THE RISE AND REPOSITIONING OF WIKIS IN BUSINESS: A SCOPUS–VOSVIEWER REVIEW (2003-2025)

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ABSTRACT

This article reviews the academic literature on the use of wikis in business settings. As part of the Web 2.0 wave, wikis were introduced as tools for knowledge management, collaboration, and organisational learning. To examine the evolution of this research area, a bibliometric analysis of 352 Scopus-indexed documents (2003-2025) was conducted using VOSViewer. The results show that while wikis reached their peak during the Web 2.0 era, recent research increasingly positions them as background infrastructures for generative AI and knowledge graphs, rather than frontline business tools. Citation analysis highlights influential studies in knowledge management, e-learning, and open innovation. In contrast, cluster analysis identifies knowledge management as the central theme, linked to education, online communities, business processes, and later to semantic technologies and artificial intelligence. Overall, the findings confirm that research on wikis in business has declined as social media and integrated platforms have become dominant. However, the rise of generative AI and knowledge graphs may open new opportunities for wiki-like structures as transparent and collaborative environments for knowledge creation.

KEY WORDS

CLASSIFICATION

JEL: D83, M15, O33

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INTRODUCTION

Modern organisations are becoming increasingly oriented towards knowledge sharing [1]. Many of them have introduced Web 2.0 applications, i.e., knowledge management tools such as wikis, weblogs, social network sites (Facebook, LinkedIn, ...), and social bookmarking [2], due to their intangible value to the users [3], and their positive impact on the success of the organisation [4]. Mentioned tools emphasize knowledge sharing and online collaboration among users, changing the manner of working and the way information is created and shared [2, 5].

Web 2.0 applications represent a new approach to managing knowledge and learning, as well as teaching processes, at both personal and organisational levels [6]. Knowledge management tools enable people to write and share knowledge and opinions with a broad audience [7] and to learn from online learning communities. In organisations, knowledge management tools generate a strategic advantage, allowing employees to collaborate, share knowledge, and communicate [6]. In our article, we will focus on the wiki as a Web 2.0 application – a technology-based system for collaborative knowledge management, particularly in the context of distributed knowledge work. Wiki provides organisations with an effective tool for creating and accumulating knowledge learned from lessons in a collaborative manner [8].

In the first decade of the 20th century, the relevance of wikis in business declined as social media platforms and integrated collaboration tools became dominant [6]. Nevertheless, wikis continue to play an important role in research, particularly as data sources for generative AI, knowledge graphs, and semantic technologies [9, 10]. This shift highlights the transformation of wikis from visible collaboration platforms to largely invisible infrastructures that support emerging digital ecosystems.

Wikis provide organisations with an effective means to create and accumulate lessons learned in a shared environment, particularly valuable in contexts of distributed knowledge work [8]. However, wikis have somewhat lost visibility in business practice, replaced by social media and integrated collaboration tools [6]. Still, they remain significant as data infrastructures for AI and knowledge graphs [9, 10]. Building on this foundation, the article examines how research on wikis in business has evolved, identifies the themes that dominate the literature, and explores how the relevance of wikis has changed over time.

To examine the academic interest in this topic, we conduct a bibliometric analysis using the Scopus database and employ VOSViewer software to identify significant research themes, trends, and influential publications. This article focuses specifically on the role of the wiki as a Web 2.0 application and a technology-based system for collaborative knowledge management in the last two decades, from 2003 to 2025.

The article is structured into the following sections: after the Introduction, the Methodology section outlines the data collection and analysis procedures. The Results section presents descriptive bibliometrics, citation analysis, and thematic clusters identified through VOSViewer. Finally, the Conclusion summarises the key findings and reflects on the future relevance of wikis in business research.

LITERATURE REVIEW

KNOWLEDGE MANAGEMENT SYSTEMS

Knowledge management is not only important for our society and future generations, who will build upon our knowledge and skills, but also for today's organisations. Organisations need to be aware of their employees' knowledge, because based on their knowledge, unique business processes, and adaptation to customer needs, the value of the organisation is increased and new

value is created [11]. The major challenge for employers is to utilise and store the knowledge of the employees. This can be achieved by different management system tools [8].

Knowledge management systems comprise experience and best practices from employees, which are stored in a widely accessible database [7]. A knowledge management system is "developed to support and enhance the organisational knowledge processes of knowledge creation, storage, retrieval, transfer and application" [12]. Their benefits include visibility of knowledge within organisations, a knowledge-based organisational culture, and a knowledge infrastructure [13]. As organisations move towards virtual collaboration and become geographically dispersed, sharing knowledge through practical knowledge management system tools is crucial. Novel forms of knowledge management system tools, such as wikis, make organisational knowledge more visible and establish new opportunities for collaboration [14]. Additionally, a wiki, a tool that enables collaborative authoring, is an appropriate solution for supporting knowledge processes [15].

Wikis are an alternative to traditional knowledge management systems; they are the next generation of knowledge management system tools. The difference between earlier management system tools and a wiki is that a wiki enables collaborative publications, which are organised by topic and subtopic, not by chronology, as many other management system tools do. Each topic is kept on a different page on the wiki website [16]. Another difference is that in traditional management systems, work is structured in a way that allows each employee to perform only the tasks for which they are responsible [17].

WIKI TECHNOLOGY AS A KNOWLEDGE MANAGEMENT SYSTEM

Wiki is one of the Web 2.0 applications, and is described as an open source, "a community of users responsible for its own content" [3]. Wagner and Majchrzak [18] defined wikis as "websites which multiple users collaboratively create in a web browser". Users are therefore able to read, delete, edit, and add content to webpages [19]. Wiki encourages effective communication, reading, writing, collaboration, revision, knowledge co-creation, and ensures effective knowledge sharing [20, 21].

Wikis consist of two components, wiki technology and the social norms. Wiki technology is based on software called a wiki engine, which is open-source [13]. Wiki engines are freely available on the web and can be supported by any browser. At the same time, social norms are partly embedded in the wiki technology and partly shared as a code of conduct [2].

Wiki can be placed behind organisational firewalls for organisational use as well [22]. According to [23] and [24], wikis are the best tools for knowledge management and collaboration for geographically dispersed employees and is distinguished from other knowledge management tools by two major technological features; "open editing", which is function enable everyone to edit the same wiki pages and "edit preservation", function that recorded each edit to a wiki page [25]. Success of the organisation can be achieved through the various benefits wiki offers to the organisation; for example, enabling employees to collaborate and create knowledge in order to achieve organisational goals, enabling leaders to have a better overview of a work, its positive impact on the organisational culture, saving time for employees training, simplicity of use, ability to improve work processes, and ability to facilitate knowledge sharing [2, 3, 27].

It is crucial for the organisation that wikis are sustainable, i.e., continuously used to support work processes. Arazy and Croitoru's [27] research showed that employees are more satisfied with the wiki and its content when it is sustainable. A reliable wiki system infrastructure, promotion of a sense of community, quality control mechanisms, and integration of wikis within work processes can achieve wiki sustainability.

IMPACT OF WIKIS ON KNOWLEDGE SHARING AND INNOVATION

Knowledge sharing in an organisation is an activity through which knowledge is exchanged among employees and within organisations. Knowledge sharing is important because it has great potential to contribute to innovation and performance of the organisation [28]. Knowledge sharing allows organisations to create value-added. For this reason, many organisations have been influenced by various Web 2.0 applications [4], such as wikis, which enable employees to share knowledge easily. Different studies [2, 4, 16, 22] have confirmed the importance of wikis as knowledge management tools for supporting innovation processes and providing greater improvements in productivity. This is especially true in organisations where knowledge sharing is valued due to its potential to capture distributed knowledge, address the location and filtering of knowledge, and maintain knowledge in a state of change [2].

Innovation is, according to [29], "the act of introducing a new device, method, or material for application to commercial or practical objectives". Innovation can be either incremental, which is slightly different from an existing solution, or radical, which produces fundamental changes to the organisation [29]. Innovation is crucial for today's competitive and rapidly changing business environment [2, 30]. The author from [31] argues that innovation processes require the support of knowledge management tools due to their help in storing and acquiring knowledge.

Wikis can be used for knowledge sharing and encouraging innovation processes in organisations. For the successful implementation of an innovation strategy in an organisation, a wiki needs to support the innovation agenda. It should be linked to and aligned with the organisation's innovation strategy [2].

Wiki, as a second-generation knowledge management system tool, can help organisations alleviate bottlenecks in knowledge creation. It enables employees to engage in various knowledge-sharing tasks and express themselves more fully [17]. Wikis are transforming the way employees work and interact with one another. It presents a valuable tool for supporting knowledge management processes in organisations [32]. Many organisations have already introduced a wiki and its new approach of knowledge management [15]. A lot of them use a wiki as a repository for their working knowledge [33].

Wiki was primarily used to exchange ideas on technical issues [34]. However, there are also studies on wiki usage regarding other issues in organisations [35]. There are both successful and ineffective cases of wiki use. The success cases led organisations to flexibility and innovation, while ineffective cases led to a lack of user motivation and tension in the organisation [36].

Drivers for employees to collaborate and share knowledge on wikis are enjoyment, learning new skills, social pressure, and personal benefits [1]. However, there are also some obstacles to wiki implementation in the organisation. Stocker and Richter's [35] study revealed that wiki content is perceived as the most significant obstacle by non-managerial employees, and that managers perceive higher benefits from their wikis than non-managerial workers. Obstacles to implementation include, for example, a lack of a clear purpose for the wiki itself, organisational culture, a lack of control over quality, and the fact that service quality largely depends on the users [15]. Therefore, support from top management is necessary to promote wiki use, which involves training, motivating, and rewarding users, as well as achieving a critical mass of users by fostering collaboration and knowledge sharing [32]. They divided the factors for a successful wiki implementation into five categories, as follows: technical factors (i.e. infrastructure, openness, security, and reliance), economic factors (i.e. clear purpose, critical mass of users, rewarding, and motivating), process/operational factors (i.e. guidelines, templates, technical support, usability), organisational factors (i.e. managerial support, training, moderator, IT expertise), and cultural factors (supportive organisational culture, willingness to share, identifying the right content, information sensitivity).

RECENT RESEARCH ON WIKIS

Early studies highlighted wikis as essential Web 2.0 tools that supported knowledge sharing, collaboration, and organisational learning [6, 7]. Research from the late 2000s to the mid-2010s frequently positioned wikis at the center of knowledge management and business innovation, showing how they enabled employees to co-create content, build communities of practice, and capture lessons learned within organizations. During this period, wikis were regarded as practical instruments for achieving transparency, improving communication, and sustaining organisational memory.

More recent work, however, indicates an apparent decline in both academic and practical interest. Since 2020, wikis have appeared less as standalone business platforms and more as background resources for advanced technologies. For example, the Wiki Neutrality Corpus has been used to address bias in digital content [9], and wiki-based tutorials are referenced in reinforcement learning contexts [37]. Wikis are also linked with knowledge graphs and semantic technologies, contributing to research on information representation and collaborative knowledge ecosystems [10, 38, 39]. In parallel, wiki-inspired repositories continue to support education, libraries, and domain-specific knowledge dissemination [40, 41].

Taken together, the literature suggests that wikis have transformed: from visible platforms for business knowledge management in the Web 2.0 era to largely invisible infrastructures that underpin AI, the semantic web, and community-driven knowledge systems. The decline in direct organisational use reflects the rise of social media platforms and integrated collaboration tools, which have displaced wikis as preferred solutions for teamwork and communication. However, their repurposing in AI contexts shows that wikis have not disappeared entirely but have shifted to a different role. This opens the possibility of a partial renaissance of wikis, not as central business applications, but as structured, transparent, and explainable resources integrated into generative AI and human-AI collaboration frameworks.

In line with this changing research landscape, the present study applies a bibliometric analysis of Scopus-indexed publications to examine how the academic focus on wikis in business has evolved, what themes dominate the literature, and how their relevance has shifted in the context of emerging technologies.

METHODOLOGY

The present study employs a bibliometric approach to systematically review the literature on the use of wikis in business settings. Bibliometric methods are increasingly applied in management and information systems research to provide a quantitative overview of knowledge structures, thematic foci, and intellectual trajectories.

DATA COLLECTION AND PREPARATION

The bibliographic data were retrieved from the Scopus database, which was selected due to its extensive coverage of peer-reviewed journals, conference proceedings, and book chapters relevant to business and economics. The search was conducted in August 2025.

The initial search query TITLE-ABS-KEY (wiki) retrieved 6 686 documents published between 1992 and 2005 across various subject areas. To narrow the scope to the business and economics domains, subject filters were applied: LIMIT-TO (SUBJAREA, "BUSI") or LIMIT-TO (SUBJAREA, "ECON"). This refinement yielded a final dataset of 352 documents published between 2003 and 2025, Table 1. No restrictions were applied regarding language, document type, or source, as the intention was to capture the full spectrum of research outputs.

Table 1. Database search strategy.

Database	Query	Years range	Results
Scopus	TITLE-ABS-KEY (wiki)	1992-2025	6 686
	TITLE-ABS-KEY (wiki) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON"))	2003-2025	352

The bibliographic information (including authors, titles, abstracts, keywords, citations, affiliations, and funding sponsors) was exported in CSV format and processed for bibliometric analysis. Data cleaning procedures were applied to standardise author names, merge synonymous keywords (e.g., "wiki" and "wikis"), and remove general or irrelevant terms (e.g., "study", "analysis").

ANALYTICAL TECHNIQUES

The analysis was carried out using Scopus output and VOSViewer, a software tool designed for constructing and visualising bibliometric networks. Several types of analysis were performed.

In the first stage of the analysis, descriptive bibliometrics were applied to map the overall characteristics of the dataset. Frequency distributions were generated to examine publications across years, document types, source titles, countries, subject areas, and funding sponsors. Additionally, citation counts and the h-index were calculated to assess the scholarly impact of the field.

Building on this descriptive overview, a co-occurrence analysis of keywords was conducted. By identifying terms that frequently appear together, this step allowed for the detection of clusters that represent the dominant research themes within the literature. To ensure clarity and relevance, a minimum occurrence threshold was applied, which reduced noise and improved the interpretability of the results. The results were visualised using VOSViewer's network, density, and overlay visualisation techniques. These visualisations illustrated the structural composition of the field and its temporal evolution, offering a comprehensive picture of how the research landscape has developed over time. The co-occurrence clusters generated by VOSViewer were subjected to a qualitative thematic analysis. Each cluster was interpreted in terms of its dominant concepts and underlying research focus, allowing the identification of major thematic areas in the literature on wiki use in business.

RESULTS

The results of the bibliometric analysis provide a comprehensive overview of the research landscape on the use of wikis in business contexts. The findings are presented in several parts. First, descriptive statistics are used to summarise the distribution of publications across various categories, including journals, countries, document types, subject areas, and funding sponsors. Second, citation analysis is applied to identify the most influential works in the field. Finally, a co-occurrence analysis of keywords using VOSViewer is presented, which enables the identification of major thematic clusters and research trends over time.

BIBLIOMETRIC ANALYSIS

The analysis of publications on the use of wikis in business reveals that the topic gained attention in the mid-2000s, with a notable increase in interest after 2006. The peak period was between 2008 and 2010, when more than 30 papers per year were published, reflecting the popularity of wikis as collaborative tools in business practice and research. After 2011, the number of studies fluctuated, with a minor increase from 2014 to 2016, followed by a decline.

Since 2020, the number of publications has dropped to single digits, suggesting that research on wikis in business has become less visible as attention has shifted to broader areas, such as digital platforms, social media, and open innovation. The linear trendline confirms a slight overall decrease in output; however, wikis continue to appear in business research as part of broader studies on knowledge management and collaboration.
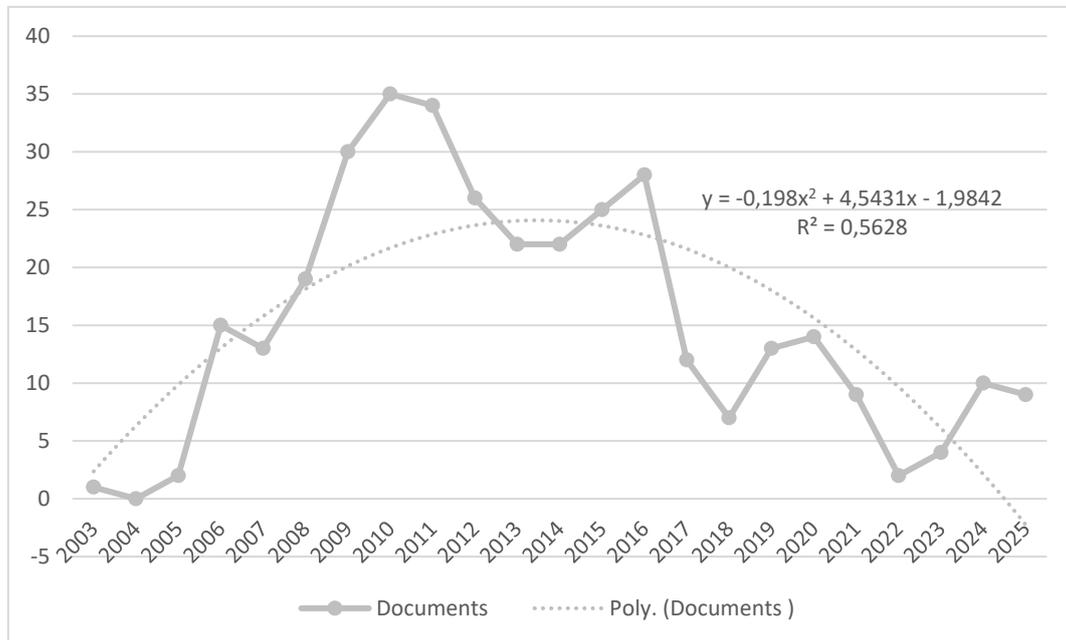

The chart shows the equation $y = -0{,}198x^2 + 4{,}5431x - 1{,}9842$ and $R^2 = 0{,}5628$.

Legend: ●—— Documents ·········· Poly. (Documents)

Figure 1. Publication trends of wiki research in Scopus (2003-2025).

The fitted second-order polynomial in Figure 1 is $y = -0{,}198 \cdot x^2 + 4{,}5431 \cdot x - 1{,}9842$ with $R^2 = 0{,}5628$. Unlike a simple linear trend, this curve captures the rise in publications up to the late 2000s and early 2010s, and the downturn after the mid-2010s. The moderate R^2 indicates that the model explains a meaningful share of the variance (approximately 56%), but it should still be treated as descriptive rather than predictive. In practice, the pattern shows a field that peaked around 2009-2011, dipped after 2016, and remained at lower levels in recent years – consistent with the shift of attention from wikis toward broader social platforms and AI-related topics.

From a thematic perspective, the decrease can be attributed to the shift in attention from wikis to social media platforms and integrated collaboration tools, which have assumed much of their original role in business contexts. At the same time, recent publications increasingly mention wikis in connection with AI training, knowledge graphs, and natural language processing, suggesting that while their direct business relevance has diminished, they continue to serve as valuable infrastructures for emerging digital technologies.

The analysis of source titles shows that research on wikis in business has been published across a wide range of journals and conference proceedings, Table 2. The most productive outlets are Lecture Notes in Business Information Processing (13 papers), the International Conference on Information and Knowledge Management Proceedings (10 papers), and Knowledge-Based Systems (9 papers).

Core management and information systems journals, such as the Journal of Knowledge Management (six papers), MIS Quarterly (five papers), and the Strategic Management Journal (four papers), also appear among the leading sources, indicating that the topic has been recognised within mainstream business and management research. In addition to established journals, several specialised outlets focusing on knowledge management, professional communication, and information systems education contributed multiple papers.

Table 2. Leading journals publishing research on wikis in business (journals with two or more papers).

Journal	number of papers
Lecture Notes in Business Information Processing	13
International Conference on Information and Knowledge Management Proceedings	10
Knowledge-Based Systems	9
Journal of Knowledge Management	6
Proceedings of the European Conference on E Government ECEG	6
MIS Quarterly Management Information Systems	5
Business Information Review	4
Economist	4
IEEE Transactions on Professional Communication	4
International Journal of Knowledge, Culture and Change Management	4
Strategic Management Journal	4
International Journal of Innovation and Learning	3
Learning Organization	3
ACM Transactions on Information Systems	2
ACM Transactions on Management Information Systems	2
Asian Social Science	2
Big Data Research	2
Capitale Culturale	2
Collection Management	2
Economist United Kingdom	2
Electronic Commerce Research and Applications	2
IEEE Potentials	2
Information and Management	2
International Journal of Human Capital and Information Technology Professionals	2
International Journal of Knowledge Management	2
International Journal of Knowledge Management Ijkm	2
International Journal of Management Education	2
International Journal of Production Research	2
International Journal of Recent Technology and Engineering	2
Issues in Accounting Education	2
Journal of Corporate Accounting and Finance	2
Journal of Enterprise Information Management	2
Journal of Management Information Systems	2
Journal of Organisational and End User Computing	2
Knowledge and Process Management	2
Lecture Notes in Information Systems and Organisation	2
Mediterranean Journal of Social Sciences	2
Proceedings of the International Conference on Electronic Business Iceb	2
Schole: A Journal of Leisure Studies and Recreation Education	2
Studies in Systems Decision and Control	2
Systemic Practice and Action Research	2

The geographical distribution of publications shows that the United States is the most active country in research on wikis in business (Table 3), with 80 documents, followed by Germany (32), China (29), and the United Kingdom (21). Other countries with notable contributions include Australia (20), Spain (14), Malaysia (13), and Italy (12). This distribution reflects both the early adoption of collaborative technologies in developed economies and the increasing

interest from emerging economies, particularly in Asia. For example, the presence of China, Malaysia, and Singapore among the leading contributors highlights the growing role of Asian research communities in the study of digital collaboration.

Table 3. Leading countries in research on wikis in business (countries with four or more papers).

Country/Territory	Number of documents
United States	80
Germany	32
China	29
United Kingdom	21
Australia	20
Spain	14
Malaysia	13
Italy	12
Austria	10
Canada	10
Hong Kong	10
Portugal	10
France	9
Netherlands	8
Singapore	8
Ireland	7
Switzerland	7
India	6
Taiwan	6
Denmark	5
Finland	5
Greece	5
Israel	5
South Korea	5
Brazil	4
Japan	4
Norway	4
Poland	4

Table 4 indicates that most publications on wikis in business are in the form of journal articles (179), followed by conference papers (85) and book chapters (66). Reviews, notes, and other document types are less common. This suggests that original research studies primarily shape the field, while conferences and edited volumes also play a significant role in disseminating findings.

Table 4. Document types in research on wikis in business.

Document type	Number of documents
Article	179
Conference Paper	85
Book Chapter	66
Review	10
Conference Review	6
Note	3
Short Survey	2
Book	1

Most publications on wikis in business fall under the Business, Management, and Accounting category (329 documents), which is expected due to the topic of this research, Table 5. However, it is interesting to explore the multidisciplinary aspects of this field. Significant contributions also come from Computer Science (124) and Economics, Econometrics and Finance (91), showing the technological and economic perspectives on wiki use. Additional areas, such as Decision Sciences (87), Social Sciences (86), and Engineering (48), further illustrate the breadth of the field. The distribution of subject areas highlights the interdisciplinary character of wiki research in business. The involvement of computer science and related disciplines shows that wikis are studied both as collaborative technologies and as tools for supporting organisational processes and innovation.

Table 5. Subject areas of research on wikis in business.

Subject area	Documents
Business, Management, and Accounting	329
Computer Science	124
Economics, Econometrics, and Finance	91
Decision Sciences	87
Social Sciences	86
Engineering	48
Mathematics	19
Arts and Humanities	15
Psychology	5
Other	19

Funding for research on wikis in business is provided by various national and international programs, Table 6. The most frequent sponsors are the National Natural Science Foundation of China and the Seventh Framework Programme of the European Union, each supporting seven documents. Other contributors include U.S. and Korean foundations, as well as European Commission programs such as Horizon 2020. This indicates that the topic has garnered funding from both national agencies and large international research frameworks.

Table 6. Leading funding sponsors in research on wikis in business (sponsors funding two or more papers).

Funding sponsor	Documents
National Natural Science Foundation of China	7
Seventh Framework Programme	7
National Key Research and Development Program of China	5
National Science Foundation	5
European Commission	4
European Research Council	2
Horizon 2020 Framework Programme	2
National Research Foundation of Korea	2
Russell Sage Foundation	2

The bibliometric analysis reveals that research on wikis in business is widely disseminated across various journals, countries, and subject areas, reflecting its interdisciplinary and international nature. While the intensity of publications has declined in recent years, the field has established a solid knowledge base that continues to inform studies on collaboration, knowledge management, and digital innovation.

CITATION ANALYSIS

Out of the 352 documents on wikis in business, only 246 have received citations, while a considerable share of publications remain uncited. In total, the dataset comprises 6,180 citations and an h-index of 36, indicating that at least 36 documents have been cited 36 times or more. This suggests that, although the field has produced a substantial body of research, its overall academic impact is uneven, with a smaller number of highly influential studies accounting for most of the citations.

Figure 2 shows both the annual number of publications and their citations. Research activity increased rapidly after 2006 and reached its peak between 2008 and 2011, when more than 30 papers were published per year. After this period, the number of publications began to decline, especially after 2016, and in recent years has fallen to single digits.

In contrast, the number of citations continued to grow steadily until around 2016 and has remained relatively stable since then. This suggests that, although fewer new studies are being published, earlier works continue to attract attention and influence the field. Overall, the trend suggests that research on wikis in business is losing momentum as a standalone topic, but it still contributes to ongoing discussions on digital collaboration and knowledge management.

Figure 2. Number of publications and citations on wikis in business (2000-2025).
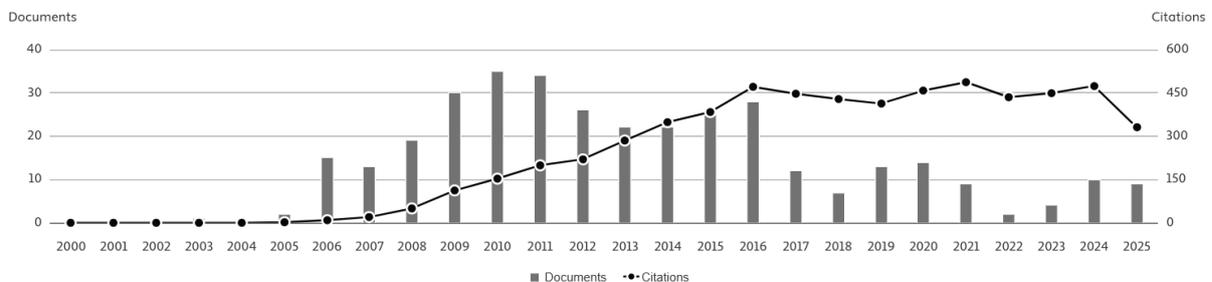
The most cited publications on wikis in business were published mainly between 2006 and 2014, a period that coincides with the rapid development of Web 2.0 and the growing interest in collaborative technologies. Seminal contributions such as [18] study on customer-centricity using wikis and the "wiki way", Grace's [3] work on wikis as knowledge management tools. Kane and Fichman's [42] exploration of their use in teaching and research illustrates how wikis became positioned at the intersection of business practice and technological innovation. Other highly cited works, including Levy [23] on the implications of Web 2.0 for knowledge management and Kane, Alavi, Labianca, and Borgatti [43] on the distinctiveness of social media networks, further demonstrate how wikis have been studied within broader debates on organisational learning, social media, and digital collaboration.

High citation counts suggest that these early studies established a strong conceptual and methodological foundation for the field [44, 45]. Even though more recent publications attract fewer citations, the earlier works remain highly influential, indicating that research on wikis in business reached its peak impact during the late 2000s and early 2010s. This trend confirms the role of wikis as a transitional technology – important for shaping debates on open innovation and digital transformation, but later overshadowed by broader platforms and social media studies [46, 47].

Overall, the citation analysis shows that research on wikis in business reached its greatest academic impact between 2006 and 2014, when the most influential studies were published. Although many later papers remain uncited, the highly cited works from this period established the core knowledge base of the field and continue to shape discussions on collaboration, knowledge management, and digital innovation.

Table 7. Top 20 most cited documents on wikis in business (2006-2015).

Document	Authors	Year	number of citations
What is different about social media networks? A framework and research agenda	Kane, G.C.; Alavi, M.; Labianca, G.; Borgatti, S.P. [43]	2014	786
WEB 2.0 implications on knowledge management	Levy, M. [23]	2009	304
An Empirical Test of the Theory of Gamified Learning: The Effect of Leaderboards on Time-on-Task and Academic Performance	Landers, R.N.; Landers, A.K. [48]	2014	298
Enabling customer-centricity using wikis and the wiki Way	Wagner, C.; Majchrzak, A. [18]	2006	278
The impact of shaping on knowledge reuse for organizational improvement with Wikis	Majchrzak, A.; Wagner, C.; Yates, D. [44]	2013	203
The shoemaker's children: Using wikis for information systems teaching, research, and publication	Kane, G.C.; Fichman, R.G. [42]	2009	202
Wikis as a knowledge management tool	Grace, T.P.L. [3]	2009	165
Web 2.0 and Business: A pointer to the intranets of the future?	Tredinnick, L. [46]	2006	164
Wiki Art Gallery, Inc.: A case for critical thinking	Phillips, F.; Mackintosh, B. [49]	2011	148
Breaking the knowledge acquisition bottleneck through conversational knowledge management	Wagner, C. [50]	2006	142
Network characteristics and the value of collaborative user-generated content	Ransbotham, S.; Kane, G.C.; Lurie, N.H. [45]	2012	140
Emergent life cycle: The tension between knowledge change and knowledge retention in open online coproduction communities	Kane, G.C.; Johnson, J.; Majchrzak, A. [47]	2014	121
Corporate wikis: The effects of owners' motivation and behavior on group members' engagement	Arazy, O.; Gellatly, I. [51]	2012	107
Does collaboration among participants lead to better ideas in IT-based idea competitions? An empirical investigation	Blohm, I.; Bretschneider, U.; Marco, J.L.; Krcmar, H. [52]	2011	100
Handbook of natural language processing, second edition	Indurkhya, N.; Damerau, F.J. [53]	2010	83
Vigilant interaction in knowledge collaboration: Challenges of online user participation under ambivalence	Jarvenpaa, S.L.; Majchrzak, A. [54]	2010	81
Faceted Wikipedia search	Hahn, R.; Bizer, C.; Sahnwaldt, C.; Herta, C.; Robinson, S.; Bürgle, M.; Düwiger, H.; Scheel, U. [55]	2010	78
Improving the quality of collaboration requirements for information management through social network analysis	Pereira, C.; Soares, Antonio [56]	2007	75
Using the community of inquiry framework to introduce wiki environments in blended-learning pedagogies: Evidence from a business capstone course	Daspit, J.J.; D'Souza, D.E. [57]	2012	73
Harnessing the power of volunteers, the internet, and Google Earth to collect and validate global spatial information using Geo-Wiki	See, L.; Fritz, S.; Perger, C.; Schill, C.; McCallum, I.; Schepaschenko, D.; Duerauer, M.; Sturn, T.; Karner, M.; Kraxner, F. [58]	2015	69

VOSVIEWER ANALYSIS

To identify the main themes within the field, a co-occurrence analysis of keywords was performed using VOSViewer. Only keywords that appeared in at least three documents were included in the analysis, which resulted in a network of 140 items grouped into 8 clusters, connected through 1500 links with a total link strength of 2 192.

The density map shows the concentration of frequently used keywords, Figure 3. The terms "wiki", "knowledge management", "web 2.0", and "collaboration" appear at the core, surrounded by related concepts such as information systems, e-learning, and innovation. This aspect of analysis implies that the central focus of research on wikis in business has been on their role in knowledge management and collaboration. At the same time, education and digital innovation appear as complementary themes.

Figure 3. Density visualisation of keyword co-occurrence in the wiki in business research.

The network visualisation groups keywords into thematic clusters, each represented by a different colour, Figure 4. Key clusters include knowledge management and collaboration, education and e-learning, innovation and information management, and social networking and web technologies. The structure suggests that research on wikis in business has been highly interdisciplinary, linking organisational studies with computer science and education. The central position of wiki and knowledge management shows their importance in bridging concepts across clusters.

The overlay map highlights the temporal evolution of research themes. Earlier studies (shown in darker blue) focused on Web 2.0, information systems, and knowledge management. At the same time, more recent topics (yellow-green) include learning systems, deep learning, natural language processing, and knowledge graphs, Figure 5. The presented shift suggests that research on wikis in business has gradually integrated into broader discussions of digital transformation and emerging technologies, with wikis serving as a foundational platform for studying collaborative systems.

Figure 4. Network visualisation of keyword clusters in a wiki in business research.

Figure 5. Overlay visualisation of keyword co-occurence by average publication year.

The VOSViewer analysis yielded eight clusters that collectively represent the primary research directions on wikis in business, Table 8. The first group of studies (Cluster 1), which can be described as focusing on digital platforms and online communities, includes keywords such as information systems, social networking (online), innovation, and Wikipedia. With most publications appearing between 2012 and 2015, this cluster shows how wikis were studied within the broader Web 2.0 ecosystem. Over time, however, interest shifted toward more dominant social media platforms, leaving wikis less visible.

A second stream of keywords captured by Cluster 2 relates to education and e-learning, where keywords such as students, teaching, higher education, and e-learning highlight the role of wikis as collaborative learning tools. Most of this research was published between 2011 and 2015, reflecting the early phase of digital pedagogy. Today, the attention of researchers has moved to learning analytics, MOOCs, and AI-driven educational platforms, while wikis remain more peripheral.

The third cluster (Cluster 3) is best described as collaboration and open innovation, which emphasizes keywords such as collaboration, knowledge sharing, open innovation, and user-generated content. This line of work, most active between 2010 and 2014, explored wikis as mechanisms for collective intelligence and innovation. These ideas remain relevant, but are now more often connected to enterprise collaboration tools and social networks rather than wikis themselves.

A central body of research is grouped around knowledge management, which is also the largest cluster in terms of the number of keywords (Cluster 4). With terms such as knowledge management, knowledge acquisition, knowledge transfer, and organisational knowledge, and with an average publication year around 2011-2012, this cluster reflects the dominant view of wikis as instruments for capturing and organising business knowledge. Although this theme established the academic foundation of the field, wikis have since been replaced in practice by integrated knowledge platforms and social intranets.

More recent work captured by Cluster 5 points toward emerging technologies and AI links, where terms such as artificial intelligence, deep learning, language models, and knowledge graphs appear. These studies, published primarily between 2011 and 2013, aimed to enhance wikis by utilizing AI. While wikis are rarely the primary focus, there is a possibility that AI could revive their relevance as structured spaces for collaborative knowledge creation.

The cluster on semantics and information retrieval covers terms such as the semantic web, ontology, knowledge representation, and search engines (Cluster 6). Active mainly between 2011 and 2013, this line of research aimed to enhance wikis through semantic technologies. Although interest has declined, the ideas have carried over into newer fields such as knowledge graphs and AI-driven retrieval systems.

Another group of studies (Cluster 7), classified under business processes and management, highlights terms like business process, enterprise resource management, groupware, and social software. Published mainly between 2011 and 2012, this research explored the role of wikis in organisational processes and enterprise systems. In later years, these functions became integrated into broader digital workplace solutions, thereby reducing the visibility of wikis.

Finally, a cluster centred on social media and Web 2.0 connects wikis with blogs, student engagement, and social media (Cluster 8). With an average publication year around 2011-2014, this cluster illustrates how wikis were part of the broader participatory turn in the early 2010s. However, as social media platforms expanded rapidly, they pushed wikis into the background.

Taken together, the cluster analysis shows that research on wikis in business reached its peak during the Web 2.0 era, when they were widely seen as tools for collaboration, knowledge

management, and education. In the years that followed, their relevance declined as other platforms took the lead. Still, with the rapid growth of generative AI and knowledge graphs, there may be new opportunities for wikis to re-emerge as structured environments for human-AI collaboration.

Table 8 also provides insights into the strength of connections between clusters. The cluster focused on knowledge management stands out with the highest number of links and the strongest total link strength. This is not surprising, as knowledge management has long been a central theme in business research, providing a natural bridge to related areas such as collaboration, education, and information systems. In contrast, clusters dealing with more recent topics, such as emerging technologies and AI, show fewer links, which reflects their relatively new position within the field. The distribution of links suggests that while different clusters capture specific research directions, most of them remain connected through the overarching role of knowledge management, confirming its function as the conceptual hub of wiki-related business research.

Table 8. Keyword clusters in a wiki in business research (minimum three occurrences).

Label	Cluster	Links	Total link strength	Occurrences	Avg. pub. year
case-studies	1	18	21	4	2017.00
commerce	1	22	25	5	2012.60
competition	1	29	34	6	2015.67
crowdsourcing	1	17	20	6	2016.17
crowdsourcing platforms	1	6	8	3	2018.33
data mining	1	19	22	7	2014.86
decision making	1	13	13	4	2013.50
economics	1	7	9	3	2010.33
http	1	9	11	3	2019.00
hypertext systems	1	11	14	4	2016.25
information management	1	44	65	13	2012.77
information systems	1	50	71	15	2012.07
innovation	1	26	30	9	2014.00
investments	1	19	21	4	2012.50
on-line communities	1	19	24	4	2017.00
online systems	1	23	34	6	2014.33
open data	1	16	20	5	2017.20
productivity	1	21	23	4	2018.00
recommender systems	1	15	15	4	2012.25
semantic wiki	1	10	14	4	2012.75
social networking (online)	1	49	74	14	2014.86
surveys	1	41	49	10	2014.30
trust	1	8	8	3	2014.00
Wikipedia	1	33	62	20	2013.70
Wikipedia articles	1	8	11	4	2015.00
blended learning	2	12	14	3	2015.67
collaborative learning	2	36	65	13	2013.62
collaborative work	2	10	10	3	2013.00
computer-aided instruction	2	27	38	5	2012.20
curricula	2	10	15	3	2013.00
digital storage	2	11	11	3	2016.33

Table 8. Keyword clusters in a wiki in business research (minimum three occurrences). Continuation from p.590, continued on pp.592-593.

Label	Cluster	Links	Total link strength	Occurrences	Avg. pub. year
e-learning	2	56	86	16	2012.75
education	2	36	48	9	2012.89
education computing	2	14	17	3	2010.33
government data processing	2	30	49	9	2009.89
group dynamics	2	13	13	3	2012.00
higher education	2	28	42	11	2014.73
learning algorithms	2	7	7	3	2013.00
participation	2	20	23	4	2010.50
personnel training	2	18	20	3	2015.67
professional aspects	2	17	17	3	2012.00
students	2	53	98	15	2011.27
teaching	2	34	61	11	2011.64
tools	2	12	15	3	2009.33
user interfaces	2	27	35	5	2010.40
websites	2	56	97	19	2011.89
blog	3	26	44	9	2010.56
collaboration	3	51	87	16	2011.94
communication	3	10	10	4	2007.50
information technology	3	22	26	6	2010.67
internet	3	40	62	12	2010.25
knowledge management systems	3	3	5	3	2008.00
knowledge sharing	3	18	31	10	2010.60
management information systems	3	18	20	3	2011.00
management science	3	7	7	3	2010.33
motivation	3	18	22	5	2014.20
open innovation	3	12	12	3	2012.67
open-source	3	19	21	4	2012.25
project management	3	12	14	4	2015.25
social network analysis	3	11	12	3	2011.00
software design	3	12	14	3	2012.33
software developer	3	10	11	3	2013.67
software engineering	3	39	50	9	2012.00
user experience	3	8	8	3	2013.33
user-generated content	3	7	8	3	2013.00
virtual reality	3	17	18	3	2014.33
wiki	3	98	279	81	2012.68
action research	4	9	10	3	2010.33
activity theory	4	8	11	3	2011.33
Australia	4	12	12	3	2010.67
emergency preparedness	4	10	12	3	2006.33
human resource management	4	21	26	5	2010.80
information services	4	13	13	3	2011.33
information use	4	36	48	8	2011.00
knowledge acquisition	4	40	63	12	2010.58

Table 8. Keyword clusters in a wiki in business research (minimum three occurrences). Continuation from pp.590-591, continued on on p.593.

Label	Cluster	Links	Total link strength	Occurrences	Avg. pub. year
knowledge based systems	4	34	48	7	2011.43
knowledge management	4	104	269	66	2011.74
knowledge management system	4	19	30	6	2009.67
knowledge organization	4	12	18	3	2008.33
knowledge transfer	4	24	33	6	2011.50
knowledge-sharing	4	19	29	6	2012.00
manufacturing companies	4	12	15	4	2012.25
organizational knowledge	4	15	22	5	2011.80
research	4	23	28	5	2010.80
support knowledge	4	15	19	3	2008.67
wiki technologies	4	10	13	3	2011.00
wiki technology	4	3	5	3	2008.67
artificial intelligence	5	23	25	4	2012.50
computer-supported cooperative work	5	16	18	3	2006.33
deep learning	5	6	6	4	2023.75
economic and social effects	5	9	9	3	2018.67
industrial management	5	27	32	4	2014.50
information retrieval	5	22	30	7	2011.71
knowledge graph	5	9	13	4	2024.00
knowledge graphs	5	9	13	4	2024.00
knowledge resource	5	11	13	4	2014.75
language model	5	7	7	4	2022.50
learn+	5	25	26	6	2016.33
learning systems	5	25	29	8	2020.75
natural language processing systems	5	12	14	5	2020.00
open source	5	9	10	3	2011.67
open source software	5	20	22	3	2012.00
open systems	5	28	32	5	2012.40
resource allocation	5	17	20	3	2008.33
zero-shot learning	5	5	7	3	2024.33
collective intelligence	6	11	12	4	2015.25
collective intelligences	6	16	17	3	2011.67
electronic commerce	6	39	62	12	2011.25
knowledge creation	6	23	26	6	2011.50
knowledge representation	6	28	37	5	2012.80
learning	6	11	16	6	2014.50
mapping	6	14	14	4	2015.00
model	6	11	11	3	2012.67
ontology	6	33	43	9	2011.44
search engines	6	21	29	5	2012.40
semantic web	6	24	35	6	2011.17
semantics	6	39	62	13	2012.31

Table 8. Keyword clusters in a wiki in business research (minimum three occurrences). Continuation from pp.590-592.

Label	Cluster	Links	Total link strength	Occurrences	Avg. pub. year
training	6	12	12	3	2014.00
wiki platform	6	13	13	3	2013.67
World Wide Web	6	46	68	15	2011.00
business process	7	10	13	3	2010.67
business process management	7	8	8	3	2014.67
business process modeling	7	10	13	3	2011.33
computer software	7	16	19	3	2009.67
distributed computer systems	7	16	17	4	2011.00
enterprise resource management	7	17	22	4	2009.75
groupware	7	12	13	4	2012.50
management	7	21	31	6	2011.00
social networks	7	20	23	4	2011.75
social software	7	40	65	9	2010.89
web services	7	46	80	14	2010.71
blogs	8	12	15	5	2010.40
case study	8	12	17	5	2018.40
SME	8	5	8	3	2014.00
social media	8	34	52	12	2012.92
societies and institutions	8	26	30	5	2014.20
student engagement	8	11	11	3	2014.67
technology	8	20	26	5	2011.60
Web 2.0	8	56	134	31	2011.61
wikis	8	30	40	16	2012.06

Figure 6 presents the topic analysis of keywords that occurred in papers from 2020 to 2025, shedding light on the sources of decline in wiki research. The 2020-2025 keyword co-occurrence network reveals that wikis are no longer central to business research, but instead appear in connection with artificial intelligence themes, such as deep learning, language models, knowledge graphs, and natural language processing.

This indicates a clear shift: while wikis were studied as tools for collaboration and knowledge management in organisations in earlier years [3, 44], they are now more often referenced in the context of training datasets and generative AI applications. Recent work supports this trend: the Wiki Neutrality Corpus has been used to study bias in digital content [9]. At the same time, wiki-based resources have been applied in reinforcement learning frameworks and knowledge graph research [37, 38]. The marginal position of "wiki" in the network suggests that wikis have lost their relevance as a standalone business tool. However, their continued use in AI research highlights an important transformation – from being a collaborative platform for organisations to becoming a knowledge resource for machine learning and generative AI systems. This echoes recent findings on the role of Wikidata and other structured wiki environments in supporting semantic technologies and community-driven knowledge infrastructures [10].

The VOSViewer analysis shows that research on wikis in business has been organised around clusters such as knowledge management, collaboration, education, and Web 2.0, with knowledge management emerging as the central hub. While the intensity of research has declined as social media and integrated digital platforms have become dominant, wikis may regain relevance in the context of generative AI and knowledge graphs.
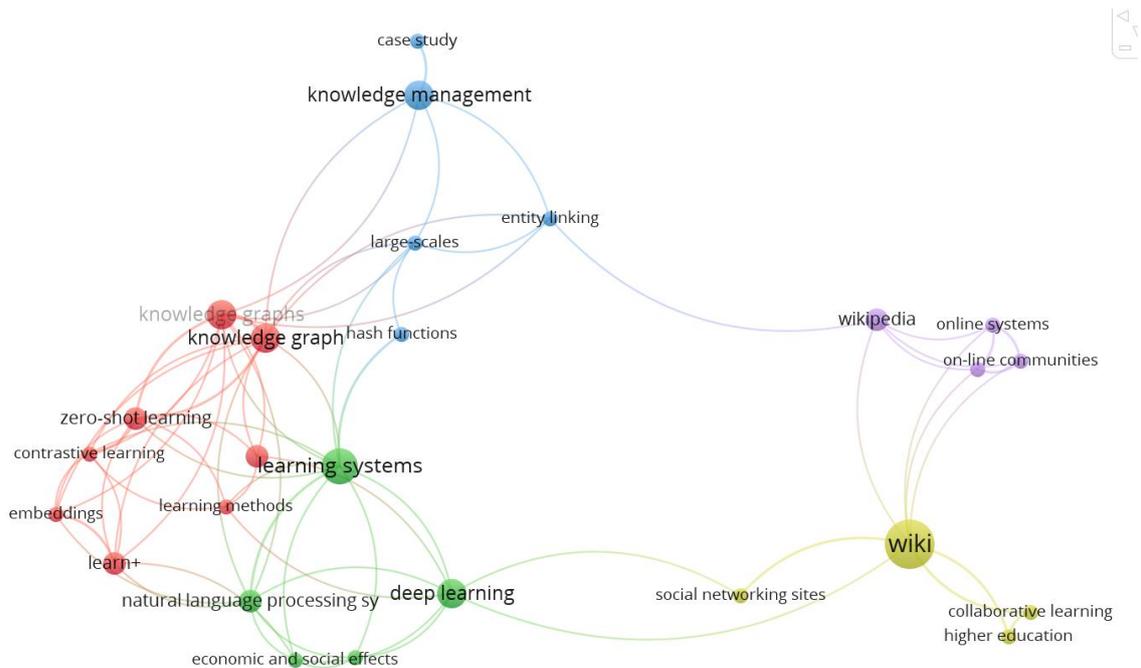
Figure 6. Keyword co-occurrence network for wiki research in business (2020-2025).

CONCLUSIONS

The analysis shows that research on wikis in business reached its peak during the Web 2.0 era, when they were widely recognised as tools for knowledge management, collaboration, and education. Since then, the number of publications has steadily declined, reflecting the fact that wikis have mainly been replaced in practice by social media platforms and integrated digital collaboration tools. For organisations, this trend suggests that while traditional wiki applications may no longer be at the centre of digital collaboration, the underlying principles of collective knowledge creation remain highly relevant. With the rise of artificial intelligence and knowledge graphs, wikis – or wiki-like structures – may once again become valuable, particularly as complements to AI systems that require transparent, structured, and explainable sources of knowledge. Companies aiming to strengthen their knowledge management strategies could benefit from revisiting wiki-based approaches, but in combination with modern AI-driven solutions.

In recent years, the role of wikis in business research has significantly diminished. While they were once studied as tools for collaboration, knowledge management, and organisational learning, the 2020-2025 analysis shows that their relevance has shifted toward the domain of generative AI. Wikis are increasingly referenced not as platforms for business practice but as sources of structured information for training AI models, often linked to knowledge graphs, deep learning, and natural language processing. For organisations, this shift means that wikis have largely lost their role as everyday business tools for knowledge sharing, being replaced by integrated collaboration platforms and social media-based solutions. However, their indirect influence persists, and content created in wikis now underpins many AI systems that companies use. This suggests that while wikis may no longer provide a competitive advantage in direct business use, they remain part of the knowledge infrastructure powering digital transformation and may regain visibility if future AI systems require transparent, community-driven sources of knowledge.

This study is not without limitations. The analysis was based exclusively on academic publications indexed in the Scopus database, and grey literature such as white papers, industry reports, or practitioner case studies was not included. These sources may offer further insights

into the practical application of wikis in business. Future research could therefore extend the scope of analysis to capture perspectives beyond peer-reviewed academic work.

In summary, while the field of wiki research in business has lost momentum as a standalone topic, it has established a solid conceptual foundation. This foundation remains relevant for understanding how organisations can integrate collaborative knowledge structures into the evolving landscape of digital platforms and AI technologies.

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