

**AFFECT OF THE PUBLIC PROCUREMENT  
PROCEDURE ON THE PROCUREMENT EFFICENCY  
OF AIRPORT AND AVIATION SERVICES (SRI  
LANKA) LTD.**

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Master of Business Administration in Supply Chain Management

Department of Transport and Logistics Management

University of Moratuwa  
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## DECLARATION

I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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The above candidate has carried out research for the Masters Dissertation under my supervision.

Name of the Supervisor: Dr. Varuna Adikariwattage

Signature: .....

Date: .....

## ABSTARCT

Today supply of goods or services to the customers is more complex than the past under a competitive market. The reason for this scenario is the lack of resources prevails in the earth. Therefore this lack of resources should manage properly to satisfy the customer's demand. However if the goods or services is not provided at the right time to the customer, the customer has to suffering of not having his desired requirement at the time of he really need it.

Any country in the world, the government handles the people's funds. It is a rule which is come from ancient time. Therefore the king or the government should responsible for these funds. Under these circumstances, government should carefully manage these funds (This Funds ultimately transfer as benefits for the nation) if not government will be rejected by the nation

Under this scenario, there should be proper methods when the government utilizes these funds. When we consider the public procurement, there is a procedure which is guided by National Procurement Guild Lines with Procurement Manual in order to utilize the public funds carefully.

But as per the customers' perception, they always not satisfy with the time that they are provided the essential item by the government. Complain is the government is unable to supply the goods or services at the right time. Unless the government organizations purchase the needs at right time they will be unable to supply the needs to the consumers at the right time.

The Airport and Aviation is the owner and the operator of all civil airports in Sri Lanka, therefore the procurement of AASL should be more efficiency and effectiveness to achieve the common objectives. The failures of procurement performances of AASL align to fail the service quality which create more complain both local and foreign passengers and it create a impossible background to obtain a best value from the airport uses and it may occurred reducing the no of interesting carriers for the airports. However, in this research my object is find that is there any delay is raised when the AASL is involving purchasing with the public procurement procedure. Study the procedure and guild lines, collecting data from AASL and selected several private organizations; analyze those data to find a better result and recommend some solutions for the raising problems.

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## LIST OF ABBREVIATIONS

AASL	Airport and Aviation Services (Sri Lanka) Ltd
CAPC	Cabinet Appointed Procurement Committee
GOSL	Government of Sri Lanka
GRN	Good Receiving Note
LT	Lead Time
MPC	Ministry Appointed Procurement Committee
NPC	National Procurement Commission
PG	Procurement Guidelines
PM	Procurement Manual
PO	Purchase Order
PPP	Public Procurement Procedure
PR	Purchasing Requisition
PTS	Procurement Time Schedule
QTN	Quotation
RFQ	Request for Quotations
SCAPC	Standing Appointed Procurement Committee
SCM	Supply Chain Management
SRN	Stores Requisition Note
TB	Tender Board
TEC	Technical Evaluation Committee

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# 1. INTRODUCTION

Neither one of people of this world is not self-sustained from the birth as well as during the life time; they are committed to satisfy their needs and want by exchanging such needs and wants to each others. It proves that the peoples of this planet are depending on the each others. In the modern world, the population has been increased considerably especially from East Asia through Asia to Africa and Latin America. But resources are not increased as well, therefore we have to make an effort to use those limited resources carefully to maintain our lives. Because the lands those are eligible to live and for the agriculture are limited, fuel and mineral resources are also limited. Under these circumstances a competition among the human became to the society to obtain these limited resources.

In the modern world nobody is self sufficient in their essential needs. When farmer farming, he doesn't know how to make a house and make a dress or when dress maker make a dress, he doesn't know how to make a sewing machine. Therefore every human should work together to obtain their requirements.

Initially the only wants of were exchanged by the people and then even the needs were exchange as a result of been wants were change as per the geographic and demographic factors. After introducing money instead of exchanging of wants and needs, they were given a value as per their scarcity, size, weight, inputs, durability, quality and many more and then it become a business that selling of such wants and needs to consumers at a profit. In the business context, these want and needs define as goods and service as per the way of raising, way of consuming, way of producing and supply.

## 1.1 Good and Service

Every human does not come to the world with their essential requirements such as meals and safe background basically, until they grow that they are able to manage their initial human activities such as having food by them self, maintain their sanitary life as well as the maintain their security, they should be given or be fulfilled with all needs such as goods and services. Therefore all needs should be obtain by the every human from the birth to death. Our essential needs like food, Home, Clothes can be classified under Goods Category due to been tangible and the Medicines can be classified under services category due to been intangible and in the modern world, Motor vehicles, Electric and Electronic home appliances mobile phones can be

identified as goods and medical Consultation, Legal consultation, Engineering & Architectural Consultation etc...can be identified as the services.

## **1.2 Services**

A commercial enterprise that provides work performed in an expert manner by an individual or team for the benefit of its customers. The typical service business provides intangible products, such as accounting, banking, consulting, cleaning, landscaping, education, insurance, treatment and transportation service.

## **1.3 Civil Aviation Industry**

Civil aviation industry is one of two major categories of flying, representing all non-military aviation, both private and commercial.(Wikipedia).The international Civil Aviation Organization (ICAO) is the agency who regulate ,establish common standards and recommendations and work together with most of countries in order to provide more safe and secured aeronautical journey. Civil aviation includes two major categories.

Providing air transportations for both passengers and goods, ensuring safe and secured air space through modern navigations and communication systems, develop airport facilities for the air line operations as well as the passenger requirements and education are the major aeronautical and non aeronautical sources which create a cash flow.

### **1.3.1. Civil Aviation Industry in Sri Lanka**

Geographical Location and the tourist attraction dominate the civil aviation industry in Sri Lanka; after ending the 30 years civil war, the development of tourist industry and the lot of development projects were align to develop the Civil Aviation Industry in dramatically. The Civil Aviation Authority of Sri Lanka has the authority to regulate all Aeronautical and non aeronautical activities, involvements, operations and affections rising in Sri Lankan Flight information region. The Airport and Aviation Service (Sri Lanka) Ltd is the only entity who has the statutory power to operate all airports in Sri Lanka and the Sri Lankan Air Lines Ltd is the National carrier as well as the only airline that operate internationally. There are several domestics airlines are operated in sri Lanka which provide a better service to both local and foreign passengers

## 1.4 Government Business (Public Enterprises)

A government-owned company is a legal entity that undertakes commercial activities. Major objective is the earning of profits in a very formal way of manner other than the private own companies. But there are several advantages and disadvantages for the business as a result of being a government organization.

Government security, reputation, stake holders' attractions, ability for obtaining loan facilities are the main advantages of being a government business. And political influences, lot of red tapes in administrations and operations, higher level of legally bounded business operations and the bureaucratic are the major disadvantages of such. The no of government/public own commercial/business are below mentioned

1. Airport and Aviation Services (Sri Lanka) Limited
2. The Associated Newspapers of Ceylon Ltd
3. B.C.C. Lanka Ltd
4. Building Materials Corporation Ltd
5. Ceylon Fertilizer Company Ltd
6. Ceylon Shipping Corporation Ltd
7. Cey-Nor Foundation Ltd
8. Colombo Sack Makers Ltd
9. Independent Television Network Ltd
10. Kalubovitiyana Tea Factory Ltd
11. Lanka Fabrics Ltd
12. Lanka Mineral Sands Ltd
13. Lanka Phosphate Ltd
14. Lanka Salusala Ltd
15. Mantai Salt Ltd
16. Milk Industries of Lanka (Pvt) Ltd (MILCO)
17. National Equipment & Machinery Organization
18. National Paper Co. Ltd
19. North Sea Ltd
20. Paranthan Chemicals Co. Ltd
21. Private Sector Infrastructure Development Company
22. Skill Development Fund Ltd
23. Sri Lanka Rubber Manufacturing Export Co. Ltd
24. STC General Trading Company Ltd
25. Thamankaduwa Agro Fertilizer Co. Ltd.

## **1.5 Procurement in Public Sector**

Public procurement is important, not just to governments tasked with providing public services, but to local, national, and international economies. Quite how important is a matter for significant debate and effort in collecting and analyzing expenditure data. Offices gathering data routinely on the amount recorded in public procurement contracts report figures around 13 percent of gross domestic product (GDP) (OECD library, 2011). However, this figure does not include procurement by state-owned utilities that do not report expenditure in the same way as central and local government departments. The World Trade Organization (WTO, 2012) estimates that public procurement represents around 10–15 percent of most economies. But clearly this figure varies enormously, not just according to how public procurement is defined and measured, but also in real terms according to how many of the economic goods and services producers in a country are owned by the state. But should measures of the impact of public spending be bounded by economic measures of final goods and services production, as represented in GDP? There are recent calls for evidence-based analysis of the true impact of reductions of public spending, not just on national and local economies but also on employment, social wellbeing, communities, public confidence – even ‘happiness’ has been suggested as a reasonable indicator to monitor in relation to spending cuts. As the evidence-based movement sweeps through medicine, healthcare, policy makers, and more recently management decision making. The public procurement and its broader role in supporting and delivering government objectives.

## **1.6 Research Problem Statement**

Over the Past Decade, The Sri Lankan government made a lot of failures in supplying essential items those are directly for the fulfilling of basic needs and wants of the nations and the inputs for the development of economy. Failures of supplying such demands within a stipulated time with an accepted quality at an affordable price occurs huge economical calamities and political instability of any society. Therefore, maintaining an interrupted flow of needs and wants to the nation is essential to survive the government and people too. The Sri Lankan government has an authority to supply (directly or indirectly) of some essential items those are taken considerable portion of the total demand. The considerable portion of the total demand for petroleum products, cements, pharmaceutical items, school uniforms & books, FMCG those are supplied through “Sathosa” and co-operative shops as well as the services like medical, transport, aviation and telecommunications are supplied by the government organizations.

We have a lot of experiences in past decade regarding the failures of supplying essential requirements at predetermined cost, quality and the time measures. The “Hedging” agreement is an example of such failure due to inaccurate forecasting



which caused to unexpected considerable price increase of fuel. In 2018, there was an shortage of petroleum in state's fuel station through three days due to unavailability of stock. The government was unable to perform in supplying quality vaccine due to consist of foreign objects (small pieces of silica glass) in the bottle (year 20...). And also they were unable to supply essential food items at the right time especially when an unexpected natural calamity such as floods, draughts and tsunami prevails in the island even they have an adequate stock of such goods or possible to import those. When the government fulfills the requirements of school uniforms and books, the first term is already started. And when we turn in to the pharmaceutical & surgical requirements, a lot of patients have been suffered of not having medicines due to failure of supplying these items at the time that they really need.

In these clarifications, we are able to realize that the government should be able to supply these requirements whatever the several mere issues in the price, quality or the time of the goods and service in some extent.

### **1.6.1 Introduction of the Organization**

**Airport and Aviation Services (Sri Lanka) Ltd (AASL)** is a fully government owned company with statutory powers to manage and develop civil airports in Sri Lanka. It is one of the leading public business undertakings making a great contribution to the national economy and it is the institutional mechanism of the Government of Sri Lanka (GOSL) through which economic benefits of civil aviation industry are channeled to the nation's coffers. The company is among the top most profit-making blue chip companies in Sri Lanka.

ANNUAL TRAFFIC STATISTICS OF BANDARANAIKE INTERNATIONAL AIRPORT (2010 – 2018)																						
PASSENGER MOVEMENTS												AIRCRAFT MOVEMENTS										
Year	International			Domestic			Total Passenger Movements			Growth Rate (%)	Transfer/Transit Pax.	Growth Rate (%)	International			Domestic			Total			Growth Rate (%)
	Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total				Arr.	Dep.	Total	Arr.	Dep.	Total	Arr.	Dep.	Total	
2010	2,608,102	2,651,546	5,259,648	0	0	0	2,608,102	2,651,546	5,259,648	23.98	683,566	18.69	-	-	33,863	-	-	6,878	20,368	20,373	40,741	8.2%
2011	3,056,971	3,088,561	6,145,532	0	0	0	3,056,971	3,088,561	6,145,532	16.84	1,014,651	48.43	-	-	43,341	-	-	6,483	24,924	24,900	49,824	22.3%
2012	3,514,648	3,565,272	7,079,920	0	0	0	3,514,648	3,565,272	7,079,920	15.20	1,296,743	27.80	-	-	48,543	-	-	3,188	25,856	25,875	51,731	3.8%
2013	3,614,179	3,680,106	7,294,284	8,017	10,281	18,298	3,622,196	3,690,386	7,312,582	3.29	1,359,328	4.83	25,354	25,330	50,684	1,733	1,732	3,465	27,087	27,062	54,149	4.7%
2014	3,842,059	3,899,418	7,741,477	14,079	15,585	29,664	3,856,138	3,915,003	7,771,141	6.3	1,290,818	-5.1	25,794	25,815	51,609	2,600	2,584	5,184	28,394	28,399	56,793	4.9%
2015	4,296,584	4,203,048	8,499,632	4,464	4,248	8,714	4,301,050	4,207,296	8,508,346	9.5	1,261,035	-2.3	27,437	27,450	54,887	3,324	3,327	6,651	30,761	30,777	61,538	8.4%
2016	4,739,470	4,721,311	9,460,781	3,555	3,650	7,205	4,743,025	4,724,967	9,467,992	11.3	1,311,263	4.0	30,530	30,513	61,043	3,524	3,524	7,048	34,054	34,037	68,091	10.6%
2017	4,986,321	4,932,955	9,919,276	3,576	3,352	6,928	4,989,897	4,936,307	9,926,204	4.8	1,485,548	13.3	31,039	31,046	62,085	2,908	2,908	5,816	33,947	33,954	67,901	-0.3%
2018	5,449,913	5,431,091	10,881,010	5,161	4,498	9,659	5,455,074	5,435,595	10,890,668	9.7	1,704,222	14.6	33,493	33,481	66,974	3,773	3,765	7,538	37,266	37,246	74,512	9.8

Figure 1.1: Annual Traffic Statics of Bandaranaike International Airport (2010-2018)

## OUR Vision & MISSION

### Vision

"To be the most Efficient and Friendliest Premier Aviation Hub in the Asian Region".

### Mission

"We will strive to provide Competitive Aviation Facilities and Services with Best Practices while ensuring Stakeholder Satisfaction".

Ultimately it is possible to identify that AASL is a service provider that producing under mentioned several services which is originating, generating and operating as same as in the goods producing sector and functioning all policies and procedures as well as the production sector.

## **Services**

### **Related to**

#### **1 .Aeronautic**

1. Air navigation and communications
2. Runway/Air taxi parking/Boarding bridges
3. Information
4. Civil Aviation Training
5. Fire & Rescue Terminal operation (departure/arrival)

#### **2. Non Aeronautic**

1. Facilities for external Commercial Involvement (Duty free shop, Air line agencies, etc...)
2. Taxis and parking
3. Information

Under these circumstances, the organization's major objective is succeeding in **earning profit through providing a competitive aviation services and facilities while ensuring all stake holders satisfaction** which is strived to provide by the accomplishment of all individuals overall performances.

Procurement is a key component for success of supply chain management (Janat Sha 2009). High level of performance in procurement is more important to do the all aeronautical and non aeronautical operations as specified above in satisfactory way of manner which align to achieve the common objectives of AASL.

However I have observed the following performance failures in procurement management during past six years at AASL. It was very useful to do an empirical study of the procurement procedure at AASL.

1. Low Compliance Rate

Less Understand of supplier's capabilities to fulfill the requirement (Compliances of Specifications, Quality and the capacity)

2. Not adequate no of reliable Suppliers

Fewer opportunities to track the level of dependency towards the suppliers

3. High Purchase order cycle time

E.g. Suppliers' performance in executing the order

4. High Lead Time

Less understand the total time to fulfill an order

E.g.

5. High procurement Cost

Unable to control the internal and external cost incurred by each procurements

E.g. Fewer Price negotiations, Exchange rate, price increase (due to increase of lead time)

The procurement procedure of AASL should be complied with the provisions of the guild lines and the manual which is incorporated by the National Procurement Commission (Earlier National Procurement Agency) .Study the both Procurement procedure and the Guild lines is more important to find the impact for the above performance failures in procurement management at AASL.

There is a discussion among the AASL employees that the reasons for above Procurement failures are issues of policies, formalities, approving authorities, delegation of authorities of the procurement policy which were developed as per the NPC guild lines and the Manuel and there is an impartibility of applying those guild lines for a complex industry like aviation. And there were several controversial atmosphere prevails between the AASL staff and the ministry staff as the result of conflict between the business perception and the .....perception when executing the roles and responsibilities of the procurement procedure.

## **1.7 Public procurement guild lines and manual**

### **National procurement commission (NPC)**

The NPC is the principle authority for formulating and effecting amendments to these Guidelines; issuance of manuals, Standard Bidding Document's (SBD), evaluation methodologies, standard contracts, and specifications. Any clarification of the provisions of the Guidelines or the aforementioned documents should be sought from the NPC.

As per the procurement NPA Guild Lines 1.2.1 (2006),

The Government Procurement Guidelines -2006 are issued with the approval of the Cabinet of Ministers in order to enhance the transparency of Government procurement process to minimize delays and to obtain financially the most advantageous and qualitatively the best services and supplies for the nation.

### **1.7.1 Procurement guild lines and manual**

Unlike the current Guidelines, these Guidelines have two components; The Guidelines & the Manual. The Manual will be issued separately. The provisions of these Guidelines will be **effective from 01.02.2006** in respect of all procurements of Goods, Works and Services other than the Selection and Employment of Consultants. These guidelines are applicable to the ongoing tenders in which bidding documents or pre-qualification documents are issued after the effective date of these Guidelines.

The Procurement Guidelines constitute the GOSL's (Government of Sri Lanka) policies on procurement. Intention of the issuance of this manual is to provide assistance, advice, directions and procedures to be followed in carrying out procurement activities by the public sector Procurement Entities. The manual explains in more detail how specific aspects of procurement should be handled in consistent with the Guidelines-2006.

As per the government competitive procurement process mentioned in the page no.142 in the Procurement Manual, the major functions those are directly affect to the success of SCM lead time can be shown as follows

1. Obtaining Provision approval
2. Preparing Bidding Documents
3. Invitation for Bids
4. Financial evaluation
5. Technical evaluation
6. Obtaining final purchasing approval
7. Placing the order
8. Delivery
9. Payments

Even the average time frame for the procurement process is given by the procurement guild lines: 4.2.2. in the PM for the Construction Contracts, there is not a specific time frame is given only for the procurement which value is considerably high and more important.

### **Purpose of These Guild Lines & Manual**

The purpose of these Guidelines is to set forth the procedures that should be adhered to by the procurement entity, in carrying out any Procurement Action financed in whole or in part by GOSL or a Foreign Funding Agency.

### **Objectives of These Guild Lines & Manual**

The Procurement process should ensure:–

- (a) Maximizing economy, timeliness and quality in Procurement resulting in least cost together with the high quality;
- (b) Adhering to prescribed standards, specifications, rules, regulations and good governance;
- (c) Providing fair, equal and maximum opportunity for eligible interested parties to participate in Procurement;
- (d) Expeditious execution of Works and delivery of Goods and Services;
- (e) Compliance with local laws and regulations and international obligations;
- (f) Ensuring transparency and consistency in the evaluation and selection procedure; and
- (g) Retaining confidentiality of information provided by bidders.

### **1.8 AASL Procurement Procedure**

The AASL procurement Procedure is adopted as per the public procurement procedure in general and the complexity is depend of the value of the procurement, nature of the procurement and the time period of the such procurement and refer to AASL procurement procedure in Appendix A.

## 1.9 Purpose of the Study

There is a common discussion in the country that it is unable to obtain goods and services with the best value, the best quality at a desired time through the public procurement guidelines and it is also applicable to AASL and I hereby do my research study in procurement efficiency in AASL through AASL procurement procedure. The procurement efficiency can be measured by procurement lead time (the latency between rising of a requisition and executing it)

### General Objectives

1. To find that the PPP affects the success of lead time management of AASL
2. To find that the AASL is unable to adopt the PPP to achieve the success of lead time management
3. Or both PPP and the adopting of PPP affect the success of lead time management of AASL

Those Objectives are consisting with following objectives

1. Is it true that the AASL is unable to manage the procurement lead time as per the procurement time schedule which was early determined?
  2. Is the success of procurement lead time management depending on the executing of the government procurement procedure?
  3. Is the success of the procurement lead time management depending on the using and ensuring of those guidelines by the relevant authorities?
  4. How the government procurement lead time manage successful without deviate/avoid those guidelines?
  5. Should the government procurement guidelines be amended or moderated specially for public enterprises in order to satisfy the customers /consumers offering the best service at the right time.
1. To compare the success of lead time management of the AASL and several private organizations in order to find who follow the most appropriate procurement policies and procedures.

2. To identify the critical areas and non critical areas of above guidelines and policies of both government and private and identify what are the difficulties, barriers, limitations and restrictions when executing the procurement process.
3. To verify whether these guidelines badly affect to the AASL procurement lead time or the relevant authorities/management are not ensuring of these guidelines without contributing their optimum contribution to succeed the procurement process which may be a more difficult task in this study.
4. To make an interest to the readers to make a better understanding regarding the both government and private procurement guidelines/policies and encourage them to do study of those in order to do another study or research to find the probable solutions to minimize the procurement lead time.

Finally, my study is to find that whether the government guidelines are factors which affecting to the success of the procurement lead time management in the AASL.

### **1.10 Significant of the study**

Help to make a better understand that what is the real situation existing in public procurement process to determine the factors those affect to the lead time management and help to share the acquired knowledge with persons who are involving in public procurement and persons who are interested in doing a research to find a solution for reducing the lead time without deviate the public procurement guidelines. In this research I expect to explain that

1. How the result of my research affect to the relevant organization?
2. How will the findings contribute to subsequent research?
3. Will the result of my research influence the policy decision of the mentioned organizations?



## 2. REVIEW OF THE LITERATURE

### 2.1 Introduction

A literature review discusses published information in a particular subject area, and sometimes information in a particular subject area within a certain time period.

A literature review can be just a simple summary of the sources, but it usually has an organizational pattern and combines both summary and synthesis. A summary is a recap of the important information of the source, but a synthesis is a re-organization, or a reshuffling, of that information. It might give a new interpretation of old material or combine new with old interpretations. Or it might trace the intellectual progression of the field, including major debates. And depending on the situation, the literature review may evaluate the sources and advise the reader on the most pertinent or relevant.

### 2.2 What is supply chain management?

The supply chain encompasses all activities involved in the transformation of goods from the raw material stage to the final stage, when the goods and services reach the end customer. Supply chain management involves planning, design and control of flow of material, information and finance along the supply chain to deliver superior value to the end customer in an effective and efficient manner. (Janat shah (2009) Supply Chain Management: Text and Cases)

According to the Wikipedia definition Supply Chain Management (SCM) is the management of the flow of goods. It includes the movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. Interconnected or interlinked networks, channels and node businesses are involved in the provision of products and services required by end customers in a supply chain.

Think you are expecting to buy some banana, the simple supply chain can be shown as follows



But if you are expecting to buy a Computer lap top, the supply chain is complex as follows

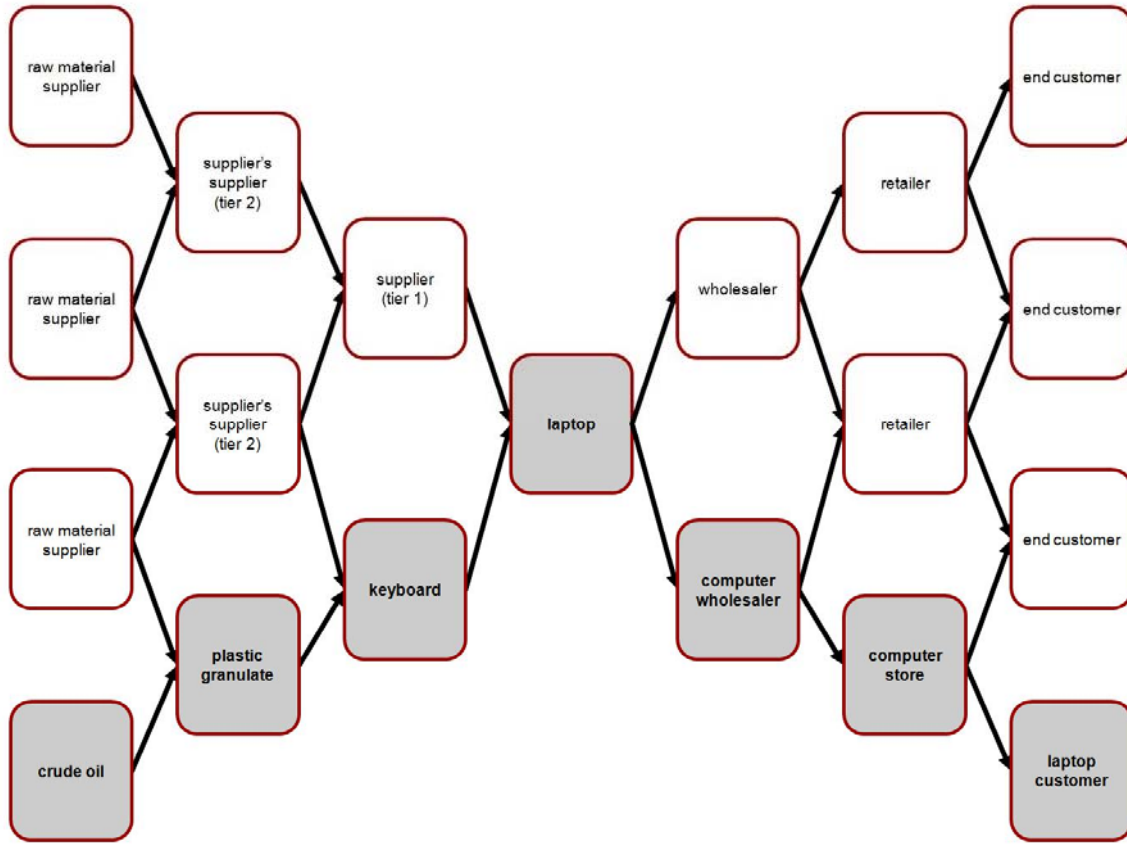


Figure 2, 1: The Supply Chain of Lap Top

### ADS-B's (Automatic dependent surveillance-broadcast) Supply chain and activities

ADS-B is a surveillance technology in which an aircraft determines its position via satellite navigation and periodically broadcasts it, enabling it to be tracked.

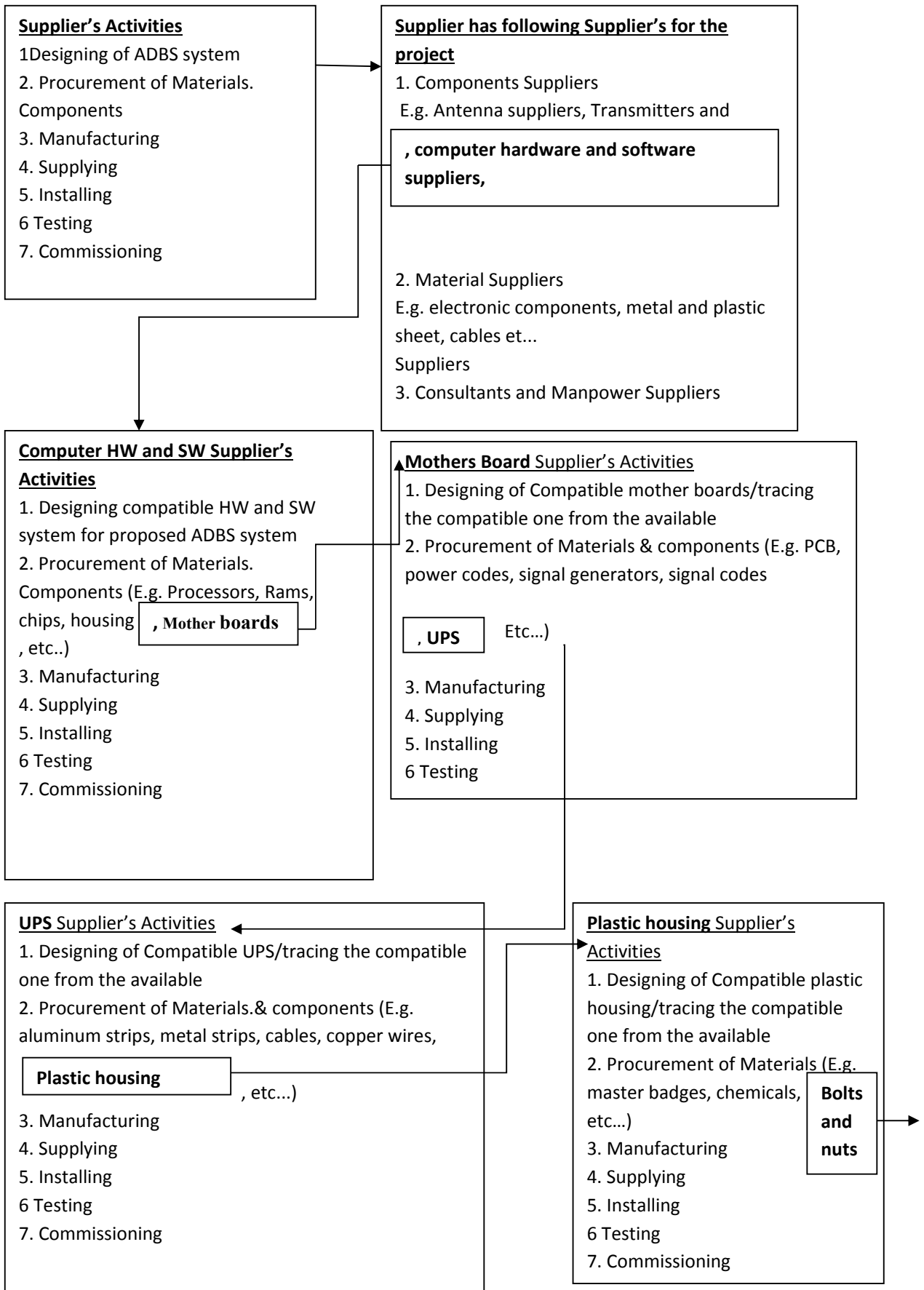


Figure 2, 2: ADS-B's Supply Chain Activity

In the production or service oriented context, the Supply Chain Management can be defined as maintain an uninterrupted flow of materials to accomplished the major objectives of the organizations in acquiring the needs for their daily requirements as expected for the all operation to be succeeded.

Following concepts have been identified by the modern supply chain management specialist to success in major Supply Chain Objectives.

Right Item: We have to identify the item correctly that we really need

Right Quantity: verify accurately how much/many units we need to utilize

Right Quality: determine correctly will the item fit for the usage

Right source: Chose the most appropriate supplier who can fulfill all above requirements

Right Price: Consider the value of money that we expected to expend for our needs

Right time: Determine when we need the item and how to acquire it same time

Right Place: to where we want it to utilize

Right delivery: acquired said item at the desired place with safe.

In simple way when we need to obtain some dhal for our kitchen, firstly we have to think what type of dhal we need, it may be spited of lentils, yellow peace or chick peace then we have to measure of it that we want it in grams or kilograms as per our requirement, after that think our desire to utilize it according to the appearance, smell and the taste then determine where we should buy it from a super market, from a whole seller or retailer with the best price that we afford for this need to fulfill our requirement. Then we have to adjust our time correctly to acquire that need to our kitchen with safe delivery.

### **The SCM consist of following major Functions**

Logistics Management

Purchasing Management

Inventory Management

Warehouse/Stores Management

## **Logistic Management**

According to the Wikipedia definitions, Logistics management is the part of supply chain management that plans, implements, and controls the efficient, effective forward, and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer's requirements. A professional working in the field of logistics management is called a logistician.

This consists with transportation, Delivery, Distribution, Stock yard management, cargo clearing and forwarding etc.

### **There are two types of Logistics**

#### **Inbound Logistic**

Several operations until material come to the production flow e.g.: Acquiring materials from a supplier through manufacture by sea transport then cleared it from the customs and delivered it through road by a lorry to the production flow of the factory.

#### **Out bound Logistics**

Delivery of the production to the factory flow then dispatch those to the distributor and whole seller using any transport method and finally deliver it to the customer/consumer through retailer.

## **Purchasing Management**

Purchasing is the first phase of Materials Management. Purchasing means procurement of goods and services from some external agencies. The object of purchase department is to arrange the supply of materials, spare parts and services or semi-finished goods, required by the organization to produce the desired product, from some agency or source outside the organization.

The **purchasing management department** ensures that all goods, supplies and inventory needed to operate the business are ordered and kept in stock. It is also responsible for controlling the cost of the goods ordered, controlling inventory levels and building strong relationships with suppliers.

## **Inventory Management**

**Inventory management** is a science primarily about specifying the shape and percentage of stocked goods. It is required at different locations within a facility or

within many locations of a supply network to precede the regular and planned course of production and stock of materials.

### **Warehouse Management**

A warehouse management system (WMS) is a key part of the supply chain and primarily aims to control the movement and storage of materials within a warehouse and process the associated transactions, including shipping, receiving, put away and picking. The systems also direct and optimize stock put away based on real-time information about the status of bin utilization. A WMS monitors the progress of products through the warehouse. It involves the physical warehouse infrastructure, tracking systems, and communication between product stations.

## **2.3 Lead Time**

The lead time is the time between the arising of a need and fulfills the need. According to the Wikipedia definition,

The lead time is the latency (delay) between the initiation and execution of a process. For example the lead time between the placement of an order and delivering of a new car from a manufacturer may be anywhere from 2 weeks to 6 months. In the productions and service oriented organizations, lead time reduction is an important part of lean Management.

Rajaniemi .J (2012) Has classified SCM Lead Time as Order Lead Time, Order Handling Time, Manufacturing Time, production Lead Time and Delivery Lead Time

### **Order Lead Time**

Time duration between the receiving the customer order and the fulfill (delivery) the order.

### **Order Handling Time**

Time from customer order received to sales order created

### **Manufacturing Lead Time**

Time from sales created to production finished (Ready for delivery)

### **Production Lead Time**

Time from start of physical production of first sub module to production finished (Ready for delivery)

### **Delivery Lead Time**

Time from production finished to customer order delivery

## **Result of Lead time Management failure**

1. Unable to obtain best price for the required item. Because the prices of all items increasing considerably day to day in the market.
2. Non availability of stock in the market when the purchase orders are ready.
3. Losing the supplier consumer reliability.
4. Money and Time waiting for the extra documentation.
5. When payment is delayed, delivery is also delayed.
6. Carrier demurrages, port demurrages and warehouse demurrages etc...
7. Decrease the production or service output.
8. Losing of good will
9. Damages of the machines and equipments of the production flow due to not having the spares at the right time.
10. The nation will suffer not having their essential requirements like food and medicines

Then I have to consider or study the lead time of the government procurement procedure. Failing of not supply the needs at right time is a result of lead time management failure. After carefully examine this section, following problems are rising.

## **2.4 Background and rational situation**

When the customers are struggling to acquire their requirements, suppliers are also struggling to supply their requirements to the customers. It is global challenges until the vast competition prevail in the modern world. Suppliers are willing to sale their items at right price as well as the customers are willing to purchase that item at the right price well. Supplier who can sale their item at the right price can win this competition. This concept is also applicable to the **right time** that when the supplier supply items to the market that can succeed in his marketing objectives as well as the customer satisfy in utilizing it to accomplish his major objectives. The SCM expertise identify this scenario and have conducted micro and macro researches and experiments to find solutions for the problems of not obtaining or supplying the both good and services at the right time to our door step or the production flow of a manufacturing plant.

## 2.5 Public Procurement in Sri Lanka

Today 55-60% of the total cost of the output of the production oriented and service oriented organizations is taken by the material. Therefore, there should be a proper system to manage the materials to minimize the material cost, to obtain the best quality, to maintain the right quality and quantity as well as to obtain those at **right time**. Under these circumstances, policies, methods and procedures have been contributed to the area of procurement in order to fulfill the major objectives of all organizations.

But in the government sector, the policies, methods and procedures should generate a better way of manner than the private sector. Because the government always committed to respond about all financial activities done by them from the money those obtain by the nation. Especially the opposition party in the parliament, media, non government organizations and other nations are in alert that what the government do with the money those are allocated for the development of the national economy and provide the essential services to the nation. This is the gravity of financial management in the government sector that we should identify which is also applicable to public procurement sector.

Under the British rule, the public procurement procedure were established in accordance with the Principles of National Procurement Guidelines (NPA) which has been regulated by the department of public finance under the ministry of finance and planning in order fulfill the following objectives.

1. Value for Money
2. Transparency
3. Accountability
4. Fairness
5. Efficiency
6. Equal Opportunity
7. Development of Local business
8. Achievement of National Development Objectives

There are several procurements methods have been generated for the convenience of public procurement efforts according to the value, quantity, urgency, requirements and the usage of the goods as follows,

1. National Competitive biddings
2. Limited National Competitive Biddings
3. International Competitive Biddings
4. Limited International Biddings



5. National Shopping
6. International Shopping
7. Single source Procurement.

Under these circumstances, every government organizations should follow all guild lines, policies rules and regulations those have been guided by the National Procurement Guidelines when they are going to fulfill any need. These guidelines consist in what type of procurement to be used, from what authorities' relevant approvals to be taken, how delegate the authorities, how offers should be evaluated, what are the limitations and delimitations etc...

Purpose of this study is to make an effort to find that is there any delay to fulfill the needs when the government organizations follow the procurement guidelines. However they are succeeded in achieving right item from the right source with right price in right quantity and quality, fulfill the need at the right item is expected to examine. The most important one is, if any one of the above achievements is not succeeded, the major objectives of the supply chain management that maintaining an uninterrupted flow of material for the production or service will not be succeeded.

In another way find whether the government organizations are succeeded in fulfilling the needs especially for the production and services oriented of their own at the right time with succeeding major procurement objectives in the procurement guidelines. Fulfillment of any need at the right time may depend on the conditions/policies in the procurement guidelines and the understanding of those guidelines in a better way.

Airport and Aviation Services (Sri Lanka) Ltd is a fully government owned company with statutory powers to manage and develop all civil airports in Sri Lanka. It is one of the leading public business undertakings making a great contribution to the national economy and it is the institutional mechanism of the Government of Sri Lanka (GOSL) through which economic benefits of civil aviation industry are channeled to the nation's coffers. The company is among the top most profit-making blue chip companies in Sri Lanka. The Supply Chain Management of Such Service Oriented organization in effective and efficient way of manner is a challenge with existing procurement guild lines. Therefore, I wish to do my research on **“Affect the public Procurement procedure on the operation of Civil Airports in Sri Lanka”**.

Available documents on any research of public procurement procedure affect on government commercial enterprises those were helpful to my research were not found up to date. Reports of Central Bank, Privet agencies or International agencies such as the World Bank or the Asian Development Bank are helpful but very general and outdated particularly in the current context of conflict. Many macro and micro

level studies in Sri Lanka could be relevant but have not been properly accounted so far while analyzing the lead time management & public procurement procedure inequality studies in Sri Lanka.

But in this research I have to study the following government circulars and acts in both macro and micro levels those will very useful and help me to identify the research problem in initial stage and obtain adequate information for my research.

### **Procurement Guidelines – 2018**

Published through gazette extraordinary of the democratic socialist republic of Sri Lanka on 09.05.2018 by the National Procurement Commission in terms of Article 156C (1) of the Constitution of the Democratic Socialist Republic of Sri Lanka.

### **Procurement manual - 2018**

Selection and employment of consultants

To be used along with government procurement guidelines – 2018 for selection and employment of consultants.

## **2.6 national procurement commission (NPC) of the democratic socialist republic of Sri Lanka**

Guidelines for the procurement of goods, works, services and information Systems and selection and employment of consultants by government Institutions and to provide for matters connected therewith and Incidental thereto.

The NPC is the principle authority for formulating and effecting amendments to these Guidelines; issuance of manuals, Standard Bidding Document's (SBD), evaluation methodologies, standard contracts, and specifications. Any clarification of the provisions of the Guidelines or the aforementioned documents should be sought from the NPC.

## 2.7 The purpose of the procurement NPC Guild Lines

The purpose of these Guidelines is to establish governing principles and procedures to ensure

Value for Money (VFM), in an efficient, fair, equitable, transparent, competitive and cost-effective procurement process by the Government Institutions for procurement of Goods, Works, Services and Information Systems.

## 2.8 Procurement Guild Lines & Procurement Manual

Unlike the current Guidelines, these Guidelines have two components; The Guidelines & the Manual. The Manual will be issued separately. The provisions of these Guidelines will be **effective from 09.05.2018** in respect of all procurements of Goods, Works and Services other than the Selection and Employment of Consultants. These guidelines are applicable to the ongoing tenders in which bidding documents or pre-qualification documents are issued after the effective date of these Guidelines.

The Procurement Guidelines constitute the GOSL's policies on procurement. Intention of the issuance of this manual is to provide assistance, advice, directions and procedures to be followed in carrying out procurement activities by the public sector Procurement Entities. The manual explains in more detail how specific aspects of procurement should be handled in consistent with the Guidelines-2018.

As per the government competitive procurement process mentioned in the in the Procurement Manual(PM), the major functions those are directly affect to the success of SCM in public sector can be shown as follows

1. Obtaining Provision approval
2. Preparing Bidding Documents
3. Invitation for Bids
4. Financial evaluation
5. Technical evaluation
6. Obtaining final purchasing approval
7. Placing the order
8. Delivery
9. Payments

Even the average time frame for the procurement process is given by the procurement guild lines: 4.2.2. in the PM for the Construction Contracts, there is not

a specific time frame is given only for the procurement which value is considerably high and more important.

### **Purpose of These Guild Lines & Manual**

The purpose of these Guidelines is to set forth the procedures that should be adhered to by the procurement entity, in carrying out any Procurement action financed in whole or in part by Government of Sri Lanka (GOSL) or a Foreign Funding Agency.

### **Objectives of These Guild Lines & Manual**

The Procurement process should ensure:—

- (a) Maximizing economy, timeliness and quality in Procurement resulting in least cost together with the high quality;
- (b) Adhering to prescribed standards, specifications, rules, regulations and good governance;
- (c) Providing fair, equal and maximum opportunity for eligible interested parties to participate in Procurement;
- (d) Expeditious execution of Works and delivery of Goods and Services;
- (e) Compliance with local laws and regulations and international obligations;
- (f) Ensuring transparency and consistency in the evaluation and selection procedure;  
and
- (g) Retaining confidentiality of information provided by bidders.

## **2.9 Financial Law of Sri Lanka**

Helped me to make a better background regarding the behavior of public funds with related to public procurement in GOSL.

## **2.10 Central Bank Reports of Sri Lanka**

After scrutinized the reports, I was able to identified the degree of exchanging funds (internally & externally) those related to the purchasing of consumer goods or any other goods or services for the development of national economy.

## **2.11 Procurement Principle and Managements**

Reducing the lead time and time compression is mandatory to obtain the major objectives of the supply chain Management (Barney Crocker, David Farmer, David Jessop, David Jones and Peter Baily,(2009)Procurement Principle and Management).Their studies on public sector procurement in England, will be able to widely recognized the major areas and minor areas as involving the exchange process, Their eight type of categorization of lead time and explanation of lead time variability and the lead time examination were useful to my studies.

## **2.12 Supply Chain Management: Text and cases**

Shorter lead time, higher responsiveness, higher reliability and higher product variety lead to a better customer service (Janat Shah, (2009) supply chain Management: Text & Cases).His research on intervening the top management of the most reputed and profitable companies In India regarding the lead time management of supply chain management will more useful for my research in order to make a framework for the research design.

In addition I have to select several theories in the general/common studies of the Supply Chain Management in service Sector in order to obtain materials for the basement of my research.

## **2.13 Conclusion**

In this scenario I have to thoroughly review the NPC guild lines with the PM more than the other literature. Theory will build up with the fundamental SCM principles in decorating with review of some literature from following references. However the accuracy or acceptability of the research is depend on the review of the literature.

### **3. RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Factors affecting for the mentioned problem situated have been identified and were able to develop a theoretical frame work so far. Then the design or methodology is the most important part of the proposal which is show you how I can plan to tackle my research problem and how I will try to find the answers to my research questions. Further I would expect to provide my work plan and describe the activities necessary for the completion of my project including selection of sample, data collection, questionnaire methods and techniques use for analysis of data.

#### **3.2 Population & sample**

It is impossible to show the population and the sample of my research in clear and cut way of manner. As a result of been measure the procurement efficiency of the AASL procurement procedure, it is considered all procurement relevant information as my sample to do the quantitative analysis and selective information as the sample. Further, it has been taken 03 nos of external organization to do the comparative analysis to compare the procurement efficiency.

#### **3.3 MEASURING INSTRUMENT**

This section provides information on the development of gathering of data those relating to measure the procurement efficiency of AASL and other selected organizations. The selected data were more useful to identify the gaps between the AASL procurement procedure and the other organizations. Time is the measuring instrument that I used to measure the procurement efficiency of both AASL and others the first step was gathering AASL procurement efficiency related data and then find that was the AASL able to execute it procurement activities at a pre determine time period and then i compared the AASL procurement lead time and the

other organization to trace who was the more efficiency in procurement operation and what are the gaps between AASL and others those affect to the procurement lead time then I develop questionnaires, a description of questionnaires, methods used to ensure the reliability and validity, administration and the interpretation of the instruments. As example, the procurement efficiency can be measured under three main categories such as financial efficiency, technical efficiency and administration efficiency. Then the questionnaires were developed to measure the effectiveness of all sub functions related to the above three main categories

E.g.:

Financial effectiveness

1. No. of days taken to obtain provision approval
2. No. of days taken for Financial evaluation
3. No. of days taken for payments

The questionnaire methods were drafted according to the secondary data those were gathered from both AASL and other organizations.

### **3.4 DATA COLLECTION**

#### **Data Collection for Quantitative Data Analysis**

##### **Secondary data collection**

As a result of not been and developed ERP(Enterprises Resources Plan) or modern data base management system at AASL ,there were unable to collect secondary data and were more effort to convert those into secondary ,as an example there is not even an primary database to monitor the no of total PR are raised annually etc. Under these circumstances I have had to use more time to develop those primary data into secondary data.

The purpose of these data collection is to do the quantitative data analysis and those data more comply with the procumbent lead time measurements. Collection of lead time related data more comply to measure the effectiveness of each steps of the total procurements procedure. It is more useful to find the problem and matters raised to affect the effectiveness of the each steps and the total procurement lead time as well and it also revealed the success and the failures of execution of the procurement procedure as per the time scheduled as specified before initiated the process. Expect to use secondary sources of data to meet the most appropriate answers to measure the effectiveness of followings

1. Financial effectiveness
2. Technical effectiveness
3. Administration effectiveness

### **Data Collection for Qualitative Data analysis**

After doing the qualitative data analysis within the AASL, it is expect to develop the questionnaire to address the problems those arrived from the findings. If I found that the no of days taken for payments is considerably high, following types of questions would be able to develop.

1. What are the factors affecting to delay of payments?
  2. What are the repercussions of delaying of payments?
  3. What are the probable recommendations to mitigate this issue?
- Etc...

### **Questioning by e-mails**

All Heads, senior managers and Supervisors of my organization and Managers and the supervisors questioned to meet the answers that their comments regarding the time duration, effective purchasing, strategic purchasing etc... each function in the procurement procedure by e-mails.

Interviewing for Qualitative Data Analysis,

1. Do you agree that it is possible to work efficiency with existing Public Procurement Procedure (PPP)?



2. Are there any obstructions/barriers in the PPP for the effectiveness and what are those?
3. What is your opinion regarding the efficiency of the all employees in overall performance?
4. What is your opinion regarding the efficiency of the all about the procurement guild lines?
5. What is your opinion regarding the top management involvement for the success of SCM effectiveness?

### **Data collection for comparative data analysis**

I have to study the common way of privet sector procurement procedure before collecting the data as well as the public sector. I found that there are no many functions/activities in the procurement procedure of the privet sector and also there are some policies and formalities followed by the privet sector those are more useful to reduce procurement lead time and those are not available in the AASL PP. But one of my efforts is try to compare the total procurement lead time between the privet sector and the AASL. Therefore I would be much careful to obtain data from the senior

managers, managers and supervisors when their involving only in the purchasing of similar items worth similar values those are generally and frequently procured by both AASL and other three organizations to keep the same level of all organization's major procurement function which provide a fair background for comparative data analysis.

### **3.5 Limitation of research**

This research will provide the good understand about the government procurement procedure. In my research, I have to gathered data from the similar ranges of values in purchasing in order to balance my data collection effort in a similar way of manner for not only AASL and other three organizations too. And select t similar items those value within a similar value range to be procured to collect the data to obtain the reliability of it. The main problem that I have to face would be the limited time frame for collecting data. And there are some restrictions to collect secondary data from their own reports and collect data from the employees of such organizations. The senior Managers, Managers and the supervisors are responsible to monitor and

complete the all activities successfully in the SCM Management unlike assistant who are involving in one or two functions in the total SCM (Raising PR, Placing PO). That is the reason for selecting the Senior Managers, Managers and Supervisors for the questioning and interviewing to collect the data for my research. I have to be more careful when the secondary data extracted from the all procurement reports of such organization without been considering the some financial statistics. I have to narrow down the questionnaire method for the privet sector due to not involving in a vast procurement procedure like public sector for my comparative data analysis. In my research I expect to find the affection of the public procurement procedure for the operations of the civil airports in Sri Lanka. Therefore I have to consider the effectiveness of such procedure broadly more than effectiveness of the employees.

The Under mentioned described type of Procurements were not considered to gathering of data

1. The all procurements those are executed under deviate of some formalities due to top urgency (E.g. Purchasing of traffic cones due to suddenly change of traffic system within the AASL premises)
2. Complex procurement & Projects those are consisting of many works and services (E.g. Designing, Manufacturing, Installation, Testing and commissioning of Modern Air navigation system)
- 3 The minor procurement those are re considering, consisting in calling of samples and field visit, shopping etc.
4. Procurements those were deferred to be considered, contracts were null and voids, breached of any conditioned stipulated in contact documents.

### **3.6 Reliability of data**

It is a common concept that the reliability of the secondary data of the government is more reliable than the privet sector. When the government organization's data base is always monitored, audited and verify by the internal staff as well as the external organizations. There were no any doubt when they respond my questions and the interviewing and all of them would be more interest to respond to those due to not

considering the individual performances for managing the lead time in success. But when the data collect for the qualitative data analysis from the government sector and the data collect from the privet sector for comparative data analysis, I have to verify the reliability of those responses with SCM Expertise as well as my Research Supervisor.

### **3.7 Validity of Data**

Validity as the “accuracy with which the questions represent the characteristics they are supposed to questionnaire” hence the construction of the questionnaire and interviewing by including only questions and in relating to the Financial effectiveness, Technical Effectiveness and Administration effectiveness that were identify by means of the literature review.

### **3.8 Development of Questionnaire**

I expect to develop the questionnaire with the assistant of subject matter experts under the supervision of my research supervisor. The steps of the development of questionnaires will be provided.

#### **Description of questionnaire**

Questionnaires is designed as a three part one related to financial effectiveness ,part two related for technical effectiveness and final part related for administration effectiveness which are obtain the information necessary for the research.

The questionnaire target for public and privet organization employees who are working as senior Managers, Managers and Supervisors for obtaining the information those need for my research.

The Questionnaire are align to identify the both public and privet sectors procurement effectiveness.

1. Financial effectiveness
2. Technical effectiveness
3. Administration effectiveness

Some questions of the questionnaire will be struck around these categories of procurement efficiency. In these questionnaires, respondents would be asked to indicate whether the lists are considered as important efficiency, thereafter they would be asked to rank the all step of procurement efficiency in terms of important. In this questions method, the respondents must choose among four options such as Very high, High, Average and Low.

1. E.g. Do you agree that it is possible to work efficiency with existing Public Procurement Procedure (PPP)?

Answers

1. Totally Agree
2. Agree
3. Partly Agree
4. Not Agree
5. Totally disagree

Then I try to develop my questions through interviewing to obtain responses of the senior managers, Managers and supervisors to elaborate their comments from the responses to construct my data those related to the effectiveness public procurement procedure. Those would bear much useful for my recommendations in finally of this report. More important there were no any “yes” “no” answers were raised among the interviewees’ and those will have to analyze in qualitative way of manner.

Structured interviewing will be conducted by me when it is known at the out self what information I need and u have a list of predetermined questions to be asked from the respondents either personally, through the telephones or the medium of personnel computers.

### **Theoretical frame work**

As an example the degree of the lead time is depending on the effectiveness of the all function/operation/activities of SCM. If there are many steps, policies and guild lines to be followed for the SCM, it will affect to the success of minimizing lead time.

### **Financial effectiveness**

After arising a need to be fulfill in AASL, the first step is consider the availability of the funds according to the budget allocation for the suggestion year and given the provision for said procurement, Further the financial evaluation of the offers and the payment of the such contract are the major function those have to be accomplished by the financial division. Effectiveness of these activities can be measured by the days those are utilized for said activities.

### **Effectiveness of the Technical & Financial Evaluation**

The effectiveness of the SCM process is depending on the effectiveness of the technical evaluation as well as the no of days taken for the technical evaluation. Technical specialists who are involving in evaluation of the technical compatibility with the offers, involving in training until such machines, plants or project to be launched and finally, complete the technical requirements for the complete of the project as installation, commissioning are more responsible to fulfill their portfolio as soon as possible to minimize the lead time to accomplished the SCM overall objectives.

### **Administration effectiveness**

This is the most important part in the SCM consist of many guild lines and policies to be followed for the administration purposes and the same part consist of the functions of preparing bidding documents, inviting bids, obtaining purchasing approval. Order placing and finally delivery .The lead time for the administration part of the SCM is depend on the effectiveness of the above all activities.

### **3.9 Summary**

The research design of study has been outlined in this chapter. Sampling procedure is discussed. This discussion is followed by a comprehensive description of the measuring instrument including evidence of reliability and validity. The collection, data processing and process are explained in details.

## 4. DATA ANALYSIS

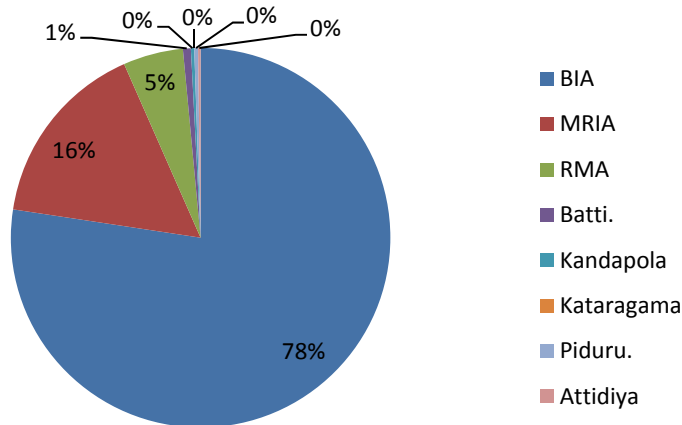
### 4.1 Introduction

In the previous chapter I was described the research design and justified the choices made with respect to methods of data collection and analytical decisions. A through reflection on the data points to, amongst other contributory factors, the biographical information provided by the various instruments in order to generate findings relevant to the research questions. Based on that, I account for findings related to external factors that had an influence on the program outcomes.

### 4.2 Analyzing of AASL data

*Table 1: No of AASL's Procurement on Location Based in 2018*

	Location	No of PRS
1	BIA	2,437
2	MRIA	504
3	RMA	161
4	Batticaloa	21
5	Kandapola	9
6	Kataragama	-
7	Piduruthalagala	10
8	Attidiya	7
Total		3,149

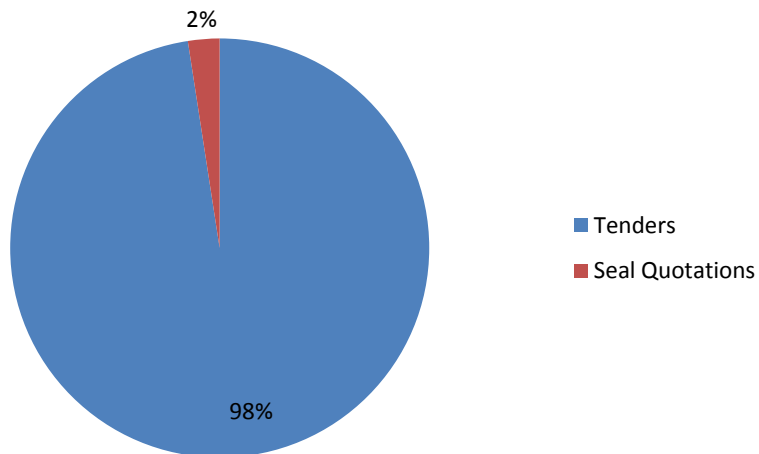
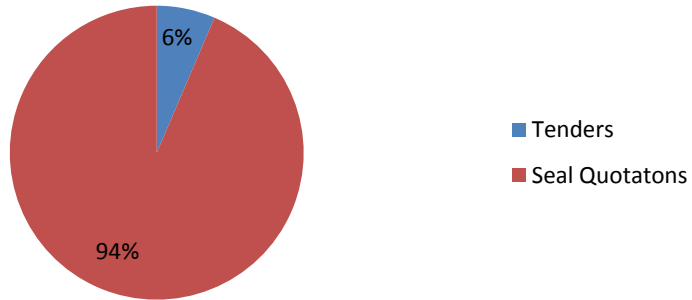


Out of total no of PRS,

Procured/to be procured under Tender Procedure : 203 nos  
Procured/to be procured under seal quotation : 2,946 nos

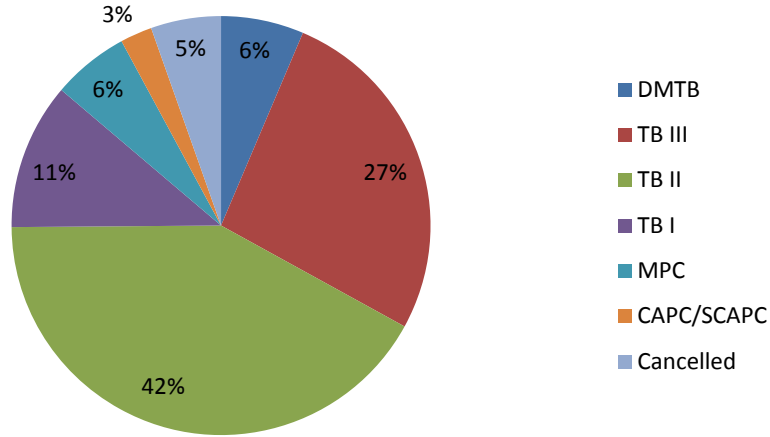
*Table 2: The value of total procurements in 2018*

Total value of Tenders	Total value of seal Quotations	Total Estimated Procurement Value
7,075.07 Millions	176.45 Millions	7,251.52 Millions



DMTB	TB III	TB II	TB I	MPC	CAPC/SCAPC	Cancelled
13	54	85	23	12	5	11

Table 3: The delegation of authority of 203 nos of tenders in 2018



	Financial Limitation	Average Lead time	Procurement Authority
1	Up to Rs 2,000.00	not calculated	Head of Division
2	Rs 2,000.00 - 10,000.00	not calculated	Head of Division
3	Rs 10,000.00 - 100,000.00	45 days	Head of Supply Chain Mgt.
4	Rs 100,000.00 - 250,000.00	63 days	Head of SCM/Chairman
5	Rs 250,000.00 - 2,000,000.00	92 days	DMTB
6	Rs 2,000,000.00 - 5,000,000.00	108 days	TB III
7	Rs 5,000,000.00 - 25,000,000.00	265 days	TB II
8	Rs 25,000,000.00 - 100,000,000.00	390 days	TB I
9	Rs 100,000,000.00 - 250,000,000.00	560 days	MPC
10	Above Rs 250,000,000.00	750 days	CAPC/SCAPC

Table 4: The growth of average lead time against the value of procurement in 2018



	AASL	Org. 1	Org. 2	Org. 3
1	Raising PR	yes	Yes	Yes
2	Preparing a specification	yes	yes	Yes
3	Obtaining Provision approval from Finance Division	no	no	no
*4	Appointing a Technical Evaluation Committee	no	yes	no
5	Preparing draft bid documents	no	Yes	no
6	Finalized bid documents and obtaining approval from the relevant authorities for these documents	no	yes	no
7	Obtaining the approval for initiate the procurement procedure from the relevant authorities	no	no	no
8	Publish for initiation for bids	no	yes	Yes
9	Opening and closing of offers	yes	yes	yes
10	Requesting Security Bonds	no	no	no
11	Confirmation of such bonds	no	no	no
12	Evaluation of offers and Recommendation	yes	yes	yes
13	Preparing Tender Board paper for Final approval	no	no	no
14	Sending Award Letter	no	yes	yes
15	Demanding Performance Bond	no	yes	yes
16	Signing the contract	yes	yes	yes
17	Placing the Order	yes	yes	yes
18	Obtaining some approvals and initiate some payments procedures specially for imports	yes	yes	yes
19	Follow up the order	yes	yes	yes
20	Receive the order	yes	yes	yes
21	Accept the order by the user division by good acceptance certificate (GAC)	no	yes	yes
22	Accept the Payments by the user division by Provision acceptance certificate (PAC)	no	no	no
23	Payments	yes	yes	Yes

*Table 5: The Comparison of procurement procedure between AASL & other organization*

\* In addition it should be identifying that is there any steps or stages consist in other organizations, procurement procedure those are not included in AASL procedure.

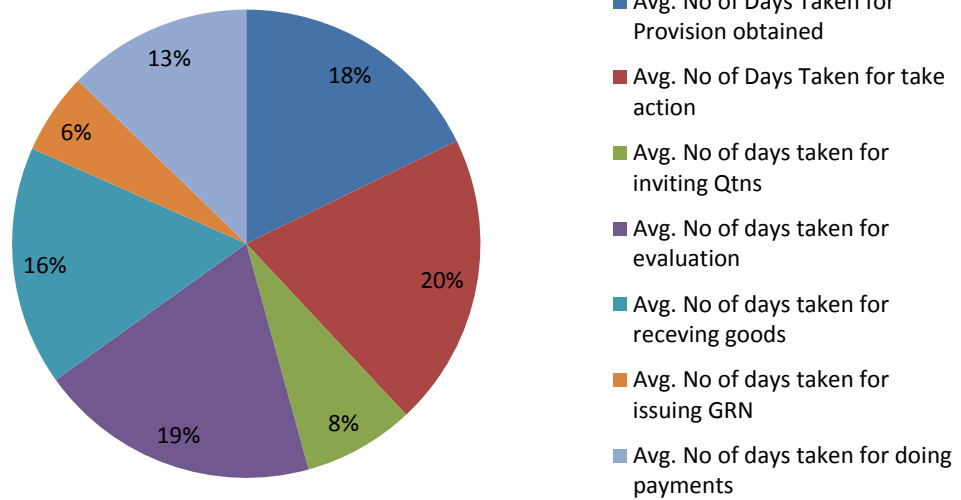
\*4. The Quality department is do the same thing which is done by the AASL TEC

Average Days taken for each stages of the total procurement form 100 nos of seal quotations which value is less than Rs. 100,000.00

Avg. No of Days Taken for Provision obtained

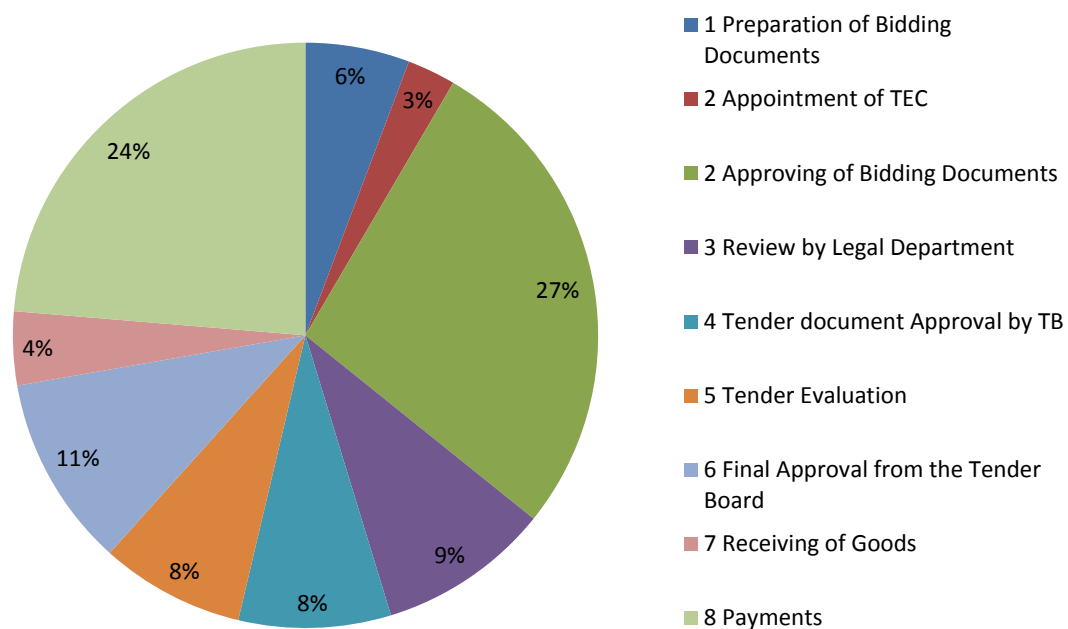
Action	Average Days
No of Days Taken for take action	31.64
No of days taken for inviting Qtns	11.98
No of days taken for evaluation	30.29
No of days taken for receiving goods	25.82
No of days taken for issuing GRN	8.75
No of days taken for doing payments	19.90
<b>Total no of days for total procurement</b>	<b>156.12</b>

Table 6: Average days taken for each stages of the total procurement from 100 nos of quotations which value is less than Rs 100,000.00



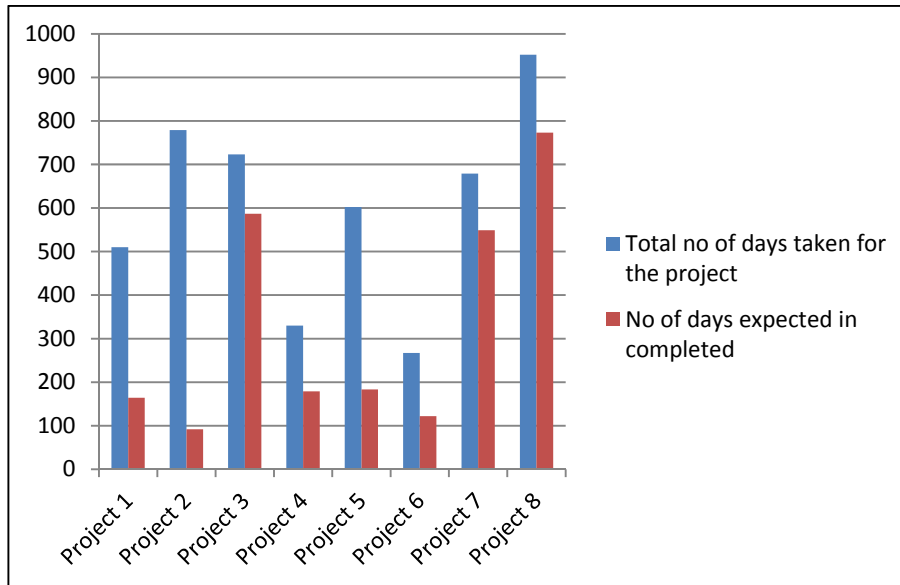
Action	Average Days
1.Preparation of Bidding Documents	30
2.Appointment of TEC	14
3.Approving of Bidding Documents	142.75
4.Review by Legal Department	49.625
5.Tender document Approval by TB	43.875
6.Tender Evaluation	41.625
7.Final Approval from the Tender Board	55.25
8.Receiving of Goods	21.25
9.Payments	123.625

Table 7: Average days taken for each stages of the total procurement from 20 nos of tenders

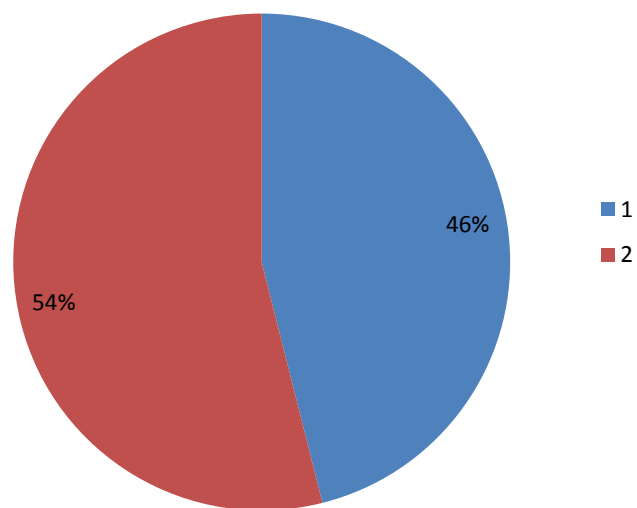


	Total no of days taken for the project	No of days expected in completed	Delays as per scheduled	Probability of completing the project at expected time	Probability of not completing the project at expected time
Project 1	510	164	346	32.16%	67.84%
Project 2	779	92	687	11.81%	88.19%
Project 3	723	587	136	81.19%	18.81%
Project 4	330	179	151	54.24%	45.76%
Project 5	602	183	419	30.40%	69.60%
Project 6	267	122	145	45.69%	54.31%
Project 7	679	549	130	80.85%	19.15%
Project 8	952	773	179	81.20%	18.80%
	<b>605.25</b>	<b>331.125</b>	<b>274.125</b>	<b>52.19%</b>	<b>47.81%</b>

*Table 8: Analysis of data as per procurement time schedule of 10 nos of projects*



Probability of completing the project at expected time	0.4606
Probability of not completing the project at expected time	0.5394

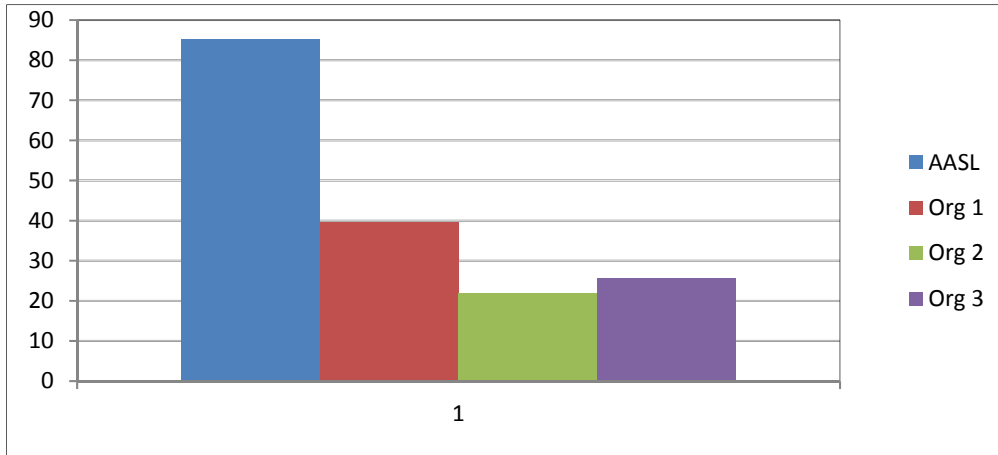


### 4.3 AASL Data analysis comparatively with other organizations

The Following tables show the total lead time in days taken for the total procurement process those values are as per given ranges from AASL and others

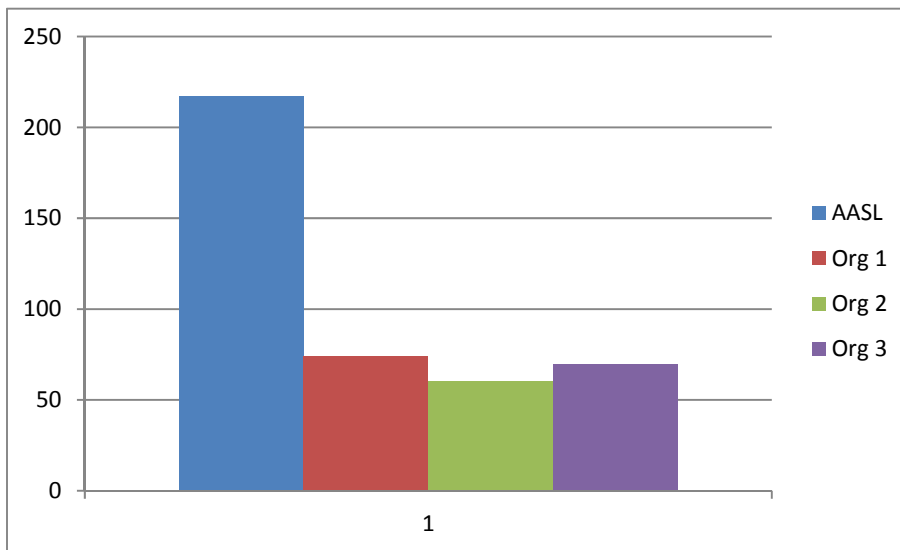
*Table 9: Average Lead time of procurements value between Rs 100,000.00 - 250,000.00*

AASL	Org 1	Org 2	Org 3
85.06	39.68	21.79	25.67



*Table 10: The average lead time of procurements value between Rs 250,000.00 - 2,000,000.00*

AASL	Org 1	Org 2	Org 3
217.3	74	60.1	69.5



*Table 11: The average lead time of procurement value between Rs 2,000,000.00 - 5,000,000.00*

AASL	Org 1	Org 2	Org 3
324.83	139.16	115.66	145.16

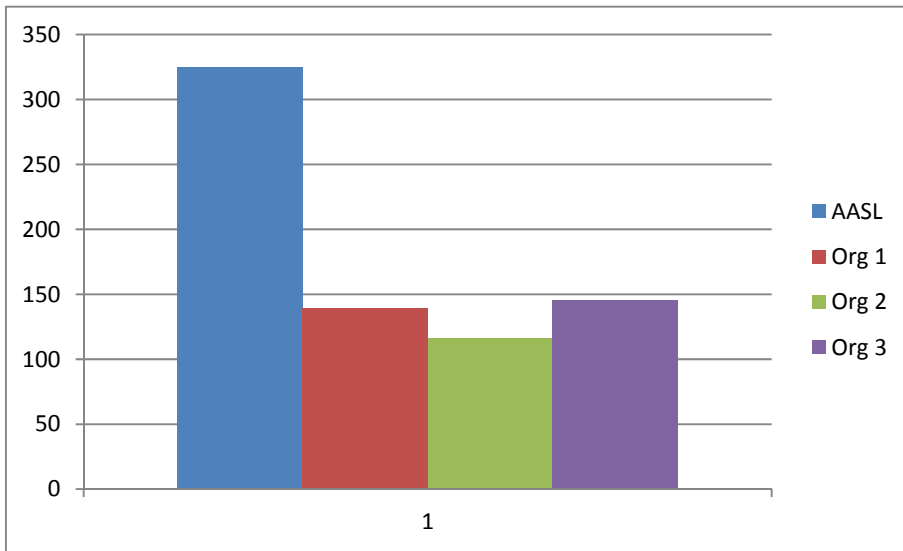
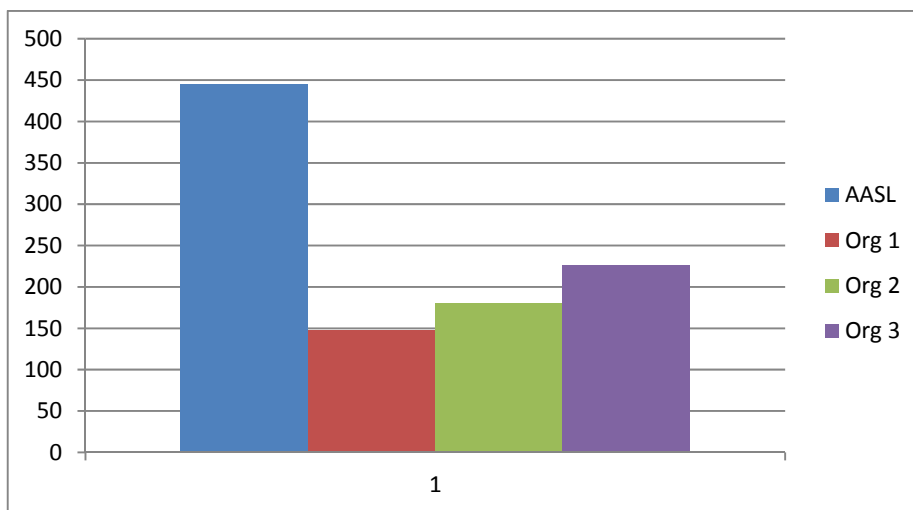


Table 12: The average lead time of procurements value between Rs 5,000,000.00 - 25,000,000.00

AASL	Org 1	Org 2	Org 3
324.83	139.16	115.66	145.16



#### 4.4 QUALITATIVE DATA ANALYSIS

1. Do you agree that it is possible to work effectively with existing Public Procurement procedure (PPP)?

Position	Responses			
	Agree	Partially Agree	Not Agree	Reason/Why
S. Manager	3	7	0	
Manager 1	4	14	2	
Manager 2				
Supervisor 1	0	21	9	
Supervisor 2				
Supervisor 3				
Total	7	42	11	60

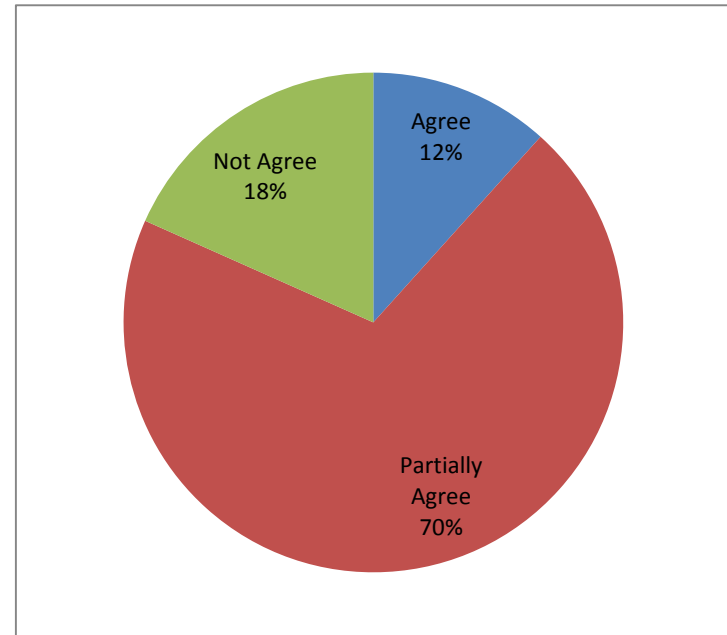


Table 13: Responses for the Question No.01

2. Are there any obstructions/barriers in the PPP for the effectiveness and what are those?

Position	Responses		
	Yes	No	If Yes What are those
S. Manager	7	3	
Manager 1	16	4	
Manager 2			
Supervisor 1	28	2	
Supervisor 2			
Supervisor 3			
Total	51	9	60

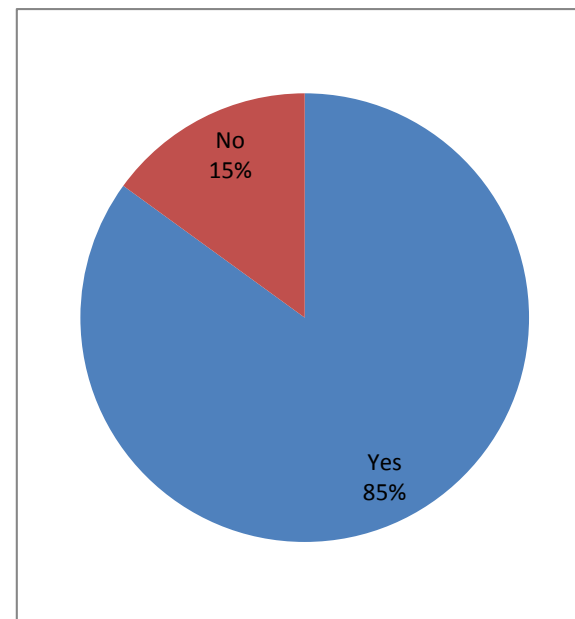


Table 14: Responses for the questions no.02



3. What is your opinion regarding the effectiveness of the all employees in overall performance.

Position	Responses				Comment
	Very High	High	Average	Low	
S. Manager	0	1	6	3	
Manager 1	0	3	15	2	
Manager 2					
Supervisor 1	1	11	16	2	
Supervisor 2					
Supervisor 3					
Total	1	15	37	7	60

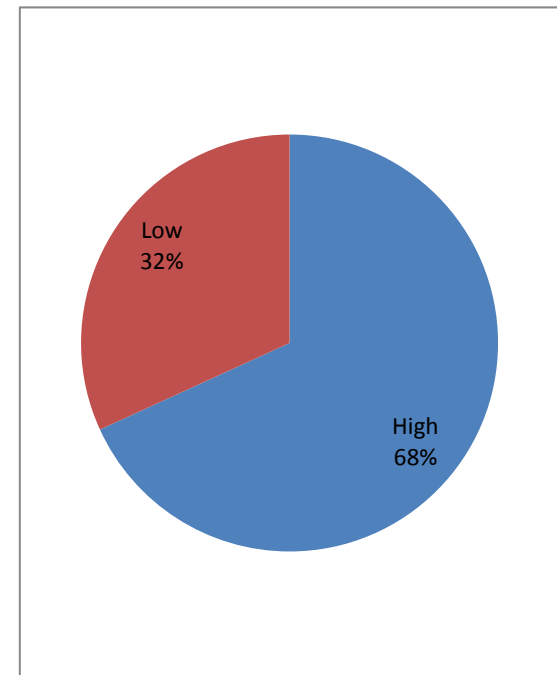


Table 15: Responses for the questions no 03.

4. What is your opinion regarding the top management involvement for the success of SCM effectiveness

Position	Responses				
	Very Good	Good	Partially Good	Bad	Comment
S. Manager	0	4	6		
Manager 1	0	2	16	2	
Manager 2					
Supervisor 1	0	1	18	11	
Supervisor 2					
Supervisor 3					
Total	0	7	40	13	60

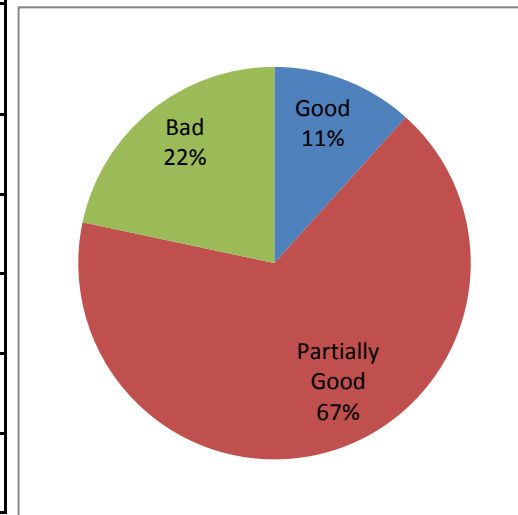


Table 16: Responses for the questions no 04

5. Would you agree that there should be any change or/and development in PPP?  
 (Impossible to obtain effectiveness with existing PP).

Position	Responses					Comment
	Totally agree	Agree	Partially Agree	Disagree	Totally Disagree	
S. Manager	3	5	1	1	0	
Manager 1	8	2	10	0	0	
Manager 2						
Supervisor 1	17	11	2	0	0	
Supervisor 2						
Supervisor 3						
Total	28	18	13	1	0	60

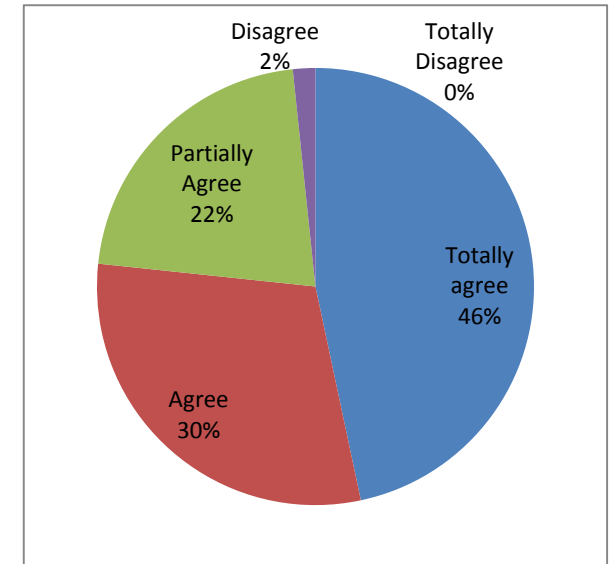


Table 18 : Responses of the questions no. 05

**\*All comments of these qualitative questionnaire mentioned in the discussion**

## 4.5 Findings

1. Basically, it shows that the majority nos of PR are raised for the operations of BIA, and out of those it takes considerably higher nos of seal quotation procurements when it takes few amount of total procurement value of year 2018 while the tender procurement takes the higher value from the total procurement.
2. The lead time taken for the evaluation purposes, financial activities and waiting for the approval from the higher management is great deal higher than the other activities in the procurement cycle.
3. The lead time of the operation of SCM Division is comparatively less that the other operation taken by the evaluation committee, financial division and the directorate
4. Neither seal Quotations procurement nor Tender procurement was unable to complete at least 50% days beyond the date of completion as pre determined.
5. The other organizations procurement hierarchy is more flattered than the AASL
6. There are lot of formalities and steps consist of AASL procurement procedure other than the others
7. There are several activities consisting in the procurement procedure of other organization which are not available in the AASL and I realized that those are much useful to reduce the lead time.(e.g. , Maintaining a Quality department for the technical evaluation)
8. The total procurement lead time is great deal higher than the procurement lead time of private organization.
9. The all individuals who are involving in the procurement procedure were unable to justify some reasons those were affect to the lead time management.

## 5. CONCLUSION AND RECOMMENDATIONS

### 5.1 Conclusion

The objectives of the research were identifying how PPP affect to the lead time management of the AASL's procurements and actually it was developed to tackle is it true that the PPP badly affect to the procurement efficiency of AASL and is there any mismatch of adapting those guild lines or both influences are badly affect to the AASL procurement efficiency. In my conclusion I would like to give a brief explanation about my research. In the initial stage I have considered the consumer's comments regarding not having the essential goods those are supplied by the GOSL at the right time. Then I have had to study government procurement procedure with NPA guild lines .Next I tried to find that is there any delay to acquire the right item at the right time with this PPP. In my research, the no of all procurement raised in year 2018 selected as the sample to do a quantitative analysis and compare time gaps between AASL and the other selected organization to benchmark the procurement efficiency, and then I develop a questionnaire to tackle responses for the findings of my quantitative analysis. I was able to found that there is several issues in the PPP as well as the issues those arise from the procurement people when they executing the assigned duties as well.

**Finally, I was able to realize that not only PPP badly affect to the SCM lead time but also efficiency of SCM employees badly affect and both areas should be developed.**

### 5.2 Recommendations

1. As per the responses of the questionnaire, majority of respondents suggest that there should be a specific NPA guild lines for the procurement of public enterprises to mitigate the lead time failures.
2. Develop a quality Management unit at AASL for the technical evaluation for frequently procured items as per other organization specified in this research.

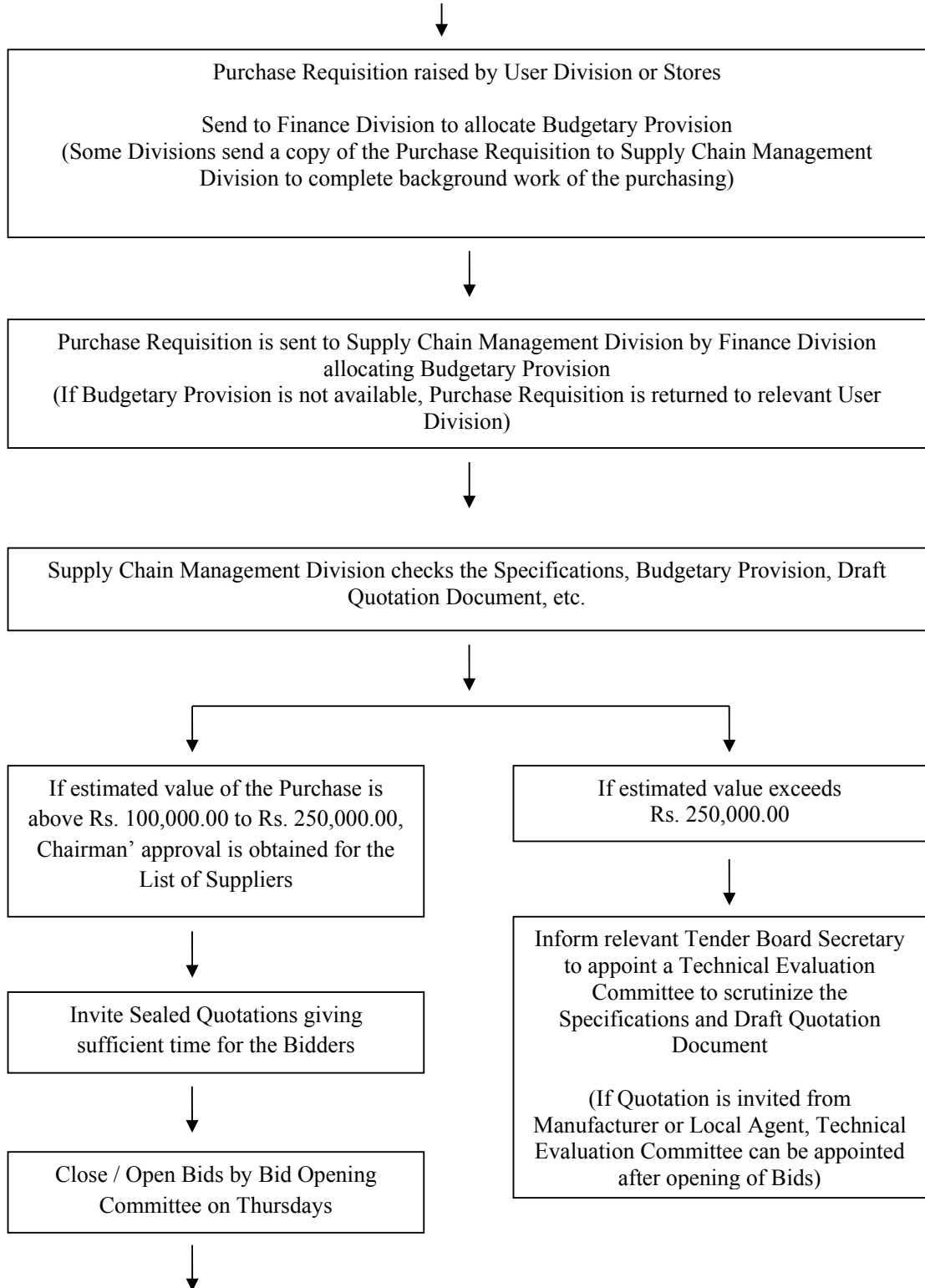
3. Reduce the repeated and more paper works of finance division and they should be trained with the general procurement procedures.
4. There should be a higher authority delegated person who appointed from the AASL management to minimize the procurement delays when the higher authorities are absent and or changing due to the changing of the government.
5. Basically, AASL doesn't utilize a proper ERP system which is a major issue for a streamline the purchasing process and it must d be implemented as soon as possible.
6. Develop a KPI to measure the performance of each individual in the SCM Division.

## 6. REFERENCES

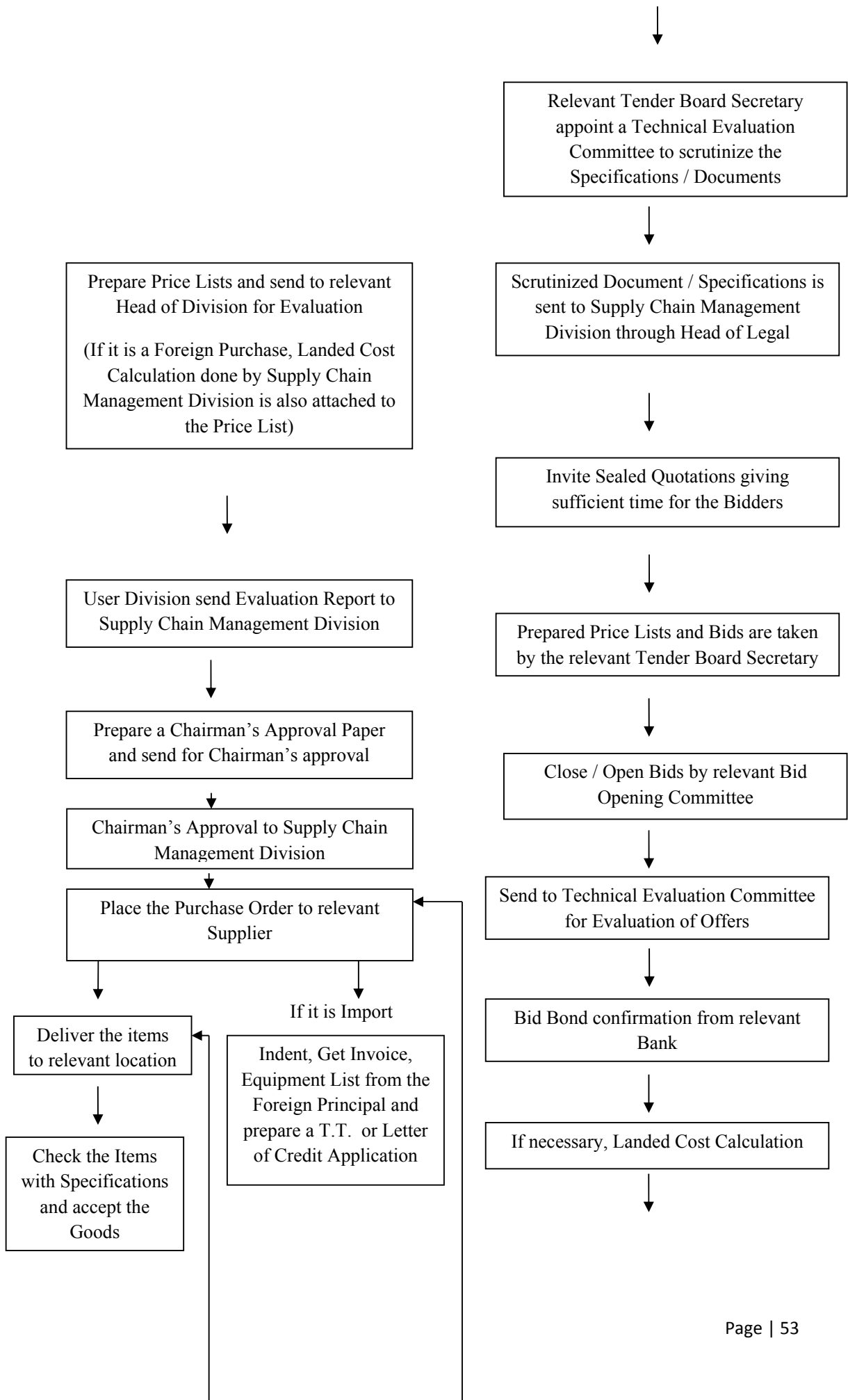
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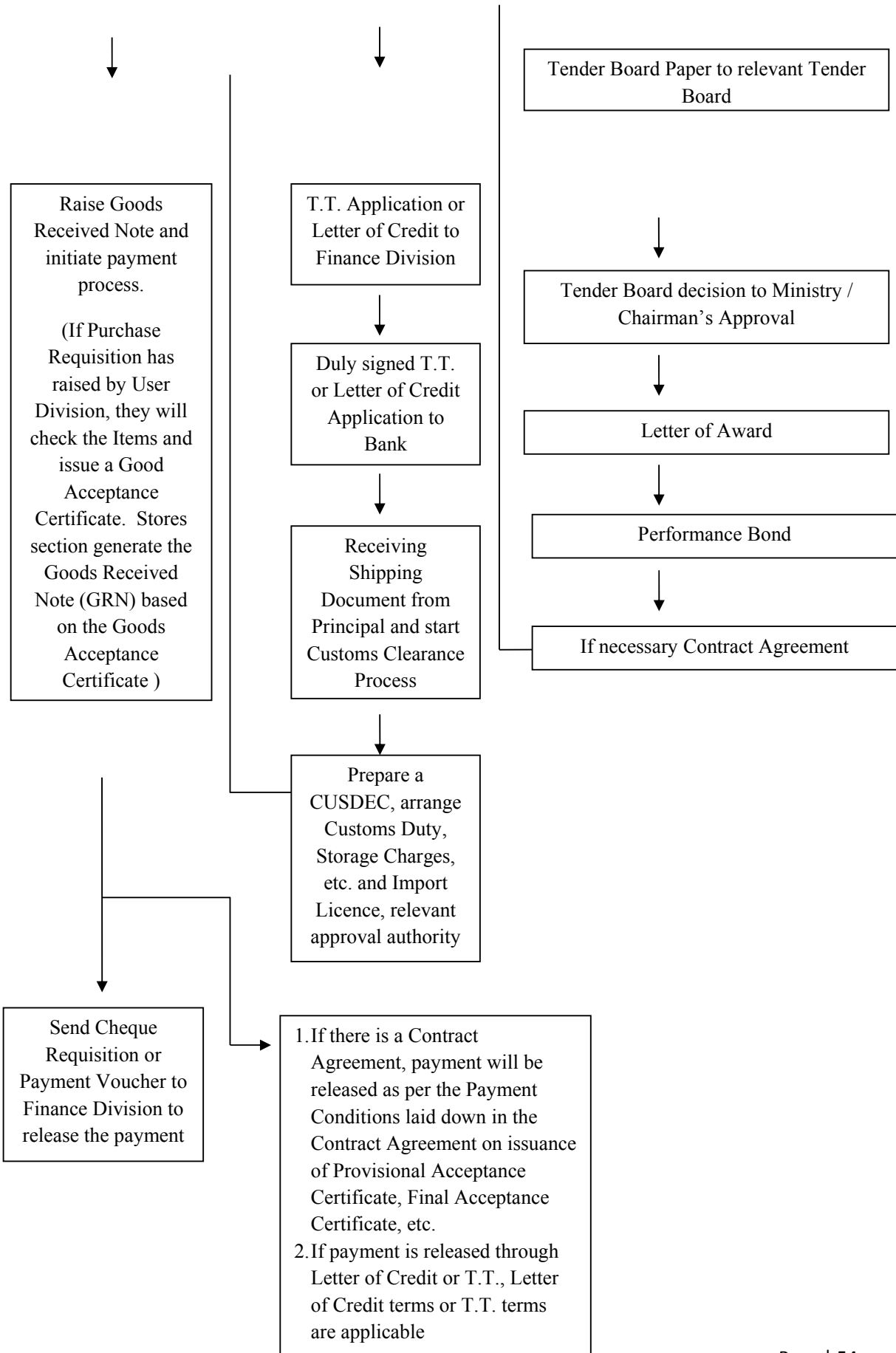
## SIMPLE PURCHASING PROCESS

### (Sealed Quotations – Purchase Requisitions raised by Stores and User Divisions)









Appendix B: Comparing The AASL procurement Procedure with other organization

	Org. 1	Org 2	Org 3
1 Raising PR	yes	Yes	Yes
2 Preparing a specification	yes	yes	Yes
3 Obtaining Provision approval from Finance Division	<b>no</b>	<b>no</b>	<b>no</b>
*4 Appointing a Technical Evaluation Committee	no	yes	no
5 Preparing draft bid documents	no	Yes	no
6 Finalized bid documents and obtaining approval from the relevant authorities for these documents	no	yes	no
7 Obtaining the approval for initiate the procurement procedure from the relevant authorities	<b>no</b>	<b>no</b>	<b>no</b>
8 Publish for invitation for bids	no	yes	Yes
9 Opening and closing of offers	yes	yes	yes
10 Requesting Security Bonds	<b>no</b>	<b>no</b>	<b>no</b>
11 Confirmation of such bonds	<b>no</b>	<b>no</b>	<b>no</b>
12 Evaluation of offers and Recommendation	yes	yes	yes
13 Preparing Tender Board paper for Final approval	<b>no</b>	<b>no</b>	<b>no</b>
14 Sending Award Letter	no	yes	yes
15 Demanding Performance Bond	no	yes	yes
16 Signing the contract	yes	yes	yes
17 Placing the Order	yes	yes	yes
18 Obtaining some approvals and initiate some payments procedures specially for imports	yes	yes	yes
19 Follow up the order	yes	yes	yes
20 Receive the order	yes	yes	yes
21 Accept the order by the user division by good acceptance certificate (GAC)	no	yes	yes
22 Accept the Payments by the user division by Provision acceptance certificate (PAC)	<b>no</b>	<b>no</b>	<b>no</b>
23 Payments	yes	yes	Yes

*\* In addition it should be identify that is there any steps or stages consist in other organizations, procurement procedure those are not included in AASL procedure.*

*\*4. The Quality department is do the same thing which is done by the AASL TEC*

Appendix C: Measuring of Lead time of QTN's Purchasing

	Date of PR	No of Days Taken for Provision obtained	No of Days Taken for take action	No of days taken for inviting Qtns.	No of days taken for evaluation	No of days taken for receiving goods	No of days taken for issuing GRN	No of days taken for doing payments	Total no of days
1	10/19/2018	3	1	8	3	16	4	12	51
2	5/26/2017	10	10	6	49	98	21	29	262
3	9/19/2017	24	24	14	27	17	1	20	136
4	6/22/2018	39	35	3	9	31	18	25	142
5	7/4/2017	1	35	10	54	35	6	30	153
6	6/28/2017	19	17	10	192	38	5	30	337
7	4/9/2018	31	29	15	7	6	2	14	125
8	3/20/2018	9	30	15	16	10	7	39	131
9	2/23/2018	24	10	15	12	9	12	32	124
10	3/19/2018	14	30	15	19	21	6	29	121
11	5/14/2018	16	16	7	12	2	9	13	85
12	6/21/2018	13	9	21	4	2	8	10	84
13	6/11/2018	8	21	16	11	2	8	9	96
14	2/27/2018	6	31	14	45	10	15	14	160
15	3/21/2018	10	35	15	31	11	11	9	175
16	12/22/2017	31	23	14	28	122	5	14	229
17	2/1/2018	13	24	8	47	8	6	24	157
18	5/9/2018	7	35	10	24	29	3	16	168
19	2/25/2018	29	43	9	21	24	25	18	183
20	3/19/2018	94	77	9	5	31	13	41	245

Appendix D: Delays of Major Projects as per Procurement Time Schedule

Procurement No	Title of Procurement	Estimate Cost	Method of Procurement	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
				Preparation of Bid Documents	Appointment of TEC	Approve Bidding Documents by TEC	Review of TEC recommendation by Legal Dept	Approval for the bidding documents by Tender Boards	Publishing of Press Notice	Issue of Bidding Documents	Clarification and Pre-Bid Meeting	Closing of Bids	Bid Evaluation by TEC	Approval of the Tender Board	Contract Award	Completion of Contract
				No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days	No of Delays in Days
110/T/17	S,I& C of Central Data Base System	10.9 ML	P.BID	0	14	22	<b>34</b>	44	90	90	<b>90</b>	91	110	234	237	346
109/T/16	Purchase of Backup Servers at BIA	2 ML	P.BID	1	36	475	<b>470</b>	514	732	729	<b>732</b>	729	761	847	902	688
096/T/17	Purchase of UPS System at BIA	3.2 ML	P.BID	58	52	37	<b>70</b>	68	3	3	<b>0</b>	151	181	195	191	194
149/T/16	Supply of FID at BIA	3.75 ML	P.BID	0	61	86	<b>87</b>	99	96	96	<b>0</b>	95	139	186	195	151
090/T/16	Supply & Ins. Of VMWARE Lice. At BIA	9 ML	P.BID	235	250	285	<b>498</b>	538	186	548	<b>0</b>	548	547	547	561	654
064/T/16	48 & 24 Port POE Switches	5.5 ML	P.BID	11	6	50	<b>67</b>	113	474	449	<b>0</b>	112	125	134	147	156
139/T/16	Supply of Fire Wall	15 ML	P.BID	21	5	123	<b>148</b>	236	258	237	<b>0</b>	252	267	300	312	151
119/T/17	Optical Fiber Cable	3 ML	P.BID	30	33	406	<b>391</b>	41	97	69	<b>0</b>	93	172	219	211	209

Appendix E: Range of Items to be considered to benchmark in purchasing lead time performances

<b><u>Rs 100,000.00 - 250,000.00</u></b>
i. Photocopy Papers
ii. Books/Files/Pen/Pencils etc..
iii. Milk Powder
iv. Tea leaves and Sugar
v. Cleaning Liquids/Detergents
vi. Beverages
vii. Refreshments
viii. Computers
ix. Computer peripherals
x. Photocopy machines/Scans
xi. General hardware items
xii. Special Hardware items e.g. Compressor, drill machines etc..
xiii. Paints
Xiv. Special Electrical and Electronic devices
XV. Communication equipments and spares
Xvi. Bulbs, Lamps ,Emergency Lamps etc.
Xvii. Timber
Xviii. Automobile Spares
Xix. Other Machinery Spares
XX. Tyres and tubes
Xxi. Air Condition Machines
XXii. Water Bottles
Xxiii. Water Boilers/Filters
Xxiv. Fans/freezers and refrigerators
XXv. TV, Projector
Xxvi. Camera, Video Camera
Xxvii. Uniforms
Xxviii. Safety Shoes, jackets etc.
xxix. Furniture
XXX. Sanitary wares
xxxi. Kitchenware/cutlery etc..
xxxii. Calculators, Fax machines
xxxiii. MDF boards and plywood
xxxiv. Tools
<b><u>Rs 250,000.00 - 2,000,000.00</u></b>
i. Compressors
ii. Air Condition Machines
iii. Motor Cycle

iv. Computers
v. Furniture
vi. Automobile Spares
vii. Refreshments
viii. Still Cameras and Video Cameras
ix. Tyres and tubes
<b><u>Rs 2,000,000.00 - 5,000,000.00</u></b>
i. CCTV System
ii. Air condition System
iii. Automobile Spares
iv. Tyres and tubes
v. Motor vehicles
vi. Machines and their spares
Rs 5,000,000.00 - 25,000,000.00
i. Motor Vehicles
ii. Machines
Rs 25,000,000.00 - 100,000,000.00
Rs 100,000,000.00 - 250,000,000.00
Above Rs 250,000,000.00

	AASL	ORG 1	ORG 2	ORG 3
No of days taken for raising PR				
No of days taken for Preparing a specification				
No of days taken for Obtaining Provision approval from Finance Division				
No of days taken for Appointing a Technical Evaluation Committee				
No of days taken for Preparing draft bid documents				
No of days taken for Finalized bid doc. and obtaining approval from the relevant authorities for these doc.				
No of days taken for Obtaining the approval for initiate the procurement procedure from the relevant authorities				
No of days taken for Publish for invitation for bids				
No of days taken for Opening and closing of offers				
No of days taken for Requesting Security Bonds				
No of days taken for Confirmation of such bonds				
No of days taken for Evaluation of offers and Recommendation				
No of days taken for Sending Award Letter				
No of days taken for Demanding Performance Bond				
No of days taken for Signing the contract				
No of days taken for Placing the Order				
No of days taken for Obtaining some approvals and initiate some payments procedures specially for imports				
No of days taken for Follow up the order				
No of days taken for Receive the order				
No of days taken for Accept the order by the user division by good acceptance certificate (GAC) or GRN				
No of days taken for Accept the Payments by the user division by Provision acceptance certificate (PAC)				
No of days taken for Payments				



**Appendix F: Questionnaire for Qualitative investigation.**

1. Do you agree that it is possible to work effectively with existing Public Procurement procedure (PPP)?

Position	Responses			
	Agree	Partially Agree	Not Agree	Reason/Why
S. Manager				
Manager 1				
Manager 2				
Supervisor 1				
Supervisor 2				
Supervisor 3				

2. Are there any obstructions/barriers in the PPP for the effectiveness and what are those?

Position	Responses		
	Yes	No	If Yes What are those
S. Manager			
Manager 1			
Manager 2			
Supervisor 1			
Supervisor 2			
Supervisor 3			

3. What is your opinion regarding the effectiveness of the all employees in overall performance.

Position	Responses				
	Very High	High	Average	Low	Comment
S. Manager					
Manager 1					
Manager 2					
Supervisor 1					
Supervisor 2					
Supervisor 3					

4. What is your opinions regarding the top management involvement for the success of SCM effectiveness

Position	Responses				
	Very Good	Good	Partially Good	Bad	Comment
S. Manager					
Manager 1					
Manager 2					
Supervisor 1					
Supervisor 2					
Supervisor 3					

5. Would you agree that there should be any change or/and development in PPP?

Position	Responses					
	Totally agree	Agree	Partially Agree	Disagree	Totally Disagree	Comment
S. Manager						
Manager 1						
Manager 2						
Supervisor 1						
Supervisor 2						
Supervisor 3						