context for understanding both the concept of project success and the performance that underpins it (Laine et al., 2016). In this context, it is particularly relevant to look at the project lifecycle—‘project management success’ and ‘product success.’ The former examines whether a project was executed within its established boundaries, while the latter represents the wider organizational dimension of success (Baccarini, 1999;

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Marnewick & Marnewick, 2022). This classification accounts for the fact that the impacts of innovation activities may only be observed much later, e.g., after a product or service enters the market and either achieves its initial sales targets or otherwise in a dynamic environment (Jørgensen & Messner, 2010; Laine et al., 2016; Shenhar, Dvir, Levy & Maltz, 2001, 1997). In other words, ‘organizational success’ can be examined only after the project has ended and ‘project management success’ has been evaluated. Moreover, ‘success’ can mean different things to different people in different projects at different points of time, e.g., depending on personal responsibilities or traits, or technological uncertainties regarding a project (Shenhar et al., 1997, 2001; also Freeman & Beale in Davis, 2014; Müller & Jugdev, 2012; Shenhar et al., 2001; Turner & Zolin, 2012, 2017; Zwikael & Meredith, 2021). Therefore, determining the time, process, and viewpoint from which project success and the performance that underpins it should be evaluated remains a challenging task (Franco-Santos, Stull & Bourne, 2022).

Indeed, a project can be a failure in some terms (Siddiquei, Fisher & Hrivnak, 2022) but still satisfy some stakeholders, for example, project management success could be considered high even if ownership or investment success is low (Sage, Dainty & Brookes, 2014; Volden & Welde, 2022; Zwikael & Smyrk, 2012). One possible explanation for this is that one’s comprehension of what constitutes a project’s success can confuse project outcome performance with project management performance, or vice versa (Zwikael & Meredith, 2021). Not surprisingly, more research examining the complex concept of project success, especially empirically (Varajão, Magalhães, Freitas & Rocha, 2022; Volden & Welde, 2022), has been recommended (Pinto, Davis, Ika, Jugdev & Zwikael, 2021). Although the early project management literature has considered project management and project outcome successes as two distinct dimensions of project success (Baccarini, 1999), it is still difficult to comprehend how these dimensions can be dynamically combined and directed during project execution by managing performance, particularly in the context of innovation (Laine et al., 2020). This is especially true considering that practice has often continued to focus on the perspectives of the iron triangle, thus lacking performance measurement systems that account for the wider benefits attained by projects (Badewi, 2016; Breese, Jenner, Serra & Thorp, 2015; Zwikael & Smyrk, 2012; Zwikael, Chih & Meredith, 2018), such as improvements in organizational performance (Zwikael & Smyrk, 2012). This creates a problem because the measurement of organizational performance might be quite disconnected from that of project performance (Bourne, Franco-Santos, Micheli & Pavlov, 2018; Kaplan & Norton, 2005). Considering this context, the ways to measure innovation project success and the project and organizational success underpinning it become an ambiguous issue. Altogether, this indicates that it is important to better understand how performance measurement can support the achievement of success in project-based operations (He et al., 2022; Pesämaa, Bourne, Bosch-Rekveltdt, Kirkham & Forster, 2020; Pinto et al., 2022; Varajão et al., 2022). Therefore, further research is required on how project performance can be measured and managed so that it dynamically supports project management work, including the project’s establishment, management, and, finally, a postmortem analysis on it (Nelson, 2007). If such research is not available to advise practice, instead of supporting the attainment of success, innovation project performance measurement might aggregate different performance types into meaningless measures that lack contextual nuances and understanding of what actually constitutes ‘success’ (Martinsuo, 2013; Müller & Jugdev, 2012; Shenhar, Tishler, Dvir, Lipovetsky & Lechler, 2002; Zwikael & Meredith, 2021).

Altogether, the current literature on project management does not adequately address how performance measurement can dynamically support project management from the combined viewpoint of project management success and wider organizational success in the innovation context. For this reason, conducting a field study is necessary to understand the terms project success and organizational success, as well as the dynamics between the two, in the innovation context. Recent

research hints at the existence of innovation projects that are successful in the short term (i.e., project management success is high) but unsuccessful in the long term (i.e., organizational success is low) (Laine et al., 2020). For example, a complex project might deliver favorable results on budget and even be completed ahead of time, but fail to solve the initial problem (Zwikael & Meredith, 2021). The situation might also be inverted—an innovation project might fail in terms of project management performance but still be successful in terms of organizational performance (Shenhar, Holzmann, Melamed & Zhao, 2016), for instance, in terms of long-term revenue. However, the question of how innovation projects can be measured and managed to achieve success in both terms still remains unanswered. Moreover, the opportunities and challenges related to performance measurement in innovation project management have not been thoroughly examined (Martinsuo, Korhonen & Laine, 2014). As a result, there is inadequate understanding of how organizations can influence the ‘trajectories’ of different cases of project management and organizational success (Abdallah et al., 2022).

To address these gaps in previous research, this paper first provides a framework for organizational and project success and then uses empirical illustrations to elaborate the same (as suggested regarding methodology by Abdallah et al., 2022), aiming to provide a new understanding of the dynamics of project management success and organizational success. Furthermore, the dynamic relationship between project and organizational successes is explored by studying three empirically grounded illustrations of projects from both viewpoints (project management success and organizational success); this sheds light on the dynamics of success in the context of innovation projects. The findings of this study reveal how different forms of project performance (predetermined, project management, postmortem) are dynamically intertwined and how they vary in importance in terms of defining whether a project is a success. At the same time, this study presents performance measurement as a potential—though not silver bullet-like—means to align different examination levels.

Effectively, the current study has multiple contributions. First, it contributes to the literature on performance and success in project management by examining the dynamic linkage between organizational success and project performance criteria (Zwikael & Meredith, 2021; Zwikael et al., 2018) with the help of empirical case illustrations that unveil different perspectives, time dimensions, and conflicts related to the two perspectives (Abdallah et al., 2022; He et al., 2022; Ika & Pinto, 2022; Kaufmann & Kock, 2022; Laine et al., 2020). Second, the findings also contribute to the literature on innovation project success and performance (Laine et al., 2016, 2020; Unger, Rank & Gemünden, 2014), as they depict the dominance of certain project performance measures (Ahrens, 2018; Carlsson-Wall, Goretzki, Kraus & Lind, 2021) in determining whether a project can be considered a success or not, thus providing insights into the interrelations between project success dimensions (Ika & Pinto, 2022; Kaufmann & Kock, 2022). This further indicates that more attention should be paid to the utilization (and not just selection) of performance measures in project-based operations. Third, the framework developed in this study is a meaningful tool for both practitioners and academics to better understand the successes of different kinds of projects, providing a much-needed structure for ex-post analysis of the dimensions of project success (Volden & Welde, 2022).

The remainder of this paper proceeds as follows—the next section reviews the literature on performance and success in projects, thus allowing the development of our framework for both project and organizational success. The following section presents the research methodology, followed by three case illustrations that help us exemplify the dynamics between project management success and organizational success. Finally, the study ends with a discussion and conclusions section.

2. Literature review

2.1. Project success

Projects generally intend to contribute to certain strategic organizational objectives by using activities and resources to create intangible and tangible project outcomes that satisfy the needs of stakeholders (Nogeste & Walker, 2008). Both ‘project management success’ and ‘product success’ are *desired* as elements that contribute to overall project success (Baccarini, 1999). This is because it is (usually) necessary for single projects to also adhere to wider organizational goals, meaning that there is a connection between the parent organization’s strategy and the individual project (Artto, Martinsuo, Dietrich & Kujala, 2008; Stjerne & Svejnova, 2016; Turner & Müller, 2003). It should be noted that the term ‘organizational success’ is used in this study to not only include wider considerations of ‘product success’ (Baccarini, 1999) but also other types of organizational benefits (Badewi, 2016).

Moreover, success in project management and the roles it encompasses contribute to organizational success as well (Zwikael & Meredith, 2018; Zwikael et al., 2018). While the linkage between organizational and project success goes hand in hand in some projects, especially those with incremental development, the possible risks and rewards might be higher but more ambiguous in other projects, such as in the case of *ventures* or radical innovation (Artto et al., 2008)—a phenomenon that is acknowledged during the project planning phase itself. In such cases, the path to organizational success can be expected to be longer. Sometimes, however, a project becomes an *expensive lesson* to be learned when it fails to perform well on both terms, but the organization learns something valuable from it as it offers opportunities for learning to increase the chances of success in later projects (Nelson, 2007). In all of these cases, it might be rather difficult to understand how success is measured and, more importantly, when this measurement should be conducted. The decision regarding whether suboptimal performance in an individual project can be seen more widely as a challenge or an opportunity depends on a contextualized decision-making situation (e.g., Laine et al., 2020; Martinsuo et al., 2014).

To achieve high levels of project management and organizational success, it is first important to understand how project performance and project success are related. However, the literature on holistically managing performance in project environments is scarce (Mir & Pinnington, 2014). The recent conception related to this aspect is that ‘the success criteria model to be presented should go beyond the concept of project performance (time, budget, and quality), permit changes for different projects, be reliable, and present a current comprehension of project success’ (Castro, Bahli, Barcaui, & Figueiredo, 2021, p. 801). But what does the ‘comprehension of project success’ actually mean? A wider perspective on project success can contain, for instance, evaluation of customer satisfaction (Cao & Hoffman, 2011) and supplement project management metrics with those that concern the lifecycle of the project’s output more strategically—e.g., a developed product and its business lifecycle (Baccarini, 1999; Jugdev & Müller, 2005). In this context, Todorović, Petrović, Mihić, Obradović and Bushuyev (2015) suggest using a project success evaluation framework consisting of critical success criteria, key performance indicators for measurement and documentation of success, and a final evaluation of the project’s success from a final report. On the other hand, Badewi (2016) links investment success to project management and benefits management. Meanwhile, Zwikael and Smyrk (2012) propose that the project manager’s success in ensuring project execution, project ownership success in terms of realizing business case expectations, and project investment success should be considered separate viewpoints to measure project performance. They further suggest that future research should examine the wider conception of project performance in relation to the success criteria. Hence, to meet the project objectives, one needs to look not only at the rearview mirror but also at what lies in front. Therefore, Turner and Zolin (2012) suggest using leading performance indicators to

estimate project success in advance. Altogether, ‘project success’ has been considered a wider outcome of the more strictly delineated variable of project management performance.

Altogether, the causal chains that connect diverse performance measures to perceptions of success have not yet been thoroughly examined and deserve further scrutiny in different project settings to understand what constitutes success in different cases (Williams, 2016). Otherwise, the real-life ambiguity of project success that is currently dependent on various viewpoints (Sage et al., 2014) would be left unresolved, both in practice and in context (Martinsuo, 2013).

2.2. Ambiguity of success at the organizational and project levels

This section explores some projects whose success has been reported to be ambiguous—we present the difficulties in understanding project performance in relation to project or organizational success in some compelling cases explored in earlier studies. It should be noted that we do not seek to cover all prior research in the area; instead, we try to find informative examples.

First, we concentrate on projects that succeeded in terms of project management but failed to provide wider organizational benefits. Shenhar and Dvir (2007) describe the case of Motorola Iridium—a global communication network. In this case, although the project was handled by the book, the company failed to account for the economic and technological contexts and developments. The business was filed for bankruptcy soon after its launch. One could say that the project was *myopic* in terms of its understanding of what was happening in its surroundings. In this study, we use terminology derived from optics—(1) whether somebody is able to see close but not far off (myopia) or (2) see far off but not close (hyperopia)—since they offer powerful parallels for understanding nearsightedness and farsightedness in project management. Carlsson-Wall et al. (2021) describe a project in the robotics industry that aimed at launching a new robot part that succeeded in terms of technical requirements and the targeted cost level but failed to give the company its desired technological leadership position in the market. Moreover, customer feedback indicated that the robot parts produced by another company would be preferable. Ultimately, the project that had been successfully managed was terminated. In this instance too, one could claim that some amount of myopia was involved. Zwikael and Meredith (2021) describe the Red Line Metro project in Los Angeles that succeeded in terms of project management—it finished early with no cost overrun. Nevertheless, the authors report that the project was a failure in terms of solving its core issue, i.e., it could not lessen traffic problems. Once again, one could remark that the project was myopically managed, as it did not serve the wider organizational purposes, even though it was well-executed. Moreover, *under-the-table* and *pet projects* hamper the connection between formalized organizational success metrics and project selection criteria, as projects might also be conducted outside the formal processes of project management, with or without extremely high sponsor commitment (Loch, 2000). This situation indicates that myopic behavior might not be the only issue. Sometimes, some projects might be *privileged* in comparison to other projects in terms of their organizational success dimension, thus allowing the project to underperform in this respect. Altogether, these cases raise concerns regarding the applicability of project management performance measurement to overall project success.

Second, with reference to projects that underperform in terms of project management but become successes in terms of organizational performance, Shenhar and Dvir (2007) describe the well-known example of the Sydney Opera House. The authors claim that the Sydney Opera House can hardly be seen as an absolute failure because it was a failed project; rather, it is a success because it is one of the greatest pieces of modern architecture (see also Zwikael & Smyrk, 2012). One could say that the project was a *venture*, since it was an investment for the greater good in the longer term (Artto et al., 2008). Shenhar et al. (2016) describe the case of the Boeing Dreamliner, which eventually

became a success but suffered from difficulties during project execution—although the project finished late, it filled the order books. However, reputational damage was involved as well, which again reminds us that success and failure are also dependent on viewpoint. For instance, a public relations person could have depicted the case as a disaster, whereas a manufacturing person would call it a huge success, since it provided work to many (by filling the order books). Therefore, whether a project can be labeled as a venture project whose relatively low performance could be sacrificed for greater good, or whether the project just avoided being *catastrophic* due to reputational damage—all of this depends on the viewpoint. Turner and Xue (2018), based on a number of known megaprojects (e.g., the Thames flood barrier), show that while many megaprojects exceed their budgets and schedules, their societal impact can be huge, and thus they eventually become successes. Similarly, a project might also be *privileged* in terms of relatively low project success. From a positive point of view, the projects can be called *hyperopic*, since they do not necessarily focus on short-term objectives, perhaps at the cost of low project management success. Finally, Laine et al. (2020) provide a longitudinal case study of a new product development project characterized by the transfer of learning from one project to another. In this case, non-supportive target-setting practices of a preceding project were revisited in a subsequent one to make performance measurement more supportive of the project members by giving them an achievable target. In this way, subjective conceptualizations of project performance within an organization can be changed. This last example shows some of the possible dynamics involved in project and organizational success in the context of innovation.

In summary, we argue that a relatively wide conception of project performance is significant for understanding and assessing project outcomes in an appropriate manner. This reasoning is consistent with the project management literature that claims wider benefits require more attention (Zwikael & Smyrk, 2012). If project performance and organizational performance are not combined in a manageable manner, practitioners might find the former to be a hindrance to their worthy efforts to produce long-term benefits for the organization (Zwikael & Smyrk, 2012). Again, project management success, business case success, and investment success (Zwikael & Smyrk, 2012) might indicate different things. Moreover, different people might perceive the success or failure of a project in different ways (Carlsson-Wall et al., 2021; Shenhar et al., 2001; Zwikael & Meredith, 2021). In addition, a person might consider the project to be a horrendous mistake when it is closed, but none might remember the missed project target if the business flourishes a few years later (Shenhar & Dvir, 2007; Zwikael & Smyrk, 2012). These aspects represent the dynamics of project success. However, these dynamics need in-depth analysis from the viewpoint of performance in project management. More knowledge on this aspect could help academics and practitioners alike to understand how *desired* innovation projects that achieve both project management and organizational success can be attained, and how the high-performing practices of such projects can be transferred to others so as to avoid *hero*-stories that cannot be copied elsewhere within an organization (Blackburn, 2002).

2.3. Ambiguity of the performance of innovation projects

Studies that have specifically investigated innovation projects show that it is quite possible for such a project to succeed in terms of time, cost, and quality but fail in its strategic terms, meaning that certain performance criteria may dominate over others (Ahrens, 2018; Carlsson-Wall et al., 2021). Alternatively, there could be projects that succeed strategically but fall short of accomplishing their targets regarding single-project performance (Laine et al., 2020; Samset & Volden, 2016; Shenhar & Dvir, 2007). This indicates that the performance of innovation projects requires the examination of multiple viewpoints, such as project efficiency, impact on customers, impact on business, and future potential of the deliverable, i.e., innovation in the market (Shenhar

et al., 1997, 2001, 2002; see also Gemünden, Salomo & Krieger, 2005; Müller & Jugdev, 2012).

Despite the ambiguity of innovation project success, it is extremely important to have *performance measures* in place to support project management in different types of organizations (Jordan & Messner, 2012; Merchant & Van der Stede, 2017; Wouters & Wilderom, 2008). In this sense, the target should be (a) to support both project execution and its related organizational outcomes through performance measurement, which would then (b) lead to both being perceived as successful, thus ultimately yielding higher customer satisfaction and organizational performance (Diegmann, Basten & Pankratz, 2017; Shenhar et al., 1997, 2001). Therefore, it is necessary to better understand how multiple innovation projects within an innovation project portfolio together deliver overall organizational performance (Clegg, Killen, Biesenthal & Shankaran, 2018; Meskendahl, 2010; Unger et al., 2014; Vuorinen & Martinsuo, 2018) and how performance measurement can support project management to ultimately deliver this organizational performance, i.e., to *succeed* in broader terms. Luckily, the project management literature is not alone in trying to find solutions to the problem of measurement ambiguity. The next section discusses a more general theory of performance measurement.

2.4. Facilitating the attainment of success through performance measurement

Various purposes for performance measurement have been mentioned in the literature (Franco-Santos, Lucianetti & Bourne, 2012), with the most widely acknowledged one being strategy implementation (Bititci et al., 2011; Davis & Albright, 2004; Kaplan & Norton, 1992), which also characterizes the models for performance management (e.g., Broadbent & Laughlin, 2009; Ferreira & Otley, 2009). Moreover, goal orientation is inherent in the discussion of performance management (Franco-Santos et al., 2012). Since performance measures provide information on the factors that are important from the viewpoint of business objectives, they support the improvement of poor performance or the attainment of a higher level of success. Performance measures may also help identify the alignment or misalignment of success between the organizational and project levels (cf. Farris, van Aken, Letens, Chearksul & Coleman, 2011; Johnston & Pongatchat, 2008). In this sense, they may be considered a means to change the status or trajectory of an entity, such as a project, in terms of organizational success (Akroyd, Biswas & Chuang, 2016) or to understand such aspects as goal clarity or conflict (Franco-Santos et al., 2012). Hence, success guided by performance measurement does not always focus on reaching or failing to reach specific goals: gray areas do exist. This less dichotomous view of success contrasts with some views expressed in the project management literature. For instance, Berssaneti and Carvalho (2015) determine whether a project is successful by checking whether the goals set in terms of the iron triangle have been met. In their study, partial success refers to not reaching all of these goals, rather than reaching some of them only to some extent.

Nevertheless, performance measures support the monitoring of target attainment and help ensure that activities are implemented as planned—provided measures are updated if needed (e.g., Bourne, Mills, Wilcox, Neely & Platts, 2000; Ferreira & Otley, 2009; Korhonen, Laine & Suomala, 2013). Hence, performance measures can guide employees in identifying the most essential areas to focus on. In practice, to improve performance either from the project or the organization's point of view (i.e., to change the trajectory of success), organizations can select to measure certain improvement aspects either ad hoc or more longitudinally (Davila, 2000; Franco-Santos et al., 2012; Korhonen et al., 2013). This would enable organizations to become more aware of the possible obstacles in context and focus their attention on certain project goals or introduce new ones, if needed, according to the respective changes in the project scope and schedule.

When employees feel that the strategic goals of their company are

distant from their work (Kaplan & Norton, 2005), it indicates that the alignment between *performance measurement* at the project and company levels is not self-evident. However, even if managers hardly ever have ‘optimal’ performance indicators at their disposal, they still need to work and make decisions about many complex issues, notwithstanding the amount of information they possess about it (Jordan & Messner, 2012). In this regard, it would be important to understand how managers can support the alignment of employees’ goals with those of the organization in the context of innovation project management as well.

2.5. The theoretical framework developed

Altogether, we constructed our theoretical framework based on the literature on project performance, success and ambiguity, and the more general literature on performance measurement. This framework has two dimensions—‘project management success’ (x-axis) and ‘organizational success’ (y-axis) (Fig. 1). Moreover, we acknowledge that both these dimensions are continuums rather than clear dichotomies (hence, the dashed line between the cells), based on our interpretation of the earlier literature on performance measurement, which is in slight contrast with some recent studies in project management (e.g., Berssanetti & Carvalho, 2015). Each corner of the two-by-two matrix includes certain archetypes that have been identified based on the earlier literature. We also acknowledge that both challenges and opportunities might be present, regardless of the corner (Dutton & Jackson, 1987; Martinsuo et al., 2014). Furthermore, to balance traceability and readability, the references inside the figure are marked as numbered items.

We also acknowledge that with the help of performance measurement, managers can attempt to change the trajectory of success, in terms of either project management, organizational success, or both, by

aligning organizational and project performance measures. More importantly, we note that organizational and project success are dynamic concepts, since they are (a) time-dependent, (b) viewpoint-dependent, and (c) their trajectory of success can be changed even during project execution. In practical terms, this could require the alignment and realignment of project and organizational performance measures (Korhonen et al., 2013). However, to thoroughly understand how different dynamic conceptualizations of success can be managed in innovation projects, in-depth empirical exploration is required.

3. Methodology

The case and, subsequently, the unit of analysis (Martinsuo & Huemann, 2021) in this study is performance measurement in alignment or misalignment with success. This study is conducted following the abductive approach, including open exploration of the field, followed by linking observations to the framework. A dataset of three different project settings, depicted using pseudonyms (Table 1), was used. The role of these cases is to exemplify the dynamics between project management success and organizational success, together exhibiting types of dynamics that cover all quadrants of our theoretical framework. The cases represent illustrations of a problematic matter—the fact that project management success and organizational success, which represent different things, are closely intertwined. Hence, the point of departure for our ‘information-oriented’ case selection was tensions between project management and organizational success that reflect high goal complexity (Franco-Santos et al., 2022), with particular focus on problematic cases with regard to existing knowledge (Flyvbjerg, 2006; Martinsuo & Huemann, 2021). The selected cases should concern the performance of projects in the innovation context in a longitudinal

		Project management success (trajectory)	
		Low	High
Organizational success (trajectory)	High	<p>As an opportunity A venture¹ or privileged² project in which low project management success is tolerated. An expensive lesson³ to guide future project management.</p> <p>As a challenge A hyperopic⁴, under-the-table, or pet project⁵ in which low project success is not noticed or cared about.</p>	<p>As an opportunity A desirable⁶ project which is the logical norm.</p> <p>As a challenge The hero⁷ project whose practices are difficult to transfer to other projects.</p>
	Low	<p>As an opportunity An expensive lesson³ to guide future project management.</p> <p>As a challenge A catastrophic⁹ project that is the logical opposite of the norm.</p>	<p>As an opportunity A privileged¹⁰ project in which low organizational success is tolerated.</p> <p>As a challenge A myopic¹¹ project in which low organizational success is not noticed or cared about.</p>

Changing the trajectory of success with the help of performance measurement ⁸

Fig. 1. The theoretical framework of this study as derived from earlier literature, considering the project management and organizational success trajectories as either opportunities or challenges.

Fig. 1 references: ¹ Artto et al. (2008); ² Turner and Xue (2018); ³ Nelson (2007) and Laine et al. (2020); ⁴ logically derived from Turner and Xue (2018); ⁵ Loch (2000); ⁶ e.g., Baccarini (1999); ⁷ Blackburn (2002) and Laine et al. (2020); ⁸ Akroyd et al. (2016) and Abdallah et al. (2022); ⁹ logically derived from Shenhar et al. (2016); ¹⁰ Loch (2000); ¹¹ Shenhar and Dvir (2007), Carlsson-Wall et al. (2021), and Zwikael and Meredith (2021).

Table 1
The empirical cases, including case selection criteria.

Case Period	SmartCity 2007–2016	ManuCorp 2009–2014	FlexCo 2018–2021
Case selection criteria	Enabled the exploration of a project with 'myopic' characteristics, as it could not satisfy organizational needs even though project management success was quite high.	Enabled the exploration of a longitudinal change of perception regarding project and organizational success—reconceptualization of a 'catastrophe' into an internal 'lesson' with wider organizational benefits.	Enabled the exploration of organizational success overshadowing project performance, i. e., performance in a 'venture' project.
Organization type	The capital city of Finland, meaning a public organization with tens of thousands of employees.	A publicly listed multinational company operating globally with tens of thousands of employees.	Privately owned growth company with over 100 employees.
Market	Citizens	Business to business	Business to business
Project type	Series of development projects funded by the city and national funding agencies.	A new product development project to renew an outdated product, organized in stages and gates.	A new service development research project partially funded by a state funding agency.
Project objective	Performance measurement development in different departments of the city.	Development of a product that takes a technological leap in the firm's product portfolio, thus improving product segment profitability.	Development of a new understanding as the basis for new human resource analytics business.
Organizational objective	New solutions for information and knowledge management, facilitating collaboration and horizontal processes among departments.	Gain technological advantage and improve profitability.	Learn for gaining long-term business impacts through profitable growth in a new area.
Data collection method	Interviews on project status before the project (18 interviews, 2007), participant observations during the project (2007–2013, 7 workshops related to the examined project), follow-up interviews (4 interviews, 2016).	Participant observation to support product cost estimations during the new development project, including interviews, site observations, meetings—adding up to over 100 interactions (2009–2014).	Participant observation: meetings to set objectives before the project (2 meetings, 2018), meetings to plan and review research during the project (10 meetings, 2018–2020), meetings on human resource analytics development in practice (6 meetings, 2020–2021).
Data collected	Written workshops, meeting memos, interview audio recordings, secondary document data (resolutions, measurement instructions, etc.)	Written memos or audio-recordings, when possible, and emails.	Written memos, audio recordings, and audio and video recordings through Microsoft Teams (remote meetings during the COVID-19 pandemic).

manner (establishing the project, project execution, postmortem analysis) to make it possible to know something meaningful about the dynamics of success. For this purpose, we would need longitudinal access to the studied organizations. Therefore, the three cases were selected not only to cover the different quadrants, but also to show how performance measurement can support project management from the combined viewpoint of project management success and wider organizational success in different innovation contexts. Altogether, we sought sufficient coverage of the dynamics of success in alignment with our theoretical framework.

The three cases provide us with windows into different kinds of organizations in terms of their performance in project management. Although the data collected on these cases are not entirely uniform, they allow us to gain an understanding of the role of performance measurement in alignment or misalignment with success at the project management and organizational levels, hence teaching us about dealing with the concept of performance in project management.

First, we examine the 'SmartCity' case (2007–2016) in a large municipality (with around 40,000 employees) that aimed to facilitate smart-city goals, including better technology support for information and knowledge management, as well as better collaboration among departments. The target of this project was to develop performance measurement in infrastructure construction, while the wider organizational aim was to facilitate collaboration among city departments, public utility companies, and private subcontractors. However, the performance measurement in this case focused on project management success metrics rather than those concerning organizational success. Notably, this case study also provided interview data, which were gathered during participant observation. Second, we explore the longitudinal case study of 'ManuCorp,' a company in the machinery manufacturing industry (2009–2014). ManuCorp's innovation project portfolio consisted of concept and new product development projects, and product improvement projects. They conducted a massive new product development project that was considered unsuccessful in terms of project management performance. However, one of the key project success criteria in this case (i.e., product cost) was also linked to organizational success (i.e., firm profitability). Although the project could

not reach all of its project management targets, it could still contribute to organizational success by improving the initial state of things. This case involved participatory observation of the project work (product cost management support for the project), which enabled the conceptual analysis of project governance practices. Finally, we supplement the two previous cases with observations from a human resource analytics development project at 'FlexCo' (2018–2021), a company that holds employee satisfaction in high esteem in all their processes. In this case, the firm focused on the organizational (long-term) success dimension of a project, considering (short-term) project management success measurement as less important. This case also provided us with the possibility to draw conclusions from participant observation (development of human resource analytics services for customers), helping us understand how the company viewed success. Altogether, the three cases make it possible to elaborate on the earlier theory (Ketokivi & Choi, 2014) that we built upon to construct our theoretical framework (in Section 2.5). In the following section, our empirical illustrations provide examples that elaborate on the dynamics within the framework.

Even though the three cases included the direct involvement of researchers in the studied context (i.e., participant observation), the issues reported in this paper belong to different conceptual level than the practices in which researcher involvement took place. For this reason, the analysis of the cases was conducted with what is believed to be minor bias of involvement. In practice, this means that the core message of this paper is neither developing municipal performance measurement practices ('SmartCity') nor product cost management practices ('ManuCorp'), or human resource analytics ('FlexCo'). Rather, direct involvement in the studied organizations gave the researchers sufficient access to analyze the dynamics of project management from the perspective of success at the project management and organizational levels. This approach also allowed longitudinal access, which was necessary for understanding the possibly lagging effects of project management success on organizational success. From a distance, such holistic access could have been rather challenging, if not impossible, since trust plays a major role in gathering meaningful empirical data from real-life operations (Lyly-Yrjänäinen, Suomala, Laine & Mitchell, 2017; Suomala, Lyly-Yrjänäinen & Lukka, 2014). The validity of our

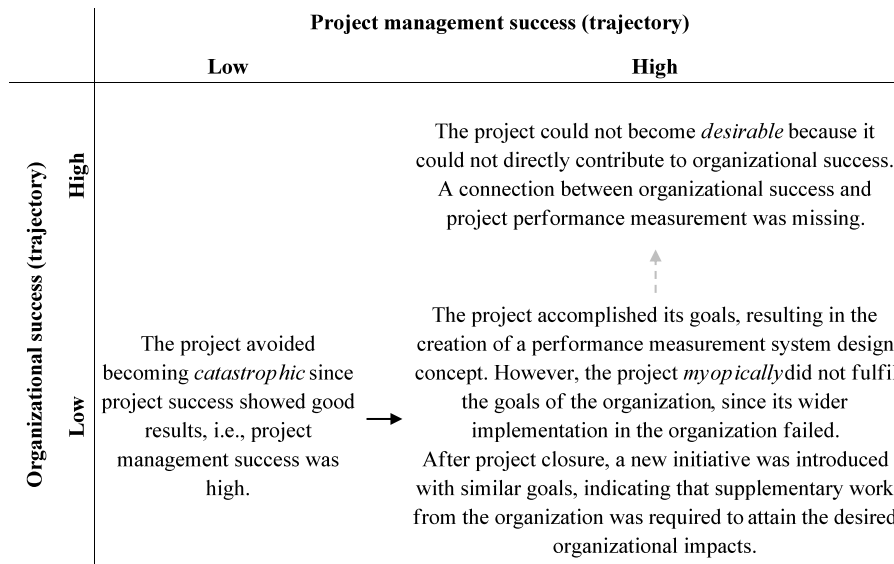


Fig. 2. SmartCity’s case illustration located in the framework of the paper.

case research findings, including those derived from participative observations, was assured by several means. First, several types of empirical material were gathered, including not only observations but also interviews and document data related to performance measurement, such as organizational instructions, project documentation, or strategy-related materials. This enabled the triangulation of observations, e.g., examination of both project- and organizational-level objectives. Second, the data analysis process involved researchers who had not been involved in participatory observations, thus further decreasing the possibility of biased conclusions.

The data were analyzed by deploying the systematic combining approach of the abductive analysis process (Dubois & Gadde, 2002), which included an active interplay between the gathered empirical material and the literature-derived framework. This approach was necessary since the current study required the extension of current knowledge through empirical exploration due to limitations of the literature-derived framework in explaining the dynamics of success (e.g., lagging effects) between the project management and organizational levels. At the same time, the theoretical framework provided a starting point for our analysis through its primary dimensions. Moreover, the analysis process included multiple phases. First, a preunderstanding of each case was established by creating a summary of the key empirical observations in each case to reflect the chronological process for reaching success, both at the project management and organizational success levels (yielding the basis for Tables 2–4), including the examination of post-project success. Initially, this phase was explorative, with no direct link to the theoretical framework (Fig. 1), although the analysis was naturally guided by the theoretical work preceding it through the perspectives presented in the tables. Second, an analysis process was constructed based on the definitions for each cell and its archetypes (e.g., ‘myopic’) in the theoretical framework. During this process, the authors reached a joint interpretation based on the empirical summaries of each case in the analysis workshops. The interpretation was the result of an iterative dialog between our empirics and the theoretical framework. The analysis began by focusing on performance targets and measures at the project management and organizational levels and their interconnections with the aim of positioning the observations in one or more cells (yielding Figs. 2–4). Here, the idea was not to fit the case into a single cell, but to understand the temporal dynamics in each case, i.e., the way in which the possible chronological development could be represented in the theoretical framework. The analysis continued by examining the manifestation of the archetypes present in individual cells

(i.e., challenges and opportunities observed during the examination period). This provided more nuance to the analysis of success, which was not always evident when considering the high and low levels of success. Altogether, we analyzed the three cases as chronological timelines of three phases—project establishment, project execution, and postmortem analysis. In all cases, post-project organizational success could be defined only at a later period (i.e., during the postmortem). This means that the project management success dimension represents the short-term viewpoint of success (whether the project was managed well), while the post-project organizational success dimension indicates the long-term one (whether the project contributed to meeting wider organizational success criteria).

4. Empirical illustrations

4.1. SmartCity’s illustration: disconnected project management success and organizational success

The large city organization, with around 20 departments, had failed in its earlier attempts to measure the performance of services. As a typical characteristic of a large public organization, it had many different missions, objectives, and needs for performance information. The variety of contexts within the wider arena of the organization was not successfully considered in its performance measurement, consequently leading to a wide dissatisfaction with performance measurement that was deemed to provide only limited benefits for departmental management. At the same time, the new smart city goals stressing collaboration between departments and public utility companies, as well as the implementation of new technological solutions, were increasing in importance. It was evident that organizational innovation was the need of the hour. Starting in 2007, one of the authors participated in a series of development projects dealing with the development of a new performance measurement system in different city departments and services. A new method of implementing smart city goals in the organization was proposed that involved no direct involvement of the central administration. Table 2 depicts a chronological overview of SmartCity’s case illustration, after which the timeline of the project is explored in more detail.

The focus was on developing the concept of a performance measurement system for joint infrastructure construction that would involve the participation of many different organizational actors—public departments, public utility companies, and private subcontractors.

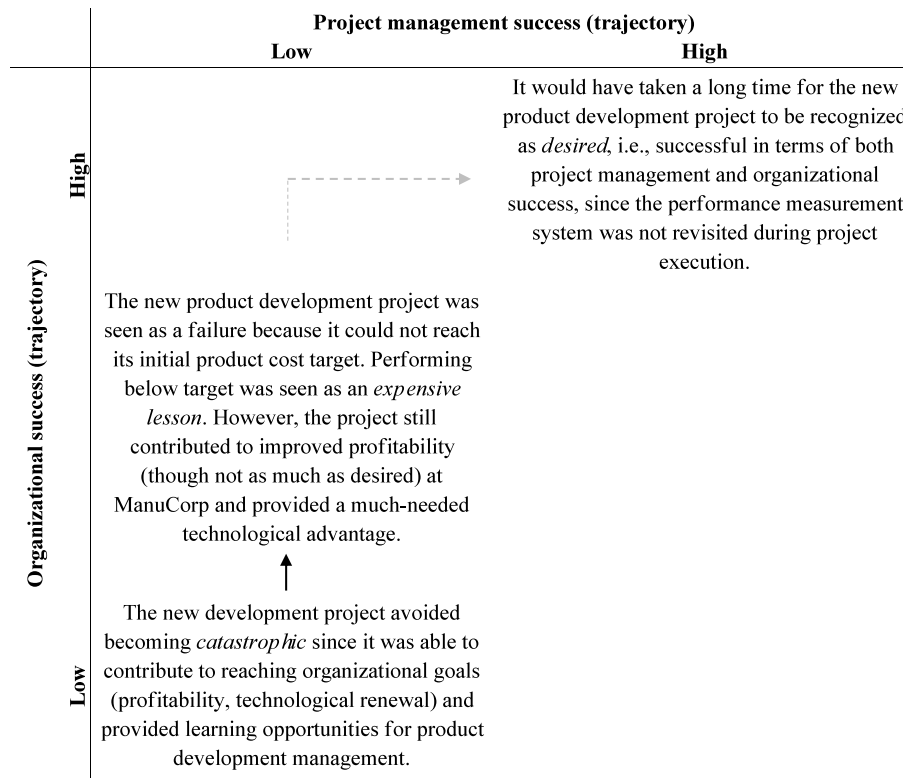


Fig. 3. ManuCorp's case illustration located in the framework of the paper.

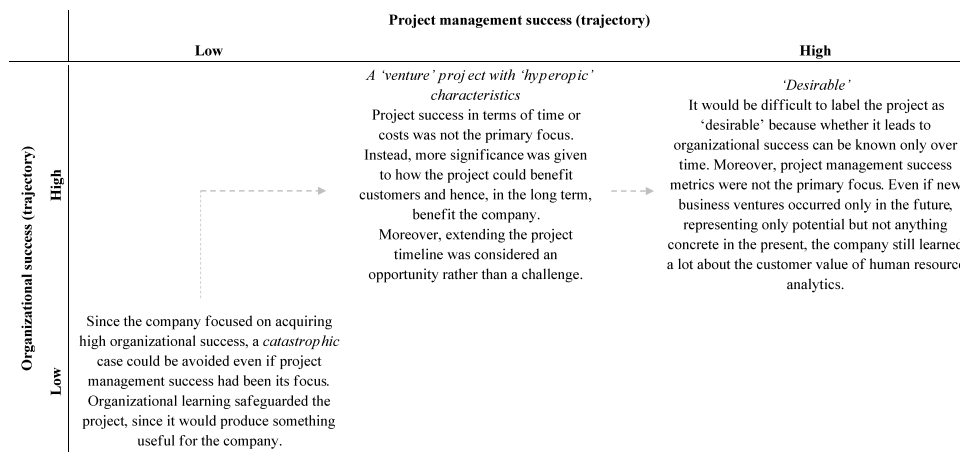


Fig. 4. FlexCo's case illustration located in the framework of the paper.

Table 2
SmartCity's case illustration on a timeline.

	Project establishment	Project execution phase	Project post-mortem analysis
Project management success		The project resulted in a new concept for measurement systems, supporting inter-organizational collaboration.	The project was accomplished in accordance with the project management targets.
Organizational success	Earlier performance measurement had failed to gain wide acceptance and had not met the new smart city goals.	Disconnected from project execution.	Implementation of the new measurement system failed and the new concept was not applied in the wider organization. A new initiative for reaching the same organizational aims was implemented.
	2007	2007–2013	2016–
			Time

Table 3
ManuCorp’s case illustration on a timeline.

	<i>Project establishment</i>	<i>Project execution phase</i>	<i>Project post-mortem analysis</i>
<i>Project management success</i>	The researchers were asked to join the project to support manufacturing cost estimation.	The new product development project was deemed to be a failure as it could not succeed in reaching a key project target, i.e., product quality (too high manufacturing costs).	The project was seen as an ‘expensive lesson.’
<i>Organizational success</i>	Firm profitability stemmed from product profitability and, hence, product cost.	The key project (product cost) target was linked to organizational success metrics (long-term firm profitability).	During the following years, ManuCorp could enjoy improved profitability (although not as high as initially targeted). Other organizational benefits included renewed technological position and learning regarding performance measurement (especially target setting) in projects.
	2009	2009–2012	2012– Time

Consequently, a project aiming for a new performance measurement system concept was launched with the objective of facilitating inter-organizational collaboration and avoiding sub-optimization (e.g., cost cutting in the wrong place). During the execution phase, project management was successful in terms of schedule, budget, and scope. In 2013, a new concept for measuring performance was presented, including a specification that presented a novel method for measuring the performance of inter-organizational construction projects and a plan for implementing the measurement approach more widely, with linkages to rewards as well.

In 2016, a follow-up ‘post-mortem’ analysis was conducted to evaluate the success of the development project at the organizational level. The results were not favorable—the smart city goals set for the project were not fulfilled, performance measurement supporting collaboration among departments had not been applied widely, nor had it been connected to any rewards program, as originally planned. Even in the pilot case, challenges related to dysfunctional and incompatible information systems were identified. As such, the studied project had not been effective in advancing organization-wide goals. Consequently, a new initiative for facilitating the goal of inter-organizational collaboration was already under preparation in 2016. This ‘supplementary’ initiative included a completely new administrative structure and management system for the city, indicating that major work would be required to supplement the project’s output to attain the desired organizational benefits and achieve what the project could not deliver as an organizational outcome.

Fig. 2 presents the success at the SmartCity in the form of a ‘myopic’ project, where the project itself was a success in terms of its scope and implementation objectives, schedule, and budget, but failed to meet the key goals of the organization, i.e., facilitation of collaboration among sub-organizations and implementation of new technologies. Therefore, to understand whether the project had been successful, the dynamism of the project’s organizational success trajectory was examined from the viewpoints of project management and organizational success. The gray dashed arrow represents a path that could not be reached, while the black arrow represents the witnessed dynamic.

The key lesson from SmartCity’s case illustration is that a connection should exist between organizational success criteria and project performance goals. With this connection in place, the project could have become more desirable.

4.2. ManuCorp’s illustration: improved organizational performance does not guarantee that a project is seen as successful

Our second case illustration concerns ManuCorp, whose competitiveness relies on its technological advantage. Their product is a type of machinery. With the product becoming outdated over time and competitors introducing new products, ManuCorp was eager to develop new products to replace its old ones, thus continuing to reinforce its technological advantage. The projects were controlled using the stage-gate model, which ensured a sufficiently strong business case and project

execution proceeding toward the established targets for each project. Table 3 presents a chronological overview of ManuCorp’s case illustration, after which its timeline is described in more detail.

This case illustration concerns a project in which the targets (such as the product cost target) were too ambitious to reach. In 2009, two of the authors were invited to join a new product development project at ManuCorp. The authors, as external researchers, were asked to help estimate how early the component choices and signals from the sourcing and manufacturing departments would contribute to future product profitability. Altogether, the project became heavily controlled by a leading measure—the product manufacturing cost. At first, as expected, only a few pieces of information regarding (future) product manufacturing were available, but more information could be gathered as the engineering process proceeded and more product attributes were fixed.

Eventually, as the first units were manufactured, it became evident that the initial target had been set too high, and the product cost target could not be reached. Although a new technological leap was taken and the company’s engineers were able to reinvent the product, it became a story about a failed project. Since every newly produced unit would be less profitable than the (unrealistic) target, the project could not deliver a product that met its profitability objectives. However, the developed product was more profitable than its predecessor, thus contributing to future profits for ManuCorp in a positive manner—they were just not as much as the company desired. Thus, project management success was only partly determined by budget or time measures and seemingly by quality (product cost), which was an officially sanctioned performance measure at the project level. However, although the project seemed like a failed one, it enabled the company to become more well equipped at setting realistic targets in subsequent projects.

Overall, although the project was considered unsuccessful in terms of project management success, it was able to teach ManuCorp a lot about new product development, project management, and target setting. Moreover, a bottom-up plan was initiated after this project to revisit the target-setting practices of the company. However, it was an expensive ‘lesson’ to be learned. Fig. 3 shows how ManuCorp’s case can be located within the framework proposed in this paper. The meaning of the black and gray arrows is the same as in the previous figure (i.e., the gray dashed arrow represents a path that could not be reached, while the black arrow indicates the witnessed dynamic).

As inferred from the above discussion, ManuCorp’s case illustration shows how a project can be considered a failed one even if some of its performance measures are related to long-term organizational success. However, being an ‘expensive lesson’ prevented the outcome of the project from becoming a catastrophe, even though its initial goals were not met.

4.3. FlexCo’s illustration: organizational success makes project management success less relevant

Finally, FlexCo’s case illustration exemplifies another viewpoint on

Table 4
FlexCo's case illustration on a timeline.

	<i>Project establishment</i>	<i>Project execution phase</i>	<i>Project post-mortem analysis</i>	
<i>Project management success</i>	Project management success criteria not highlighted—they served only as a structure and borders for the development work.	The project had quality goals, but they were not strictly set. The project timeline was extended during project execution, which was considered an asset rather than a failure in terms of project success.	Project management success metrics were not the primary focus	
<i>Organizational success</i>	A project was initiated to generate organizational success, namely profitable growth, in a new business area.	Organizational success was clearly focused on and emphasized; however, it was not officially sanctioned. Rather, it was more of an informal project steering element that provided significant meaning to the project.	Future organizational success is yet to be observed, but it was the clear guiding principle in terms of project management during the whole project. The company learned a lot about the possible customer value of human resource analytics and was able to test their analytical capabilities in pilot customer cases.	
	2018	2018–2021	2021–	Time

project and organizational success. FlexCo is a growth company that offers payroll services to its clients. The company's work is heavily guided by its values, which highlight long-term organizational success over quick wins as employee and customer satisfaction was valued over anything else. According to their view, financial successes occur only as a result of these two factors. Table 4 shows a chronological overview of FlexCo's case illustration.

In 2018, two of the authors began cooperating with FlexCo in connection with a research project that was under development. The project would be financially backed by a state agency that grants funding for joint innovation activities in companies and universities. Collaboration efforts were focused on gaining a new understanding of business potential related to human resource analytics services. Moreover, this would be a new kind of business for the company. Eventually, the researchers and FlexCo acquired the funding and began working together to understand the potential of analytics. Formally, however, FlexCo was working on a project separate from that of the university, since both entities were funded separately by the agency.

During project planning, FlexCo's personnel were highly interested in the benefits of the project for the organization in a broad sense. They were far less concerned about the project's time, budget, or quality targets as indicators of project success. These indicators, however, were well established and were also required by the project's funder. Nevertheless, it was organizational success that would ultimately determine whether the project could be considered a success or not, both internally and from the perspectives of different stakeholders (the funder, customers, owners, employees). Therefore, it was more interesting and even crucial to explore organizational success rather than project management success.

Although FlexCo's project had established quality goals, they were not very strict (gaining new knowledge and business potential for increased export sales). Similarly, although the project had a budget and a timeline, they were not too crucial, except for the resources available for hiring additional analytics development staff. Moreover, both the university's and FlexCo's research project (as parts of an even wider consortium) got permission to extend the project schedule on two occasions (first extension of four months, followed by a one-year extension on the initially planned closing date), thus strengthening the longer-term impact of the project. Interestingly, the extended schedule was not considered a disappointment in terms of time and schedule. On the contrary, people could now continue working on the issues they considered important for a longer period while being funded by the state agency. Naturally, new tasks with extended impacts could be executed, which also extended the project scope. With an extended timeline and scope, the project was able to lay the groundwork for even higher future business potential. In short, the longer FlexCo could work on the subject, the better the results it could possibly reach. The project could be interpreted as 'privileged' by some, but not necessarily within FlexCo, since it seemed to be nothing extraordinary for them.

Altogether, traditional project management, which provided a structure and borders but nothing more to the project, was merely a starting point for wider impacts in FlexCo's case. One could say that formalizing FlexCo's work as a project enabled the company to apply for state-agency funding and cooperate with the university, thereby contributing to the development of their future business potential. Hence, the project itself was important, but managing it was not necessarily the key element of the company's success. Instead, by projectizing the work, FlexCo was able to increase its resources and, in turn, allocate people to the business development tasks that they considered important. Without the project, the whole business development task could have perhaps been postponed because of their own growth or due to the company's day-to-day responsibilities. Fig. 4 locates FlexCo's case in the framework proposed in this paper. The meaning of the gray arrows is the same as in the two previous figures (i.e., a gray dashed arrow represents a path that cannot be reached). However, FlexCo's case shows that it is rather difficult to understand the dynamics (see the gray arrows) of a project if its project management success is not the company's primary focus. In practice, therefore, we interpreted the situation as FlexCo's project being focused on organizational success, with project management success being of neither low nor high priority (hence, it is visualized between the two extremes).

FlexCo's case presents a fitting amendment to the other two cases, as it helps us understand that project management and organizational success might be deliberately separated if either of them is considered as more important than the other. In this case, the interpreted hyperopia might be a deliberate attempt to avoid looking at minor things when more important and major things are at play. This choice contrasts with the earlier cases presented in this study. In the case of SmartCity, the viewpoints were disconnected as a result of accidental myopic behavior, while for ManuCorp, even employing two intertwined viewpoints could not guarantee either project management or organizational success.

5. Discussion and conclusions

5.1. Synthesis of findings

This paper sought to create new knowledge on how performance measurement can dynamically support attaining both project management success and wider organizational success in the innovation context. To explore this issue, we first developed a theoretical framework and then used three empirical cases to elaborate it, with the aim of shedding light on the dynamics of success in the context of innovation projects. The empirical illustrations show that even when organizational and project objectives are disconnected and hindered by ambiguities, it could still be possible for organizations to find ways to achieve both project management and organizational success. As exemplified by our empirical insights, organizational objectives can sometimes be aligned with those of single projects, even when the performance measures of

Table 5

The proposed framework evaluated based on the case studies—elaboration of the literature and identification of future research avenues.

		Project management success (trajectory)	
		Low	High
Organizational success (trajectory)	High	<p>As an opportunity <i>Venture:</i> A long-term organizational success-driven venture informed by project management performance measures, while emphasizing organizational success (FlexCo). <i>Expensive lesson:</i> Organizations can learn from their mistakes to improve their project management practices (ManuCorp). Furthermore, project-level performance measures do not guarantee organizational success, while dysfunctional measures may even hamper organizational success when the project itself fails (ManuCorp). <i>Privileged:</i> Not witnessed As a challenge <i>Hyperopic:</i> A focus on long-term organizational success (and effectiveness) might consider project management practices to be of secondary importance. Possibility that resources might be utilized inefficiently (FlexCo). <i>Under-the-table:</i> Not witnessed <i>Pet project:</i> Not witnessed</p>	<p>As an opportunity <i>Desirable:</i> Top-down or bottom-up interventions could turn project success/failure into wider organizational benefits (SmartCity, ManuCorp). Adjusting performance targets at the project level may facilitate success at both the project management and organizational levels (FlexCo). Incorporating wider organizational performance goals to project-level performance management might bridge the gap between the two levels of success (SmartCity). Short-term performance targets at the project level can drive long-term organizational success in the future, provided the two dimensions are aligned. (ManuCorp). As a challenge: <i>Hero:</i> Not witnessed</p>
	Low	<p>As an opportunity <i>Expensive lesson:</i> A project can be shielded from catastrophic performance if the organizational success dimension is taken into consideration in performance measurement (ManuCorp). Dysfunctional project management success indicators can be modified before the next project to support the transformation from unsuccessful to successful project management (ManuCorp). As a challenge <i>Catastrophic:</i> Not witnessed</p>	<p>As an opportunity <i>Privileged:</i> Not witnessed As a challenge <i>Myopic:</i> Organizational success criteria might feel ambiguous. Misalignment between the measures of organizational and project management success would not allow for further improvement in overall success (SmartCity). Unsupportive project performance measures and targets might hamper organizational success and make personnel feel sanctioned, regardless of their efforts (ManuCorp). The interpretation of the extent of organizational success is subjective, and hence debatable (ManuCorp).</p>

the latter are not primarily focused on (FlexCo). Meanwhile, a project can be considered a failure or an ‘expensive lesson’ even in the presence of goal alignment (ManuCorp). Similarly, a project may turn out to be ‘myopic’ if it pays too much attention to its management success, which can lead to supplementary work later for the purpose of meeting organizational success (SmartCity). Altogether, the case illustrations enabled a proper elaboration of the framework proposed in this study (Table 5). Moreover, based on our theoretical framework, we also develop an understanding of the possible fruitful research avenues that are yet to be explored. The framework can be further utilized to better understand how performance measurement can support the achievement of success in project-based operations (He et al., 2022; Pesämaa et al., 2020; Pinto et al., 2022; Varajão et al., 2022).

5.2. Theoretical contributions

Overall, this study indicates that attaining simultaneous project management and organizational success is challenging. Hence, more research on the intersubjectively constructed concept of ‘project success’ is required (Pinto et al., 2021, 2022), especially empirical research (Varajão et al., 2022; Volden & Welde, 2022). The fact that the dynamics of performance measurement and management in supporting project success in the innovation context has not been adequately studied creates the need to examine the success criteria in innovation projects in practice (Mir & Pinnington, 2014). Moreover, although a wealth of knowledge is available on project management, project benefits, and performance measurement/management separately, there is still no consensus on the ways in which performance measurement and management support the innovation projects in attaining success at the project management and the organizational levels (Laine et al., 2020). This paper is, therefore, an attempt to develop an understanding of the social construction of ‘success’ across the lifecycles of different innovation projects (Pinto et al., 2022; Volden & Welde, 2022). The contribution of this study is three-fold, as noted based on our reflections on the empirical illustrations and earlier literature pointing toward certain gaps in current knowledge:

1. **Performance measurement is a way to influence project management and organizational success trajectories**—we examined this aspect through the dynamic linkage between project management success and organizational success.
2. **Certain performance criteria may dominate in determining whether an innovation project can be considered successful, thus turning research attention to the utilization of performance measures in project-based operations**—e.g., to balancing and harnessing tension rather than mere selection of metrics.
3. **We offer a framework that integrates the dimensions of project management success and organizational success**—thus we help future researchers understand the linkages between these two dimensions, even ex post facto, and how success in both dimensions can eventually be achieved.

Each of these contributions is hereby described in more detail. *First*, we contribute to the literature on performance and success in project management by examining the dynamic linkage between organizational success and project performance criteria (Zwikael & Meredith, 2021; Zwikael et al., 2018). In this context, our empirical case illustrations exhibit how different perspectives, time dimensions, and conflicts related to the project management success and organizational success dimensions can interact and create different interpretations of ‘success’ (Davis, 2014, 2017; Abdallah et al., 2022; He et al., 2022; Ika & Pinto, 2022; Kaufmann & Kock, 2022; Laine et al., 2020; Zwikael & Meredith, 2021). Moreover, the ‘trajectory’ (Abdallah et al., 2022; Akroyd et al., 2016) of success in the two dimensions might be influenced and aligned by performance measurement, although this does not always happen in a functional manner (see ManuCorp). Organizations can attempt to seek ways to rectify the situation, thus meeting both the success dimensions and, in turn, decreasing the ambiguity of project success. In effect, we are now more attuned to the ways in which organizations can influence project success trajectories in context (Abdallah et al., 2022; He et al., 2022).

Interestingly, our findings suggest that instead of only being insufficient for project management (e.g., Badewi, 2016; Breese et al., 2015;

Zwikael & Smyrk, 2012; Zwikael et al., 2018; Castro et al., 2021; Marnewick & Marnewick, 2022), the iron triangle could at times even become potentially counterproductive for long-term organizational success (see FlexCo). Even customer satisfaction does not always depend on the timely delivery of projects (Diegmann et al., 2017; Shenhar et al., 1997, 2001). In FlexCo's case illustration, closing the project on time would hardly benefit the organization in the long run or satisfy their customers more. Moreover, the project was not sanctioned for being late; rather, the extended timeframe allowed personnel to increase its scope by adding new tasks that were noted as important during project execution, thus increasing the likelihood of attaining wider organizational benefits. Overall, this study increases the academic understanding of performance in project management by showing how performance measurement can be utilized in a supportive manner to balance the perspectives of project management and organizational-level success (Franco-Santos et al., 2022; Laine et al., 2020; Mir & Pinnington, 2014; Zwikael & Meredith, 2021; Zwikael et al., 2018). However, our findings cannot reveal if organizational success drives project management success. Hence, studying the antecedents of project management success from an organizational success viewpoint would be a meaningful area for further research. Different profiles of project-organization dynamics would be another significant topic for future research, as it would be useful to understand whether such profiles relate to attaining overall 'success' and, if so, how.

Second, our findings also contribute to the literature on innovation project success and performance (Laine et al., 2016, 2020; Unger et al., 2014). Based on our findings, we claim that a thorough understanding of organizational success would be rather demanding when it comes to innovation projects. While organizational success can in some cases be observed and discussed in broad terms, some projects and their connections to the wider context might get easily hidden within complex organizations in other cases. Adding to the literature on the interrelations between the success dimensions in projects (Ika & Pinto, 2022; Kaufmann & Kock, 2022), our findings show the dominance of certain project performance measures in determining its success (Ahrens, 2018; Carlsson-Wall et al., 2021). In the current study, project management success (see SmartCity) and organizational success (see FlexCo) dominated in terms of different cases. However, neither can be considered automatically better than the other—rather, we identify a certain balance as desirable to eventually acquire success in both terms. While performance measurement can facilitate project management (Ahrens & Chapman, 2004; Franco-Santos et al., 2022; Jordan & Messner, 2012; Jørgensen & Messner, 2009; Merchant & Van der Stede, 2017; Wouters & Roijmans, 2011; Wouters & Wilderom, 2008), it can hardly make projects turn into successes by itself in terms of project management or organizational performance. Rather, it is the ways in which performance measures are used in projects that are of significance. In fact, it is the chosen use, referring to the meaning of an indicator rather than the indicator itself, that makes all the difference (Jordan & Messner, 2012). This is a direct contribution to filling the gap in the current understanding of how innovation projects within a portfolio can drive organizational success (Clegg et al., 2018; Meskendahl, 2010; Unger et al., 2014; Vuorinen & Martinsuo, 2018). In practice, our empirical cases verified the necessity to observe (innovation) project 'success' as having shades of gray (see ManuCorp, FlexCo), which is in slight contrast with some earlier literature (Berssaneti & Carvalho, 2015). Our findings show that success is not black-and-white—an organization can focus on either project success or organizational success, or it might consciously (see FlexCo) or unconsciously (see SmartCity) end up focusing on a certain success dimension. An organization may also seek to find ways to succeed in both terms—project success and organizational success—through inter-project learning, or only partly attain either of these aspects (see ManuCorp). The exploration of the cases also indicates that occasional excessive focus on project management or organizational success can overshadow the other (see SmartCity, FlexCo). Effectively, these ideas represent different dynamic ways of

using performance measures in project management.

Furthermore, this study clarifies that, at times, it might not be necessary for temporary organizations to succeed in both dimensions, i. e., attaining both project management and organizational success. It is the organization's decision whether project management success should be the dominating performance measurement object or if it is sufficient to highly emphasize only wider organizational benefits. However, project performance measures in terms of project management and organizational success might sometimes become conflicting once a certain dominating performance measure overshadows others. In this case, a dominating performance measure might 'dictate' whether a project was a success. Based on our findings, it seems that success, in fact, is in the eye of the beholder (Carlsson-Wall et al., 2021; Davis, 2014, 2017; Müller & Jugdev, 2012; Shenhar & Dvir, 2007; Shenhar et al., 2001, 2016; Turner & Zolin, 2012; Zwikael & Meredith, 2021; Zwikael & Smyrk, 2012). Subsequently, with subjectivism arises the possibility of conflicts. Hence, conflicting measures and tensions are possible topics for further project management studies to understand how practices can support performance.

Third, the theoretical framework developed in this study is a meaningful tool for practitioners and academics alike to better understand the success of different kinds of projects. Previous literature suggests a possible disconnect between project management success and organizational success (Shenhar & Dvir, 2007; Shenhar et al., 1997, 2016; Turner & Xue, 2018; Zwikael & Smyrk, 2012; Laine et al., 2020; Carlsson-Wall et al., 2021; Zwikael & Meredith, 2021). In practice, it is already well known that although project management success and organizational success are two different things, they are closely intertwined (Turner & Xue, 2018). Our study contributes to this literature by providing a theoretical framework that allows the mapping of paths to understand how success can be reached in either or both dimensions, including attaining the more ambiguous (gray) extents of success. Acknowledging that there are both challenges and opportunities, even in low-low and high-high quadrants, is itself valuable. Hence, our framework serves as a source of inspiration for further inquiry into the nature of project success. We specifically highlight the ability of our framework to capture ex-post viewpoints toward assessing project success dimensions in context, which is consistent with a recent recommendation by Volden and Welde (2022). When both academics and practitioners connect the dimensions of project management success and organizational success, they can find new ways to drive either or both. Depending on contextual characteristics, organizational success might sometimes be the ultimate test for a project's success. Does this idea make project performance management a more marginal task in some cases? Perhaps yes, provided the organization can bear the possible cost and time overruns. This is especially true with reference to cases in which the project cost is minimal compared to future business potential or other organizational benefit. Drawing on the above discussion, our findings suggest that the ambiguity between project management and organizational success could, in certain cases, be resolved by focusing mainly on the organizational success dimension (cf. Shenhar & Dvir, 2007; Zwikael & Smyrk, 2012).

5.3. Managerial implications

Each project requires certain established ways that keep it on track for success, be it project management success, organizational success, or both. Since mixing these two aspects is, without a doubt, counterproductive in many cases, a clear distinction between the two is necessary. Moreover, the reasons for the existence of a project need to be clear to the project personnel. This concerns most, if not all, projects (Huemann & Pesämaa, 2022). The reasons might vary and sometimes involve even conflicting objectives (e.g., sell more vs. pollute less) and difficult debates. According to our findings, a long-term perspective should be adopted to prioritize objectives when difficult debates emerge within projects. Consequently, practitioners can ask themselves questions such

as, “Could we sacrifice not meeting our immediate project management success criteria if we are able to gain wider organizational benefits later on?” To manage this balance, we highly encourage the inclusion of organizational success metrics in project performance measurement, even if it is not entirely unproblematic. Managers could, for example, include organizational success metrics not only in their initial project proposals, but also in performance measurement during project execution to support project management. Alternatively, project management performance metrics also need to be discussed as operational constraints when wider organizational success is discussed. Questions such as the following could be helpful in operationalizing the idea—“Could certain wider organizational success criteria be met within the existing cost, time, and quality constraints?”

However, increasing emphasis on organizational success in project performance measurement does not apply to all projects (Huemann & Pesämaa, 2022). In particular, if the portfolio of projects consists of a huge number of small projects, it might not even be necessary, during execution, to evaluate whether and how an individual ‘mini-project’ contributes to long-term success at the organizational level. This viewpoint emphasizes performance measurement at the project-portfolio level. In contrast, if there are large projects that are fewer in number, it might be wise to manage them by directly connecting their contributions to organizational success even during project execution. This viewpoint emphasizes performance measurement at the project level. Overall, we suggest that performance measurement can decrease discrepancies between project management success and organizational success. Additionally, organizations could use performance measurement to identify misalignment in the performance of these two levels. Therefore, a dynamic approach toward performance measurement is suggested in the form of updated targets and the possibility of updating measures when needed. However, one must remember that performance measurement does not work as a ‘silver bullet,’ due to which finding a balance between the measurement of these two dimensions of success is important. It is also noteworthy that other dimensions of success also exist, such as business unit success. Hence, the path toward organizational success might include several steps.

Since performance measurement should not be considered a ‘silver bullet,’ it indicates that performance considerations in project management can also fail. Based on our empirical illustrations, we can expect such a failure to occur when wrong targets that hamper organizational success are established, or if people are made to feel sanctioned for poor performance regardless of their efforts. To support managers’ work and, ultimately, yield high organizational performance through the implementation of well-managed projects, performance measurement in projects should be complemented with other means in reaching the ‘high-high’ situation (high organizational success, high project management success). In this context, we suggest top-down organizational interventions that support wider organizational success, bottom-up interventions that encourage the achievement of project management success, and managerial and leadership support in aligning the success of a project with the organization.

5.4. Conclusions

The primary research question of this study aimed to explore the ways in which innovation projects can be effectively measured and managed to achieve success in terms of both project management success and organizational success. This question, however, has not yet been thoroughly answered owing to the finding that project performance and success are often disconnected.

This study advances current academic knowledge by presenting the dynamics between project management success and organizational success and the paths that can be undertaken toward achieving both. Organizations might increase the likelihood of this happening and mitigate the ambiguities that stem from disconnected organizational and project-level objectives by allowing dynamic changes in the

importance given to different performance criteria at different points in time (Bourne et al., 2000; Farris et al., 2011; Ferreira & Otley, 2009; Korhonen et al., 2013; Zwikael et al., 2018; Castro et al., 2021).

Since this paper could not cover all the opportunities and challenges in each quadrant of the theoretical framework, further research is required to understand how performance measurement can aid different kinds of projects. Our findings highlighted two particularly ambiguous corners (low-high, high-low) of the quadrant. However, the ways in which performance measurement can support ‘privileged’ projects has yet to be explored. Privileged projects should be studied from both viewpoints—low project management success but high organizational success (low-high) and vice versa (high-low). Moreover, ‘under-the-table’ and ‘pet’ projects in the low-high corner require further examination from the viewpoint of performance. Observing the low-low corner of the framework indicates that much could be learned from performance measurement and management (failures) in ‘catastrophic’ projects. Moreover, in the case of ‘hero’ projects, performance measurement and management practices could be a fruitful area for future research. Since our data could not cover such specific but highly interesting and plausible cases, we encourage future researchers to seek an understanding of how performance measurement and management operate in such situations. Additionally, possible counterproductive cases of using performance measurement could be educational in this context, e.g., as they could hamper personnel well-being by being a source of anxiety and stress (Franco-Santos et al., 2022).

Moreover, from an application point of view, our theoretical framework on project and organizational success can be utilized to identify and map possible patterns of counterproductive project management practices within organizations for further detailed scrutiny. This framework can also be utilized to help projects that seem to be performing poorly but would be important for the wider organization to gain legitimacy. In other words, the framework can help identify the projects within a project portfolio that may require more attention or leeway. The ambiguous quadrants (low-high, high-low) might be particularly problematic in terms of organizational practice and decision-making—hence, they are two areas that would especially deserve further inquiry in project management research. These types of projects can be especially problematic in terms of understanding whether they are successful and, if so, how successful. In this sense, our framework is a step forward in providing such an understanding in terms of different contexts.

Similar to other studies, this paper has its limitations—generalizability based on different case illustrations is not necessarily possible. Therefore, more future research is needed to elaborate the findings and possibly test them with a larger sample. Moreover, one specific limitation lies in our case selection—neither did we have any industry focus nor did we select the cases based on the size of the organization or the project. However, all of our projects were innovation projects that had a consistent dataset. Combining both these viewpoints, future research could utilize our framework to examine specific industries or sectors to seek a more thorough understanding of success dynamics in different kinds of industries, organizations, and sizes or types of projects. Moreover, viewpoints such as inter-organizational project success (Martinsuo & Ahola, 2022) or the connections of a project’s success to wider societal concerns, such as sustainability (e.g., Ika & Pinto, 2022; Pinto et al., 2022), deserve further scrutiny from the viewpoint of project success dynamics. These aspects were not investigated in the current study. However, regardless of these limitations, this study has been able to show that understanding the nexus of project management success and organizational success is a topic that deserves further inquiry—the challenges and interlinkages between project performance and project success could then be better problematized (Huemann & Pesämaa, 2022), subsequently offering more applicable starting points for research and contributions to practitioners in future studies.

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