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RESEARCH ARTICLE

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From data to action: knowledge management as institutional work in local governments

Harri Laihonen [a], Lotta-Maria Sinervo [b] and Paula Pusenius [c]

[a]Department of Health and Social Management, University of Eastern Finland, Kuopio, Finland; [b]School of Management, University of Vaasa, Vaasa, Finland; [c]LAB University of Applied Sciences and University of Eastern Finland, Lappeenranta, Finland

ABSTRACT

Public sector organizations are facing increasing pressure to embed sustainability into their strategies, processes, and everyday management, yet research has only begun to explore how knowledge management supports this institutionalization process. This study addresses this gap by examining how senior local government managers understand sustainability as a managerial concern and how they access, interpret, and use sustainability-related knowledge. Drawing on 25 semi-structured interviews with branch and financial directors from Finnish municipalities, and informed by the knowledge-based view and institutional work, the study identifies four arenas – strategy, reporting, capability building, and everyday management practices – in which KM supports the technical, political, and cultural work of institutionalizing sustainability. The findings show how KM enables public officials to interpret sustainability, adapt it to organizational priorities, integrate diverse information streams, and stabilize sustainability through routines, skills, and decision-making practices across administrative domains. The proposed framework contributes to public sector KM theory by conceptualizing KM as a governance mechanism that supports the technical, political, and cultural work of institutionalizing sustainability. Practically, the study highlights how knowledge infrastructures, learning practices, and cross-sectoral collaboration can strengthen the capacity of local governments to advance sustainability in adaptive and integrated ways.

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1. Introduction

Sustainability has become a matter of increasing concern in public governance, yet knowledge management (KM) research has only to a limited extent addressed how sustainability is operationalized within public organizations. While KM scholarship in the private sector has explored links to innovation, competitive advantage, and performance (Inkinen, 2016; Martins et al., 2019), its potential to support sustainability transformations in the public sector remains comparatively underexplored (Fusco & Ricci, 2019). Public sector KM research so far has largely focused on service delivery, digitalization, and knowledge sharing (Laihonen et al., 2023; Massaro et al., 2015), with limited attention to how KM enables organizations to implement complex and comprehensive policy goals such as sustainability. This gap reflects not only a limited empirical base, but also unresolved questions concerning how KM practices shape the interpretation, integration, and use of sustainability information in complex public sector settings. These challenges are further shaped by fragmented responsibility structures, the prevalence of efficiency-oriented KM approaches, and the conceptual ambiguity of sustainability as an organizational objective.

Public organizations, particularly local governments, operate in institutional environments in which sustainability features increasingly in policy frameworks and on strategic agendas (Sinervo et al., 2026). Local governments function simultaneously as implementers of national and international sustainability initiatives and as arenas for locally situated policy innovation (Deslatte et al., 2023; Krause et al., 2016). Their proximity to citizens and their responsibility for essential public services situate them as empirically relevant contexts for examining how broad sustainability objectives are translated into administrative practices and managerial decision-making (Ball et al., 2014; Guarini et al., 2021, 2022).

Against this backdrop, this study examines how local government managers interpret sustainability as a managerial issue and how they engage with sustainability-related information in their everyday work. The analysis focuses on how these knowledge practices contribute to the institutionalization of sustainability within municipal organizations. Drawing on the knowledge-based view of the organization (Grant, 1996) and the institutional work perspective (Perkmann & Spicer, 2008; Sinervo et al., 2024), the study conceptualizes KM as a strategic organizational capability through which sustainability-related

CONTACT Harri Laihonen harri.laihonen@uef.fi Faculty of Social Sciences and Business Studies, Department of Health and Social Management, University of Eastern Finland, P.O. Box 1627, FI-70211, Finland

information is acquired, integrated, interpreted, and used. From this perspective, the institutionalization of sustainability is understood as ongoing political, technical, and cultural work that manifests within managerial practices, routines, and decision-making arenas. KM practices constitute part of the infrastructure through which such work is carried out across domains including strategy, reporting, capability building, and everyday management.

Accordingly, we investigate: (1) *How sustainability is managed in local governments*, and (2) *What roles KM plays in institutionalizing sustainability*. By addressing these questions, the study contributes to theory-building in public sector KM by examining how KM operates not only as an information-processing capability, but also as a governance mechanism through which sustainability is interpreted, enacted, and institutionalized in organizational practice. In so doing, the study foregrounds KM practices – rather than sustainability policies *per se*—as the primary locus through which managerial agency and institutional work shape sustainability outcomes. Empirically, the study provides insights into how sustainability is understood and enacted in local government contexts.

The remainder of the article is structured as follows. Section 2 reviews the existing research on sustainability in public governance and the KM – sustainability nexus. Section 3 outlines the theoretical framework. Section 4 describes the methodological approach. Section 5 presents the empirical findings. Section 6 discusses these findings in relation to existing theory, and Section 7 concludes with implications for research, practice, and policy.

2. Literature review: sustainability in public governance

2.1. Sustainability as a managerial and organizational domain in the public sector

Public organizations are increasingly expected to embed sustainability in everyday managerial and administrative routines while balancing ambiguity, long-term trade-offs, and competing stakeholder interests (Sinervo et al., 2026). These tensions are exacerbated by resource constraints and institutional complexity (Christensen & Lægreid, 2011; Sinervo & Laihonen, 2024; Torfing & Triantafillou, 2013). Existing research emphasizes the interpretive and enactment-based nature of sustainability, highlighting that it requires translation, sensemaking, and active implementation through management systems embedded in organizational structures, values, and capacities (Bebbington & Unerman, 2020; Kaur & Lodhia, 2019). These interpretive demands are particularly pronounced with respect to social sustainability, concerned with issues like fair income distribution, equitable access to services, gender equality, and civic participation (Dempsey et al., 2009; Purvis et al., 2019; Reed, 1997). These aspects highlight that sustainability management in the public sector entails balancing economic, social, and environmental dimensions under conditions of uncertainty and institutional plurality.

Local governments are pivotal implementers of national and international sustainability strategies and policies and often initiators of locally grounded sustainability innovations. Their proximity to citizens and responsibility for essential service provision position them as key actors in translating broad goals into administrative routines (Krause et al., 2016; Zeemering, 2018). Prior research highlights that local governments operate under conditions of institutional complexity, where multiple and sometimes competing institutional logics shape how sustainability goals are interpreted and pursued (Christensen & Lægreid, 2011; Vikstedt et al., 2024). Implementing sustainability in such contexts requires multi-actor coordination, knowledge integration, and learning across organizational and sectoral boundaries (Shiroyama et al., 2012; Sinervo et al., 2026). Recent studies further show that disparate sustainability rationales influence how local governments construct and manage sustainability as a performance object (Vikstedt et al., 2024), underscoring the pivotal role of managerial interpretation and knowledge practices in institutionally complex settings.

Organizational size, capacity, and resource endowment influence the adoption and implementation of sustainability tools, with resource-based, legitimacy, and absorptive capacity perspectives explaining why larger organizations may integrate sustainability more readily (Hörisch et al., 2015; Krause et al., 2016). However, recent research suggests that access to resources and tools alone does not determine how sustainability is implemented in practice (Sinervo et al., 2024; Vikstedt et al., 2024). Studies show that the compiling and management of local sustainability information can facilitate integration into municipal management processes, but only insofar as such information is interpreted, integrated, and mobilized within existing managerial and governance arrangements (Kunová et al., 2025; Vikstedt et al., 2024). Together, this stream of research exposes persistent challenges in bridging policy intent and operational practice under conditions of institutional complexity and competing priorities, demonstrating the importance of understanding the knowledge practices through which sustainability is made meaningful and actionable in everyday management.

2.2. The KM – sustainability nexus: what we know and where the gaps are

Research at the intersection of KM and sustainability is better developed in corporate contexts than in public governance, while empirical work focusing on local government remains comparatively limited (Fusco & Ricci, 2019; Sinervo et al., 2026). KM research has typically framed sustainability-related knowledge work as a mechanism for information sharing and organizational learning linked to economic, environmental, and social sustainability objectives (Fusco & Ricci, 2019; Martins et al., 2019). However, despite conceptual advances, operational models for implementation are insufficiently specified (Martins et al., 2019). Parallel discussions in the intellectual capital literature link human, structural, and relational capital to long-term value creation, but their integration with broader sustainability frameworks is incomplete. This reflects a persistent tension between performance-oriented measurement logics and the societal, normative, and long-term aims inherent in sustainable development (Alvino et al., 2021; Laihonen & Pusenius, 2025).

Sector-specific studies further confirm that sustainability outcomes depend not only on the availability of technical tools, metrics, or reporting systems, but also on the capacity of organizations to share, interpret, and integrate knowledge across professional, organizational, and sectoral boundaries. Research in construction and infrastructure-intensive domains has shown that benchmarking practices, maturity models, and best-practice frameworks highlight the role of KM in managing complexity and coordinating sustainability-related action (Robinson et al., 2006; Schröpfer et al., 2017). At the same time, KM and sustainability research more generally warns against introspective and purely technical approaches ignoring accountability, transparency, and stakeholder engagement – dimensions that are central to sustainability in public governance (Evangelista & Durst, 2015; Preuss & Córdoba-Pachon, 2009).

A recurring critique in critical KM and intellectual capital research is that conventional KM solutions tend to simplify complex challenges and overlook the social, political, and value-laden dimensions of knowledge work (Dumay, 2020; Hujala & Laihonen, 2021; Laihonen et al., 2023). Such critiques concern especially the public sector, where sustainability challenges are characterized by ambiguity, competing values, and the need for collaboration across institutional and organizational boundaries. In these contexts, sustainability cannot be advanced through mere data collection or knowledge codification; deliberation, negotiation, and collective sense-making are needed.

In response to these limitations, scholars increasingly call for approaches based on collective knowledge formation, understood as knowledge emerging from dialogue, reflection, and interpretations shared among diverse actors. This perspective repositions KM as a social and institutional process through which public officials interpret sustainability goals, evaluate performance, and adapt organizational practices in conditions of uncertainty (Laihonen et al., 2023; Zeemering, 2018). In the context of sustainability, such collective knowledge processes are inseparable from public value creation, democratic legitimacy, and the reconciliation of economic, environmental, and social priorities. However, despite this growing body of work, little is known about how such collective knowledge processes are enacted by managers in everyday practice in local government contexts.

Taken together, the research so far claims that sustainability in public organizations is both knowledge-intensive and institutionally complex. Nevertheless, it provides limited insight into how managers operating in different functional domains interpret sustainability, define and use sustainability-related information, and mobilize KM practices to embed sustainability in everyday management. This gap is particularly evident in local governments, where strategic, operational, and professional contexts intersect in context-specific ways. To address this research gap, the present study examines how knowledge practices contribute to the institutionalization of sustainability in municipal organizations, thereby linking KM capabilities with the political, technical, and cultural work through which sustainability becomes meaningful and through which it is translated into practice in public sector governance.

3. Theoretical framework

3.1. Knowledge-based view and KM as a strategic capability

In the knowledge-based view (KBV), knowledge is a strategically significant organizational resource (Grant, 1996). Accordingly, KM is not conceptualized as a purely technical or administrative function but as a strategic capability for creating, sharing, integrating and applying knowledge to support performance, adaptability, and innovation (Hansen et al., 1999; Zack, 1999). Classic KM frameworks – intellectual capital (human, structural, relational capital) and business intelligence – emphasize the identification of intangible assets and the systematic collection and analysis to decisions and generate new knowledge (Choo, 1996, 2002; Edvinsson & Malone, 1997; Petty & Guthrie, 2000; Roos et al., 1997). In public sector contexts, these capabilities are salient for

navigating complex societal challenges such as sustainability (Laihonen & Mäntylä, 2018; Laihonen & Pusenius, 2025).

The KBV raises two fundamental questions for public managers: (1) does the organization possess the knowledge resources required to successfully pursue its goals, and (2) does it know what it needs to know to make informed decisions under conditions of uncertainty and change? These are vital issues in sustainability decision-making, which involves long time horizons, uncertainty, and competing values (Sinervo & Laihonen, 2024). KM research suggests that effective sustainability work requires KM practices extending beyond narrow, data-driven rationality toward pluralistic, participatory, and adaptive approaches to knowledge integration and interpretation (Bratianu & Vasilache, 2009; Bratianu et al., 2021; Laihonen & Huhtamäki, 2020). In this study, we therefore adopt an expanded view of KM as a set of capabilities enabling the integration, interpretation, and institutionalization of sustainability-related knowledge across managerial arenas.

3.2. Institutionalizing sustainability as institutional work

Sustainability, like knowledge, is not automatic; it must be interpreted, translated, and enacted through managerial practices embedded in organizational structures, values, and capacities. Institutionalization is thus understood as the process of making sustainability durable in routines, systems, and identities. Following the institutional work perspective, we distinguish three interrelated dimensions through which this occurs – technical, political, and cultural work (Perkmann & Spicer, 2008; Sinervo et al., 2024).

- Technical work involves the development and application of tools, such as performance indicators, planning frameworks, and reporting systems, that define, measure, and monitor sustainability goals.
- Political work embeds these tools in governance and management systems, integrating them into budgeting, strategy, and accountability mechanisms while securing stakeholder support and organizational mandates.
- Cultural work reshapes values, identities, and shared understandings so that sustainability becomes a meaningful and legitimate organizational priority, supported by leadership, learning, and reflective evaluation.

In public organizations these tasks are complicated by stakeholder heterogeneity, bureaucratic rigidities, and short political cycles possibly conflicting with the long-term orientation of sustainability (Hofstad et al., 2026). Moreover, institutional complexity, understood as the coexistence of multiple, sometimes competing logics, shapes both the production and the use of sustainability-related performance information, thereby making contextualization and sensemaking prominent KM concerns (Vikstedt et al., 2024). Differences in organizational orientations, for example, treating sustainability as brand, strategy, or *raison d'être*, imply distinct informational needs and distinct pathways for institutionalization (Vikstedt et al., 2024; see also Sinervo & Laihonen, 2024).

3.3. An integrative analytical framework organized around four KM roles

We do not treat the knowledge-based view (KBV) and institutional work as fixed coding schemes but as complementary theoretical perspectives for interpreting how sustainability becomes meaningful and is translated into practice in local governments. KBV foregrounds knowledge resources and capabilities, as well as processes of acquisition, integration, interpretation, and application that enable organizations to navigate complexity (Grant, 1996; Choo, 1996, 2002; Hansen et al., 1999; Zack, 1999). The institutional work perspective, in turn, highlights the technical, political, and cultural efforts required to make sustainability durable in routines, roles, and identities (Perkmann & Spicer, 2008; Sinervo et al., 2024).

Reflecting the managerial realities observed in local government, we organize our analysis around four KM roles in which these two perspectives intersect in practice: (i) KM for sustainability strategy, (ii) KM for sustainability reporting, (iii) KM for skills and capability building for sustainability, and (iv) KM for sustainability management practices (cf. Sinervo et al., 2026). Across these roles, KBV informs how sustainability-related knowledge is prioritized, integrated, and interpreted, while the institutional work perspective explains how these knowledge practices are technically operationalized, politically embedded (e.g., through budgeting and accountability), and culturally legitimized (e.g., through shared meanings and leadership).

In the context of sustainability strategy, KM supports agenda-setting, prioritization, and cross-functional integration, while political and cultural work embed sustainability in mandates, strategic narratives, and long-term orientation. In reporting, KM capabilities shape information infrastructures and feedback loops, and technical work translates sustainability into indicators and routines that enable organizational learning rather than mere compliance. In skills and capability building, KM facilitates collective learning and knowledge sharing, while cultural work fosters

shared understandings and values, and political work secures resources and clarifies responsibilities. Finally, in management practices, KM supports sensemaking and coordination across services, and political, technical, and cultural work together anchor sustainability in everyday decisions and processes.

Conceptually, these four KM roles function as mid-range analytical constructs that connect our theoretical perspectives with empirical observation. They are broad enough to capture variation across managerial roles yet specific enough to demonstrate how KM practices contribute to the institutionalization of sustainability. We therefore use these constructs to structure the analysis in Section 5 and to organize the discussion of contributions in Section 6.

4. Methodology

The aim of this study is to examine how public managers understand sustainability as a managerial issue and how they engage with sustainability-related information in their everyday decision-making. To identify these interpretive, context-dependent processes, we used a qualitative research design based on semi-structured interviews. Semi-structured interviews were selected because they enable in-depth exploration of managerial sensemaking and retain sufficient flexibility to follow emerging themes. They also allow respondents to describe complex KM practices in their own terms; an approach particularly suited to studying interpretive phenomena such as KM, sustainability, and institutional change (Eisenhardt & Graebner, 2007; Gioia et al., 2012).

4.1. Research context and sampling

The study focuses on Finnish local governments, which underwent a major structural reform in 2023 that transferred most social and welfare services to specifically created regional authorities. Data collection was conducted in October – November 2022, during a transitional period when the municipalities were actively redefining their roles, responsibilities, and sustainability priorities. This timing provided a unique opportunity to examine how sustainability was being interpreted and operationalized amid institutional restructuring.

We used purposive sampling to select participants bearing managerial responsibilities and positioned to influence sustainability-related decision-making. A total of 25 senior municipal managers were interviewed. This sample size is appropriate for qualitative studies where depth, diversity, and saturation of meaning are prioritized over statistical representativeness (Miles et al., 2019; Patton, 1999). The number also reflects the scale of Finnish municipalities, where senior management teams are typically small.

Participants were drawn from three key municipal domains that remained under local government control after the 2023 reform:

- Infrastructure and development: 6 interviewees (sector directors; heads of technical and environmental departments)
- Education and culture: 6 interviewees (directors, deputy mayors; persons responsible for early childhood education, basic and upper secondary education, culture, youth services, and sports)
- Finance: 13 interviewees (chief financial officers, financial directors)

The asymmetrical numbers of interviewees reflect the organizational structure of the municipalities: financial management is highly centralized and employs larger senior teams, whereas infrastructure and education are distributed across several units with fewer top-level managers. Because financial information and fiscal stewardship are central to municipal decision-making, it was important to capture this domain proportionally. Moreover, the ability of municipalities to pursue sustainability objectives is fundamentally conditioned by their fiscal capacity and resourcing decisions: without adequate financial planning, budgeting, and prioritization, sustainability cannot be readily operationalized beyond strategic aspiration (Sinervo et al., 2026; Zeemering, 2018). From this perspective, financial management constitutes a critical arena in which sustainability goals are interpreted, negotiated, and enabled in practice. The sampling strategy therefore aimed at role diversity and diversity in knowledge bases, rather than numerical balance.

This study was conducted in accordance with the guidelines of the Finnish National Board on Research Integrity (TENK) on the responsible conduct of research. No formal ethical approval was required under these guidelines because the research did not involve sensitive personal data, minors, or vulnerable participants, and the interviewees took part in their professional capacity as senior public officials. All participants were provided with written information about the purpose and procedures of the study and gave informed consent prior to the interviews. Confidentiality and anonymity were ensured throughout the research process, and data were handled in compliance with GDPR and national data protection legislation.

4.2. Data collection

Semi-structured interviews were conducted via Microsoft Teams by members of the research team,

recorded with permission, and transcribed verbatim. Remote interviews are well established in contemporary qualitative research and do not compromise the depth or richness of the data when careful rapport-building and follow-up probing are employed. Interviews lasted approximately 60 minutes. The interview framework was organized around six themes: 1) sustainability as a phenomenon and part of managerial work, 2) sustainability in municipal strategy processes, 3) the management of sustainability, 4) the sustainability-related knowledge base, 5) sustainability reporting, and 6) external steering mechanisms for sustainability. For the purposes of this article, the analysis centers on managers' interpretations of sustainability and their sustainability-related KM practices; although the interview guide included six themes, insights relevant to these focal areas were identified in multiple parts of the interviews.

4.3. Data analysis

The data analysis involved a two-phase interpretive approach grounded on the principles of qualitative inquiry, which emphasize meaning-making, reflexivity, and contextual understanding (Alvesson & Sköldberg, 2009; Miles et al., 2019; Saldaña, 2020).

4.3.1. Phase 1: inductive coding

All transcripts were read line by line using open coding to identify how managers defined sustainability, how they framed its relevance to their work, and how they described sustainability information. Data were coded manually on Excel sheets without using specific qualitative software; this approach supported close engagement with the transcripts, iterative comparison, and interpretive flexibility in line with the relatively small corpus. To enhance trustworthiness, the team engaged in analyst triangulation through joint coding sessions, conducted peer debriefing, maintained an audit trail documenting analytical decisions, and cross-validated interpretations across researchers. This inductive phase allowed interpretive variation to emerge without applying predefined categories, consistent with the systematic search for meaning advocated by Gioia et al. (2012).

4.3.2. Phase 2: abductive analysis

In the second phase the analysis moved iteratively between data and theory. Sensitizing concepts from the knowledge-based view, knowledge management, and institutional work guided interpretation, helping identify patterns in how sustainability knowledge was acquired, produced, interpreted, and applied. These sensitizing concepts were not used as coding schemes but as interpretive heuristics supporting abductive inference.

Through iterative comparison across managerial domains, the research team identified recurrent patterns that reflected broader KM practices. This process led to the abstraction of four managerial arenas in which KM plays a prominent role in institutionalizing sustainability: strategy, reporting, capability building, and everyday management practices. The combination of purposive sampling, systematic coding, and theoretical and researcher triangulation increased the credibility and analytical depth of the study (Miles et al., 2019; Patton, 1999).

5. Results

5.1. Sustainability as a managerial concern

The interview data revealed that managers' organizational roles shaped how they conceptualized sustainability and that this process was in turn shaped by their responsibilities and strategic priorities. This diversity highlights the need to situate sustainability within the specific managerial and functional domains of local government. Rather than being understood as a single or uniform concept, sustainability emerges as a multidimensional and situated concern that is interpreted through the lenses of financial stewardship, ecological responsibility, social equity, and developmental goals.

5.1.1. Financial sustainability as a dominant frame

For financial directors, sustainability was primarily understood in terms of fiscal responsibility and long-term economic viability. Their definitions emphasized budgetary discipline, intergenerational equity, and the avoidance of decisions that would compromise future financial stability:

> "*Financial sustainability means that you do not exceed your resources and do not make the kind of decisions that burden the city's future or the future economy, so that you do not, in effect, eat away at its financial base. It is about durability.*" *[Financial Director]*

This framing corroborates the strategic KM principle that knowledge initiatives should be anchored to organizational objectives (Zack, 1999). In this case, financial data and forecasting tools are indispensable to the knowledge infrastructure supporting sustainability.

5.1.2. Integrative views from service directors

While financial sustainability was also emphasized by service area directors, their interpretations were more holistic than those of the financial directors, integrating economic concerns with social, cultural, and ecological dimensions. For example, the Director of Education highlighted the importance of embedding sustainability in considerations of children's well-being and the broader operating environment:

> All four dimensions of sustainable development—economic, social, cultural, and ecological—are important to us. All of this is clearly reflected in our operations. The aim is that our operations are financially sustainable so that we have resources going forward as well, and we take into account what is happening in the operating environment. [Director of Education]

This broader framing reflects a more systemic understanding of sustainability, in which financial sustainability is a necessary but insufficient condition for long-term value creation.

5.1.3. Ecological emphasis in urban planning

Directors responsible for infrastructure and urban development placed greater emphasis on ecological sustainability and the built environment than did financial and service directors. Their focus was on sustainable urban structures, environmental impact, and the integration of sustainability into spatial planning:

> The first three things that come to mind in terms of sustainability are ecological sustainability, then the economic perspective, economic sustainability, sustainable municipal economy, and perhaps the third point of view in urban structure services, which is emphasized, is this kind of social sustainability or sustainable urban structure. [Director of Urban Planning and City Infrastructure]

This perspective highlights how sustainability is interpreted in terms of urban systems and long-term planning. It also emphasizes the need for integrated knowledge flows across departments, linking ecological goals with financial and social considerations. In this context, KM plays a key role in supporting cross-sectoral coordination and informed decision-making in urban sustainability efforts.

5.1.4. Developmental sustainability and city attractiveness

A fourth perspective emerged from the development directors, who emphasized sustainability as continuous urban renewal and competitiveness. Here, sustainability was linked to the city's ability to attract residents, businesses, and investments while maintaining environmental and social standards:

> For me, that sustainability is how this city remains a growing and developing city in terms of both attraction and holding power [. . .] ensuring that the conditions for development exist and the requirements of the environment are taken into account. [Director of Development]

This view corroborates the recent KM literature, which highlights the role of knowledge and KM in supporting organizational agility, strategic foresight, and innovation (cf. Li et al., 2025). In this context, KM enables cities to harness data, expertise, and stakeholder insights to anticipate future needs, steer development toward sustainability goals, and strengthen their long-term attractiveness and resilience.

5.1.5. Implications for public sector knowledge management

From a KM perspective, the empirical findings show how organizational objectives and professional roles shape the way sustainability-related information is defined, prioritized, and utilized. Strategic KM theory emphasizes the necessity of embedding core knowledge processes, such as data collection, interpretation, and application, with an organization's mission and evolving strategic goals (Hansen et al., 1999; Laihonen & Mäntylä, 2018). When such coherence is lacking, sustainability initiatives risk becoming fragmented, reactive, or disconnected from the broader strategic intent of the organization.

The variation in sustainability framings across managerial roles, ranging from ecological planning to economic resilience and urban attractiveness, points to the need for integrative KM practices that transcend organizational silos. This calls for the development of knowledge infrastructures and routines that facilitate cross-functional dialogue, shared interpretation, and coordinated action. In this context, KM functions as not only a technical enabler but also as a facilitator of institutional work, supporting the political, technical, and cultural processes through which sustainability becomes embedded in everyday management.

Furthermore, the findings emphasize the significance of collective knowledge formation (Laihonen et al., 2023), in which sustainability is approached not as a fixed or universally defined concept but, rather as a dynamic and negotiated objective. This requires KM systems capable of accommodating pluralistic perspectives, fostering reflexivity, and enabling learning across organizational levels. In so doing, KM contributes to the institutionalization of sustainability, not merely by managing information but also by shaping how sustainability is understood, valued, and operationalized within public sector organizations.

5.2. Sustainability information – what is it, and how is it used in public management?

Managers' understandings of sustainability information were closely tied to their organizational roles and strategic responsibilities. Rather than providing precise definitions, most directors described sustainability information in broad and context-specific terms, often linking it to performance metrics within their service area, city-level strategies, or legislative requirements. This variation reflects the inherently interpretive and contextual nature of sustainability information. It is

not a fixed dataset but, rather, a dynamic construct shaped by managerial priorities, institutional frameworks, and sectoral mandates.

A recurring theme across the interviews was the inherent ambiguity and multidimensionality of sustainability information. As one director of technical services explained, sustainability can be understood as comprising ecological, economic, and social dimensions, with each gaining prominence depending on the context or decision-making situation:

> Yes, of course, I think about sustainability in this way. You cannot really consider it solely from the perspective of sustainable development, environmental legislation, or environmental protection, that is, from a purely ecological point of view. [. . .] As a leader, economic considerations inevitably also come into play. [. . .] At the same time, there are important values associated with this field of activity, which bring in the social perspective as well, including issues of equity and equality. Inclusion is also embedded in legislation. Overall, the emphasis shifts over time, with different dimensions becoming more prominent in different situations. [Director Of Technical Services]

This quote illustrates that sustainability information is not only multidimensional but also situationally weighted, varying according to the decision-making context and each manager's functional domain. It highlights the interplay between formal data – such as environmental indicators and financial metrics – and normative values, including equity and inclusion. Together, these elements shape how managers interpret and engage with sustainability, reflecting its character as both a technical and value-laden construct.

5.2.1. Financial information as a core component

For financial directors, sustainability information was largely equated with financial data – budget performance, investment tracking, and revenue forecasts. These data integral to their role in maintaining fiscal discipline and ensuring effective resource allocation, and they are viewed as foundational to long-term sustainability:

> At the whole-city level, I would say that from the point of view of monitoring, the top should be the income statement [. . .] investments in relation to the targeted amount [. . .] the development of operating expenses and income in relation to the budget [. . .] And operating margin is, of course, important [. . .] We respect the things that happen in our core tasks [. . .] It is natural to always assess the outlook for tax revenues at a fairly precise level. [Financial Director]

This perspective highlights a performance-oriented view of sustainability, in which financial viability is seen as a prerequisite for delivering public services and fulfilling strategic commitments. The emphasis on financial metrics reflects an institutional logic centered on accountability and control. Integrating sustainability into financial management thus entails expanding the definition of value beyond cost-efficiency to include ecological and social goals. KM systems enable this expansion by linking financial data with broader sustainability indicators.

5.2.2. Social sustainability and well-being metrics in education

For directors in the education sector, sustainability information was primarily associated with social sustainability – student and staff well-being, the quality of learning environments, and service inclusiveness. They relied on both standardized indicators (e.g., SDG-based metrics, school health surveys) and service-specific data (e.g., meals, energy use, support needs):

> In the entire strategy work, we have taken on these SDG indicators. We chose ten, those that we felt were the most relevant for us [. . .] School health surveys, a really important document for us [. . .] We draw up well-being plans [. . .] There are different metrics that are then monitored related to meals, energy use [. . .] and also social sustainability and how you do it, how people work and so on. [Director of Education]

This highlights the multi-source and multi-level nature of sustainability information in education. The breadth of social sustainability – equity, inclusion, and quality of life – makes it difficult to define a fixed set of indicators. As another director noted:

> There is a lot of variety. For us, student absences, the amount of support needed, etc. New needs are emerging [. . .] service processes and service network [. . .] how much, for example, students from different schools cost us per student. [Director of Education]

This complexity points to the need for adaptive KM systems capable of integrating diverse data sources and supporting sense-making and learning across organizational levels.

5.2.3. Ecological and spatial data in infrastructure and development

Directors in infrastructure, urban planning, and environmental services emphasized ecological indicators, spatial data, and demographic trends. These inform long-term planning, resource allocation, and environmental monitoring:

> We make a lot of use of data related to demographic development [. . .] population, migration [. . .] We already use it in connection with planning [. . .] Our 'resource wise program' has about 180 separate measures. Also, location information is very important. [Director of Urban Planning and City Infrastructure]

> We compile an ecological road map and the data from the related meters [. . .] how many solar panel sites we

> need to put into use every year [...] We have an energy-saving working group that monitors the energy consumption of our buildings [...] and of course, the financial monitoring systems are part of where we monitor how our operations for that year are progressing. [Director of Environmental and Technical Department]

These examples show how environmental and financial data often overlap, reinforcing the need for cross-functional KM processes that harmonize data streams and enable adaptive planning.

5.2.4. Managing information overload and complexity

A recurring challenge was the volume and fragmentation of sustainability-related data. Many managers noted that the problem was not scarcity but overabundance:

> I would say that the main question related to information is not that we should have more of it but that existing information should be simplified and bundled [...] We are currently working on such reporting that would bring together the essential information to support management. [Director of Education]

This reflects a core KM challenge: transforming abundant, heterogeneous data into actionable knowledge. Effective sustainability management requires curation, interpretation, and communication, not simply more data. KM thus becomes a strategic, not merely technical, function.

5.2.5. The role of expertise and collective intelligence

Several directors emphasized that sustainability information is managed through collaborative knowledge practices, not individual expertise alone:

> I don't need to know everything myself, but I have a good orchestra of very skilled experts. [...] They are specialists in their respective fields, work with genuine passion, and manage their knowledge resources better than I ever could. I trust them. For me, the main thing is to ask the right questions. [Director Of Technical Services]

This resonates with the notion of collective knowledge formation, where KM includes dialogue, reflection, and shared interpretation. Sustainability work requires mobilizing diverse expertise and building trust, shared responsibility, and continuous learning. The institutionalization of sustainability therefore depends on organizations' capacity to integrate technical knowledge, experiential insights, and normative values into informed and inclusive decision-making.

6. Discussion

6.1. From recognition to practice: institutionalizing sustainability in local government

This section interprets the findings through a combined KBV – institutional work perspective. Although the interview guide included six thematic areas, the analysis focused on managers' interpretations of sustainability and their sustainability-related knowledge practices as reflected in the interviews. These practices manifested in several areas of municipal management, and through an iterative analytic process, four analytically distinct arenas were identified through which KM mediates between sustainability aspirations and everyday managerial practice: strategy, reporting, capability building, and everyday management practices. We then relate these findings to earlier research and discuss their implications for public management.

In public administration, sustainability is increasingly recognized as a central guiding principle (Fiorino, 2010). However, as Zeemering (2018) notes, there remains a pressing need to understand how public officials operationalize sustainability. This gap places public sector sustainability management among the key future research areas (Martins et al., 2019). Larger cities, in particular, often possess the resources, administrative capacity, and institutional infrastructure to prioritize sustainability, allocate funding, and develop specialized expertise (cf. Hörisch et al., 2015). However, their public mandate demands transparency and scrutiny across all services. Sustainability management must extend beyond information transfer (Schröpfer et al., 2017) to include strategic knowledge integration and the management of intellectual capital, which are essential in knowledge-intensive organizations (Alvino et al., 2021).

The interview data revealed that while sustainability is widely acknowledged in strategic discussions, its implementation is often marked by ambiguity and unclear responsibilities. These findings suggest the need for dedicated organizational processes that can help interpret sustainability and build shared understanding. As Shiroyama et al. (2012) argue, knowledge integration and multi-actor governance are vital to designing resilient systems and achieving consensus on sustainable actions. Sustainability management also requires ongoing dialogue across organizational levels and societal actors to define goals and means (Laihonen & Mäntylä, 2018). The process of collective knowledge formation (Laihonen et al., 2023) is essential in addressing the complex and wicked nature of sustainability challenges.

Interpreted through an institutional work perspective, the findings suggest that sustainability is still only partially institutionalized: while it is culturally

recognized as important, the technical and political work required to stabilize it in routines, roles, and decision-making structures is still incomplete. KM practices therefore operate at the intersection of meaning construction, governance arrangements, and tool development, shaping how sustainability moves from recognition toward practice. In this sense, KM functions not merely as an information infrastructure, but as a key mechanism through which institutional work around sustainability is accomplished.

Interpretive learning from sustainability information played a significant role in the management practices observed. These findings resonate with prior research showing that KM, organizational learning, and data-mining systems support learning and knowledge reuse by making experiential insights visible and usable across contexts (cf. Hu et al., 2018). At the same time, scholars caution against overly inward-looking KM approaches, advocating broader perspectives that incorporate external accountability, transparency, and societal impact (Evangelista & Durst, 2015; Preuss & Córdoba-Pachon, 2009). In practice, financial data continue to dominate local government decision-making. Managers also rely on expert analyses, national statistics, and institutional publications – for example, government-issued guidelines, municipal strategy reports, and national audit office reviews. While sustainability information is generally available and used in budgeting, goal setting, and procurement, it often remains siloed within departments. The interviewees expressed a need for more standardized and comparable data, especially across municipalities.

Overall, the findings suggest that while the importance of sustainability information and KM is widely recognized, integrating such information into decision-making remains a challenge. This suggests the need for KM systems that support not only data collection but also interpretation, learning, and strategic application.

6.2. The roles of knowledge management in institutionalizing sustainability

Our study advances research on sustainability in public management by showing that sustainability is not managed as a single concept but is interpreted and enacted differently across organizational roles and decision contexts (Sinervo et al., 2026). To synthesize how KM practices contribute to institutionalization under these conditions, we organize our findings around four distinct KM roles, namely strategy, reporting, capability building, and management practices. These roles function as mid-range constructs mediating between KBV-derived knowledge capabilities and the technical, political, and cultural work through which sustainability is institutionalized.

These roles reflect the inherently multidimensional nature of sustainability management in local government, shaped by strategic priorities, professional norms, and contextual constraints. Together, they form a conceptual framework for understanding how KM contributes to the institutionalization of sustainability through cumulative technical, political, and cultural work. In these arenas, KM practices provide the infrastructure for defining sustainability, embedding it in governance systems, and making it meaningful in everyday practice, while their effects depend on how such practices are resourced, legitimized, and interpreted across organizational levels. Each KM role is examined in turn.

6.2.1. KM and sustainability strategy: from alignment to integration

Sustainability, especially financial sustainability, is often framed through existing strategic priorities. This reflects a core principle of strategic KM: connecting knowledge processes to organizational goals (Hansen et al., 1999; Zack, 1999). However, advancing sustainability requires moving beyond such goal-oriented coupling toward deeper integration, supporting strategic foresight, cross-sectoral coordination, and adaptive learning. Integrated KM infrastructures enable knowledge to flow across organizational boundaries, fostering shared understanding and coordinated action. Embedding sustainability in strategic planning transforms KM from a supportive function into a strategic enabler by shaping how knowledge is valued, managed, and used for different organizational purposes (Zack, 1999; Zeemering, 2018).

This shift involves managing intellectual capital (Edvinsson & Malone, 1997; Laihonen & Pusenius, 2025), human, structural, and relational, and addressing the following key questions:

- Do professionals have the necessary skills and expertise to implement sustainability-related changes?
- Do the organization's operational and management models support the achievement of sustainability objectives?
- Are the organization's knowledge systems capable of supporting learning and adaptation in response to emerging sustainability challenges?

Our findings show that sustainability is increasingly embedded in municipal strategies, enabling collaboration, citizen engagement, and resource mobilization. The strategic integration of sustainability thus serves as both a symbolic commitment and a practical mechanism for connecting organizational efforts to long-term societal goals. From an institutional work perspective, strategic KM functions simultaneously as political work that legitimizes sustainability priorities

within decision-making structures, cultural work that anchors sustainability in strategic narratives and identities, and technical work that integrates sustainability into planning and coordination processes (Sinervo et al., 2024).

6.2.2. KM and sustainability reporting: from compliance to learning

Although sustainability reporting was not a primary focus of the interview guide, managers frequently referred to reporting systems as key infrastructures through which sustainability information is produced, interpreted, and translated into practice. These insights therefore form a natural part of our analysis of KM's role in institutionalizing sustainability.

Sustainability reporting in local governments is often driven by external accountability requirements, promoting transparency and comparability. However, these mechanisms can lead to fragmented or compliance-oriented practices that limit their strategic value (Vikstedt et al., 2024). Our findings suggest that KM can play a transformative role by shifting reporting from a static documentation exercise to a dynamic process of organizational development and adaptation (Li et al., 2025). When reporting systems are designed to support reflection, dialogue, and feedback, they become tools for continuous improvement (Laihonen et al., 2023). Reporting thus emerges as a key site of institutional work: technical work stabilizes indicators and data infrastructures, political work responds to accountability demands, and cultural work shapes whether reporting is oriented toward compliance or learning. Sustainability reporting is currently the most institutionalized domain in which KM, business analytics, and data-driven management intersect. As sustainability becomes a strategic objective, organizations must develop robust methods of measuring and evaluating progress. KM frameworks, especially those related to information management and business intelligence, can guide the identification of information needs, the collection of data, and the transformation of raw data into actionable insights (Choo, 1996, 2002).

Our data show that financial information, supplemented by expert analyses and national statistics, is still the dominant input in decision-making. While sustainability information is used in budgeting, goal setting, and procurement, it is often confined within departmental boundaries. The managers expressed a need for more standardized and comparable data both within and between municipalities to support coherent and coordinated efforts. Taken together, these findings point to the need for KM systems and practices that go beyond data collection and reporting, supporting interpretation, integration, and learning across organizational boundaries, thereby linking reporting to broader capability building and everyday management practices.

6.2.3. KM and skills for sustainability: building collective capacity

Sustainability challenges demand more than data and technical expertise; they require collaborative, interpretive, and adaptive capabilities (Sinervo et al., 2024). Organizations committed to sustainability must actively assess and cultivate diverse knowledge assets, including technical skills, systems thinking, and cross-sectoral collaboration (e.g., Deslatte et al., 2023; MacDonald et al., 2020). Research suggests that decentralized structures and integrated decision-making enhance innovation and responsiveness in complex environments (Stazyk et al., 2016). Moreover, organizational culture and managerial competencies, such as goal-setting, process integration, and infrastructure development, are critical to embedding sustainability in institutional routines (e.g., Hofstad et al., 2023, 2026; Yuriev et al., 2021).

Our findings suggest that effective sustainability management depends on developing organizational capacities that extend beyond individual expertise. In this context, KM plays a strategic role in fostering collective capacity through learning, knowledge sharing, and leadership development. Capacity building can therefore be understood as cultural institutional work that reshapes professional identities and shared values, political work that legitimizes investments in skills and roles, and technical work that embeds sustainability competences in HR systems and organizational structures. KM frameworks, particularly those based on intellectual capital theory (Laihonen & Pusenius, 2025), offer tools for identifying and leveraging key assets: human capital (e.g., skills, expertise, and motivation), structural capital (e.g., systems, processes, and databases), and relational capital (e.g., networks and partnerships). Managing these interdependencies enhances knowledge work productivity and long-term sustainability. A culture of innovation, reinforced by continuous training and cross-organizational collaboration, appears to play a significant role in embedding sustainability in everyday practices and decision-making.

6.2.4. KM and sustainability management practices: navigating complexity

Sustainability management in local governments involves navigating a complex landscape of data, actors, and expectations. The challenge lies not in data scarcity but in making sense of fragmented and sometimes conflicting information. In this context, KM plays a critical role in enabling sense-making, prioritization, and informed decision-making across organizational boundaries (Choo, 1996). While sustainability is widely adopted as a strategic goal, its implementation is uneven in practice. Public managers interpret broad objectives within local constraints, drawing on both technical tools, such as

dashboards and performance indicators, and organizational practices that foster integration, collaboration, and learning. Empirical research on the operational dimensions of sustainability management is still limited (e.g., Bhatia et al., 2024; Zeemering, 2018).

Our findings show that sustainability management is shaped by both formal structures (e.g., reporting systems and strategic plans) and informal practices (e.g., professional norms and interdepartmental collaboration). Public – private partnerships and innovative financing mechanisms are used increasingly to meet sustainability goals (e.g., Li et al., 2024; Patrucco et al., 2024; Rosell et al., 2024), reflecting the need for inter-organizational coordination and long-term planning. Everyday sustainability management thus entails ongoing institutional work that brings together technical instruments, political coordination, and cultural sense-making in routine decision-making processes. KM practices support the integration of these forms of work in practice.

Our findings further suggest that leadership capable of bridging knowledge domains – tacit and explicit, human and technological, and strategic and operational – is closely associated with how sustainability is enacted in practice. KM plays an important role in enabling a shift from fragmented, compliance-driven approaches toward more integrated, learning-oriented practices that build adaptive capacity and support long-term goals. This integrative role of KM provides a foundation for the broader theoretical and practical implications discussed in the concluding section.

7. Conclusions

This study examined how knowledge management supports the institutionalization of sustainability in local governments. Drawing on empirical insights from senior municipal managers and informed by the knowledge-based view and institutional work, we identify four interrelated domains in which KM plays a strategic and integrative role: sustainability strategy, sustainability reporting, skills for sustainability, and everyday sustainability management practices. Together, these domains form a conceptual framework that advances our understanding of how KM contributes to organizational and societal capacities for sustainability.

Across all four domains, a consistent insight emerges: KM operates not merely as a technical function but as a strategic governance mechanism. In strategy, KM enables the integration of sustainability into long-term planning by connecting knowledge processes to evolving priorities and fostering foresight and cross-sectoral coordination. In reporting, KM supports a shift from compliance-driven documentation toward learning-oriented approaches that promote reflection, dialogue, and continuous improvement (cf. Laihonen et al., 2023; Vikstedt et al., 2024). In skills and capability building, KM contributes to the development of human, structural, and relational capital (Edvinsson & Malone, 1997; Laihonen & Pusenius, 2025), enhancing collective learning and enabling organizations to respond to complex sustainability challenges. In management practices, KM facilitates sense-making, prioritization, and adaptive decision-making across silos, supporting institutional work that embeds sustainability in everyday routines.

7.1. Theoretical implications

The study advances public sector KM research in three ways. First, it extends KM theorizing beyond efficiency-oriented paradigms by illustrating how KM underpins the institutionalization of complex, multi-sectoral and multi-level policy goals (Sinervo et al., 2024). Second, it contributes to the sustainability management literature by demonstrating that sustainability is not a fixed target but an evolving managerial process requiring continuous interpretation, negotiation, and learning (Shiroyama et al., 2012; Zeemering, 2018). Third, it provides a mid-range framework that links KM capabilities to technical, political, and cultural forms of institutional work, which offers a theoretically grounded way to analyze how public organizations implement sustainability in practice.

7.2. Practical implications

For practitioners, the findings highlight the importance of assessing and strengthening the knowledge foundations of sustainability work. The proposed framework can support local governments in:

- diagnosing the coherence between sustainability goals and knowledge infrastructures.
- improving the integration of financial, ecological, and social data across organizational boundaries.
- investing in skills, leadership, and collaborative learning that enable collective interpretation of sustainability information.
- designing reporting practices that serve strategic learning rather than mere external accountability.

These insights are of relevance to public managers, performance analysts, sustainability coordinators, and elected officials seeking to build coherent and adaptive sustainability governance. They may also inform public administration education, where sustainability competences and KM capabilities increasingly define the skill set needed in modern public service.

7.3. Policy and societal implications

At the policy level, the study demonstrates that sustainability goals require supportive knowledge infrastructures and institutional arrangements that encourage cross-sectoral learning and collaboration. Policymakers can draw on these insights to design steering mechanisms, reporting systems, and capacity-building programs that promote integrated sustainability work rather than fragmented compliance.

At the societal level, improved sustainability knowledge practices can contribute to more transparent decision-making, enhanced public trust, and stronger connections between municipal actions and community well-being. Strengthening KM for sustainability can therefore influence public attitudes, support informed civic participation, and improve long-term quality of life.

7.4. Future research

Future research could explore how these KM roles evolve as sustainability agendas mature, examine comparative cases across different governance systems, or investigate how digitalization and AI-enabled analytics reshape these arenas of sustainability-related knowledge work. There is also scope for further theoretical inquiry into the interplay between knowledge, power, and sustainability, particularly in contexts marked by institutional complexity and political contestation.

Author contributions

CRediT: **Harri Laihonen:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing; **Lotta-Maria Sinervo:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing; **Paula Pusenius:** Writing – original draft.

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ORCID

Harri Laihonen http://orcid.org/0000-0002-5836-5649
Lotta-Maria Sinervo http://orcid.org/0000-0001-6532-3220
Paula Pusenius http://orcid.org/0009-0001-8987-1464

Data availability statement

The data underlying this study are not publicly available. Participants provided written consent for participation and for the use of their data in research, but did not provide consent for the data to be shared publicly.

References

Alvesson, M., & Sköldberg, K. (2009). *Reflexive methodology: New vistas for qualitative research* (2nd ed.). SAGE Publications.

Alvino, F., DiVaio, A., Hassan, R., & Palladino, R. (2021). Intellectual capital and sustainable development: A systematic literature review. *Journal of Intellectual Capital*, *22*(1), 76–94. https://doi.org/10.1108/JIC-11-2019-0259

Ball, A., Grubnic, S., & Birchall, J. (2014). Sustainability accounting and accountability in the public sector. In J. Bebbington, J. Unerman, & B. O'Dwyer (Eds.), *Sustainability accounting and accountability* (pp. 176–196). Routledge.

Bebbington, J., & Unerman, J. (2020). Advancing research into accounting and the United Nations sustainable development goals. *Accounting, Auditing & Accountability Journal*, *33*(7), 1657–1670. https://doi.org/10.1108/AAAJ-05-2020-4556

Bhatia, R., Pihlajamaa, M., Hyytinen, K., & Jäntti, A. (2024). Capabilities for transformative sustainability management in cities. *Public Management Review*, *27*(4), 1179–1203. https://doi.org/10.1080/14719037.2024.2394955

Bratianu, C., & Vasilache, S. (2009). Evaluating linear-nonlinear thinking style for knowledge management education. *Management & Marketing*, *4*(3), 3–18.

Bratianu, C., Vatamanescu, E. M., Anagnoste, S., & Dominici, G. (2021). Untangling knowledge fields and knowledge dynamics with the decision-making process. *Management Decision*, *59*(2), 306–323. https://doi.org/10.1108/MD-05-2019-0559

Choo, C. W. (1996). The knowing organization: How organizations use information to construct meaning, create knowledge and make decisions. *International Journal of Information Management*, *16*(5), 329–340. https://doi.org/10.1016/0268-4012(96)00020-5

Choo, C. W. (2002). *Information management for the intelligent organization: The art of scanning the environment*. Information Today.

Christensen, T., & Lægreid, P. (2011). Complexity and hybrid public administration-theoretical and empirical challenges. *Public Organization Review*, *11*(4), 407–423. https://doi.org/10.1007/s11115-010-0141-4

Dempsey, N., Brampley, G., Power, S. S., & Brown, C. (2009). The social dimension of sustainable development: Defining urban social sustainability. *Sustainable Development*, *19*(5), 289–300. https://doi.org/10.1002/sd.417

Deslatte, A., Siciliano, M. D., & Krause, R. M. (2023). Local government managers are on the frontlines of climate change: Are they ready? *Public Administration Review*, *83*(6), 1506–1511. https://doi.org/10.1111/puar.13726

Dumay, J. (2020). Using critical km to address wicked problems. *Knowledge Management Research & Practice*, *20*(5), 767–775. https://doi.org/10.1080/14778238.2020.1790310

Edvinsson, L., & Malone, M. S. (1997). *Intellectual capital: Realizing your company's true value by finding its hidden brainpower*. Harper Business.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, *50*(1), 25–32. https://doi.org/10.5465/amj.2007.24160888

Evangelista, P., & Durst, S. (2015). Knowledge management in environmental sustainability practices of third-party logistics service providers. *VINE*, *45*(4), 509–529. https://doi.org/10.1108/VINE-02-2015-0012

Fiorino, D. (2010). Sustainability as a conceptual focus for public administration. *Public Administrative Review*, *70* (1), 78–88. https://doi.org/10.1111/j.1540-6210.2010.02249.x

Fusco, F., & Ricci, P. (2019). What is the stock of the situation? A bibliometric analysis on social and environmental accounting research in the public sector. *International Journal of Public Sector Management*, *32* (1), 21–41. https://doi.org/10.1108/IJPSM-05-2017-0134

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, *16*(1), 15–31. https://doi.org/10.1177/1094428112452151

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, *17*(S2), 109–122. https://doi.org/10.1002/smj.4250171110

Guarini, E., Mori, E., & Zuffada, E. (2021). New development: Embedding the SDGs in city strategic planning and management. *Public Money and Management*, *41*(6), 494–497. https://doi.org/10.1080/09540962.2021.1885820

Guarini, E., Mori, E., & Zuffada, E. (2022). Localizing the sustainable development goals: A managerial perspective. *Journal of Public Budgeting, Accounting & Financial Management*, *34*(5), 583–601. https://doi.org/10.1108/JPBAFM-02-2021-0031

Hansen, M. T., Nohria, N., & Tierney, T. (1999). What's your strategy for managing knowledge? *Harvard Business Review*, *77*(2), 106–116.

Hofstad, H., Sørensen, E., Torfing, J., & Vedeld, T. (2023). Leading co-creation for the green shift. *Public Money and Management*, *43*(4), 357–366. https://doi.org/10.1080/09540962.2021.1992120

Hofstad, H., Vedeld, T., & Haarstad, H. (2026). Building local sustainability: Identifying critical transformative capacities. *Environmental Innovation and Societal Transitions*, *58*, 101043. https://doi.org/10.1016/j.eist.2025.101043

Hörisch, J., Johnson, M. P., & Schaltegger, S. (2015). Implementation of sustainability management and company size: A knowledge-based view. *Business Strategy and the Environment*, *24*(8), 765–779. https://doi.org/10.1002/bse.1844

Hu, X., Xia, B., Chen, Q., Skitmore, M., Buys, L., & Wu, P. (2018). A practice mining system for the delivery of sustainable retirement villages. *Journal of Cleaner Production*, *203*, 943–956. https://doi.org/10.1016/j.jclepro.2018.08.184

Hujala, T., & Laihonen, H. (2021). Effects of knowledge management on the management of health and social care: A systematic literature review. *Journal of Knowledge Management*, *25*(11), 203–221. https://doi.org/10.1108/JKM-11-2020-0813

Inkinen, H. (2016). Review of empirical research on knowledge management practices and firm performance. *Journal of Knowledge Management*, *20*(2), 230–257. https://doi.org/10.1108/JKM-09-2015-0336

Kaur, A., & Lodhia, S. K. (2019). Sustainability accounting, accountability and reporting in the public sector: An overview and suggestions for future research. *Meditari Accountancy Research*, *27*(4), 498–504. https://doi.org/10.1108/MEDAR-08-2019-510

Krause, R. M., Feiock, R. C., & Hawkins, C. V. (2016). The administrative organization of sustainability within local government. *Journal of Public Administration Research & Theory*, *26*(1), 113–127. https://doi.org/10.1093/jopart/muu032

Kunová, A., Bakrania, S., Mamo, S., & Biggeri, M. (2025). *Lessons from evaluations: SDG localization through local governance*. United Nations Development Programme. https://www.undp.org/sites/g/files/zskgke326/files/2025-02/sdg_localization.pdf

Laihonen, H., & Huhtamäki, J. (2020). Organizational hybridity and fluidity: Deriving new strategies for dynamic knowledge management. *Knowledge Management Research & Practice*, *21*(2), 216–228. https://doi.org/10.1080/14778238.2020.1794993

Laihonen, H., Kork, A.-A., & Sinervo, L.-M. (2023). Advancing public sector knowledge management: Towards an understanding of knowledge formation in public administration. *Knowledge Management Research & Practice*, *22*(3), 223–233. https://doi.org/10.1080/14778238.2023.2187719

Laihonen, H., & Mäntylä, S. (2018). Strategic knowledge management and evolving local government. *Journal of Knowledge Management*, *22*(1), 219–234. https://doi.org/10.1108/JKM-06-2017-0232

Laihonen, H., & Pusenius, P. (2025). Relevance and the future of intellectual capital management in the public sector. In A. Kianto, S. Čabrilo, & L. Užienė (Eds.), *Futurizing intellectual capital. Knowledge management and organizational learning* (Vol. 15, pp. 169–183). Springer. https://doi.org/10.1007/978-3-031-80197-6_9

Li, B., Teece, D. J., Baskaran, A., & Chandran, V. G. R. (2025). Dynamic knowledge management: A dynamic capabilities approach to knowledge management. *Technovation*, *147*, 147. https://doi.org/10.1016/j.technovation.2025.103316

Li, J., Liu, B., Wang, D., & Casady, C. B. (2024). The effects of contractual and relational governance on public-private partnership sustainability. *Public Administration*, *102*(4), 1418–1449. https://doi.org/10.1111/padm.12982

MacDonald, A., Clarke, A., Ordonez-Ponce, E., Chai, Z., & Andreasen, J. (2020). Sustainability managers: The job roles and competencies of building sustainable cities and communities. *Public Performance and Management Review*, *43*(6), 1301–1329. https://doi.org/10.1080/15309576.2020.1803091

Martins, V. W. B., Rampasso, I. S., Anholon, R., Quelhas, O. L. G., & Leal Filho, W. (2019). Knowledge management in the context of sustainability: Literature review and opportunities for future research. *Journal of Cleaner Production*, *229*, 489–500. https://doi.org/10.1016/j.jclepro.2019.04.354

Massaro, M., Dumay, J., & Garlatti, A. (2015). Public sector knowledge management: A structured literature review. *Journal of Knowledge Management*, *19*(3), 530–558. https://doi.org/10.1108/JKM-11-2014-0466

Miles, M. B., Huberman, A. M., & Saldana, J. (2019). *Qualitative data analysis. A methods sourcebook*. SAGE Publications.

Patrucco, A. S., Kauppi, K., DiMauro, C., & Schotanus, F. (2024). Enhancing strategic public procurement: A public service logic perspective. *Public Management Review*, 1–21. https://doi.org/10.1080/14719037.2024.2411630

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, *34*(5), 1189–1208.

Perkmann, M., & Spicer, A. (2008). How are management fashions institutionalized? The role of institutional work. *Human Relations*, *61*(6), 811–844. https://doi.org/10.1177/0018726708092406

Petty, R., & Guthrie, J. (2000). Intellectual capital literature review: Measurement, reporting and management. *Journal of Intellectual Capital*, *1*(2), 155–176. https://doi.org/10.1108/14691930010348731

Preuss, L., & Córdoba-Pachon, J. (2009). A knowledge management perspective of corporate social responsibility. *Corporate Governance*, *9*(4), 517–527. https://doi.org/10.1108/14720700910985052

Purvis, B., Mao, Y., & Robinson, D. (2019). Three pillars of sustainability: In search of conceptual origins. *Sustainability Science*, *14*(3), 681–695. https://doi.org/10.1007/s11625-018-0627-5

Reed, D. (1997). *Structural adjustment, the environment and sustainable development*. Earthscan Publications. https://doi.org/10.1016/S0024-6301(97)86608-3

Robinson, H. S., Anumba, C. J., Carrillo, P. M., & Al-Ghassani, A. M. (2006). Steps: A knowledge management maturity roadmap for corporate sustainability. *Business Process Management Journal*, *12*(6), 793–808. https://doi.org/10.1108/14637150610710936

Roos, G., Edvinsson, L., Roos, J., & Dragonetti, N. C. (1997). *Intellectual capital: Navigating the new business landscape*. Macmillan. https://doi.org/10.1007/978-1-349-14494-5

Rosell, J., Plaček, M., Ochrana, F., & Šumpíková, M. (2024). Hiding when you're not green: An empirical analysis on green public procurement. *Public Money and Management*, *45*(5), 1–10. https://doi.org/10.1080/09540962.2024.2395327

Saldaña, J. (2020). Qualitative data analysis strategies. In Patricia Leavy (Ed.), *The Oxford Handbook of qualitative research* (ed.). Oxford Handbooks (pp. 876–911). https://doi.org/10.1093/oxfordhb/9780190847388.013.33

Schröpfer, V. L. M., Tah, J., & Kurul, E. (2017). Mapping the knowledge flow in sustainable construction project teams using social network analysis. *Engineering, Construction and Architectural Management*, *24*(2), 229–259. https://doi.org/10.1108/ECAM-08-2015-0124

Shiroyama, H., Yarime, M., Matsuo, M., Schroeder, H., Scholz, R., & Ulrich, A. E. (2012). Governance for sustainability: Knowledge integration and multi-actor dimensions in risk management. *Sustainability Science*, *7*(1), 45–55. https://doi.org/10.1007/s11625-011-0155-z

Sinervo, L.-M., & Laihonen, H. (2024). New development: Public managers between a rock and a hard place - social-financial sustainability in local government. *Public Money and Management*, *44*(6), 559–564. https://doi.org/10.1080/09540962.2024.2351133

Sinervo, L.-M., Vikstedt, E., Laihonen, H., & Pulkkinen, M. (2026). Public management for a sustainable future: Insights from a systematic literature review. *Public Money and Management*, 1–16. https://doi.org/10.1080/09540962.2026.2631591

Sinervo, L.-M., Vikstedt, E., Luhtala, M., Laihonen, H., & Welinder, O. (2024). Fostering sustainability in local government: The institutional work perspective on the accounting-management nexus. *Financial Accounting & Management*, *40*(4), 592–612. https://doi.org/10.1111/faam.12399

Stazyk, E., Moldavanova, A., & Frederickson, H. (2016). Sustainability, intergenerational social equity, and the socially responsible organization. *Administration & Society*, *48*(6), 655–682. https://doi.org/10.1177/0095399713519094

Torfing, J., & Triantafillou, P. (2013). What's in a name? Grasping new public governance as a political-administrative system. *International Review of Public Administration*, *18*(2), 9–25. https://doi.org/10.1080/12294659.2013.10805250

Vikstedt, E., Luhtala, M., Welinder, O., Sinervo, L. M., & Laihonen, H. (2024). Different sustainability endgames: Institutional logics in the performance management of local governments. *Public Money and Management*, *45*(7), 735–743. https://doi.org/10.1080/09540962.2024.2421503

Yuriev, A., Boiral, O., & Talbot, D. (2021). Is there a place for employee-driven pro-environmental innovations? The case of public organizations. *Public Management Review*, *23*(11), 1652–1674. https://doi.org/10.1080/14719037.2021.1900350

Zack, M. (1999). Developing a knowledge strategy. *California Management Review*, *41*(3), 125–145. https://doi.org/10.2307/41166000

Zeemering, E. (2018). Sustainability management, strategy and reform in local government. *Public Management Review*, *20*(1), 136–163. https://doi.org/10.1080/14719037.2017.1293148