

check Agile Methods for ERP Implementation A Systematic

by Arta Sundjaja

Submission date: 01-Oct-2019 11:55AM (UTC+0700)

Submission ID: 1102563730

File name: Agile_Methods_for_ERP_Implementation_A_Systematic.pdf (329.08K)

Word count: 4944

Character count: 28981

Agile Methods for ERP Implementation: A Systematic Literature Review

Santo Fernandi Wijaya
*Information Systems Department,
 School of Information Systems,
 Computer Science Department,
 BINUS Graduate Program - Doctor of
 Computer Science
 Bina Nusantara University
 Jakarta, Indonesia 11480
 santofw@binus.ac.id*

Harjanto Prabowo
*Management Department,
 BINUS Business School Undergraduate
 Program,
 Computer Science Department,
 BINUS Graduate Program - Doctor of
 Computer Science
 Bina Nusantara University
 Jakarta, Indonesia 11480
 harprabowo@binus.edu*

Raymondus Raymond Kosala
*Computer Science Department,
 BINUS Graduate Program – Doctor of
 Computer Science,
 Bina Nusantara University
 Jakarta, Indonesia 11480
 rkosala@binus.edu*

Meyliana

*Information Systems Department,
 School of Information Systems,
 Bina Nusantara University
 Jakarta, Indonesia 11480
 meyliana@binus.edu*

Abstract – Since ERP solution facilitates has changed in business environment and also has helped in supporting managerial level to make decision. Therefore, ERP system is important strategy for organization's survival. One of the critical issues that affect a successful ERP implementation is the implementation method. In previous research, it showed that many organizations had faced complexity when they were implementing ERP in order to meet their requirements. In other cases, the ERP systems are unable to provide solution which is a simplicity of the necessary business processes. The ERP implementation complexity is one of the factors that lead the failures. Thus, here, we intend to propose an agile approach to reduce complexity and eventually our intention is to improve ERP implementing to become more successful. In this study, we are employing a systematic literature review (SLR) approach to identify the principles factors of the agile methods for ERP implementation. In result of employing this SLR method, we found that agile values and principles are correlated in ERP implementation complexity.

Keywords—Complexity, Agile methods, ERP implementation, Systematic literature review

I. INTRODUCTION

Lately in recent decades, the purpose of ERP investment has showed as an important strategy of the organizations for ensure reaching competitive advantage and enhancing the performance of the organizations. ERP system has proved to be the best solution to help the managerial level to decision-making, but a costly mistake for many others [3]. Information systems are important tools for improving productivity. Therefore, management of organizations has commitment and

support for the investment of ERP projects. In reality, many organizations have encountered the complexity and they even have failed to implement ERP. It is important for management of organizations to know the main issues of the complexity of ERP implementation. The main issues are the critical factors that affect the success rate of the ERP implementation. Therefore, the organizations are finding the complexity in ERP implementation. It is found that the effects of such complexities are more than 90% over budgets and 72% ERP implementation can't fulfill the time constraint. The result of ERP implementation success is below 30%, and approximately 20% ERP implementation is the failure [19]. The ERP implementation is venturous, complicated and timeframes. The customizing is considered one of the most precarious matters when ERP implementation is done [14]. The ERP implementation failure has an urge for the new method of facing the misalignment problem [8]. Project management factors become one of the main problems and contribute to failure or success in implementing ERP [10]. The customization issues affect the increase the risk of ERP implementation complexity. Additionally, the methodology of implementation is the important tool that must be considered for reducing the complexity of ERP implementation. An agile development has contributed to describe the decision process in customizing in ERP development in the organizations environment [1].

The purposes of this research were to serve three goals. First, was to identify the main issues of the ERP implementation complexity. Second, the research would propose the main issues of agile method and the ERP implementation complexity. Third, the research would propose the correlate agile methods and the

ERP implementation complexity. The research questions that were explained in the review are:

1. What are the main issues that affect the ERP implementation complexity?
2. Are the agile methods and the ERP implementation complexity concerned with the same issues?
3. How do we determine the correlation between the agile values and principles and the issues found in ERP implementation complexity?

II. LITERATURE SEARCH

A. ERP implementation approach

ERP implementation projects are complex, risky and expensive. Accordingly, it is quite precarious of failure [34]. Many ERP implementation projects still depend on the using of traditional waterfall methodologies. ERP implementation success depends on choosing the implementation approach by the organization [14]. The common implementation approaches are traditional waterfall approach and an agile approach. In a waterfall approach, the process of implementation is not effective: on the other hand, in agile approach, the process implementation is incremental or phased way and iterative, focusing on time delivery, simplicity, and fast response. The traditional method requires a long time in project planning [32]. ERP implementation phase is a complex process that potentially results in serious failures [2]. ERP implementation will describe business processes, and use a prototype-iterative approach that was based on the agile approach [35].

B. ERP implementation complexity

The complexity is a significant concern and can increasingly undermine the performance of operational, but with the improvement of technology, complexity is associated with the resources to develop the quality of products [17]. The ERP implementation complexity does not face technological issues only but also face in the organizational factors and other factors. [40]. The ERP implementation project is critical and complex [16]. The ERP projects are complex projects that consist of multiple sub-projects, such as mapping of business processes requirements, development of infrastructure technology, business processes change [14]. The ERP implementation success depends on the integration with applications that affect the organizations. The ERP systems have characterized a high rate of the business process complexity, data integrate, and functionality that affects the increase of the business processes complexity [37]. The ERP system is a complex application and that is due to depending on the business process, and it is known as best practices and the main reasons ERP project failures are project management issue, business process change during the project implementing, and management support issue [5]. The complexity of ERP implementation is the task and system complexity. Task complexity is known as the uncertainty that defines the best practice in business. Besides that, System

complexity is known as the uncertainty that defines the best practice in systems development [40]. The ERP systems have the risk of failure because of the increasing complexity of organization's business processes and scale of operations [35]. Additionally, the organizations need the ERP implementation because of some factors such as company growth, information need, new functionality, reorganization, updating project reporting, and business process integration for support management. The complexity is not only in specialized publications but also in methodologies used to manage ERP projects [15]. The ERP projects are a complex system in project development which 35% of ERP implementations cancel, 70% of ERP implementations fail, 178% over budget and only 30% of ERP implementations delivered [2]. The complexity has affected the behavior and performance of the key users, so to reduce the complexity, needed other method approach to solve these gaps [36].

TABLE I. COMPLEXITY OF ERP IMPLEMENTATION [25]

Complexity Type	Difficult to use	Difficult to understand	Difficult to manage	Difficult to implement	Potential to increase	Frequency
Lack of change management		✓				1
Internal resource unavailability				✓		1
Lack of business sponsorship				✓		1
Process duplication			✓		✓	2
Poor integration			✓	✓		2
Resistance to change			✓	✓		2
Problematic implementation sequence	✓		✓	✓		3
Poor training	✓	✓	✓	✓		3
Poor business process understanding	✓	✓	✓	✓		3
Substantial customization	✓		✓	✓	✓	4
Poor process standardization	✓	✓	✓	✓		4
Poor business process integration	✓	✓	✓	✓	✓	4
Poor end to end process design	✓	✓	✓	✓	✓	5
Poor understanding of ERP solution	✓	✓	✓	✓	✓	5
Poor data quality	✓	✓	✓	✓	✓	5

Table I. indicates that the main issues of the ERP implementation complexity need to focus seriously on process design, understanding of ERP solutions, data quality, customization, process standardization, and business process integration because these factors have critical factors in reducing the complexity of ERP implementation.

C. Agile methods of literature review

Another factor to consider in ensuring reduce the ERP implementation complexity is methodology. The methodology is to reduce information system complexity [15]. The agile approach is one of methodology that is considered for reducing the ERP implementation complexity. The Agile method started to appear in 2001 to develop incremental, iterative development and methods principles [34]. Agile methods were designed to manage change more efficient [12]. The component of the agile approach shown in table 2.

TABLE II. AGILE APPROACH - ADOPTED FROM [12]

Components	Factors
Quality assurance challenges	Accommodating non-functional testing Lack of automated testing Requirements ambiguity affects quality assurance
Integrating non development functions	Other functions unwilling to change Challenges in adjusting to incremental delivery pace Bewarding model not teamwork centric Challenges in adjusting product launch activities
Management Support	Ensure management support Evidicate management on agile Make management support visible
Commitment to change	Communicate that change is non negotiable Show strong commitment
Leadership	Recognize the importance of change leaders Engage change leaders without baggage of the past
Choosing and customizing	Customize the agile approach carefully Conform the a single approach Map to old way of working to ease adaptation. Keep it simple
Piloting	Start with a pilot to gain acceptance Gathering insights from a pilot
Training & coaching	Coach teams as they learn by doing Provide training on agile method
Engaging people	Engage everyone in the organization Start with agile supporters Include persons with previous agile experience
Communication & transparency	Create & communicate Communicate the change intensively. Make change transparent
Mindset & alignment	Align the organization Concentrate on agile values Arrange social events, Cherish agile communities
Team autonomy	Allow teams to self-organize Allow grass roots level empowerment
Requirements management	Recognize the importance of the product owner role Invest in learning to refine the requirements

D. Agile methods and ERP implementation

Agile methodologies are the focus in incremental and iterative that effect in order to divide the function into smaller ones, so the development cycle becomes shorter while traditional waterfall methodologies focus on trick change management [34]. The agile methods in the ERP implementation will build on the premises which more the focus to achieve communication efficient [8]. The benefits of the agile method for ERP implementation have a significant impact to enhance the ERP implementation success [34]. Therefore, implementing ERP with the agile approach can break projects into limited iterations and time-boxed to quick monitoring. ERP systems are integrated with the business process into one single system. So ERP implementation can increase the resistance to change. Therefore, ERP implementation should have a systematic approach to manage the complexity of ERP implementation [14]. The agile approach can reduce the failure of ERP implementation [35]. It can be concluded that agile methods and ERP implementation have a correlation because both methods can achieve their goals in improving quality of the projects.

III. RESEARCH METHOD

In this section, the research methodology used for conducting the literature review is presented. This research employs the SLR on the parameters defined by [21].

A. Search terms

The keyword used to search terms for papers, we determined the search string are as follows:

- a. (“complexity”) AND (“ERP” OR “implementation”)
- b. (“agile”) AND (“methods”)
- c. (“agile”) AND (“framework” OR “ERP” OR “implementation”)

The complete string used in the search was: 1 AND 2 AND 3

B. Search process

The search process was presented by online databases which included references for papers of conference proceedings and journals between the year 2002 and 2018. The search process was used online database for finding the papers related.

C. Study selection

We determined a set of selection inclusion criteria exclusion criteria to select the appropriate papers for the answer to research questions. The inclusion criteria used on the literature are listed below:

- a) The criteria of studies are the agile ERP topic.
- b) The papers published between the year 2002 and year 2018.
- c) The conference and journals only.
- d) The collection of data from the general online database sources.
- e) The papers that based on qualitative analysis or quantitative analysis or a mix both.

The exclusion criteria used to explain based on the literature are as follows:

- a) The title is not related to this study.
- b) The papers are publication before the year 2002.
- c) The papers have a weak analysis such as papers redundancy, editorial paper, master thesis, unpublished paper, opinion, panel discussion, technical reports, etc.
- d) The paper is non-academic databases or is a book.
- e) The paper is not written in English.

D. Data collection

The data collection is done by title, keywords, abstracts, and full-text analysis for determining design forms that the finding information of the papers selected. The search result was processed by using the following processes as follows:

- a. Papers found: Papers were found based on predetermined keywords related to this research.
- b. Candidate papers: Paper is made by review the title, keywords, and abstract.
- c. Select papers: Paper is made by review the full text of the papers.

TABLE III. THE SOURCE OF STUDIES SELECTED

Source	Papers Found	Candidate Papers	Select Papers
ACM digital library	797	18	4
Elsevier	1,325	58	6
Emerald Insight	529	27	4
IEEE Digital Library	16	19	4
Scopus	37	16	-
Springer Link	734	12	3
Taylor & Francis Online	801	18	3
Wiley Online Library	179	8	1
Other	95	95	11
	4,504	271	36

After process studies selected, we have selected papers from 36 papers that will be the primary paper of this research, that the categories papers are 18 papers selected from the journal and 18 papers selected from conference proceeding. The primary

C. The main issues of the ERP implementation complexity found through the literature review

Based on the result analysis identified through the literature review, we show that the main issues of the complexity of ERP implementation are project management, management/leadership, technology, organization, process, people, technical, external, and methodology. These factors have the significant impact to reduce the ERP implementation complexity.

TABLE VII. THE MAIN ISSUES OF THE ERP IMPLEMENTATION COMPLEXITY IDENTIFIED THROUGH LITERATURE REVIEW

The main issues	No	Factors	(total)	Bansal & Negi, 2008	Farooq, 2016	Chowdhury & Shrivastava, 2010	Hand et al., 2012	Apparao et al., 2015	Chen et al., 2009	Speed et al., 2017	Prati, 2015	Larime et al., 2017	Frederick & Vance, 2014	Hubb, 2016	Valken et al., 2015	Whicker & Bouse, 2007	Jacob, 2013	Rahman & Sabry, 2012	Hussain et al., 2018
Project Management	1	Project management & project planning	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2	Too tight project schedule	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Management	3	Risk management	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4	Top management support	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	5	Adequate change management	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Leadership	6	Parade	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	8	More customization	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Systems	9	Data fill-in (Inaccurate data)	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	10	Adequate selection of application	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	11	Performance measurement system	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Organization	7	Organizational Change	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Process	12	Business Process Reengineering	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	13	Right people on the team	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
People	14	Adequate education and training	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	15	Effective external consultant	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
External	16	Innovative technology	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methodology	17	Framework for ERP implementation	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Total		57	3	6	7	9	3	3	4	4	3	6	1	1	2	1	2	2

V. DISCUSSION

In this section, the researchers have shown the result of mapping for the answer of research questions.

A. What are the main issues that affect the ERP implementation complexity?

The result investigation of the primary papers indicate that the main issues of the complexity of ERP implementation are project management (23%), management/leadership (19%), systems (16%), organization (11%), process (11%), people (9%), external (5%), technology (4%) and methodology (4%). The summary main issues of the complexity of ERP implementation.

B. Are the agile methods and the ERP implementation complexity concerned with the same issues?

Based on the result analysis, we show that the main issues of the agile methods are strategies, agile project management, systems, process, management/leadership, methodology, technologies, people, and organization. These factors have the significant impact to ensure information system project success. The main issues detail of the agile methods shown in table 8.

TABLE VIII. THE SUMMARY MAIN ISSUES OF THE AGILE METHODS FOUND THROUGH LITERATURE REVIEW

The main issues	# Papers	%
Strategies	19	22%
Agile Project Management	17	20%
Systems	9	10%
Process	9	10%
Management /Leadership	8	9%
Methodology	8	9%
Technologies	6	7%
People	7	8%
Organization	4	5%
		100%

The comparison of main issues between the ERP implementation complexity and the agile methods that indicate the main issues are the same with the focus of achieving information system project success. It can be concluded that the agile methods have the significant impact to reduce the complexity of ERP implementation.

C. How do we determine the correlation between the agile values and principles and the issues found in ERP implementation complexity?

Based on the result analysis, we show that the same main issues between the ERP implementation complexity and the agile methods are project management, process, management/leadership, methodology, technologies, people, and organization. These factors have the significant impact to ensure information system project success. The project management is the key factors that significantly effect to achieve the project's success. The comparison between agile methods and ERP implementation complexity shown in table 9.

TABLE IX. COMPARISON AGILE METHODS VS ERP IMPLEMENTATION COMPLEXITY OF

The main issues	Agile methods		ERP implementation complexity	
	# of papers	%	# of papers	%
Strategies	19	22%	-	0%
Project Management	17	20%	13	23%
Systems	9	10%	9	16%
Process	9	10%	6	11%
Management /Leadership	8	9%	11	19%
Methodology	8	9%	2	4%
Technologies	6	7%	2	4%
People	7	8%	5	9%
Organization	4	5%	6	11%
External	0	0%	3	5%
		100%		100%

D. The limitations and future research

This research identifies the main issues of ERP implementation complexity and agile methods based on SLR approach for general organizations, and the limitation on the industry sample. Therefore, the researchers have understood that this research has a limitation and need to be improve the future research to proving with the real case in business by focusing on case studies and conducting survey of many different industries as the objects for developing of the agile framework for ERP implementation.

VI. CONCLUSION

The resulting analysis indicates that the implication for the organizations is more understandable and about the main issues of the agile methods and the ERP implementation complexity become an important strategy to consider in helping the managerial level of organizations before they make the decision to implement the projects. The research has given the contribution that is to find potential which the agile methods as approach methods and can be considered as the solutions to reduce the ERP implementation complexity. The main issues of the agile methods are strategies that give contribution and

support in reducing the ERP implementation complexity. The strategies factors of agile methods are as follows: virtual enterprise, supply chain, concurrent engineering, flexibility and adaptability of changing the environment, iterative and incremental phased, improve business value, and reduce complexity, customer needs, and delivery functions. These factors have the significant strategy to reduce the ERP implementation complexity.

REFERENCES

- [1] Alleman, GB (2002). Agile project management methods for ERP: how to apply agile processes to complex COTS projects and live to tell about it. In Conference on Extreme Programming and Agile Methods. Springer.
- [2] Amid, A., Moalagh, M., & Ravasan, AZ. (2012). Identification and classification of ERP critical failure factors in Iranian industries.
- [3] Ali M & Miller L. (2017). ERP System Implementation in Large Enterprises-A Systematic Literature Review. *Journal of Enterprise Information Management*, 30(4).
- [4] Baig, J. J. A., Shah, A., & Sajjad, F. (2017). Evaluation of agile methods for quality assurance and quality control in ERP implementation. In *Intelligent Computing and Information Systems (ICICIS)*, 2017 Eighth International Conference on (pp. 252-257). IEEE.
- [5] Bansal, V & Negi, T. (2008). A metric for ERP complexity. In *International Conference on Business Information Systems* (pp. 369-379). Springer, Berlin, Heidelberg.
- [6] Baramichai, M., Zimmers Jr, EW, & Marangos, CA. (2007). Agile supply chain transformation matrix: an integrated tool for creating an agile enterprise. *Supply Chain Management: An International Journal*, 12(5).
- [7] Campanelli AS & Parreiras FS. (2015). Agile methods tailoring-A systematic literature review. *Journal of Systems & Software*, 110, 85-100.
- [8] De Carvalho, RA., Johansson, B., & Manhaes, RS. (2009). Mapping Agile Methods to ERP: Directions Limitations. *Selbis Journal*, (4), 9-17.
- [9] Chang, M. (2010). An Agile approach to library IT innovations. *Library Hi Tech*, 28(4), 672-689.
- [10] Chen, CC., Law, CC., & Yang, SC. (2009). Managing ERP implementation failure: a project management perspective. *IEEE transactions on engineering management*, 56(1), 157-170.
- [11] Conboy, K & Fitzgerald, B. (2004). Toward a conceptual framework of agile methods: a study of agility in different disciplines. In *Proceedings of the 2004 ACM workshop on Interdisciplinary software engineering*
- [12] Dikert K, Paasivaara M, & Lassenius C. (2016). Challenges and success factors for large-scale agile transformations: A systematic literature review. *Journal of Systems and Software*, 119, 87-108.
- [13] Fetouh AA, el Abbassy A, & Moawad R. (2011). Applying Agile Approach in ERP Implementation. *IJCSNS*, 11(8), 173.
- [14] Ghosh, S & Skibniewski, MJ. (2010). Enterprise resource planning systems implementation as a complex project: a conceptual framework. *Journal of Business Economics and Management*, 11(4), 533-549.
- [15] Holub, I. (2016). Methodology for Measuring the Complexity of Enterprise Information Systems. *Journal of Systems Integration*, 7(3), 34.
- [16] Hussain, KM., Subramanian, DV, Thangakumar, J., & Kumar, KP. (2018). ERP: framework based implementation-a case study. *International Journal of Engineering & Technology*, 7(1.9), 45-49.
- [17] Jacobs, MA. (2013). Complexity: Toward an empirical measure.
- [18] Jovicic, B., Devedzic, V., Djuric, D., Sendelj, R. (2012). Agile ERP systems development: a technical perspective. In *Proceedings of the 5th India Software Engineering Conference* (pp. 71-74). ACM.
- [19] Kaushik, S., Bharadwaj, A., Awasthi, V. (2015). Need for blending Agile Methodologies and Lean Thinking for ERP Implementation: An industry point of view. In *Next Generation Computing Technologies (NGCT)*, 2015 1st International Conference on (pp. 751-755). IEEE.
- [20] Khatri, A., Garg, D., & Dangayach, G. S. (2018). Modelling of Prime Agile Enablers: People, Virtual Integration and Information Technology. *Procedia Manufacturing*, 20, 464-469.
- [21] Kitchenham, B. (2004). Procedures for performing systematic reviews. Keele, UK, Keele University, 33(2004)
- [22] Laurie D Hughes, Nripendra P. Rana, Antonis C. Simintiras. (2017). the changing landscape of IS project failure: an examination of the key factors, *Journal of Enterprise Information Management*, Vol. 30 Iss: 1.
- [23] Mishra, D., & Mishra, A. (2011). Complex software project development: agile methods adoption. *Journal of Software: Evolution and Process*, 23
- [24] Moon, K.L.K. Lee, JY. Lai, SYC. (2017). Key drivers of an agile, collaborative fast fashion supply chain: Dongdaemun. *Journal of Fashion Marketing & Management: An International Journal*, 21(3), 278-297.
- [25] Momoh A. (2015). A framework for complexity cost modelling of ERP implementation. *Dspace.lib.cranfield.ac.uk*
- [26] Nerur S., Mahapatra R., Mangalaraj G. (2005). Challenges of migrating to agile methodologies. *Communications of the ACM*, 48(5), 72-78.
- [27] Patil, M. S. Limitation and Complexity of ERP System failure in an Organization: A case study.
- [28] Peci M & Važan P. (2014). The biggest critical failure factors in ERP implementation. In *Applied Mechanics and Materials* (Vol. 519, pp. 1478-1482). Trans Tech Publications.
- [29] Ribbers, PM., & Schoo, KC. (2002). Program management and complexity of ERP implementations. *Engineering Management Journal*,
- [30] Saeed, S., Shaikh, A., Memon, M. A., Memon, M. H., Abassi, F. A., & Naqvi, S. M. R. (2017). Implementation of Failure Enterprise Systems in Organizational Perspective Framework. *International journal of advanced computer science and applications*, 8(5), 54-63.
- [31] Salvador, C., Nakasone, A., & Pow-Sang, J. A. (2014). A systematic review of usability techniques in agile methodologies. In *Proceedings of the 7th Euro American Conference on Telematics*. ACM.
- [32] Shayduln, R., & Sybrandt, J. (2017). To Agile, or not to Agile: A Comparison of Software Development Methodologies. arXiv preprint.
- [33] Suomalainen, T., Kuusela, R., & Tihinen, M. (2015). Continuous planning: an important aspect of agile and lean development. *International Journal of Agile Systems and Management*, 8(2), 132-162.
- [34] Tareq Q. (2016). Avoiding the Most Common ERP Challenges with Agile Methodologies.
- [35] Trbka, J., & Soja, P. (2014). Agile versus design-based approach to ERP system implementation: A cross-case study.
- [36] Tripp, J., & Armstrong, DJ. (2018). agile methodologies: organizational adoption motives, tailoring, and performance. *Journal of Computer Information Systems*, 58(2), 170-179.
- [37] Uflacker, M., & Busse, D. (2007). Complexity in enterprise applications vs. simplicity in user experience. *Human-Computer Interaction. HCI Applications and Services*, 778-787.
- [38] Uppström, E., Lönn, CM, Hoffsten, M., & Thorström, J. (2015). New implications for customization of ERP systems. In *System Sciences*, 48th Hawaii International Conference on (pp. 4220-4229). IEEE.
- [39] Valdeza, AC., Brauener, P., Schaara, AK, Holzinger, A., & Zieflea, M. (2015). Reducing complexity with simplicity-usability methods for industry 4.0. In *Proceedings 19th triennial congress of the IEA* (Vol. 9).
- [40] Xia, W & Lee, G. (2005). Complexity of information systems development projects: conceptualization and measurement development. *Journal of management information systems*, 22(1), 45-83.

check Agile Methods for ERP Implementation A Systematic

ORIGINALITY REPORT

19%

SIMILARITY INDEX

6%

INTERNET SOURCES

13%

PUBLICATIONS

15%

STUDENT PAPERS

PRIMARY SOURCES

1

Submitted to Harrisburg University of Science and Technology

Student Paper

6%

2

Santo Fernandi Wijaya, Harjanto Prabowo, Raymondus Raymond Kosala, Meyliana. "an Agile Implementation Model for ERP", 2019 International Conference on Information Management and Technology (ICIMTech), 2019

Publication

3%

3

Maria Paasivaara, Casper Lassenius. "Challenges and Success Factors for Large-scale Agile Transformations", Proceedings of the Scientific Workshop Proceedings of XP2016 on - XP '16 Workshops, 2016

Publication

3%

4

Santo Fernandi Wijaya, Raymondus Raymond Kosala, Meyliana, Harjanto Prabowo. "Impact of IT governance framework in post-implementation for ERP performance: Literature review", 2017 International Conference on ICT For Smart Society (ICISS), 2017

2%

5 Hasnah Haron, Ishak Ismail, Daing Nasir Ibrahim, Mohd Ridzuan Darun, Kamal Zuhairi Zamli, Aziman Abdullah, Anderes Gui. "The Development of Anti Bribery Management System: A Preliminary Study", 2018 International Conference on Information Management and Technology (ICIMTech), 2018
Publication **2%**

6 Santo F. Wijaya, Harjanto Prabowo, Meyliana, Raymond Kosala. "Identification of key success factors and challenges for ERP systems — A systematic literature review", 2017 International Conference on Applied Computer and Communication Technologies (ComCom), 2017
Publication **1%**

7 eprints.binus.ac.id
Internet Source **1%**

8 Submitted to University of Derby
Student Paper **1%**

9 Arief Agus Sukmandhani, Bambang Dwi Wijanarko, Eric Gunawan, Devriady Pratama, Ford Lumban Gaol, Indraajani Sutedja. "Measurement effectiveness and efficiency to improve the IT services using ITSM", 2017 International Conference on Information Management and Technology (ICIMTech), 2017 **1%**

Publication

Exclude quotes On

Exclude bibliography On

Exclude matches < 1%

check Agile Methods for ERP Implementation A Systematic

GRADEMARK REPORT

FINAL GRADE

/0

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6