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Project Management Information Systems: a Systematic Review

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Abstract

This paper presents a systematic scientific literature review of software in Project Management over the past five years. Through keyword-based research and subsequent selection, 108 papers were identified. Initially, these papers were categorized based on their research methodology and objectives. Then, trends related to the terminology, affiliation country, and journals and conferences where they were published were analyzed. The first result is related to the nomenclature: most sources refer to this kind of software as Project Management Information System (PMIS), followed by Project Management Software (PMS), Project Management System, and Project Management Tools. As for the contents, those include 43 case studies and/or technical reports on PMIS development, 28 case studies about implementing PMIS in business contexts, 27 frameworks and models for developing or implementing a PMIS, 13 models for comparing PMIS, and 12 surveys on PMIS adoption (some sources fall into multiple categories). No specific trending journals or conferences have emerged. It is discussed that the lack of standardized terminology has hindered the development of coherent literature strands, unlike in other business software domains such as Enterprise Resource Planning (ERP). This fragmentation could act as a barrier to competition among applications, delaying the development of quality software and necessitating customized solutions due to the scarcity and difficulty of obtaining commercial options.

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1. Introduction

Project Management is *"the application of knowledge, skills, tools, and techniques to project activities to meet project requirements"* [1]. This process includes the use of various project management tools: qualitative tools, which support interpersonal and organizational processes; quantitative tools, which facilitate the computational aspects of Project Management (PM); and computer tools [2]. The latter are called Project Management Information Systems (PMIS) and are useful for several purposes.

For instance, they can support projects, programs, and portfolios management [3], [4] by optimizing resource allocation [5], facilitating monitoring and control, and managing risks [6]. Also, they can provide a platform for reporting and sharing key information to decision-makers [6] and facilitate the integration and automation necessary to implement Industry 4.0 in PM [7]. Overall, PMIS increases the efficiency and digital transformation of project-oriented companies, while improving planning, scheduling, collaboration, and effective task delegation [8], [9]. The application of PMIS to construction projects has shown that they contribute to keeping these projects within the established timeframes and budgets [10]. Ultimately, PMIS can positively influence the reputation of organizations [11]. Therefore, they are identified as one of the key technologies with the highest growth potential [12]. PMIS literature also includes comparative studies. Retnowardhani and Suroso compare five applications of PMIS across different geographical areas, confirming the afore-mentioned benefits, while adding that PMIS implementation requires support from top management and needs to be done systematically [13]; Haloul et al. propose a literature review classifying the main applications of PMIS to construction projects [14].

However, to the best of the authors' knowledge, no systematic review has broadly addressed this subject. The fields are characterized by inconsistencies and a lack of unified terminology among sources, from both scientific literature and practitioners. This paper aims to bridge this gap by systematically analyzing and cataloging the literature on PMIS, enhancing cohesion and enriching the collective scientific understanding. The research questions (RQ) addressed in this paper are:

[RQ1] What research objectives and methodologies have been adopted in PMIS research?

[RQ2] What terminology is most commonly used to define software for PM?

[RQ3] Which are the main journals and conferences for this topic?

The structure of this paper is as follows: First, the methodology section outlines the review steps. Next, the results section displays the key findings from the corpus. Following that, the discussion section explores the contribution of this paper in both academic and practical contexts. Finally, conclusions are drawn.

2. Methodology

This research was conducted on the Scopus portal, which covers most peer-reviewed academic journals, especially in the fields of engineering [15], [16]. Considering that the goal is to find software applications in PM, the search query used was *"Project Management" and ("Software" OR "Information System") and year >= 2019*. This resulted in 3257 articles. As mentioned in the introduction, the majority of these articles relate to agile methodologies, that is, project management applied in IT contexts. Therefore, filtering based on abstracts was necessary, leading to the selection of only 108 articles. The inclusion criterion was: to present a study related to software supporting PM. Operational research papers that introduced models applicable in multiple contexts, including PMIS, were excluded unless it was explicitly clarified that their purpose was to be applied to PMIS.

Categories of analysis were derived inductively, focusing on the goals of the papers and the methodologies employed.



Fig. 1. Research Methodology

3. Analysis of results

3.1. Papers Categorization / Methodological approaches to PMIS

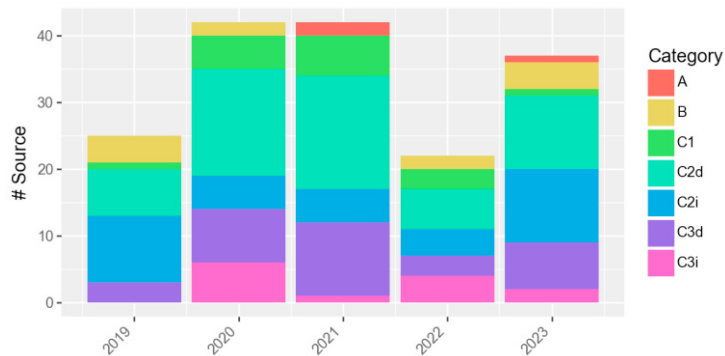
Analyzing the selected papers, three main categories based on the research methodology have been identified. Category A includes **conceptual papers** that place Project Management Information Systems (PMIS) within the broader discipline of Project Management. Category B consists of **survey-based studies** discussing the role, effectiveness, and impact of PMIS across various industries and countries. Category C includes **case studies** and frameworks.

Category C has been further subdivided into five subcategories based on the paper's objectives. Category C1 includes frameworks and case studies for selecting a PMIS suitable for specific contexts; category C2d includes case studies and technical reports on the development of new PMIS or PMIS modules; category C2i includes case studies and technical reports on the implementation of existing PMIS in real-world contexts; category C3d includes theoretical frameworks to develop PMIS, and category C3i includes theoretical frameworks to implement PMIS.

Category *	#	Sources
A Conceptual	3	[17], [18], [19]
B Survey	12	[20], [21], [22], [23], [24], [25], [26], [27], [28], [29], [30], [31]
C1 Frameworks and case study for PMIS selection	13	[9], [32], [33], [34], [35], [36], [37], [38], [39], [40], [41], [42], [43]
C2d Case study and technical reports on PMIS development	43	[5], [8], [43], [44], [45], [46], [47], [48], [49], [50], [51], [52], [53], [54], [55], [56], [57], [58], [59], [60], [61], [62], [63], [64], [65], [66], [67], [68], [69], [70], [71], [72], [73], [74], [75], [76], [77], [78], [79], [80], [81], [82], [83]
C2i Case study and technical reports on PMIS implementation	28	[5], [10], [44], [59], [76], [83], [84], [85], [86], [87], [88], [89], [90], [91], [92], [93], [94], [95], [96], [97], [98], [99], [100], [101], [102], [103], [104], [105]
C3d Development Frameworks	19	[8], [9], [35], [46], [65], [70], [72], [75], [78], [82], [106], [107], [108], [109], [110], [111], [112], [113], [114]
C3i Implementation Frameworks	8	[91], [96], [109], [110], [111], [115], [116], [117]
Other	3	[6], [118], [119]

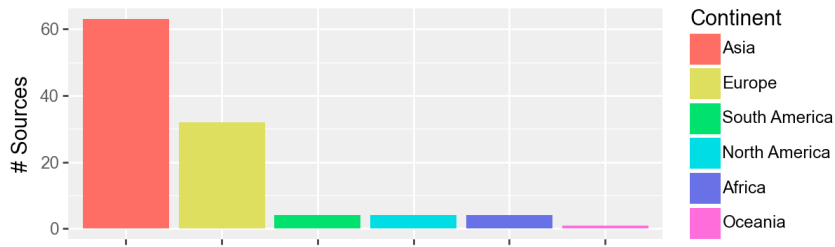
* Some sources are in more than one category.

3.2. Publications and Categories over Time



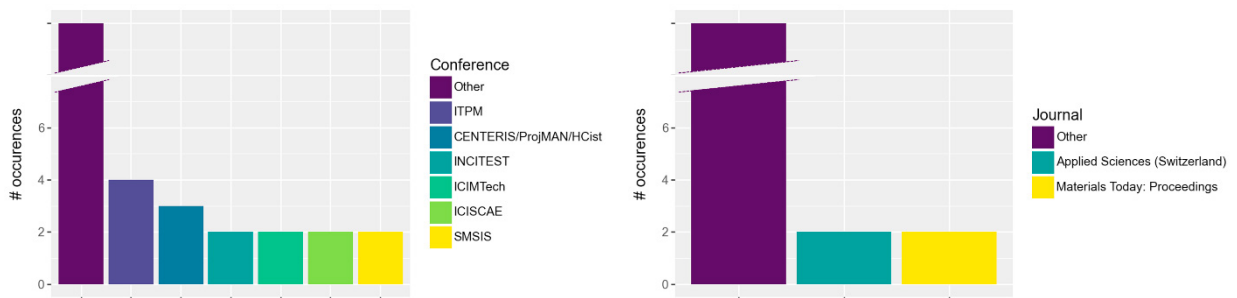
The dominant category is C, which includes case studies and technical reports, with 111 occurrences. This is followed by category B, which consists of surveys, with 12 occurrences; and finally, category A, conceptual papers, with 3 occurrences. The number of publications varies over the years, from a minimum of 22 to a maximum of 45.

3.3. Countries



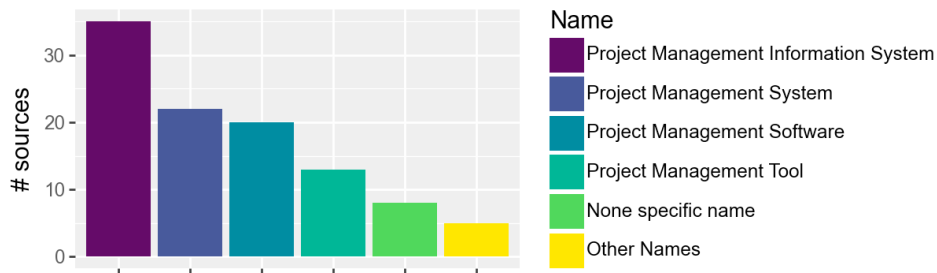
The publications originate from 44 different countries, with the majority in Asia and Europe.

3.4. Trending Journal and Conferences



There are 73 conference papers and 35 journal papers (we have adopted the subdivision of the portal used, Scopus, which also indexes some collections of proceedings as journal papers). Of the 73 conference papers, 4 are from the International Workshop on IT Project Management (ITPM), 3 from CENTERIS/ProjMAN - International Conference on ENTERprise Information Systems and Project Management, 2 from INCITEST - International Conference on Informatics, Engineering, Science, and Technology, 2 from ICIMTech - International Conference on Information Management and Technology, 2 from ICISCAE - International Conference on Information Systems and Computer Aided Education, 2 from SMSIS - International Conference on Strategic Management and its Support by Information Systems, and 58 from various other conferences with one paper each. For the 35 journal papers, “Applied Science” (Switzerland) and “Materials Today – Proceedings” each have two papers, while the other 31 are published in various journals. Hence, no particular conferences or journals emerge.

3.5. Nomenclature



The term “Project Management Information System” is the most commonly used to describe software for managing projects, used by 35 sources. It is followed by “Project Management System”, used by 22 sources, “Project Management Software”, used by 20 sources, and “Project Management Tool”, used by 13 sources. Other terms such as “Project Management Application System”, “Project Portfolio Management Information Systems”, and “Project

Data Management Information System” are used by fewer sources. Additionally, 8 papers do not specify any particular name for such software.

4. Discussion

The results confirm the scientific interest in the subject, showing a fluctuating yet consistent trend over each year analyzed, with a global interest in the field. The main finding is a significant fragmentation within the area. There is a lack of common terminology, and there are no journals or conferences with dedicated streams for PMIS. This defect becomes even more apparent when compared to the literature on other common business software like Enterprise Resource Planning (ERP) or Customer Relationship Management (CRM) systems. For instance, searching for "ERP" or "CRM" on the same database yields thousands of articles and hundreds of reviews, a severe contrast to the situation described here.

The fragmentation extends to practitioners: websites for software like SAP, Salesforce, and Odoo identify themselves as ERP or CRM from their homepages, while websites for software like Microsoft Project or Project Libre do not adopt any specific nomenclature. We believe the consequences of this fragmentation are multiple.

From a practical perspective, we consider this fragmentation a barrier to competition among different applications and solutions, ultimately delaying the development of quality software. As authors, we have empirical evidence of this shortage: we have been involved in various applied research projects aimed at monitoring and controlling large projects and have often recommended the introduction of customized systems, even in relatively standard situations, given the scarcity of commercial solutions and the difficulty in obtaining them.

From a scientific standpoint, any comparative analysis becomes difficult and expensive in terms of efforts for source selection. This leads to the publication of similar studies that are unaware of each other's existence, slowing down the process of incremental research. Furthermore, without clear boundaries for PMIS, it is challenging for the literature to produce algorithms and frameworks that can be implemented in commonly used commercial platforms.

With our work, we hope to have contributed to highlighting and partially addressing this gap. A clear future development in research, we believe, is to continue the analysis and reorganization of knowledge. Studies that clearly qualify the functionalities of PMIS are lacking, as well as the validity and generalizability of previously proposed models and frameworks. Future research should also categorize sources basing on new orthogonal variables, such as “public or private” or “large enterprise or SME”.

5. Conclusions and limitations

In this paper, we present a systematic review of research related to Project Management Information Systems (PMIS). By identifying and categorizing 108 research works on the topic published in the last five years we respond to the first [RQ1] question: *“What research objectives and methodologies have been adopted in PMIS research?”*.

As for [RQ2], *“What terminology is most commonly used to define software for project management?”*, we can state that “Project Management Information System (PMIS)” is the most commonly used term, followed by “Project Management System”, “Project Management Software (PMS)”, and “Project Management Tool”.

Regarding [RQ3], *“Which are the main journals and conferences for this topic?”*, we find out that there is no dominant or emerging trending journal or magazine for the topic.

This study is constrained to an analysis of relevant literature from the last five years, reflecting the limited range of existing research. Future research could explore how terminology and the design of PMIS impact and are applied across different industrial sectors.

References

- [1] Project Management Institute. (2021). A guide to the Project Management Body of Knowledge (PMBOK guide) (7th ed.).
- [2] Badiru, A. B. (2019) “Project Management: Systems, Principles, and Applications”, Second Edition, CRC Press.
- [3] Kock, A., Schulz, B., Kopmann, J., Gemünden, H. G. (2020) “Project portfolio management information systems' positive influence on performance – the importance of process maturity”, *International Journal of Project Management* **38** (4): 229–241.

- [4] Teslia, I. et al. (2022) “Development of the concept of construction of the project management information standard on the basis of the Primadoc information management system”, *Eastern-European Journal of Enterprise Technologies* 1 (3–115): 53–65.
- [5] Pratama, I. N., Dachyar, M., Pratama, N. R. (2023) “Optimization of Resource Allocation and Task Allocation with Project Management Information Systems in Information Technology Companies”, *TEM Journal* 12 (3): 1814–1824.
- [6] Choi, J., Ha, M. (2022) “Validation of project management information systems for industrial construction projects”, *Journal of Asian Architecture and Building Engineering* 21 (5): 2046–2057.
- [7] Jally, V., Kulkarni, V. N., Gaitonde, V. N., Satis, G. J., Kotturshettar, B. B. (2021) “A review on project management transformation using industry 4.0”, *AIP Conference Proceedings* 30 2358 (1): 100014.
- [8] Luong, H. H., Huynh, T. K. N., Dao, A. T., Nguyen, H. T. (2021) “An Approach for Project Management System Based on Blockchain”, *Communications in Computer and Information Science* 1500 CCIS: 310–326.
- [9] Teslia, I., Khlevna, I., Yehorchenkov, O., Zaspá, H., Khlevnyi, A. (2021) “The concept of integrated information technology of enterprises project activities management implementation”, *CEUR Workshop Proceedings, 2021*. 143–152.
- [10] Churacharit, C., Chutima, P. (2022) “An Integration of Project Management Body of Knowledge and Project Management Information System to Improve On-time Deliverable of Liquefied Natural Gas Station Construction Projects”, *Engineering Journal* 26 (1): 55–73.
- [11] Irfan, M., Hassan, M., Hassan, N., Habib, M., Khan, S., Nasruddin, A. M. (2020) “Project Management Maturity and Organizational Reputation: A Case Study of Public Sector Organizations”, *IEEE Access* 8: 73828–73842.
- [12] Assaad, R. H., El-Adaway, I. H., Hastak, M., Needy, K. L. S. (2021) “Smart and Emerging Technologies: Shaping the Future of the Industry and Offsite Construction”, *Computing in Civil Engineering 2021*: 787–794.
- [13] Retnowardhani, A., Suroso, J. S. (2019) “Project Management Information Systems (PMIS) for Project Management Effectiveness: Comparison of Case Studies”, *Proceedings - 2019 International Conference on Computer Science, Information Technology, and Electrical Engineering, ICOMITEE 2019*: 160–164.
- [14] Haloul, M. I. K., Mohd Ariffin, M. K. A., Supeni, E. E., Ahmad, S. A. B., Bilema, M., Ahmad, M. (2024) “A Systematic Review of the Project Management Information Systems in Different Types of Construction Projects”, *UCJC Business and Society Review* 21 (80).
- [15] Pirola, F., Boucher, X., Wiesner, S., Pezzotta, G. (2020) “Digital technologies in product-service systems: a literature review and a research agenda”, *Computers in Industry*, 123: 103301.
- [16] Chadegani, A. A. et al. (2013) “A Comparison between Two Main Academic Literature Collections: Web of Science and Scopus Databases”, *arXiv preprint*, 1305.0377.
- [17] Lukianov, D., Mazhei, K., Gogunskii, V., Kolesnikov, O. (2021) “Transformation Digital Competence Area in the Competence Model of Project Managers”, *SIST 2021 - 2021 IEEE International Conference on Smart Information Systems and Technologies*: 1–6.
- [18] Melecký, L., Staničková, M. (2021) “Project Management Skills: Hard Versus Soft. Is It Enough? Technical Tools That Really Work”, *Proceedings of the 14th International Conference on Strategic Management and its Support by Information Systems 2021*: 198–206.
- [19] Al-Nakeeb, A., El Khatib, M., Abu Zitar, R., Alhosani, A., Alhosani, I. (2023) “Project Manager’s Role in Manage Project Knowledge Process: An Approach to Enhance Project Quality”, *International Journal of Computers and their Applications* 30 (4): 425–439.
- [20] Kock, A., Schulz, B., Kopmann, J., Gemünden, H. G. (2020) “Project portfolio management information systems’ positive influence on performance – the importance of process maturity”, *International Journal of Project Management* 38 (4): 229–241.
- [21] Alvanchi, A., Shiri, N., Alikhani, H. (2020) “In-depth investigation of project planning and control software package application in the construction industry of Iran”, *International Journal of Engineering, Transactions A: Basics* 33 (10): 1817–1825.
- [22] Głodziński, E., Szymborski, M. (2019) “Utilization of software supporting project management in middle and large project-based organizations: An empirical study in Poland”, *Procedia Computer Science* 164: 389–396.
- [23] Corrigan, M. J., van der Poll, J. A., Mtsweni, E. S. (2019) “The project management information system as enabler for ICT4D achievement at capability maturity level 2 and above”, *Communications in Computer and Information Science* 933: 295–310.
- [24] Purohit, A., Chopra, G., Dangwal, P. G. (2022) “Measuring the Effectiveness of the Project Management Information System (PMIS) on the Financial Wellness of Rural Households in the Hill Districts of Uttarakhand, India: An IS-FW Model”, *Sustainability (Switzerland)* 14 (21).
- [25] Nyandongo, K. M., Lubisi, J. (2019) “Assessing the use of project management information systems and its impact on project outcome”, *Proceedings of the International Conference on Industrial Engineering and Operations Management*.
- [26] AL-Zubaidi, E. D. A. (2019) “Project management information system effect decision making in the construction industry of Iraq”, *Periodicals of Engineering and Natural Sciences* 7 (4): 1924–1932.
- [27] Garyaeva, V., Garyaev, A., Parfenov, S. (2023) “Automation of the process of coordinating project work”, *E3S Web of Conferences* 389.
- [28] Stanimirovic, P., Borozan, T., Radojicic, M., Tomic, A. D. (2023) “Project Management Software Tools - One Step Closer to UN Sustainable Development Goals”, *3rd International Conference on Electrical, Computer, Communications and Mechatronics Engineering*.
- [29] Jun, T. K., Ramiah, S. (2023) “Preliminary study: Professional Collaboration Application with Project Management Tools”, *Proceedings - International Conference on Developments in eSystems Engineering, DeSE*.
- [30] Santy, Magdalena, Y. (2022) “Project Management SaaS Feature Framework for MSMEs in Indonesia”, *Proceedings of 2022 International Conference on Information Management and Technology, ICIMTech 2022*: 386–390.
- [40] Micale, R., La Fata, C. M., Lombardo, A., La Scalia, G. (2021) “Project management information systems (Pmiss): A statistical-based analysis for the evaluation of software packages features”, *Applied Sciences (Switzerland)* 11 (23).

- [41] Ahmad, T., Arif, F. (2021) “Open Source Project Management Software Evaluation: Application to an E-commerce Project”, *3rd International Conference on Communication Technologies, ComTech 2021*: 144–150.
- [42] Bošnjak, A., Majstorovic, V. (2020) “Practical application of contemporary project management software”, *Annals of DAAAM and Proceedings of the International DAAAM Symposium*: 851–859.
- [43] Weiss, C., Keckeis, J. (2020) “Procedural model for selecting enterprise systems based on project management software”, *Software Engineering (Workshops)*.
- [44] Mukhamadiev, R., Staroverova, N., Shustrova, M. (2020) “Specifics of Project Management System Development for Large Organizations”, *International Multi-Conference on Industrial Engineering and Modern Technologies, FarEastCon 2020*.
- [45] Lima, R., Tereso, A., Faria, J. (2019) “Project management under uncertainty: Resource flexibility visualization in the schedule”, *Procedia Computer Science* **164**: 381–388.
- [46] Teslia, I. et al. (2022) “Development of the concept of construction of the project management information standard on the basis of the Primadoc information management system”, *Eastern-European Journal of Enterprise Technologies* **1**: 53–65.
- [47] Yehorchenkova, N., Teslia, I., Yehorchenkov, O. (2020) “Method of project and operational processes integration in the activities of project-oriented enterprises based on functional 4P-environment”, *CEUR Workshop Proceedings* **2565**: 142–151.
- [48] Alam, S. (2019) “An Innovative Project Management System”, *Proceedings of 2019 International Conference on Information Management and Technology, ICIMTech 2019*: 180–185.
- [49] Aljebory, K. M., QaisIssam, M. (2019) “Developing AI Based Scheme for Project Planning by Expert Merging Revit and Primavera Software”, *16th International Multi-Conference on Systems, Signals and Devices, SSD 2019*: 404–412.
- [50] Naik, N., Jenkins, P. (2019) “A web based method for managing PRINCE2® projects using trello®”, *ISSE 2019 - 5th IEEE International Symposium on Systems Engineering, Proceedings*.
- [51] Fachrizal, M. R., Wibawa, J. C., Afifah, Z. (2020) “Web-Based Project Management Information System in Construction Projects”, *IOP Conference Series: Materials Science and Engineering*.
- [52] Mohammed, A., Al Busaedi, N., Mohamed, A. A., Saud, S. (2022) “Smart Project Management System (SPMS) - An Integrated and Predictive Solution for Proactively Managing Oil & Gas client Projects”, *Society of Petroleum Engineers - ADIPEC 2022*.
- [53] Ren, Y. et al. (2020) “Discussion and Research on informatization of Power Grid Infrastructure Project management”, *Journal of Physics: Conference Series*.
- [54] Salama, T., Salah, A., Moselhi, O. (2019) “Integrated scheduling of modular construction using mod-scheduler”, *Proceedings, Annual Conference - Canadian Society for Civil Engineering 2019*.
- [55] Goldstein, M., Eliezer, O. (2024) “A Software Package (in progress) that Implements the Hammock-EFL Methodology”, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* **14390** LNCS: 235–238.
- [56] Aziz, M., Ghuzdewan, T. (2023) “Evaluation of a construction management software: 'Progresi'”, *E3S Web of Conferences*.
- [57] Huang, X., Huang, J., Ao, Z., Cui, Y. (2023) “Research on application software architecture under the project management informatization of power grid enterprises”, *International Conference on Electronics and Devices, Computational Science, ICEDCS 2023*: 357–361.
- [58] Jimenez-Barros, M. A., Ramirez Rios, D. G., Ardila Hernandez, C. J., Castro Bolaño, L. J., Neira Rodado, D. (2020) “Design of a Decision Support System for Multiobjective Activity Planning and Programming Using Global Bacteria Optimization”, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* **12133** LNCS: 158–171.
- [59] Soleh, O., Rosdiana, Dewi, M. A., Ningsih, Y. F. (2020) “Utilization of Information System in Electrical Panel Project Management to Provide Various Facility in Project Implementation”, *Journal of Physics* **1641** (1): 012054.
- [60] Muttaqin, F., Akbar, F. A., Mandyartha, E. P., Prasetya, L. M. I. (2020) “Development project management information systems at Unicode Indonesia”, *Proceeding - 6th Information Technology International Seminar, ITIS 2020*: 69–74.
- [61] Silva, D., Gomes, A., Macieira, R., Silva, E., Soares, S. (2020) “Pah Pum: A project management tool based on TAKT PM”, *ACM International Conference Proceeding Series*: 332–337.
- [62] Pavličková, P., Brožová, H., Rydval, J., Havlíček, J., Šubrt, T. (2021) “New MS Project Add-in for Task Threatness Evaluation”, *Proceedings of the 14th International Conference on Strategic Management and its Support by Information Systems 2021*: 240–247.
- [63] Santoso, F., Widayani, Y. (2021) “EssenceProject: Software Project Planning Tools based on OMG's Essence”, *International Conference on Data and Software Engineering: Data and Software Engineering for Supporting Sustainable Development Goals, ICoDSE 2021*.
- [64] Martínez, P. Q., Puyén, R. C. (2021) “Design of a Project Monitoring and Control System based on the Earned Value Management Technique to Improve the Management of Institutional Projects in a Microfinance Entity in Trujillo, 2020”, *Proceedings of the LACCEI international Multi-conference for Engineering, Education and Technology*.
- [65] Zhao, P. (2021) “Engineering Management Information System Based on Adaptive Ant Colony Algorithm”, *Proceedings - 11th International Conference on Information Technology in Medicine and Education, ITME 2021*: 1–5.
- [66] Amarasekara, T. N. E., Isurindi, H. G. P., Navanajana, E. H. D. T. D., Gamage, O. M., Samarakoon, U., Kugathasan, A. (2021) “Project Zone: An Advanced Undergraduate Project Management System For Software Development”, *21st International Conference on Advances in ICT for Emerging Regions, ICTer 2021 - Proceedings*: 183–188.
- [67] Teslia, I., Klevanna, G. (2022) “Development of a Reflective Intelligent Project Planning System”, *CEUR Workshop Proceedings* **3295**.
- [68] Li, C., Zhang, S. Y., Na, J. S., Yue, L. (2022) “Design and Implementation of Project Management System Based on Vue3.0 Framework”, *2nd International Conference on Algorithms, High Performance Computing and Artificial Intelligence, AHPCAI 2022*: 347–353.

- [69] Gusnawan, R., Lubis, M. (2023) “Web-Based Village Bridge and Road Project Monitoring Information System”, *Lecture Notes in Networks and Systems* **578**.
- [70] Teslia, I. et al. (2023) “Development of the Concept of Intelligent Add-On over Project Planning Instruments”, *Lecture Notes on Data Engineering and Communications Technologies* **178**: 149–161.
- [71] Gao, Z. (2023) “Development and application of web information system in enterprise management under SSH framework”, *Journal of Information Systems Engineering and Management* **8** (2).
- [72] Chunyi, L. (2023) “Power Engineering Construction Management Information System Based on Data Mining Algorithm”, *Proceedings - 2023 International Conference on Networking, Informatics and Computing, ICNETIC 2023*: 40–43.
- [73] Dehao, G. (2020) “Analysis and improvement of construction project management system based on network information”, *Proceedings - 2020 12th International Conference on Measuring Technology and Mechatronics Automation, ICMTMA 2020*: 693–697.
- [74] Diao, Y., Zhang, Q. (2021) “Optimization of Management Mode of Small- and Medium-Sized Enterprises Based on Decision Tree Model”, *Journal of Mathematics* **2021**.
- [75] Fadillah, A. P., Fitriana, D. (2019) “Design of Project Data Management Information System”, *IOP Conference Series: Materials Science and Engineering*.
- [76] Ou, J., Yuan, J., Tian, J., Zhang, W., Cao, W., Bai, K. (2021) “Research on Early Warning System of Consulting Risk for Power Engineering Project”, *IOP Conference Series: Earth and Environmental Science*.
- [77] Piñero Ramírez, P. E., Pérez Pupo, I., Piñero Pérez, P. Y., Marquez Ruiz, Y., Fustiel Alvarez, Y. (2022) “A Software Ecosystem for Project Management in BIM Environments Assisted by Artificial Intelligent Techniques” *Conferencia Científica Internacional Uciencia*.
- [78] Yan, Y., Song, Y., Zhang, X., Ai, L. (2021) “Research on the construction of project management information system based on multi-tier architecture”, *ACM International Conference Proceeding Series*: 1577–1581.
- [79] Yan, Z., Wei, G., Dongdong, L., Lei, N., Mengran, Y. (2020) “University Research Project Management System Based on Cloud Platform”, *Proceedings - 2020 International Conference on Big Data and Informatization Education, ICBDE 2020*: 453–456.
- [80] Xie, B., Lin, Z., Chen, J., Maizura, I. (2021) “Application of artificial intelligence computer control technology in management information system”, *Proceedings of 2021 IEEE International Conference on Emergency Science and Information Technology, ICESIT 2021*: 757–760.
- [81] Yanzheng, W. (2021) “Design and application of information system and technology in business management: Take the design of the Chengdu Panda Park project as an example”, *ACM International Conference Proceeding Series*: 131–136.
- [82] Yehorchenkova, N., Yehorchenkov, O., Teslia, I., Kataieva, Y., Mitsenko, S. (2020) “The Concept of an Add-On of a Functional Portfolio and Project Management Environment”, *IEEE 15th International Conference on Computer Sciences and Information Technologies (CSIT)*.
- [83] Yehorchenkova, N., Yehorchenkov, O., Sazonov, A. (2021) “Project management information systems: An experience of developing and implementation on a production enterprise. Case study”, *CEUR Workshop Proceedings*.
- [84] Abdel-Khalek, H. A., Aziz, R. F., Abdellatif, I. A. (2019) “Prepare and analysis for claims in construction projects using Primavera Contract Management (PCM)”, *Alexandria Engineering Journal* **58** (2): 487–497.
- [85] Chowdhury, D., Gharami, P., Akter, J. (2019) “Implementing Advanced Software in Construction Project Management and Control”, *Journal of Logistics, Informatics and Service Science* **6** (1): 87–105.
- [86] Warinda, E. (2019) “Evaluating operationalisation of integrated monitoring and evaluation system in Kisumu County: Implications for policy makers”, *African Evaluation Journal* **7** (1).
- [87] Alves, P. R., Tereso, A., Fernandes, G. (2019) “Project management system implementation in SMEs: A case study”, *Proceedings of the 33rd International Business Information Management Association Conference, IBIMA 2019*: 8322–8332.
- [88] Miranda, S., Sugarindra, M. (2019) “Utilizing project management software in project scheduling: A case study”, *IOP Conference Series: Materials Science and Engineering*.
- [89] Wach, M., Chomiak-Orsa, I. (2019) “Improvement of investment processes in mining company by implementation of project management system”, *Mining Goes Digital - Proceedings of the 39th international symposium on Application of Computers and Operations Research in the Mineral Industry, APCOM 2019*: 47–55.
- [90] Mikkelsen, M. F., Aaltonen, K. (2023) “IT-enabled management of project complexity – An Action Design Research project”, *International Journal of Managing Projects in Business* **16** (1): 141–164.
- [91] Gejo-García, J., Gallego-García, S., García-García, M. (2022) “Project Design and Management of Optimized Self-Protection Plans: A Case Study for Spanish Public Buildings”, *Applied Sciences (Switzerland)* **12** (9).
- [92] Shah, P., Chandragade, A. A. (2023) “Application of project management tool in construction for Planning, Scheduling and Optimization”, *Materials Today: Proceedings*: 773–779.
- [93] Castro-Maldonado, J. J., Londoño-Gallego, J. A., Londoño-Marin, S., Patiño-Murillo, J. A. (2019) “Implementation of a technological, information, and communication tool for project management in the network of Tecnoparque, Colombia”, *Journal of Physics, Conf. Series*.
- [94] Aishwarya, S., Muthu, D., Venkata, S. C. (2019) “Progress monitoring in a real time infrastructure projects”, *International Journal of Innovative Technology and Exploring Engineering* **8** (7): 743–747.
- [95] Atmika, I. M. B., Wahyuni, P. I., Sinarta, I. N. (2023) “Implementation of construction management system based on information technology (IT) and integrated towards digital construction in industry 4.0”, *AIP Conference Proceedings*.
- [96] Owolabi, O. A. et al. (Year not specified) “Utilization of Social Management Theoretical Framework and Program Management Tool to Successfully Manage Large Multi-Department STEM Projects”, *ASEE Annual Conference and Exposition, Conference Proceedings*.

- [97] Harshavardhan, T., Reddy, V. S., Vardhani, P. S. R. P. S. S. S., Shrihari, S., Alawadi, A. H. R., Sharma, S. D. (2023) “Resource Allocation, Scheduling and Planning of a Multi Storeyed Residential Building”, *E3S Web of Conferences*.
- [98] Raj, H., Punhani, R., Punhani, I. (2023) “A practical approach to visualizing different phases of project management using MSP”, *IGI Global*.
- [99] Lauth, E., Scholz, S. G. (2023) “Introduction and Evaluation of a Project Management Software Tool in the Context of the Administration of Science and Research Projects”, *Smart Innovation, Systems and Technologies* **338**: 11–20.
- [100] Shanmugan, P., Kesavan, K., Senthilkumar, C., Shantharam, Y., Sivakaumar, C. T. (2022) “Need for metro rail system & Its planning using MSP”, *AIP Conference Proceedings*.
- [100] Shanmugan, P., Kesavan, K., Senthilkumar, C., Shantharam, Y., Sivakaumar, C. T. (2022) “Need for metro rail system & Its planning using MSP”, *AIP Conference Proceedings*. doi: 10.1063/5.0076283.
- [101] Haas, O., Markovič, P. (2023) “Management Information System of the Critical Path of Construction Projects by Way of Example Berlin Brandenburg Airport (BER)”, *Studies in Systems, Decision and Control* **466**: 465–493.
- [102] Blaga, F. S., Pop, A., Hule, V., Karczis, A., Buzdugan, D. (2021) “Using critical path method for a new project scheduling - The case of a new product launch in production”, *IOP Conference Series: Materials Science and Engineering*.
- [103] Hu, F. (2020) “The application of information system in the management of university’s repair project”, *Proceedings - 2020 International Conference on Computer Information and Big Data Applications, CIBDA 2020*: 474–477.
- [104] Narlawar, G. S., Chaphalkar, N. B., Sandbhor, S. (2019) “Application of primavera software in management of construction project: A review”, *International Journal of Scientific and Technology Research* **8 (8)**: 912–915.
- [105] Panakala Rao, K. L. N., Chamberlin, K. S. (2019) “Resources optimization in construction of a residential apartment by using primavera: A Case Study”, *International Journal of Recent Technology and Engineering* **7 (6C2)**: 184–187.
- [106] Schimanski, C. P., Monizza, G. P., Marcher, C., Matt, D. T. (2019) “Conceptual foundations for a new lean BIM-based production system in construction”, *27th Annual Conference of the International Group for Lean Construction, IGLC 2019*: 877–888.
- [107] Baharom, M. A. A., Rahman, M. S. A., Sabudin, A. R., Nor, M. F. M. (2023) “Decision Support Tools: Machine Learning Application in Smart Planner”, *ICPER 2020: Proceedings of the 7th International Conference on Production, Energy and Reliability*.
- [108] Zhang, K., Zhang, X. (2021) “Research on the overall architecture design of project management information system based on SOA”, *ACM International Conference Proceeding Series*: 1582–1586.
- [109] Tulupov, M. A. (2020) “Methodology for Constructing a Project Management Information System Based on the Enterprise Application Integration”, *Cybernetics and Systems Analysis* **56(4)**, 641–654.
- [110] Tsurkan, M. V., Liubarskaia, M. A., Chekalin, V. S., Mironova, S. M., Artemiev, A. A. (2020) “Information Systems for Project Management in the Public Sector”, *Lecture Notes in Networks and Systems* **87**: 449–459.
- [111] Huang, R., Pu, H., Zou, L., and Shi, W. (2020) “Design of Multi-project Collaborative Management System”, *International Conference on Applications and Techniques in Cyber Intelligence ATCI 2019*: 780–790.
- [112] Li, Q., Jiang, M., Tao, S., Hao, J., and Chong, H.-Y. (2023) “The Integrated Problem of Construction Project Scheduling and Multiskilled Staff Assignment with Learning Effect”, *J Constr Eng Manag* **149 (8)**. doi: 10.1061/JCEMD4.COENG-13150.
- [113] Ottaviani, F. M., Rebuglio, M., and De Marco, A. (2023) “Project management information system data model development and explanation”, in *Proceedings of the International Conference on Simulation and Modeling Methodologies, Technologies and Applications*.
- [114] Ledenev, M., and Shashkin, A. (2022) “Project Management System Tools Based on Approximate Information Models”, in *Proceedings of 4th International Conference on Control Systems, Mathematical Modeling, Automation and Energy Efficiency*: 269–273.
- [115] Vărzaru, A. A. (2022) “An Empirical Framework for Assessing the Digital Technologies Users’ Acceptance in Project Management” *Electronics (Switzerland)* **11 (23)**.
- [116] Zulfiandri, Yasmin, F. D., and Kusumaningtyas, R. H. (2022) “Implementation of Critical Path Method and What If Analysis in Project Management Information System” in *10th International Conference on Cyber and IT Service Management, CITSM 2022*.
- [117] Pedrosa, J., Varajão, J., Magalhães, L., and Martinho, R. (2021) “Process Mining for IS Project Success Factors Management: A proposal” *ACIS 2021 - Australasian Conference on Information Systems*.
- [118] Abrantes, R., and Figueiredo, J. (2021) “Information systems and change in project based organizations”, *Procedia Computer Science* **181**: 367–376.
- [119] Ali, N. H. M., et al. (2021) “Agile Project Management Software for Construction and Management Industries” *Proceedings of the 3rd International Conference on Separation Technology. Lecture Notes in Mechanical Engineering*: 101–111.