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# The Challenges of IT Shared Services to Increase Service Performance in Public Sector

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## ABSTRACT

The management support service era has changed from standalone, distributed and centralised to Shared Services. The Shared Services strategy has become the most favored option for many organisations nationwide, and significant benefits and drivers will follow from adopting this strategy. Previous studies have primarily concentrated on the definition, motives, drivers and benefits of Shared Services. However, studies on the issues and challenges for specific types of Shared Services are still scant. Therefore, a literature review and interviews were conducted to identify the specific challenges related to the motives for IT Shared Services (ITSS). Interviews with the ITSS project team are chosen as the main strategy in this study to get rich information on ITSS implementation based on a real scenario. Previous studies identified five motives for the adoption of Shared Services (cost saving, increased service performance, focus on core business, improved organisational learning and reduced redundancy) and this study will focus on the challenges to the increase in service performance. This study reveals 14 challenges with regard to service performance improvement motives, categorised as strategic and organisational, technical, political and economic. Findings from this study will inform any organisation that is interested in implementing ITSS to be ready with all challenges related to the increase in service performance. Awareness of the challenges will help future ITSS organisations achieve smooth and successful implementation.

**Key words:** Shared Services, IT Shared Services, Motives, Challenges, Service Quality

## 1. INTRODUCTION

Shared Services is one of the popular strategies for managing Information Technology in recent times. Most of the organisations that move to Shared Services from previously distributed or decentralised systems gain a more effective and efficient service delivery. The importance of IT in this digital economy era has led it to become a crucial service for any organisation to be competitive. The challenges are not only to ensure the availability of technology but, most importantly, managing the operation to ensure the efficiency of service delivery to customers. Reference [1] defined Shared Services as follows:

> *"Shared Services is a collaborative strategy in which a subset of existing business functions are concentrated into a new semi-autonomous business unit that has a management structure designed to promote efficiency, value generation, costs savings and improved service for the internal customers of the parent corporation"*

Shared Services are managed by the organisation or sub-unit of the organisation called Shared Services Organisation (SSO). It is responsible to ensure the efficient service delivery of shared services to the other sub-unit organisation. They have to ensure the operation of shared services meets the motives of its implementation. Shared Services has been implemented widely in the public sector such as Australia, Germany, Canada and Netherland with the main motives to reduce cost and increase service performance [2]. Malaysia is also not left behind and has since started implementing shared services nationwide in 2010 [3]. It was implemented as a strategy to reduce the cost but at the same time to increase the service performance.

Shared Services has become the choice of many organisations, however, there is still scant research on the challenges for specific types of Shared Services. This study will explore the challenges specifically related to IT infrastructure Shared Services (ITSS). Furthermore, our study specifically discusses the challenges related to the increase in service performance or service efficiency for ITSS which has not yet been studied [2], [4]. ITSS team must well prepared to be successful in implementing and managing the ITSS [5].

The two main motives for Shared Services implementation are cost saving and increased service performance [6], [7]. These two main motives are interrelated – the lack of a sufficient budget will impact the service quality especially in businesses related to IT. As we know, the fast changes in technology and the dependency of all businesses on ICT in the digital era are really big challenges for the SSO management. So, this paper will discuss the challenges faced by the SSO team to achieve efficiency in ITSS. To address this gap in the literature, the research question addressed in this paper is as follows: What challenges do SSO encounter to meet the increased service efficiency for IT Shared Services? This paper is organised as follows. In Section 2, we review the literature on the motives and challenges of managing Shared Services. In Section 3, we discuss our research method. In Section 4, we summarise and discuss our findings. Finally, we present our conclusions in Section 5.

## 2. LITERATURE REVIEW

This part of the paper will discuss the literature on the motives for Shared Services and its challenges.

### 2.1 Motives of Shared Services

The motives or drivers are the most important elements for an organisation in choosing any strategic initiatives, including Shared Services. Based on the literature, we found that the paper studies on motives, benefits or drivers of Shared Services produced similar results [6]–[8]. Reference [6] identify the motives as an improvement of service delivery, service quality and consistency, exchange of internal capabilities and better access to skilled and external resources. Reference [8] listed the benefits of shared services in IS as cost reduction, leveraging resources, professional service delivery, customer orientation, business/IT alignment, access to expertise and technology. Whereas, the recent review by [7] identified that cost saving, increased service performance, reduced redundancy, focus on the core business and improved organisational learning are the drivers for Shared Services in general. The findings clearly demonstrate that cost saving, improved quality of services or improved efficiency/ effectiveness/ productivity are the main motives or drivers for Shared Services.

### 2.2 Challenges of Shared Services

Reference [9] summarised the previous studies on the challenges for Shared Services from four perspectives – efficiency, resource dependency, population and knowledge. The challenges were identified for all types of Shared Services and not specifically for ITSS. Recent research by [10] highlights the managerial challenges for ITSS in a public university. However, the research focuses on challenges during the transition to Shared Services. A summary of the research related to the challenges for Shared Services is listed in Table 1.

Previous studies on challenges for shared services explained the importance of a variety of aspects involving human, process and technology. Among the important aspects are maintaining the service level quality after the transition to shared services which is related to standardizing the process and good implementation strategy. Resource is also one of the main challenges that needs attention by SSO to ensure the service quality through customer-centric focus. Reference [19] discuss and categorise the factors affecting the management challenges for outsourcing information systems (IS) into 4 challenges categories: (1) strategic and organisational, (2) political, (3) technical, and (4) economic. Those categorized are suitable for this study as ITSS is in the IS domain and it is also one of the outsourcing alternatives [20].

**Table 1:** Summary of Challenges for Shared Services

| Challenges | Authors |
|---|---|
| Maintaining service level quality | [9], [11], [12], [13] |
| Developing standardized processes | [9], [10], [11], [12], [13], [14] |
| Developing an implementation strategy | [9], [11], [12], [13] |
| Obtaining resources | [13], [15], [14] |
| Ensuring alignment with the parent organization | [4], [13], [14] |
| Dealing with power struggles | [16], [17], [18] |
| Changing organizational culture | [10], [14] |
| Creating customer-centric mindset / Establishing a sense of urgency | [10], [18] |
| Generate additional value beyond efficiency - offering enhanced quality and/or differentiated services | [18] |
| Strong project management practice | [13] |

## 3. METHOD

This study adopted two methods – a literature review and interviews. In order to gain the real phenomenon of Shared Services, we chose three types of IT infrastructure Shared Services (ITSS) in the Malaysian Public Sector (MPS) as a case study. ICT networking, data centre and unified communication infrastructure are the main ITSS for MPS implemented seriously since 2010 [21]. We chose the cases as it was seriously implemented nationwide in Malaysian Public Sector with the motives to reduce cost and improve efficiency [22]. Each of the cases is managed by a different team in MAMPU and shared services provided to all the ministry and agency in MPS. The objective of the case study was to discover the challenges face by the SSO to increase ITSS performance.

The literature was from previous research related to the motives and challenges for Shared Services and documents such as policy, guidelines, incident reports and minutes of meetings from the case study. This helps the authors to understand the previous findings related to this study and cases. This was then followed by interviews with informants from top management, middle management and operating staff for three main types of ITSS in MPS. Semi-structured questionnaire is used during the interviewing session. The interviews will give an insight into the real challenges faced by the SSO in managing the ITSS that can give rich information on ITSS challenges and motives.

First, the author undertook interviews with the SSO team. Nine informants were selected through purposive and snowball sampling. The informants were selected from every level of SSO and included the project director, chief data centre consultant, project manager, project executive and support staff. The author gained a good commitment from all the informants and all of them were interviewed face to face. All the interviews were recorded and transcribed. Details of the informants are coded as in Table 2 below

**Table 2:** List of Informants

| **Informant Code** | **Position and grade** |
|---|---|
| PD | Director, SSO, Grade JUSA C |
| PSC | Chief Government Data Centre Consultant, Grade JUSA C |
| PM1 | Project Manager, Grade F54 |
| PM2 | Project Leader, Grade F52 |
| PM3 | Project Leader, Grade F52 |
| PM4 | Principle Senior Assistant Director, F52 |
| SE1 | Senior Assistant Director, F44 |
| SE2 | Senior Assistant Director, F44 |
| SE3 | Assistant Director, F41 |

Then, the findings from this study were coded and categorised according to the taxonomy developed by [19] with regard to Shared Service implementation: (1) strategic and organisational, (2) political, (3) technical, and (4) economic. The taxonomy also adopted by [8], [23] highlights the challenges of Shared Services implementation in general. It is also used by [24] to categorise the shared services motives.

## 4. RESULT AND DISCUSSION

We presented managerial challenges of that related specifically to ITSS. In this case study, the customers of ITSS are ministries/agencies in Malaysia Public Sector. The challenges are recorded based on the motives to meet service efficiency. All the informants agreed that it is a key motive for ITSS implementation. ITSS makes sure of ease of end-to-end management for the public sector. Each of the informants gave their feedback based on experiences in managing the implementation and operations of ITSS. We reveal 14 challenges uncovered by our research, categorised as (1) strategic and organisational, (2) political, (3) technical, and (4) economic. The related literature is present to support the findings from our research. Table 3 presents a summary of the 14 challenges related to an increase in service performance for ITSS.

**Table 3:** Summary of ITSS Managerial Challenges Toward Service Performance Efficiency

| **Category** | **Managerial Challenges** |
|---|---|
| **Strategic and organizational** | • Standardisation, coordination and integration (processes, IT, personnel)<br>• Procurement Policy (structure, procurement process)<br>• Determination of Performance indicator (Service Level Agreement (SLA), maintain service level quality)<br>• Struggle for required resources (human resource, systems/tools)<br>• Comprehensive contract content |
| **Technical** | • Technology availability (technology implementation / new technology)<br>• Required for multi skill expertise (technical skill/ competency for new services/ technology implementation)<br>• Design Complexity (high secure network for certain ministry)<br>• Monitoring and avoiding duplication of activities<br>• Developing standards for performance measurement (service quality -availability, reliability) |
| **Political** | • Top management support at Ministry/Agency (Agreed on the Shared Services policy, enforcement of the use of ITSS and avoidance of conflicts)<br>• Change management and training program |
| **Economic** | • Sufficient budget (for new services and security)<br>• Competitive cost (single vendor and cost based on service availability not pay per use) |

The three types of ITSS are managed by separate teams in a single SSO. ITSS serve all ministries and agencies in Malaysia Public Sector. Each ITSS has a single appointed vendor. The Shared Services stakeholder consists of the SSO team, top management, customers and appointed vendors [8]. The results demonstrate that all the stakeholders play an important role to ensure that SSO can increase service performance for ITSS. However, it is not easy to fulfil all the agencies/ customers' requirements. The limitation of facilities or technologies and budget are the main issues for the SSO. Cost savings are really challenging and will impact the quality of service and, vice versa, service improvement is difficult to achieve with a limited budget. The explanation for each, with the informants' supporting statements, are presented:

### *a) Strategic and organizational Challenges*

Standardisation, coordination and integration are very critical to the success of ITSS implementation. Strong strategic direction and an established comprehensive organisational structure ensure that the motives are achieved. It is difficult to measure the service quality of ITSS. It depends on many factors and commitment from all the ITSS stakeholders. One way is to determine the best Service Level Agreement (SLA). Customers usually require high SLA without classifying their needs according to criticality. The decision as to the SLA to choose will impact the cost of operations. At the early stage of implementation, the SSO team also struggles for human resources to manage the new work scope and entertain the increasing number of customers. Informant SE1 stated that "there are no additional resources to the existing SSO organisation, which impacts the quality of ITSS implementation. It contributes to the lack of monitoring that causes some unused facilities and bad response times to customer requests."

Implementation of ITSS happens within the specified timeframe but surprisingly with no additional team. It causes some weaknesses and causes the SSO employees stress: "We still cannot meet the various requirements from the ministries/agencies. A high workload caused the service to not meet an urgent customer request" (Informant SE1).

The informants commented that by implementing Shared Services, the IT staff from the ministry/agency needed to relocate to the SSO. This study also identified that basic systems such as the service desk system for managing one of the ITSS was not ready and caused problems in processing customer service. One of the informants stated that:

"There is no system to record incidents or service requests by customers via private channels – whether by e-mail, WhatsApp or call. Sometimes we forgot because of the high work volume" (Informant SE2)

Another challenge raised by many of the informants (PD, PSC, PM1, PM2, SE1, SE2) related to policies and the procurement procedure. In order to fulfil the new request and more new facilities, the SSO needed to go through the standard procurement process – a lengthy process that can take a year or more. The informants proposed flexible procurement in order to meet customer requests beyond the facilities that are ready to be served. The implementation of new technologies means that new knowledge and skills are required, which means that the vendor is dependent on the product principal. Some of the new services are an unexpected need for the business and customers and any failure during installation or configuration really impacts performance:

"The vendor has to wait 2–3 days for the principal expert feedback and, bound by warranty, cannot change the configuration in case there are unexpected consequences and the problem gets worse than it was before" (Informant PD).

### *b) Technical Challenges*

The need for services at new locations increases nationwide. Usually new technology implementation requires specific time for designing, preparation and pilot testing before it can be offered as a new service and implemented. Implementing new technologies means new knowledge and skills are required, which means that the vendor is dependent on the product principal. Another challenge that the SSO team commented that:

"ITSS cannot fulfil all customer requirements as requested. For instance, Agency A requested that high end facilities, but we can only offer the standard facilities" (Informant PM1).

The centring of ITSS managed by SSO enables agencies to focus on their core business. However, if the ITSS fails or is disrupted, the resolution may take time and there may follow a lengthy process to acquire new technologies or services. This will impact the core business of customers. Informant PD suggested that "We should implement flexible tender – list out the request and deliver the request within 2–3 months. For instance, when we supplied and installed 200 racks at Kulim agency office, 50 racks were not confirmed as occupied. Hence, it became an unnecessary resource. If we have more flexibility, it is slightly difficult to manage and the cost may vary. But we can save and optimise our resources.

We identified that the SSO team struggle to equip themselves with multi-skill competency such as financial, customer services and technical expertise. These skills are important to ensure the service quality of ITSS. However, in ITSS there are various issues and problems that mainly relate to incidents and attacks on security. But we have constraints in expert feedback turnaround with appointed vendors, as they rely on the product /service principal, which is normally located overseas.

"The vendor has to wait for feedback from the principal for 2–3 days. Bounded by contract, the configuration cannot be done because there is a significant consequence if the problem gets worse than it was before" (Informant PSC). Furthermore, SSO has no choice and "Outsourcing should have remained because of the lack of knowledge. We are not fully utilising the internal expert service because the product is bought by us, but installed by others – which we cannot touch or repair because of warranty" (Informant PD).

Many customers demand the latest available technology or request service upgrades. SSO found that many of the service requests are not realistic based on current utilisation and need. Customers just request the latest technology without monitoring the utilisation of provided services or cost implications. The SSO team have to evaluate hundreds of requests monthly and prepare the financial impact. IT services offerings are dependent on the latest technology to remain competitive in the market. The high cost of new technology cannot be controlled and the needs for it will increase the cost, especially when it involves the need for advanced security tools. (Informant PM2) stated that:

"…customer may request non-existence service, for all that SSO should accept the request and deliver. For example, government Dropbox, even though this service is not critical, the customer has applied for it due to its availability in the market"

### *c) Political Challenges*

The success of each innovation is dependent on the commitment and support of all stakeholders, especially top management. In this case study, change management starts with all the chief information officers (CIO) in the ministry to ensure good buy-in for ITSS implementation. This is followed by sufficient training of their IT personnel and relevant staff. The awareness program is conducted to ensure each of the customers knows their role and responsibilities and follow the process for ITSS implementation according to the Shared Services policy. Some customers find it easy to follow the instructions, but some show reluctance because they feel insecure and a loss of power [16] over their own IT services. The IT staff at the ministry are also worried about being transferred to the SSO once they joined the ITSS: "Actually with ITSS, IT staff from the ministry are to be located at the SSO, but it has not happened and this has caused increasing workload to the existing personnel at SSO" (Informant PM2).

### *d) Economic Challenges*

Meeting the service performance is always dependent on sufficient resources – personnel and budget – with good governance. Insufficiency of the core resources cause the SSO failure to meet the motive for service improvement for ITSS. Although cost saving is also one of the main motives for ITSS, with the nature of rapid change of technology, sufficient budget [23] should be allocated for it. However, the SSO team found: "services are provided according to the request of customers based on their current services, but when monitoring is done some of the services are underutilised or unused. This is wasteful – we pay based on subscribed services not pay per use as agreed in contract" (Informant PM1)

On the other hand, "it is a challenge to the SSO team to monitor thousands of network lines and do the necessary processes such as downgrading" (Informant PM1). ITSS also appointed a single vendor with a long-term contract. This meant that "sometimes the vendor was too pleasant and not competitive enough to give efficient services for government" (Informant PM3).

## 5. CONCLUSION

This study gives a real scenario implementation of three types of ITSS which are important in Malaysian Public Sector. It gives an overview of the challenges that need to be addressed by SSO top management in order to ensure successful implementation of ITSS by increased service performance/efficiency. The implementation to establish the Shared Services needs to deeply understand the implementation process. The top management should be alert to the challenges and the impact on Shared Services performance if not resolved. SSO tries hard to give the best service and they agreed that customers who are willing to join the ITSS must get a better service than from their previous own-managed services. This can leave managers unaware of the difficulties that may be encountered during the implementation. We believe the challenges faced for ITSS might be different compared to the other Shared Services.

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