

TABLE A
INCLUSION AND EXCLUSION CRITERIA

Inclusion Criteria	Exclusion Criteria
Recent publications (from 2016)	Studies before 2016
Empirical studies only	Surveys, White papers, Gray Literature Thesis, and Books
Conference & Journal	-
English Language	

TABLE B
QUALITY ASSESSMENT CRITERIA.

Q#	Quality questions	Threshold (Y=1, N=0, P=0.5)
Q1	Were the factors that affect the adoption of the project management tools clearly mentioned?	Y: The factors that affect the adoption of the project management tools were clearly described.
		N: The factors that affect the adoption of the project management tools were not described at all.
		P: The factors that affect the adoption of the project management tools were partially described.
Q2	Was the name of the SW project management tool stated explicitly?	Y: The name of the SW PM tool was clearly stated.
		N: The name of the SW PM tool was not stated at all.
		P: Only the category of the SW PM tool was stated such as, risk management, communication, scheduling ...etc.
Q3	Were the features of the SW project management tool provided clearly?	Y: The features of the SW PM tool were clearly provided.
		N: The features of the SW PM tool were not provided at all.
		P: The features of the SW PM tool were partially provided.
Q4	Was the tool used in a project management context?	Y: The tool has been used in a project management context.
		N: The tool has not been used in a project management context.
		P: The tool has been used partially in the context of project management.
Q5	Was the tool evaluated from usability perspective?	Y: The tool was evaluated formally in terms of usability.
		N: The tool was not evaluated in terms of usability at all.
		P: The tool was evaluated informally in terms of usability.

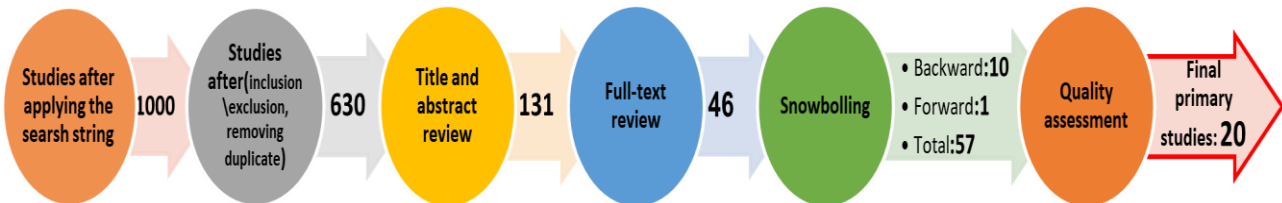


Fig. A. The process of the primary studies selection.

TABLE C
QUALITY SCORE OF THE SELECTED STUDIES.

Reference	Q1	Q2	Q3	Q4	Q5	Score
[1]	1	1	1	1	0	4
[2]	0.5	1	0.5	1	0.5	3.5
[3]	0.5	1	0.5	1	0	3
[4]	0	1	1	1	0	3
[5]	1	1	0.5	1	0	3.5
[6]	0.5	1	1	1	0	3.5
[7]	1	1	1	1	0	4
[8]	0.5	1	1	1	0.5	4
[9]	0.5	1	1	1	0.5	4
[10]	0.5	1	1	1	0	3.5
[11]	0	1	1	1	0	3
[12]	0	1	1	1	0	3
[13]	1	1	0.5	1	0	3.5
[14]	1	1	1	1	0	4
[15]	1	1	1	1	0.5	4.5
[16]	1	1	1	1	0	4
[17]	1	1	1	1	0	4
[18]	1	1	1	0	0	3
[19]	1	1	1	1	1	5
[20]	1	1	1	1	0	4

Primary studies list

- [1] V. Abramova, F. Pires, and J. Bernardino, "Open source and proprietary project management tools for smes," *Journal of Information Systems Engineering & Management*, vol. 1, no. 3, pp. 177–186, 2016.
- [2] H. Alaidaros, M. Omar, R. Romli, and A. Hussein, "The development and evaluation of a progress monitoring prototype tool for software project management," in *2019 First International Conference of Intelligent Computing and Engineering (ICOICE)*. IEEE, 2019, pp. 1–9.
- [3] Y. Khmelevsky, X. Li, and S. Madnick, "Software development using agile and scrum in distributed teams," in *2017 Annual IEEE International Systems Conference (SysCon)*. IEEE, 2017, pp. 1–4.
- [4] A. Mihalache, "Project management tools for agile teams," *Informatica Economica*, vol. 21, no. 4, pp. 85–93, 2017.
- [5] B. Tanveer, L. Guzmán, and U. M. Engel, "Effort estimation in agile software development: Case study and improvement framework," *Journal of Software: Evolution and Process*, vol. 29, no. 11, p. e1862, 2017.
- [6] S. Alyahya, M. Alqahtani, and M. Maddeh, "Evaluation and improvements for agile planning tools," in *2016 IEEE 14th International Conference on Software Engineering Research, Management and Applications (SERA)*. IEEE, 2016, pp. 217–224.
- [7] V. Gaikwad, P. Joeg, and S. Joshi, "Agilere: Agile requirements management tool," in *Proceedings of the Computational Methods in Systems and Software*. Springer, 2017, pp. 236–249.
- [8] H. C. de Paula, J. Bernardino, A. Bozzon, F. Mayo, and J. Filipe, "An application of osspal for the assessment of open source project management tools," in *WEBIST*, 2019, pp. 411–417.
- [9] J. M. Carrillo de Gea, J. Nicolás, J. L. Fernández-Alemán, and A. Toval, "Automated support for reuse-based requirements engineering in global software engineering," *Journal of Software: Evolution and Process*, vol. 29, no. 8, p. e1873, 2017.
- [10] E. Tu'zu'n, C. U'sfkes, Y. Macit, and G. Giray, "Towards unified software project monitoring for organizations using hybrid processes and tools," in *2019 IEEE/ACM International Conference on Software and System Processes (ICSSP)*. IEEE, 2019, pp. 115–119.
- [11] F. Liebert and M. Trzeciak, "Virtual temporary collaboration networks—a case study of the it industry," *Problemy Zarzadzania*, no. 5/2019 (85), pp. 56–73, 2019.
- [12] A. Lill, T. Zwickl, C. Costescu, L. Patzwahl, C. Soare, and M. Langer, "Agile mission operations in the cubesat project move-ii," in *2018 SpaceOps Conference*, 2018, p. 2635.
- [13] D. Fucci, C. Palomares, X. Franch, D. Costal, M. Raatikainen, M. Stettinger, Z. Kurtanovic, T. Kojo, L. Koenig, A. Falkner et al., "Needs and challenges for a platform to support large-scale requirements engineering: A multiple-case study," in *Proceedings of the 12th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement*, 2018, pp. 1–10.
- [14] D. Özkan and A. Mishra, "Agile project management tools: A brief comparative view," *Cybernetics and Information Technologies*, vol. 19, no. 4, pp. 17–25, 2019.
- [15] F. Alruwaili, "How agile development and its tools support digital transformation."
- [16] V. Abramova, F. Pires, and J. Bernardino, "Open source vs proprietary project management tools," in *New Advances in Information Systems and Technologies*. Springer, 2016, pp. 331–340.
- [17] F. Calefato, A. Giove, F. Lanubile, and M. Losavio, "A case study on tool support for collaboration in agile development," in *Proceedings of the 15th International Conference on Global Software Engineering*, 2020, pp. 11–21.
- [18] S. Silva, G. Fernandes, A. Lima, and R. J. Machado, "It project management tool requirements to support collaborative university-industry r&d," in *2018 International Conference on Intelligent Systems (IS)*. IEEE, 2018, pp. 917–925.
- [19] N. Alomar, N. Almobarak, S. Alkoblan, S. Alhozaimy, and S. Alharbi, "Usability engineering of agile software project management tools," in *International Conference of Design, User Experience, and Usability*. Springer, 2016, pp. 197–208.
- [20] M. Manole and M.-S. Avramescu, "Comparative analysis of agile project management tools," *Academy of Economic Studies. Economy Informatics*, vol. 17, no. 1, pp. 25–31, 2017.