

# Benefits Realisation and Success Factors for Information Systems Strategic Planning using Systematic Literature Review

Bernadus Gunawan Sudarsono<sup>a</sup>, Manorang Sihotang<sup>b</sup>, Aedah Binti Abd Rahman<sup>c</sup>, Sri Poedji Lestari<sup>d</sup>, Agus Budiyantra<sup>e</sup>, Rouly Doharma<sup>f</sup>,  
<sup>a,d</sup>Universitas Bung Karno, Jakarta, Indonesia, <sup>b</sup>Universitas Pramita Indonesia, Tangerang, Indonesia, <sup>c</sup>Asia e University, Selangor, Malaysia, <sup>e,f</sup>STMIK Widuri, Jakarta, Indonesia, Email: <sup>a</sup>[gunawanbernadus@ubk.ac.id](mailto:gunawanbernadus@ubk.ac.id),  
<sup>b</sup>[sihotang.manorang@yahoo.co.id](mailto:sihotang.manorang@yahoo.co.id), <sup>c</sup>[Aedah.abdrahman@aeu.edu.my](mailto:Aedah.abdrahman@aeu.edu.my),  
<sup>d</sup>[beningkes@gmail.com](mailto:beningkes@gmail.com), <sup>e</sup>[agusbudiyantra@kampuswiduri.ac.id](mailto:agusbudiyantra@kampuswiduri.ac.id),  
<sup>f</sup>[roulydoharma@kampuswiduri.ac.id](mailto:roulydoharma@kampuswiduri.ac.id)

Information System Strategic Planning (ISSP) is an information system planning concept that is related to information system planning in a certain period to provide benefits. ISSP benefits are felt in the form of realisation of interests in the form of increased competitive advantage, effectiveness, efficiency, capability, performance, alignment, and flexibility. The understanding of the benefits of ISSP is also influenced by ISSP's success factors, namely product quality, planning system quality, service delivery quality, facilitators, culture, use, and satisfaction. The question that arises is how the mapping of the realisation of the benefits of ISSP, mapping success factors ISSP, and mapping of the realisation benefits ISSP success factors of ISSP mentioned above. Of course, this question is still not largely answered. The purpose of this study is to investigate and evaluate the phenomenon of the realisation of ISSP benefits and ISSP success factors that influence it using the Systematic Literature Review (SLR) instrument during the period 2009 to 2019. Results of the investigation obtained synthesis and mapping realisation benefits of ISSP and the factors that influence it.

**Key word:** *Information System Strategic Planning, The Realisation of the Benefit of ISSP, Success Factor of ISSP*

## Introduction

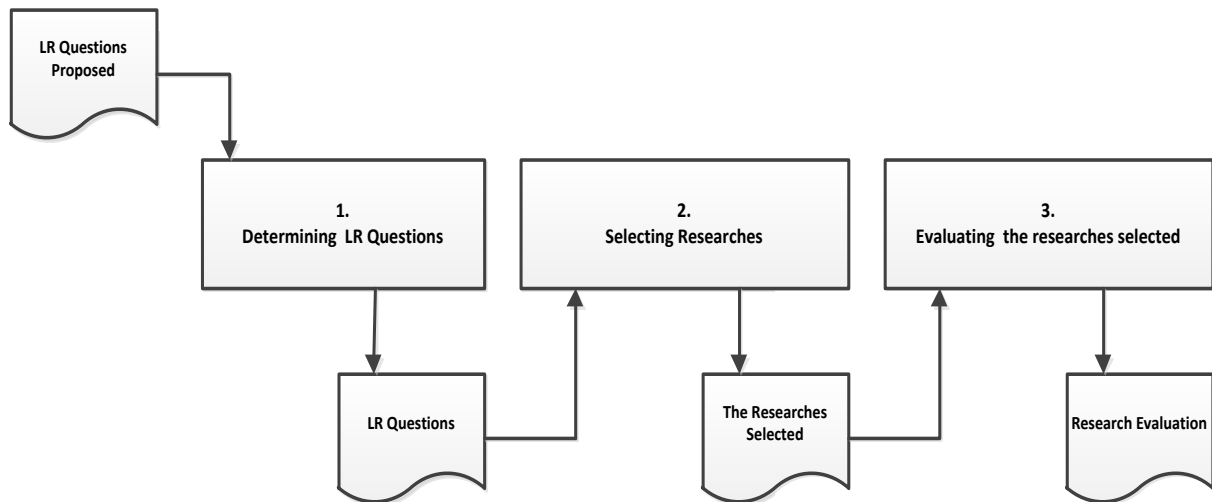
ISSP of an organisation can be felt in the form of benefits that can improve the strategic side. These perceived benefits are the organisation's goals in the use of information systems. According to John Ward, the use of information systems is outlined in 3 eras, namely the era of data processing, management information systems, and strategic (Ward, Griffiths, & Whitmore, 2002). In the period of data processing, the expected benefit is efficiency. In the information management system, the expected profit is effectiveness, especially in terms of decision making. In strategic times, the expected benefits are on the strategic side. ISSP is more inclined to the strategic side benefit approach. ISSP in the strategic side approach can have several benefits that are expected or said to be successful when it has been realised (Chou, 2015; Love et al., 2014) in the form of aligning business strategies to information systems (Chan, Sabherwal, & Thatcher, 2006), Effectiveness of planning (Newkirk & Lederer, 2006), flexibility to the external environment (N.F. Dohertya 1999), strengthening excellence compete (Sakas, 2014) and improve organisational performance regarding the use of IS (Kamariotou & Kitsios, 2016) efficiency (Kamariotou & Kitsios, 2016) and capability (Zubovic, Pita, & Khan, 2014).

The success of ISSP with the realisation of its benefits is undoubtedly very desirable for every organisation. Organisations need to know the realisation of ISSP benefits. Therefore organisations also need to know the key to success from the realisation of ISSP benefits. This key to success can be attributed to the factors that influence the success of ISSP. These success factors are interrelated with their respective benefits realisation. The problem that arises is that there is not much literature that reviews sufficiently related to the realisation of ISSP benefits, increased competitive advantage, effectiveness, efficiency, capability, performance, alignment and flexibility; and ISSP success factors, namely product quality, planning system quality, service delivery quality, facilitators, culture, use, and satisfaction. Another related problem for which there is not much literature is the relationship between ISSP success factors and the realisation of the benefits mentioned above.

The purpose of the organisation – when it will have an ISSP, or even already having an ISSP lies in wanting to know the success factors (Subiyakto, Ahlan, Kartiwi, & Putra, 2016) in the realisation of the benefits, as shown in the value of the realisation of benefits. Associated with the organisation's objectives, the purpose of this study is to review and evaluate the ISSP benefit realisation value, the factors of success in the realisation of benefits, and the relationship between the value of benefits realisation and success factors.

## Methods

The method used in this study is the SLR method (Irfan et al., 2018), which is a method that utilises literature for review. This SLR method is shown in Figure 1.



**Figure 1. SLR Method**

There are three stages in this SLR method, namely determining LR (Literature Review) questions, selecting researches, and evaluating the chosen study. In this study, the SLR method is used to review relevant literature and its phenomenon in identifying the realisation of ISSP benefits, the success factors of ISSP benefits realisation, and knowing the relationship between the benefits realisation and the success factors of ISSP benefits realisation.

In determining LR questions, a population, intervention, comparison, outcome, and context (PICOC) approach is used. This PICOC approach (Irfan et al., 2018) is useful in determining the criteria and scope of this LR question, as shown in table 1.

**Table 1. Criteria and Scope of LR Questions**

No	Criteria	Scope
1	Population	Many organisations
2	Intervention	Realisation of ISSP benefits, ISSP success, and ISSP success factors
3	Comparison	The realisation of ISSP benefits and ISSP success factors in many studies
4	Outcome	Realisation of ISSP benefits, ISSP success factors and the relationship of ISSP success factors and realisation of benefits when ISSP is successful
5	Context	Review studies on the realisation of ISSP benefits, ISSP success factors and the relationship of ISSP success factors and the realisation of benefits

Based on table 1, the LR question is made Q1: How to explore the realisation of the benefits of ISSP and the factors that influence its success. Q2: What is the relationship between the realisation of ISSP benefits and success factors.

The selection of research is made by searching journals and proceedings, as well as a few manuscripts and books online in the publisher's database through Google Scholar, namely IEEEExplore, Emerald, Elsevier, and Proquest. The search year starts from 2009 to 2019. In the search, essential keywords such as "SISP," "ISSP," and "Information System Strategic Planning" are used. The use of logical symbols such as AND and OR are also used in search activities so that more articles are obtained and accurate.

Initially, around 76 relevant articles were found. After exploring the titles and abstracts of these 76 articles, then divided into three findings for SLR synthesis, 56 items are considered following the theme of the realisation of benefits or the value of ISSP found. There are 17 related articles found and relevant to the topic of the factors affecting ISSP success, and there are ten articles that are relevant to the theme of the relationship of ISSP success factors and the realisation of its benefits. The results of article reviews are then grouped according to related criteria.

### **Findings and Discussion**

The following table 2 is a mapping of the realisation of certain benefits from ISSP using SLR in the period 2009 to 2019. This mapping maps 56 relevant articles that have been found, then selected and evaluated. Mapping results can be synthesised so that the realisation of ISSP benefits, namely alignment totalling 21 articles or 37.5%, effectiveness totalling 14 articles or 25%, flexibility totalling 2 or 3.5%, capabilities totalling six articles or 10.7%, competitive advantage totalling 20 articles or 35.7%, performance totalling 20 articles or 35.7% and efficiency totalling seven articles or 12.5%.

**Table 2. Mapping of The ISSP Benefits Realisation**

No	Benefits Realisation of ISSP	Definitions	Reference
1	Alignment	Aligning strategies to business goals	(Wu, Straub, & Liang, 2015) (Benkhayat, El Manouar, & Sadok, 2015) (Luftman, Lyytinen, & Zvi, 2017) (El-Masri, Orozco, Tarhini, & Tarhini, 2015) (A. G. Silvius & J. Stoop, 2013) (Yang, Tanner, & Kuzic, 2011) (R. H. R. M. Ali, Mohamad, & Sudin, 2016) (Ferguson, 2012) (R. M. Ali, Haslinda, Mohamad, & Tretiakov, 2013) (Nezakati, Harati, & Elahi, 2014) (Karanja & Patel, 2012) (A. Silvius & J. Stoop, 2013)
2	Effectiveness	The ability to achieve the use of information systems to influence established strategies	(Nezakati et al., 2014) (Altameem, Aldrees, & Alsaeed, 2014) (Yang et al., 2011) (Kitsios & Kamariotou, 2018) (Altameem et al., 2014) (Sepehri, 2010) (R. H. R. M. Ali et al., 2016)
3	Flexibility	The ability to deal with dynamic environmental changes	(Awwad, Bello, & Abdullah, 2018) (Yang, Singh, Pita, & Storey, 2015)
4	Capabilities	The ability to mobilise and implement IT-based resources and other resources	(Yang et al., 2015) (Yang & Pita, 2014)
5	Competitive advantage	The ability to be superior in competing against its competitors.	(Giannakopoulos, Sakas, Vlachos, & Nasiopoulos, 2014) (Altameem et al., 2014) (Yang, Pita, & Singh, 2014) (Haki, 2011) (Yang et al., 2011) (Benkhayat et al., 2015) (Yang et al., 2015) (Awwad et al., 2018) (Kitsios & Kamariotou, 2018) (Kamariotou & Kitsios, 2016) (Zia-ur-Rehman & Riaz, 2017) (Kamariotou & Kitsios, 2017) (Budiyanto & Setyohadi, 2017)

6	Performance	Indicators of a good progress program towards the realisation of the targets set	(M. M. Saravi & M. H. Dabirian, 2016) (Kamariotou & Kitsios, 2016) (Luftman et al., 2017) (Blomqvist, Halen, & Helenius, 2015) (Wu et al., 2015) (Benkhayat et al., 2015) (Yang et al., 2015) (Gorla & Somers, 2014) (Zubovic et al., 2014) (Altameem et al., 2014) (Yang et al., 2014) (Awwad et al., 2018) (Harun & Hashim, 2017; Kamariotou & Kitsios, 2017) (Alsurori, Salim, & Almasni, 2017) (Harun & Hashim, 2012)
7	Efficiency	Time or cost savings	(Farantos & Koutsoukis, 2016) (Yang et al., 2011)

The following in table 3 is a mapping of specific factors that influenced the success of ISSP using SLR in the period 2009 to 2019. The mapping results obtained 17 articles of factors that influence the success of ISSP. The results of this mapping are the results of selection and evaluation. The results of this mapping are synthesised that PQ is 1 article or 5.8%, PSQ is six articles or 35.2%, SDQ is two articles or 11.7%, FC is two articles or 11.7%, CUL is five articles or 29.4%, USE is seven articles or 41.2% and SAT amounted to 2 items or 11.7%.

**Table 3. Mapping of The ISSP Success Factors**

No	Success Factors	Definitions	Reference
1	Product Quality (PQ)	The quality of ISSP outputs or products	(A. G. Silvius & J. Stoop, 2013)
2	Planning System Quality (PSQ)	ISSP functionality	(Bechor, Neumann, Zviran, & Glezer, 2010) (Huang & Palvia, 2017)
3	Service delivery Quality (SDQ)	Delivery quality of ISSP products and services	(Gorla & Somers, 2014)
4	Facilitators (FC)	Facilitator involvement in influencing the success of ISSP	(Yang et al., 2015) (Yang & Pita, 2014)
5	Culture (CUL)	Soft-aspect ISSP in influencing the success of ISSP	(Haki, 2011)
6	USE (USE)	The use of ISSP is associated with ISSP users	(Gorla & Somers, 2014) (Yang & Pita, 2014) (Yang et al., 2014) (Elysee, 2014) (Haki, 2011)
7	Satisfaction (SAT)	ISSP user satisfaction for ISSP products	(Gorla & Somers, 2014)

The following table 4 is a mapping of the realisation of the benefits of ISSP, which was realised by ISSP success and is influenced by the success factors of ISSP (Success Factors → ISSP Success → Benefit Realisation of ISSP) using SLR in the period 2009 to 2019. After completing the selection activities and evaluation of related articles, it can be mapped that it found ten items. The synthesis of mapping results from these ten articles is as follows PQ, PSQ, FC → Success → Alignment totalling three articles or 30%, PSQ, FC → Success → Effectiveness totalling two articles or 20%, FC → Success → Flexibility totalling 1 article or 10%, PSQ, FC, USE → Success → Capabilities totalling three articles or 30%, PSQ, FC, CUL, USE → Success → Competitive Advantage totalling four articles or 40%, SDQ, FC, USE, SAT → Success → Performance there are four articles or 40% and PSQ → Success → Efficiency amounts to 1 article or 10%.

**Table 4. Mapping ISSP Success Factors For The Benefits of Realisation**

No	Benefit Realisation of ISSP	Success Factors of ISSP							Reference
		PQ	PS Q	SD Q	F C	CU L	US E	SAT	
1	Alignment	√	√		√				(A. G. Silvius & J. Stoop, 2013) (Yang et al., 2015)
2	Effectiveness		√		√				(Yang et al., 2015)
3	Flexibility				√				(Yang et al., 2015)
4	Capabilities		√		√			√	(Yang et al., 2015) (Yang & Pita, 2014) (Yang et al., 2015)
5	Competitive advantage		√		√	√		√	(R. M. Ali et al., 2013) (Yang et al., 2014) (Zia-ur-Rehman & Riaz, 2017)
6	performance			√	√			√	(Gorla & Somers, 2014) (Yang et al., 2015) (Yang et al., 2014) (Kamariotou & Kitsios, 2016)
7	Efficiency		√						(Kamariotou & Kitsios, 2016)



## **Conclusion**

Research related to the realisation of ISSP benefits, ISSP success factors, and the relationship between ISSP success factors and the realisation of their benefits is still limited. It is seen that there is still little research found to be investigated and evaluated by the SLR method. The results of this study in the form of synthesis of the most dominant ISSP benefits realisation are alignment, competitive advantage, and performance. The results of synthesis related to ISSP's most successful factors are USE, PSQ, and CUL. The synthesis results related to success factors that influence the success of ISSP and realise the most dominant benefits are PSQ, FC, CUL, USE → Success → Competitive Advantage and SDQ, FC, USE, SAT → Success → Performance.

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