

## CHAPTER 17

# **ANALYZING THE EFFECTIVENESS OF AN ERP'S ORDER FULFILMENT PROCESS**

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### **ABSTRACT**

The purpose of this chapter is to investigate how an oil company's information system, STRIPES, has assisted in ensuring a competitive advantage for its customers through its operational capabilities. This system systematically examines the processes, from the point where the customer places their order to the time he receives their ordered fuel in their tank.

For this chapter, we will be applying the Delone and McLean information system success model in the context of operational order fulfillment in this oil industry. This study will rely on three research questions to allow us to explain the effectiveness and efficiency of this information system and provide us with a better understanding of how oil companies maintain its competitive advantage. The research methodology is a way of interviews and questionnaires for those that use this information system on a daily basis within the organization. A structured questionnaire was sent out to 50 operators within the organization which consisted of order fulfillment personnel and delivery analysts to terminal dispatchers and their respective

supervisors. Of these, we received responses from 26 personnel. In total, we looked at four features which include quality of service, customer deliverables, flexibility of system use, and service for order fulfillment.

The information collection will be done by way of interviews and questionnaires for those within the oil company who use the information system as part of their daily task. Our data analysis showed that the users were generally satisfied with the information system STRIPES and indicated that it improved their processing time of their day to day operations.

Our chapter will assist researchers and students with better understanding of the operations capabilities of information systems with STRIPES.

STRIPES is the information system software used in this oil company. It was initially introduced in 2007 in some regions as a means to “stay up to date” with the ever-changing business environment. The organization realized that their information system was becoming aged and to ensure that the customers’ (internal and external) demands were met, they needed to improve on this. These pressures have increased the interest in competitive priorities and operations capabilities among firms (Phusavat & Kanchana, 2007) and in the information systems required for effective management and decision-making (e.g., Sadeghi, Rasouli, & Jandaghi, 2016; Yang, Shi, & Yan, 2016). This information system is used by the operation function to monitor receipt of fuel into the bulk tanks along with shipments to end customers. It also looks at inventory controls, material balances, equipment measurement, and truck/fleet management, however these will be out of scope for this research chapter.

Our focus will be more around the process of supplying fuel to the end users—order fulfillment process. From the instant the customer places an order with the order fulfillment team, to when fuel reaches their tanks—ordering and dispatching. STRIPES has been implemented by this oil company to fundamentally transform their facilities and their business processes to enable step-change improvements, to allow for a competitive advantage.

Driven by their business methods, corporations set goals and objectives and implement action plans to attain these goals. In practice, we apply an operations management view with efforts that

are related to areas such as information systems, marketing, and management.

The main purpose of this research is to obtain an insight into how the current system has been in operation, its integrity and whether its operation capabilities have changed over time.

For the above reason, this research will use the Delone and McLean IS success model, using the qualitative approach to further deduce information and collation of data. We hope to provide a broader and detailed insight into effectiveness, reliability, dependability, and competitiveness of the STRIPE processes and moreover, any step of change improvements.

Features used in the Delone and McLean IS success model are system quality, information quality, service quality, use, user's satisfaction, individual impact, and organizational impact.

We will look at four of the six as mentioned above which are information quality, service quality, user's satisfaction, and organizational impact. However, these dimensions are interrelated simultaneously to each other.

We hope to present a comprehensive and systematic literature review within the operations strategy space, with a selected target that identifies the operations capabilities.

Three problems that were identified with this STRIPES system are: delivery shipment number that needs to be auto-generated before the tanker is loaded, weekend back-up team not only looks after the Pacific region but also Australia and New Zealand. The team works from home, hence at times give priority to their area and not our Pacific region. New customer details are communicated via email and then the system database are populated.

Understanding information system success is an ongoing area of interest not only to researchers but also to practitioners and management stakeholders. Such understanding helps highlight the value of the system and can serve as a basis for subsequent decisions regarding such systems. There are various approaches to assessing the success of information systems (IS). The popular and most validated measure is the DeLone and McLean IS success

model (D&M model). The D&M model was first propounded in 1992 and was updated with some modifications in 2003.

The D&M model has been applied and validated in a number of IS studies. For instance, it has been tested and validated in studies assessing the success of e-commerce systems, knowledge management systems, e-government systems, and much more.

## **LITERATURE REVIEW**

According to Chuang and Lin (2017), e-service capability and service innovation orientation increases information-value offering to customer relationships and organizational performances. This is all enabled through having an information system. In today's world, one of the major trends that is changing society and businesses, both internally and externally, is being able to have digital information. Chuang and Lin (2017) introduced a resource-based perspective that looked at technology, human and business resources to develop an e-service capability into the overall business process. This research analyzed aspects affecting information-value contributions in e-service systems and the resulting outcomes in customer relationship performances and organizational performances. This study validated that the resource-based perspective and innovation strategy can be linked to model the interactions between e-service capability, service innovation orientation, and information-value offerings (Chuang & Lin, 2017). There is broad understanding among creators, analysts, advisors, and scholars in the field of the board that advancement is the focal ability for all associations keen on augmenting the open doors for achievement in the 21st century (Pereira & Fernandes, 2018).

Sansone, Hilletoft, and Eriksson (2016) conducted a systematic investigation of operational capabilities within the operations strategy area. The outcome of their research was to enable researchers and other organizations to expand on their understanding of critical operations capabilities. This investigation was done by way of literature reviews. Several research papers were looked at to provide a picture of the various studies that had already taken place in the

field of operations capabilities. A number of operations capabilities were identified and included in a conceptual framework. This conceptual framework became the output of this research on operational capabilities. There were a total of seven highlights that were distinguished during the writing of the different articles officially distributed and these included cost, quality, conveyance, adaptability, administration, development, and condition. These basic tasks abilities give extra help to managers and associations intending to build up an activities methodology. Essentially, what this exploration gave was an establishment to directors and associations to use to build up their activities technique while remembering their associations destinations. Over the long haul, a superior and more profound understanding and sharing of information in regards to focused supremacy and tasks abilities can affect an associations achievement emphatically.

Another examination was directed to break down the impact of the data framework concerning the association's execution and business methodology. From a resource based point of view, the investigation saw how to help an inventive data framework methodology and a traditionalist data framework technique to give ease and separate business procedures. The after effects of this investigation from the Spanish sustenance industry uncovered the adequacy of inventive data frameworks methodologies in associations with minimal effort business techniques. To separate, imaginative data framework techniques neglect to reward the dangers of development in showcasing errands and in this way in business methodologies that depend on image separation. It was additionally discovered that the connection between data framework procedure and business methodology that are reliant on inventive separation is vague, anyway for the sustenance business the imaginative data framework technique was counterproductive.

The researchers concluded by providing guidance on strategic decision-making for developing information systems in organizations according to the organization's goals. According to Cram, Brohman, and Gallupe (2016), many publications focus on three information systems processes which include managing information systems

development, managing information system outsourcing, and managing security. Though, there is an emergence of information system processes and technologies with distinct control challenges, there is a need to cogitate the wider applicability of past control insights. This research chapter integrates existing information system control concepts and associations into a comprehensive information system control model. This model is applied to emerging information system processes to guide future research and practice. There are five control measurements that have been recognized through the survey of 65 powerful data framework control-related diary papers. These were then combined into a solitary, coordinated model, and connected to past data framework control discoveries to the difficulties of rising data frameworks by representing a progression of related proposals.

From this research, it was found that the current information systems control research is increasingly applicable and relevant to tomorrow's emerging information system opportunities and challenges (Cram & Wiener, 2018).

Therefore information security remains a critical activity within today's organizations in light of continued data breaches, systems outages, and malicious software (Cram, Proudfoot, & D'Arcy, 2017; Ghafir et al., 2018). Although outside factors (e.g., external hackers, natural disasters) pose a significant threat to the security of an organization's information and technology resources, the actions of employees are often viewed as being a greater security risk (Willison & Warkentin, 2013). Hence, efficiency and its implementation mechanism have been the general management and the core content of the traditional public administration research. With the evolution and the development of public administration research, combined with the availability of the increasingly rich content, the concept of efficiency has often been used in different context (Han & Sun, 2016).

Though the effects of digitalization on organizations has been studied separately but there has been very little research done on the overall "big" picture of the effects. However, the digitalization of society and business is marching forward at an ever-increasing

speed, calling for more converged research on the phenomenon (Oksanen, et al., 2018).

Information system is one of the important points which lead to the success of an organization, especially an organization that requires management and financial processing. The success of the information system is also important not only for organizations to improve their efficiency and productivity, but also for developers who are responsible for enhancing and improving the systems (Aboaoga, Aziz, & Mohamed, 2018).

A recent study reported that most organizations experienced an operational disruption, such as failure to ship product or close the books, lasting beyond one month while an IS was implemented or updated (Panorama Consulting Solutions, 2014). Specialized frameworks for generation are progressively computerized, which implies that they need to work dependably. In this way, the quickly extending idea of upkeep, where individuals would state that keeping up a procedure that permits the administration of the specialized condition and unwavering quality during the whole life cycle of the framework. Customarily, upkeep has been considered as a help work, non-gainful, and not a center capacity enhancing business.

However, it has been noticed that many manufacturing industries have used various approaches to improve maintenance effectiveness (Medaković, & Marić, 2018).

This hole is a key issue since advances in innovation bring about rising authoritative procedures that have not been utilized or experienced previously. Alongside these new innovation-based procedures comes the requirement for new controls, which drive execution towards authoritative destinations. Where research does not clearly articulate the most effective approaches to design and implement controls in these new processes, organizations are at an increased risk of investing in promising new IS initiatives that fail to live up to performance expectations (Cram et al., 2018).

Swamidass and Newell (1987) defines operations strategy as the effective use of operations strengths as a competitive weapon for the achievement of business and corporate goals. Corporate strategy leads to business strategy and subsequently to operations strategy.

Driven by their business strategies, firms set goals and objectives and implement action plans to achieve these goals. Management IS is a concentrated reflection of modern management modernization and the modernization is a comprehensive concept that is the science and the technology management system in people's ideology and behavior habits of modern fusion (Zhu & Gao, 2015). Powerful administration data framework is the cutting edge of broad thoughts and techniques, current association framework and propelled PC innovation and the natural solidarity of the advanced individuals, and that will be the most recent specialized and the administration aftereffects of the dynamic and the age of the idea of dynamic.

Data frameworks had changed and improved business forms and the exchange of data. They have made business increasingly effective by encouraging a ceaseless access of data. Data frameworks empower sharing of data and offer access to new types of working, for example, home working, and new types of associations. Data frameworks reshape the authoritative procedure and not the other way around. Data efficiencies identify with time and cost investment funds produced using data frameworks. Organizations are investing huge sums of money in IS projects expecting to get positive benefits and business turn around. However, most organizations are failing to get a favorable return on investment and to derive maximum business value from IS investments (Mondo & Musungwini, 2019). Many business leaders and strategy scholars agree that the ability to effectively manage information and knowledge within an organization has become very important and provides a basis of a competitive advantage. The strategic management discipline has long sought to elicit the sources of sustainable competitive advantage and there is a significant body of research focusing on this objective and so IS management field has exerted great efforts in the same direction, there are recent researches arguing that information technology (IT) alone is unlikely to be a source of sustainable competitive advantage as it is easily to be replicated by competitors. Hence, strategic IS capability pioneers the beginning of a new era of IS management, in which organizations

can continuously derive and leverage value through information (IS) that is implicitly embedded within the fabric of the organization.

Vital data (IS) capacity is a perplexing gathering of IT-related assets, information and abilities rehearsed through hierarchical procedures and engaging the association to use IS/IT resources for wanted destinations. To put it plainly, the IS ability is installed inside the texture of the association. Data has risen as a specialist of joining and the empowering influence of new intensity for the present association's in such powerful worldwide commercial centers. Business drifts in the associations of the 21st century have risen around provider and client connections, worldwide correspondences, learning the executives, focused insight, social development, and systems administration dependent on the Data Framework (IS). It has been understood that the absence of key arrangement between Data Framework (IS) and authoritative techniques has been oftentimes announced as a significant issue in overviews of business administrators and IT chiefs. Particularly, the hole among IT and business methodologies has been every now and again announced in creating nations. Hence, for the purpose of this study to enhance the strategic role of IS in the effectiveness and efficiency of the strategic design, the researcher developed a model proposing a positive relationship between three constructs: strategic IS capability as an independent variable, strategic design as a mediating variable, and organization's competitiveness as a dependent variable (Ibrahim & Abou Naem, 2019).

Delone and McLean (2016) wrote a monograph which suggested that researchers and practitioners face a daunting challenge when assessing the "success" of information systems. The aim of this monograph was to deepen the understanding of the researchers and practitioners of the multifaceted nature of IS success measurement which is driven by the ever-changing role and use of information technology. Delone and McLean (2016) in their monograph covered the history of information success measurement along with recent trends and future expectations for information system success measurement. They additionally distinguished the basic achievement factors that upgrade data framework achievement and gave an

estimation and assessment direct for professionals. The result of this exhaustive investigation of data frameworks achievement estimation was intended to further improve the estimation practice among analysts and managers.

According to Guha and Kumar (2017), in the age of big data, consumers leave an easily traceable digital footprint whenever they visit websites online. This digital age has organizations capturing the digital footprints of their customers to understand and predict consumer behavior.

Rezvani, Dong, and Khosravi (2017) proposed that organizations face substantial challenges in capturing value from their investments in strategic information systems. In like manner, supervisors in any association are a compelling wellspring of inspiration to shape the post-appropriation demeanors and practices of clients and the achievement of their separate data frameworks. This data framework writing was centered fundamentally around the job of senior administration and notional clarifications of the job of managers in advancing proceeded with utilization of data frameworks. Taking a gander at transformational authority hypothesis and the data framework duration (ISC) model, this examination conjectures a theoretical model which separates the impact components by means of which various kinds of administration practices impact the accomplishment of data frameworks. The information that was gathered approved this speculation. The specialists additionally discovered that transformational authority practices of directors' impact the clients' valuations of fulfillment and evident handiness. This investigation takes into account different enquiries about to progress on the job of administration practices of managers considering the estimation of data frameworks. The examination likewise recommends compelling methodologies for advancing proceeds with use of mission basic frameworks, for example, venture frameworks and including an incentive from firms' IT speculations.

While the use and cost of the board data framework (MIS) have ended up being incredibly recognizable, little thought has been paid to assessing and conferring system sufficiency. Appraisal of system sufficiency is inconvenient as a result of its multi-dimensionality, its

quantitative and abstract points, and the various, and consistently conflicting, evaluator viewpoints. This article gives a blueprint of what structure suitability means and how it should be evaluated. It is the first of two articles to appear in consecutive issues of the MIS Quarterly. Starting with the significance of structure completeness, this article examines evaluation of system reasonability to the extent a hypothetical movement of system targets. The hierarchy is used to discuss problems in, and recommendations for, evaluating system effectiveness, and to compare MIS evaluation approaches (Hamilton & Chervany, 1981).

The second article characterizes and compares the evaluator viewpoints on system effectiveness for decision makers in several functional groups involved in MIS implementations—user, MIS, internal audit and management. Effective management IS are the modern management ideas and methods, modern organization systems and advanced computer technology and the organic unity of the modern people, and that will be the latest technical and the management results of the dynamic and the generation of the concept of dynamic.

Ten years prior, it was exhibited as the DeLone and McLean data frameworks (IS) achievement model as a structure and model for estimating the complex dependent variable in IS exploration. Numerous exchanges were made on the significant IS achievement investigating commitments of the most recent decade, concentrating particularly on research endeavors that apply, approve, challenge, and propose upgrades to our unique model. In view of our assessment of those commitments, we propose minor refinements to the model and propose a refreshed DeLone and McLean IS achievement model. Talk will be on utility of the refreshed model for estimating web based business framework achievement. Finally, we make a series of recommendations regarding the current and future measurement of IS success (DeLone & McLean, 2003).

The measurement of data frameworks (IS) achievement or viability is basic to our comprehension of the worth and adequacy of the Information system the executives activities and IS speculations. From that point forward, about 300 articles in refereed diaries have

alluded to, and utilized, this IS achievement model. The wide ubiquity of the model is solid proof of the requirement for a thorough system so as to incorporate IS look into discoveries. The D&M IS achievement model, however, distributed in 1992, depended on hypothetical and observational IS research directed by various specialists during the 1970s and 1980s. The jobs of IS have changed and advanced during the most recent decade. Additionally, scholastic investigation into the estimation of data framework adequacy has advanced over a similar period.

## **RESEARCH QUESTIONS**

1. What are the operations capability features?
2. What are the operations capabilities?
3. How has the features and operations capabilities changed over the years?

## **METHODOLOGY**

The methodology that was applied by this study was the DeLone and McLean IS success model. We used this model to acquire information and determine conclusions about the effectiveness and efficiency of the information systems, termed as STRIPES by the Oil company.

- *System quality*: We investigate the different inputs and characters of the information system. In this research we look in the ease of use, its flexibility, the system features, and response time.
- *Information quality*: We look at the characteristics of the system's output. This research paper further sees the output of information on the operational side of things with its correctness, timeliness of information collected, and its usefulness generated by the oil company system in use.
- *Service quality*: We look in the back up team with its quality in support of the information system. Here we examine the technical team and its responsiveness, the system inbuilt, and other reliability of the system.

- *Intention to Use or Use:* This feature was around how the information system is used. In order to get a better picture of how this is determined, we looked at the actual usage of the information system and to some extent the frequency of use. The aim to utilize or utilize is an elective measure to use for some other setting, contingent upon the idea of the data framework. Since most associations have a data framework set up which should be utilized for business activities, this exploration evaluated the helpfulness recognition.
- *User satisfaction:* For any data framework to be fruitful, this is a significant element to be estimated, frequently estimated by generally client fulfillment. This is evaluated in this examination by catching by and large client fulfillment with the oil business' data framework.
- *Organizational Benefits:* This is another feature that is equally important for a successful information system. Net advantages of the data framework comprise the degree to which a data framework adds to the accomplishment of the organization.

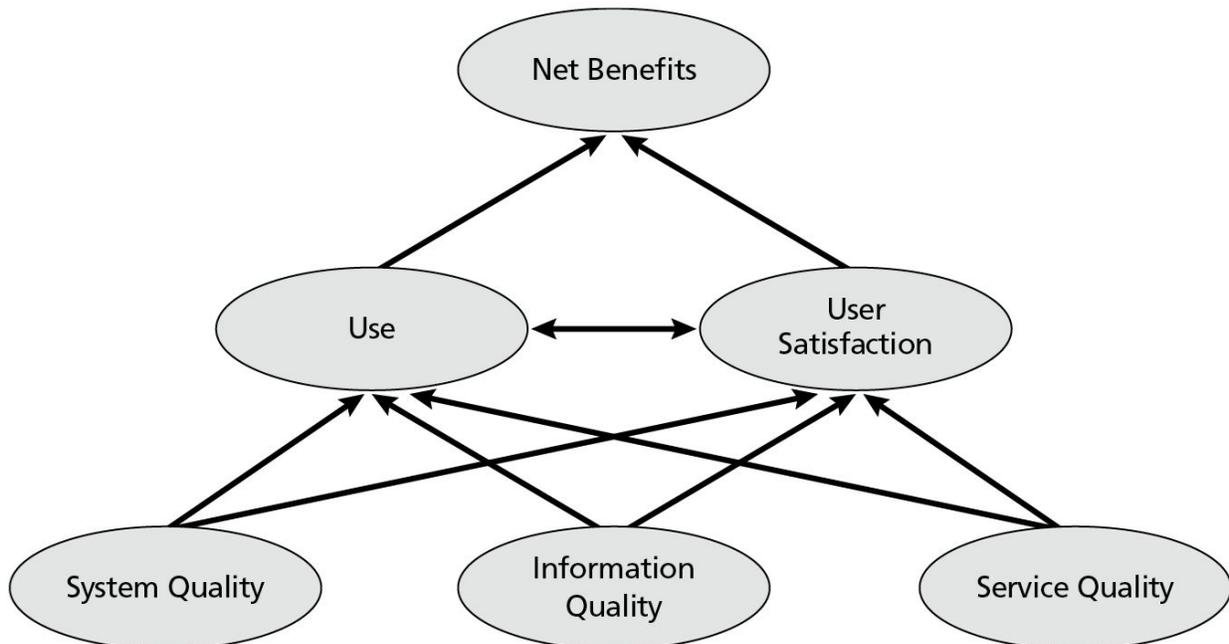


Figure 17.1

- Positivity affects system quality to use.
- Positivity affects system quality to user satisfaction.
- Positivity affects information quality to use.
- Positivity affects information quality to user satisfaction.
- Positivity affects service quality to use.
- Positivity affects service quality to user satisfaction.
- Positivity affects user satisfaction.
- Positivity affects perceived net benefit.
- Positivity affects user satisfaction to perceived net benefit.

As highlighted in our abstract we had decided to look at four features which were information quality, service quality, user satisfaction, and organizational impact while using the Delone and McLean information system success model. We found that all six features are interrelated and work simultaneously as shown in Figure 17.1.

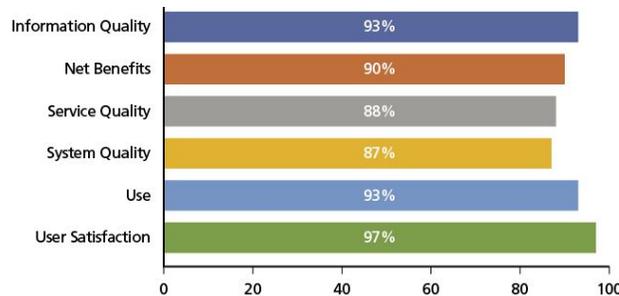
## **RESULTS**

From our three research questions, we developed a questionnaire to provide us an insight to how the IS is used within this organization. A structured questionnaire was sent out to 50 operators within the organization from five different markets, that is Fiji, Australia, New Zealand, Thailand, Papua New Guinea, and New Caledonia which consisted of order fulfillment personnel and delivery analysts to terminal dispatchers and their respective supervisors. Of these, we received responses from 26 personnel. Of the 26 we had interviewed five personnel from the Fiji market.

An analysis of our questionnaire can be found in Table 17.1 and represented in Figure 17.2 shows the assumption on the acceptance of the information system used by the operators of the organization in all areas from quality of service, customer deliveries, flexibility of the system use, and the service for order fulfillment is effective and efficient.

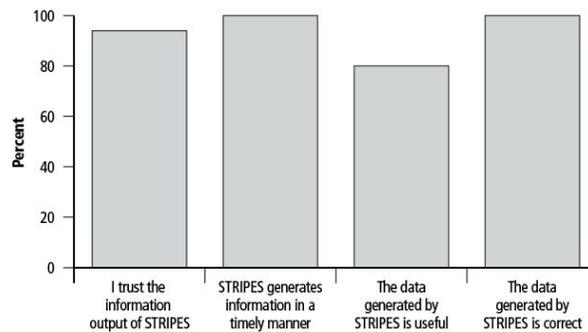
<b>TABLE 17.1</b>			
Features	Total	%	Average
Information Quality	451	347	93%

I trust the information output of STRIPES	122	94%	
STRIPES generates information in a timely manner	130	100%	
The data generated by STRIPES is useful	104	80%	
The data generated by STRIPES is correct	130	100%	
<b>Net Benefits</b>	<b>597</b>	<b>459</b>	<b>90%</b>
STRIPES facilitates easy access to customer information	130	100%	
STRIPES use will cause improved decision making	127	98%	
STRIPES will enhance communications among workers	103	79%	
STRIPES will help overcome the limitations of paper-based system	107	82%	
Using STRIPES will cause an improvement in fuel delivery	130	100%	
<b>Service Quality</b>	<b>459</b>	<b>353</b>	<b>88%</b>
STRIPES can be relied on to provide information as when needed	130	100%	
The output of STRIPES is complete for work processes	116	89%	
The overall design in place is adequate to support STRIPES	115	88%	
There is adequate technical support from backup team	98	75%	
<b>System Quality</b>	<b>451</b>	<b>347</b>	<b>87%</b>
I find it easy to get STRIPES to do what I want	104	80%	
I find STRIPES easy to use	130	100%	
Learning to use STRIPES was easy for me	87	67%	
STRIPES is flexible to interact with	130	100%	
<b>Use</b>	<b>484</b>	<b>372</b>	<b>93%</b>
I find STRIPES useful in my job	116	89%	
Using STRIPES enables me to complete tasks more quickly	120	92%	
Using STRIPES has improved my job performance	125	96%	
Using STRIPES has made my job easier	123	95%	
<b>User Satisfaction</b>	<b>378</b>	<b>291</b>	<b>97%</b>
I am generally satisfied using STRIPES	123	95%	
I am satisfied with the functions of STRIPES	130	100%	
STRIPES has eased work processes	125	96%	
<b>Grand Total</b>	<b>2,820</b>	<b>2,169</b>	<b>91%</b>



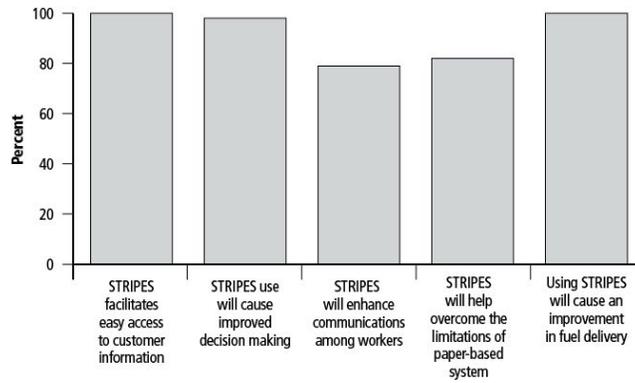
**Figure 17.2** Features of ratings.

On information quality, the operators agreed that the information system, STRIPES, generated information in a timely manner and that data was correct (See Figure 17.3). Whereas 80% did not see the usefulness of the data generated as they were using STRIPES in its operational sense rather than in an analytical sense.



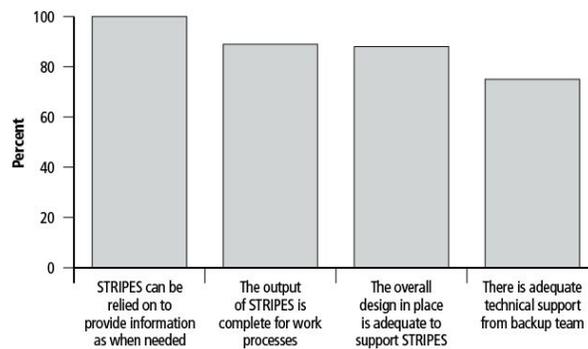
**Figure 17.3** Information quality ratings.

With regards to net benefits, the operators understood that using the information systems STRIPES improved their workflow in terms of fuel delivery, this also allowed for easy access to customer information (Figure 17.4). However, 79% noted did not agree that STRIPES system was being fully utilized with regards to communication amongst workers as listing of a new customer details are communicated via email then the system database is populated.



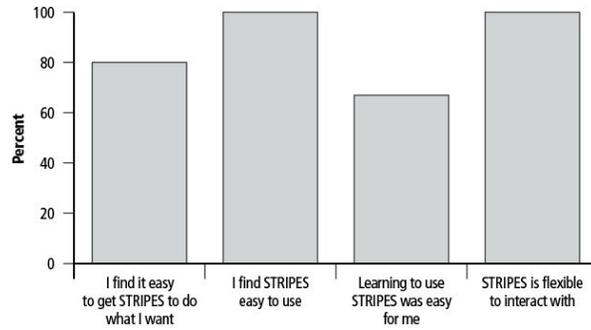
**Figure 17.4** Net benefits ratings.

Figure 17.5 shows that while STRIPES is reliable when providing information when needed at 100%, 75% confirmed that the weekend backup team does not always respond on time within the shortest time possible. During the weekends, the backup team looks after other regions such as New Zealand, Australia, PNG, and Fiji. In most cases the Fiji team is having to wait for their responses as they tend to look into their regions first.



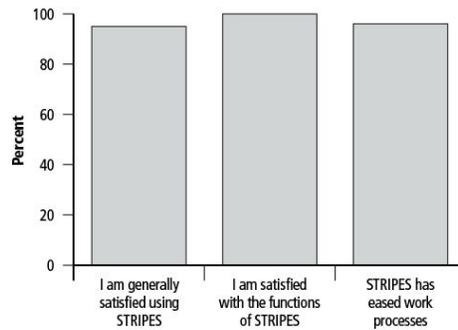
**Figure 17.5** Service quality ratings.

For system quality 100% agreed that the STRIPES system is user friendly, however 67% disagreed as they were new to using the STRIPES system (see Figure 17.6).



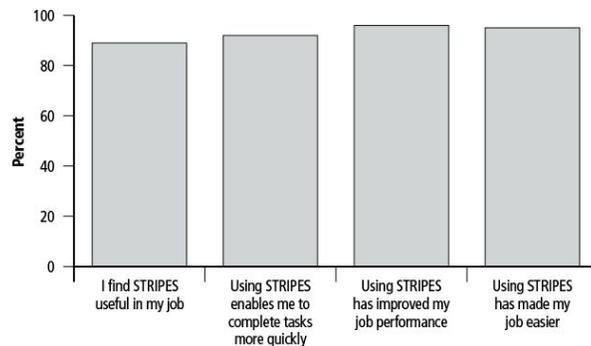
**Figure 17.6** System quality ratings.

User satisfaction, overall 97% agreed that the STRIPES system eased the work processes, they were satisfied with its functions and in general they were satisfied (see Figure 17.7).



**Figure 17.7** User satisfaction ratings.

Use feature, overall 93% agreed that the STRIPES system assisted in their daily jobs in completing tasks more quickly, this also improved their job performances and that STRIPES was very useful in their work line (see Figure 17.8).



**Figure 17.8** Use ratings.

## DISCUSSION

Our research confirms that the Delone and McLean IS success model in the oil industry is valid. Our findings give credibility to the model's constructs and provide an interrelationship within the six features discussed as part of the model. Since this is the case, the model shows that the information systems used by this oil industry is an acceptable one resulting in a fit for use and we can validate its effectiveness and efficiency to measure the success of the information system.

As shown in Figure 17.1, we see that there is a connection between each of the features highlighted as part of the Delone and McLean information system success model. We identified that there is a direct connection between the system quality, information quality, and service quality with its use. There is also a relationship between these features with the user satisfaction feature.

System quality has a positive effect on use. Similarly, information quality and service quality both have positive impacts on the use. These features in turn have a similar positive impact on user satisfaction. Having said this, the use of the information system and the user satisfaction go hand in hand as they are interconnected with each other. The use and user satisfaction showed up as high and acceptable under the data analysis especially because of the high degree to which the information systems functionalities have been integrated with each other. The high level of use and user satisfaction results in a positive effect in net benefits.

We also found that the efficiency of the information system decreased the cycle of time for processing customer information which led to better decision making by management. This enabled the management team to provide a better customer service with the resources that were available with minimum disruption to the overall performance of the organization.

As discussed in the findings, shipment number has to be generated to enable a delivery, the weekend backup support team is not always reliable, and the customer set-up initiation is done via emails prior to being entered into the system (i.e., system not being fully utilized). While the system is acceptable and user friendly, there are areas that we feel needs to be improved as mentioned above.

With this research, it does contain some limitations. The survey conducted included mainly operators and we only received 52% of the questionnaires that we sent out. We also did not take into consideration the other users of this information system hence our data is purely based on one STRIPE user and that being this organization.

## **CONCLUSION**

In conclusion, this chapter has validated the Delone and McLean information system success model in the framework of an oil industry. In the data analysis, we find that STRIPES is acceptable by its users and has a number of advantages within its functionality which makes it an efficient system. The system quality, information quality, and service quality have a positive effect on user satisfaction and use. Use and user satisfaction in turn have a positive influence on organizational benefits.

## **RECOMMENDATIONS**

For further research, data collection has to be from multiple users of STRIPES to enable a better understanding of how the information system could be utilized. Recommended organizations should identify the competitive advantage and strategic value that they can gain through an information system, such as eliminating losses through effective use of systems and tools by allowing the user to effectively use the system.

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