KCT BUSINESS SCHOOL

ASSESSMENT OF TURNAROUND TIME OF THE TOTAL PAYMENT PROCESS BY STREAMLINING INVOICE VERIFICATION AT ROBERT BOSCH ENGINEERING AND BUSINESS SOLUTION LTD, COIMBATORE

A Project Report

Submitted

By

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Kumaraguru College of Technology
(An autonomous institution affiliated to Anna University, Coimbatore)

Coimbatore - 641 049

May, 2012

BONAFIDE CERTIFICATE

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Certified that this project report titled **"Assessment of Turnaround Time of the Total Payment Process by Streamlining Invoice Verification at Robert Bosch Engineering And Business Solution Limited, Coimbatore "** is the bonafide work of **Ms.K.Banupriya, Reg no: 1020400010** who carried out the project under my supervision. Certified further, that to the best of my knowledge the work reported here does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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PROJECT COMPLETION CERTIFICATE

Robert Bosch Engineering and Business Solutions Limited
(Formerly Robert Bosch India Limited)

BOSCH

LETTER OF REFERENCE

Date 09/05/2012

This is to certify that Ms Banupriya K of KCT Business School, Coimbatore pursuing MBA in HR and Marketing is doing her project internship under the title **"Assessment of turnaround time of total payment process by streamlining invoice verification"** in PUR department from 19.01.2012 onwards her project internship will continue till 31.07.2012.

Robert Bosch Engineering and Business Solutions Limited

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The study focuses on assessing the turnaround time of the total payment process in Robert Bosch engineering and business solutions limited, Coimbatore. There exists delay in payment to vendors where the payment is happening only after 70-80 days. This is due to various reasons like multiple interactions, lack of ownership, lack of coordination, no lead time, etc..,

The reason for the delay in payment is determined by administering a structured interview schedule for all the five departments like Logistics, Purchase, BSD, BSA and Finance that are involved in the payment process. The whole payment process is divided into four stages namely Scanning process, Posting process, payment process and total process. From this the existing payment system was analyzed and the gaps in the system were identified. The total number of days taken for each process shows a high delay in payment.

In order to encounter this delay, a new payment process was proposed by the management and the department members involved in the payment process. The process was initially streamlined by invoice verification. Lead time was given to the entire department and the whole process was closely monitored. The departments were divided into three teams as Scanning team, IV team and finance team and the improvement in payment process by each team were analyzed periodically. In the process of implementation, the vendors were educated and instructed to submit a valid invoice so that the delay will be minimized. Coordination between the teams was also increased.

The process improvement was analyzed in all the four stage and the average number of days taken for payment in each stage was studied. The improvement in the payment process was determined for the Month of February, March and April'2012 and the results were compared with the payment process of 2011. The proposed payment system is successful.

CHAPTER 1

INTRODUCTION

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1.1 Introduction to the Study

As a purchaser, you must foster good relationships with your suppliers. They are important to you.

Some large firms like Robert Bosch, who buys huge volumes from thousands of individual suppliers, issue guidance literature on payment procedures. This helps suppliers to understand the timing of payment procedures, how best to present invoices and how to follow up unpaid items and disputes.

The purpose of the study is to research and determine the turnaround time of payment, starting from the submission of the invoices at the time of delivery of goods/services to the dispatch of Cheque to the suppliers and vendors.

The practice of deliberately paying later than the agreed terms is wrong for sound economic reasons:

- ❖ It weakens your organization because it harms your reputation;
- ❖ It damages your supply sources and strains your relations with suppliers;
- ❖ It weakens the economy as a whole because it constricts growth;

Late payment is often taken as an indication that the buyer is in difficulties. If you create this impression with your suppliers you may find that their terms worsen. Late payment can also be symptomatic of poor relationships between you and your suppliers.

An organization can gain in reputation and buying power when committed to prompt payment. A commitment to prompt payment can be a powerful aid to better buying; it will certainly produce closer, more co-operative partnerships between the client and the suppliers.

Large corporations in particular enjoy considerable purchasing power. That power carries esponsibility. The flow of cash in the economy begins with large organizations and should ascade, not trickle, down the chain of suppliers

Payment to suppliers on time is a very crucial part of any businesses as it can create and naintain a long lasting relationship with suppliers, timely delivery of goods/services, improves the usiness processes, minimize conflicts and tensions amidst the company regarding payment, etc..,

The total payment process is assessed and improved by streamlining invoice verification process for the month of February, March and April, 2012 and it is compared against the Year 2011 to monitor the improvement in the payment process.

1.2 Industry Profile - Automotive industry:

The automotive industry designs, develops, manufactures, markets, and sells motor vehicles, and is one of the world's most important economic sectors by revenue.

The automotive industry is a highly diversified sector that comprises of manufacturers, suppliers, dealers, retailers, original equipment manufacturers or OEMs, aftermarket parts manufacturers, automotive engineers, motor mechanics, auto electricians, spray painters or body repairers, fuel producers, environmental and transport safety groups, and trade unions.

The automobile and automotive parts & components manufacturers constitute a major chunk of automotive industry throughout the world. The automotive manufacturing sector consists of automobile and light truck manufacturers, motor vehicle body manufacturers, and motor vehicle parts and supplies manufacturers. This sector is engaged in manufacturing of automotives and light duty motor vehicles, motor vehicle bodies, chassis, cabs, trucks, automobile and utility trailers, buses, military vehicles, and motor vehicle gasoline engines.

1.2.*1* The Top Auto making Nations

United States, Japan, China, Germany and South Korea are the top five automobile manufacturing nations throughout the world. The United States of America is the world's largest producer and consumer of motor vehicles and automobiles accounting for 6.6 million direct and spin-off jobs and represents nearly 10% of the $10 trillion US economy. Automobile is one of the important industries in the world, which provides employment to 25 million people in the world.

1.2.*2* Major Segments of Automotive Industry

Auto components amount to 31.5% share of the global automobiles and components industry group's value. The global automotive component industry is highly diverse and comprises of various product segments like engine parts, drive transmission and steering parts, suspension & braking parts, electrical parts and other auto components parts.

Engine Parts segment in the automotive component industry comprises of different parts like engine parts, fuel delivery system and products such as pistons, piston rings, engine valves, carburetors, and diesel-based fuel delivery systems. Engine parts form one of largest product

egment of the automotive components industry and have a production share of 31%. A echnology intensive segment, engine parts are moving towards improved designs for optimal fuel onsumption and lesser emission. The latest trend in this sector is of outsourcing a part of the ngine from vendors.

Electrical Parts segment comprises of generators, starter motors and spark plugs. An mportant and relatively larger product segment - engine parts are gaining popularity at a faster ace in the global automotive parts & components industry. Electric start mechanism in different cooter and motorcycles is the latest concept in the automobile industry

Drive Transmission and Steering Parts segment has sub segments like gears, wheels, teering systems, axles, and clutches. Having 19% share, this segment is considered the largest roduct segment after engine parts segment. The emergence of different leading automotive manufacturers is intensifying the competition in the sector especially for products like gears and lutches.

Suspension and Braking Parts segment comprises of automobile components like brakes, rake assemblies, leaf springs, shock absorbers, brake linings. Suspension and braking parts egment has around 12% share in the global auto component industry.

Body and Chassis Parts segment comprises of body and chassis, sheet metal components, nd plastic-molded parts. The global sourcing of automotive components comprise of chassis, rames, brakes, steering and much more has reached to US $ 185 billion in 2008-09. This product egment has 12% share in the global automotive component and parts industry.

.2.3 Key Industry Drivers

he highlighting features of global automotive industry are:

- Offers support to other industries such as iron, steel, rubber, glass, plastic, petroleum, textiles, oil & gas, paints & coatings, transportation industries.

- Rising foreign investments have led to the rapid growth in terms of automobile production and exports. Overseas companies are making huge investments and are installing extensive production capacities in developing countries.

- Continuous investment in research & development has resulted in increased productivity and better quality automobiles, automotive accessories and parts.

- This sector provides employment to major chunk of human population in the world i.e. 25 million. This industry not only provides millions of jobs to the people, but also produces billions of dollars in terms of worldwide revenues.

- Adequate infrastructural facilities in form of power supply, machinery, capital, ready availability of raw materials and labor help in the tremendous growth of this industry.

.2.4 Future Outlook

The automotive industry is witnessing tremendous and unprecedented changes these days. his industry is slowly and gradually shifting towards Asian countries, mainly because of aturation of automobile industry in the western world. The principal driving markets for Asian utomotive industry are China, India and ASEAN nations.

Low cost vehicles namely scooters, motorcycles, mopeds and bicycles have led to the nassive growth of some of the fastest developing economies like China and India. The future of utomotive industry in the Asian countries such as Thailand, Philippines, Indonesia, and Malaysia s bright and promising because of the ASEAN free trade area under which the export tariffs are ery less.

On a global scale, the assets of the top ten automotive corporations accounts for 28% of the ssets of the world's top 50 companies, 29% of their employment and 30% of their total sales. In ne year 2006, the United States of America sold around 16 million of new automobiles; Western urope sold around 15 million, while China and India sold 4 million and one million respectively. atin America, Middle East, Eastern Europe, China, Malaysia and other South-Asian nations are ow emerging as the dominant markets of the automotive industry.

Most of the major automotive players are shifting their production facilities in these emerging markets with the main purpose of gaining better access and reduction in their production costs. There is estimation that the automotive markets in South America and Asia will witness a boom in the near future. The various factors such as cheap financing and prices discounts, rising and infrastructure developments will assist in the growth and development of automotive sector in the majority of Asian nations.

1.2.5 Market Forecasts

With the upcoming marketing strategies of the manufacturers, the auto parts industry is expected to have reached a value of USD 586 billion by year 2012. According to reports, the compound annual growth rate of this industry is 2.6% for the period of 2007 - 2009.

Global Auto Components Forecast Value - USD billion 2007 – 2012		
Year	USD billion	% Growth
2007	515.5	2.30
2008	526.2	2.10
2009	538.9	2.40
2010	553.4	2.70
2011	569.1	2.80
2012	585.9	3.00
CAGR	2007 - 2012 : 2.6%	

Figure 1.1 – Figure showing Global Auto Forecast values from 2007 to 2012

It is believed that by 2015, the global auto component industry would reach US$ 1.9 trillion. With different low cost countries emerging at a fast pace in this industry, it is also expected that around 40% of the money will be sourced from such countries. India is one of such low cost countries. At present, it has only 0.4% of the global auto components trade of US$ 185 billion. By the year 2025, it is expected that India might be among the top five auto component economies.

1.2.6 Consumer goods or home appliances:

A category of stocks and companies that relate to items purchased by individuals rather than by manufacturers and industries. This sector includes companies involved with food production, packaged goods, clothing, beverages, automobiles and electronics.

Performance in the consumer goods sector depends heavily on consumer behavior. When the economy grows the sector will see an increased demand for higher-end products. When the economy shrinks there is an increased demand for value products. While some product types, such as food, are necessary, others, such as automobiles, are considered luxury items.

1.2.7 Industrial Goods

Industrial goods are products that companies purchase to make other products, which they then sell. Some are used directly in the production of the products for resale, and some are used indirectly. Unlike consumer goods, industrial goods are classified on the basis of their use rather than customer buying habits. These goods are divided into five subcategories: installations, accessory equipment, raw materials, fabricated parts and materials, and industrial supplies.

Industrial goods also carry designations related to their durability. Durable industrial goods that cost large sums of money are referred to as capital items. Nondurable industrial goods that are used up within a year are called expense items.

Installations are major capital items that are typically used directly in the production of goods. Some installations, such as conveyor systems, robotics equipment, and machine tools, are designed and built for specialized situations. Other installations, such as stamping machines, large commercial ovens, and computerized axial tomography (CAT) scan machines, are built to a standard design but can be modified to meet individual requirements.

The purchase of installations requires extensive research and careful decision making on the part of the buyer. Manufacturers of installations can make their availability known through advertising. However, actual sale of installations requires the technical knowledge and assistance that can best be provided by personal selling.

Accessory Equipment Goods that fall into the subcategory of accessory equipment are capital items that are less expensive and have shorter lives than installations. Examples include hand tools, computers, desk calculators, and forklifts. While some types of accessory equipment, such as hand tools, are involved directly in the production process, most are only indirectly involved.

The relatively low unit value of accessory equipment, combined with a market made up of buyers from several different types of businesses, dictates a broad marketing strategy. Sellers rely heavily on advertisements in trade publications and mailings to purchasing agents and other business buyers. When personal selling is needed, it is usually done by intermediaries, such as wholesalers.

Raw materials are products that are purchased in their raw state for the purpose of processing them into consumer or industrial goods. Examples are iron ore, crude oil, diamonds, copper, timber, wheat, and leather. Some (e.g., wheat) may be converted directly into another consumer product (cereal). Others (e.g., timber) may be converted into an intermediate product (lumber) to be resold for use in another industry (construction).

Most raw materials are graded according to quality so that there is some assurance of consistency within each grade. There is, however, little difference between offerings within a grade. Consequently, sales negotiations focus on price, delivery, and credit terms. This negotiation plus the fact that raw materials are ordinarily sold in large quantities make personal selling the principal marketing approach for these goods.

Fabricated parts are items that are purchased to be placed in the final product without further processing. Fabricated materials, on the other hand, require additional processing before being placed in the end product. Many industries, including the auto industry, rely heavily on fabricated parts. Automakers use such fabricated parts as batteries, sun roofs, windshields, and spark plugs. They also use several fabricated materials, including steel and upholstery fabric. As a matter of fact, many industries actually buy more fabricated items than raw materials.

Buyers of fabricated parts and materials have well-defined specifications for their needs. They may work closely with a company in designing the components or materials they require, or

ney may invite bids from several companies. In either case, in order to be in a position to get the usiness, personal contact must be maintained with the buyers over time. Here again, personal elling is a key component in the marketing strategy.

Industrial supplies are frequently purchased expense items. They contribute indirectly to he production of final products or to the administration of the production process. Supplies nclude computer paper, light bulbs, lubrication oil, cleaning supplies, and office supplies.

It is not always clear whether a product is a consumer good or an industrial good. The key o differentiating them is to identify the use the buyer intends to make of the good. Goods that are n their final form, are ready to be consumed, and are bought to be resold to the final consumer are lassified as consumer goods. On the other hand, if they are bought by a business for its own use, hey are considered industrial goods. Some items, such as flour and pick-up trucks, can fall into ither classification, depending on how they are used. Flour purchased by a supermarket for resale would be classified as a consumer good, but flour purchased by a bakery to make pastries would e classified as an industrial good. A pickup truck bought for personal use is a consumer good; if urchased to transport lawnmowers for a lawn service, it is an industrial good.

1.2.8 Home appliances and consumer goods:

The explosion in the use of electronics by consumers over the last 25 years has been truly emarkable. In the late 1970s, average consumers in a developed country probably had a TV, a Hi-Fi unit, and a VCR in their homes. Today, the same consumers have a digital TV, PC, DVD-ecorder, game consoles, set-top box, and may be regularly using portable devices such as mobile hones, digital cameras, MP-3 players, and camcorders.

Following this trend, the home appliance industry has observed an increased adoption of lectronics content in consumer white-goods such as washers and dryers, refrigerators, air onditioners, microwave ovens, and portable appliances. The major drivers for this trend include:

- Technology advancement: New technologies such as variable-speed motor control allow appliances to be more energy-efficient, and home networking enables home owners to

control and monitor the energy usage of all household appliances that are connected to the same network.

- Consumer desire for improved lifestyle: An emerging trend among upper to middle-class consumers calls for appliances that not only provide basic functions, but also include "cool" features such as touch-screen controls instead of traditional buttons/knobs or an integrated security camera in a kitchen appliance that allows a parent to watch a child playing or sleeping in another room.

- Manufacturer desire to boost market share growth by adding attractive features for product differentiation: To attract the high-end segment of the consumer appliance market, manufacturers look for ways to add "digital life-style" features such as an HDTV built into the door of a refrigerator or an iPod charger integrated in a sleep-sound machine.

Until recently, most home appliance system designs contained microcontrollers (MCUs) to control appliance functions such as display panels, temperature sensors, or motors. However, programmable logic devices (PLDs) have made steady headway into the home appliance markets due to the rapid decline in PLD cost per function.

- The global kitchen appliances market grew by 1.6% in 2008 to reach a value of $129.1 billion.

- In 2013, the global kitchen appliances market is forecast to have a value of $154 billion, an increase of 19.3% since 2008.

- The global kitchen appliances market grew by 3.8% in 2008 to reach a volume of 772.9 million units.

The consumer electronics industry is massive in terms of its scope and has grown as more products have moved under the CE umbrella in recent decades. In the early days of home computing, PCs and their peripherals were looked upon, by the industry and consumers, as a product segment unto themselves. PCs were largely considered productivity tools. There can be little doubt now that consumer computer products are inextricably linked to consumer entertainment devices. But now they are also inherently connected.

The average U.S. household spent $1,179 on consumer electronics products in 2010 ccording to the Consumer Electronics Association (CEA). This amount was $201 less than in 009. Comparing figures between 2010 and 2009, the association found that: the average adult pent $652 on consumer electronics in 2010, decreasing from $794 for 2009.The average woman pent $520 during 2010, dropping from $631 in 2009.The average man spent $793 in 2010, down rom $969 for 2009.The average household owned 24 discrete consumer electronics products uring 2010, declining from 25 in 2009. Product consolidation is one reason for the decreases, long with decreasing price points and changes in consumer spending behavior, according to Brian Markalter, CEA senior VP of research and standards. CEA found that 40% of televisions in U.S. ouseholds are HDTVs, and Internet-connected TV and 3DTV technologies are helping to drive ideo growth.

.2.9 Trends and Opportunities in Home Electronics

There are no consumer products more dynamic than consumer electronics. Overriding actors driving this industry worldwide include their inherent appeal. The most basic consumer lectronics products are audio and video devices – designed for entertainment. CE products are, in act, the toys consumers love best. The current scope of the Home Electronics industry has turned irtually everyone in the home into a CE user. Preschoolers are using portable game systems. Grammar school kids have cell phones and camcorders. Older kids and parents have digital ameras, eReaders, mobile phones, tablets, and media players. These CE devices are pervasive in J.S. homes – and were rare or nonexistent just two decades ago. Other devices that have been round for decades remain the focal point of home CE users, including TVs, PCs, game consoles nd audio systems. The PC was around 20 years ago, but has obviously changed tremendously, ecoming cheaper to buy and easier to use while the scope of daily-use applications snowballed. Before the advent of the personal computer, the Consumer Electronics industry was thought of in erms of audio and video – devices that entertain users. Providing entertainment to consumers in he form of audio and video continues to be a major thrust of the industry, although the form actors have changed radically.

1.2.*10* An overview of product manufacturing industries of India

The Indian economy is based upon three important sectors that offer pillaring support to the economy's fast growth rate. These three sectors include agriculture, manufacturing industries and service sector. Earlier, the agriculture sector was a dominating sector. At present, it is the service sector which has maximum contribution towards the country's GDP.

However, the future of manufacturing industrial sector is big and bright. The manufacturing industries in different segments are constantly on a rise and the industrial products from India are increasing in demand all over the world. Among the developing and emerging economies, the industrial supplies sector of India ranks at fourth position and it is expected to keep on moving ahead of other economies.

Way back in 1990, India and China started from the same point. The GDP values for both the countries were more or less same. However, China took the initiatives in the manufacturing sector and started progressing in the production of different industrial products at a fast pace. Today, there is a huge gap between the GDP values of the two countries, with China leading and still going strong. It is not wrong to say that China will soon secure its position at number two among the most powerful economies of the world.

The economical reforms that began in India in 1990s have started bearing fruits. Industrial de-licensing and removal of ban from foreign investments allowed the foreign manufacturing companies to make investments in India. Besides, India has made a huge progress in the field of science and technology. Above all, India already has a big pool of technical talent in the form of its workforce which is specialized in different fields of manufacturing.

Another factor that is favorable to the growth of the industrial products manufacturing industry is the availability of the workforce and labor at a much cheaper rate in Indian as compared to various North American and European countries. Being a member of the world Trade Organization, the Indian economy is fast adapting the international standards of manufacturing and exporting industrial products and industrial supplies. Subsidization practices followed by the Indian government to support the growth of the manufacturing industries, especially those at the small and medium scales.

Here are some of the main highlights of the manufacturing industries in the country that are worth taking a look at:

- The Indian chemical manufacturing industry is among the top industrial products manufacturing industries as it contributes nearly 30 billion dollars towards the total GDP value every year.
- The growth in the pharmaceutical product manufacturing in the country is driven by lower costs involved in the research and development as well as low cost of manufacturing of medicines.
- Auto manufacturing industry is also on the rise as both domestic as well as international manufacturers are investing big in the industry.
- Glass manufacturing, rubber manufacturing, electrical component manufacturing industry and many other segments of manufacturing industry are too developing fast in the country.

There is need to develop infrastructure and manage the energy resources effectively, so that the growth of the manufacturing industries in the country keep on moving further towards growth and progress.

1.3 Organizational Profile

Robert Bosch GmbH (commonly known as Bosch) is a German multinational engineering and electronics a company headquartered in Gerlingen, near Stuttgart. It is the world's largest supplier of automotive components. The company was founded by Robert Bosch in Stuttgart in 1886.

Bosch's core products are automotive components (including brakes, controls, electrical drives, electronics, fuel systems, generators, starter motors and steering systems), industrial products (including drives and controls, packaging technology and solar panels) and consumer goods and building products (including household appliances, power tools, security systems and thermo technology).

Bosch has more than 350 subsidiaries across over 60 countries and its products are sold in around 150 countries. Bosch employs around 303,000 people and had revenues of approximately €51.4 billion in 2011. In 2010 it invested around €3.8 billion in research and development and applied for over 3,800 patents worldwide. In 2009 Bosch was the leader in terms of numbers of patents at the German Patent and Trade Mark Office (GPTO) with 3,213 patents.

Robert Bosch GmbH is privately owned, and 92% of its share capital is held by Robert Bosch Stiftung GmbH, a charitable foundation.[1]The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH. The Bosch logo represents a simple magneto armature and casing, one of the company's first products.

1.3.*1* RBEI (Robert Bosch engineering and Business Solutions Limited)

Robert Bosch engineering and Business Solutions Limited (RBEI) is a 100% owned subsidiary of Robert Bosch GmbH, one of the world's leading global supplier of technology and services, offering end-to-end Engineering, IT and Business Solutions.

With over 10,000+ associates, it is the largest software development center of Bosch, outside Germany, indicating it as the Technology Powerhouse of Bosch in India. We have a global footprint with presence in US, Europe and the Asia Pacific region. It is an ISO 9001:2008 certified

2009), ISO 27001 (2009) appraised at CMMI Level 5 as per ver. 1.3 (2011) and has six state-of-he-art facilities spread across Bangalore and Coimbatore in India and Ho Chi Minh City in Vietnam.

RBEI nurture, build and sustain enduring customer relationships to enable direct operational and strategic benefits to our customers. It is happened through qualified, motivated and flexible professional associates, who uphold the heritage and values of Bosch- time-tested over 125 years of a successful journey; a journey marked by quality, reliability and innovation of service to enhance the interest of our customers and the community we live in.

RBEI provide solutions for businesses in primarily three areas:

- Engineering Services
- IT services
- Business services

The focal industries:

- Automotive industry
- Industrial Technology
- Consumer Goods and Building Technology.

1.3.2 Vision and Mission

Global Bosch vision: "Creating Value, Sharing Values".

Mission: To strive towards enabling customers by maximizing value as an offshore partner in technology and business solutions.

1.3.3 Bosch Values:

1. Future & Result focus

2. Responsibility

3. Initiative & Determination

4. Openness & Trust

5. Fairness

6. Reliability, Credibility & Legality

7. Cultural Diversity

Figure 1.2 – Figure showing the value system of Bosch

1.3.4 Products and services:

I. **Engineering Services:**

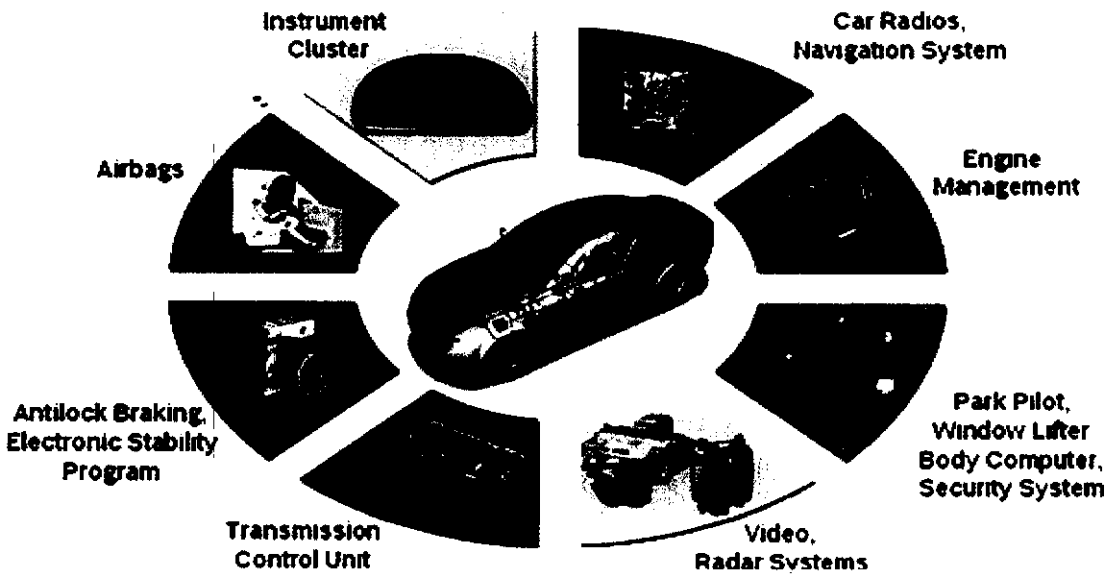

Figure 1.3 – Figure showing the services under engineering stream

Realizing the opportunities in the emerging market, RBEI offers on-time, quality solutions in a variety of engineering domains. They develop long lasting relationships with their customers by making use of best practices built up through the Bosch experience of 126 years.

The experience in the engineering domain, established quality processes, use of advanced ools and technologies and proven process models help them delight their customers.

Spectrum of services includes:

Engineering tools development (IT-based)
AUTOSAR components and tooling
Engineering Change Management
Equipment testing
Product design and development (Board Level Design, Layouts,)

Industry Focus

Automotive
Industrial Technology
Consumer Goods and Building Technologies

RBEI provides engineering solutions for a variety of applications. Primary focus is the automotive applications; closely followed by Consumer Goods, Building Technology and Industrial Technology applications. Engineering solutions can be broadly classified as,

Automotive Hardware services
Automotive Software services
Engineering solutions for Industrial, Consumer Goods and Building Technologies
Mechanical Engineering services.

Robert Bosch Engineering and Business Solutions (RBEI) delivers world class services and solutions achieved through leveraging technology talent at competitive prices. They help their customers deal with challenging business issues through technology solutions. Their services portfolio ranges from strategic consulting to post implementation services. Judicious mix of onsite -offshore model helps their customers achieve significant cost arbitrage.

With several years of experience in handling complex, geographically diversified projects across industries, they provide integrated solutions across the IT life-cycle using a mesh of leading technologies.

II. ERP Implementation & Support - SAP Services

SAP applications and technology platform can help to systemize and unlock the best out of your business. To develop an SAP landscape that suits you, you need a partner who enhances your profitability by leveraging SAP's stellar capabilities with unique value additions. RBEI has more than a decade of experience in handling complex, geographically diverse needs of various businesses and understand the business and financial pressures organizations face. Their range of services include consultancy to implementation, template rollouts to upgrades and from business process reengineering to training end users.

Microsoft Dynamics AX

Microsoft Dynamics AX is an integrated, adaptable business management solution for mid-sized and larger organizations that works like and with familiar Microsoft software to help customers improve productivity and make business decisions with greater confidence.

Oracle

Setup in 1998, our team comprises of 75+ professionals with over 100+ person years of technical expertise, including project management and functional consultants. The range of experience includes E2E Implementations, R12 Upgrades, Support and Enhancements, RICE and DBA Services. The niche products include 8D - Quality Management and Patent Management.

Application development and maintenance

RBEI's application development services help customers address evolving business and technology challenges by defining, designing and building applications tailored to meet their business requirements. We deliver high quality, reliable, secure and flexible applications that are easy to maintain.

Infrastructure Management services

RBEI ensures 24x7 availability of mission-critical business applications by building state-of-the-art secure, flexible and completely scalable infrastructure. We design our infrastructure solutions to be fault-tolerant and reliable. We provide support services to our clients based on the ITIL model which can be customized.

Migration Services

We help organizations migrate their existing legacy applications to a new environment to ensure competitive edge in their core business areas. We have the right tools, methodologies and templates to create functionally rich systems for meeting existing and future business demands.

Enterprise Application Integration

We offer technology consulting and application integration services to integrate disparate technology solutions, technologies and applications. We enable communication and sharing of information between multiple applications leading to transparent and real-time access to information. These offerings are powered by best practices acquired over the years and equipped with new generation technologies like Web methods, SAP XI, Tibco, Microsoft Biz talk server

III. RBEI IT Services:

- Application Development and maintenance
- Data Warehousing & Business Intelligence
- Enterprise Application Integration
- Infrastructure Management Service
- Legacy Migration Service
- Validation Service
- Enterprise Application Solutions
- MOSS & EPM

IV. Business Services:

In today's dynamic world of business, back-office operations or support services are a critical component for running a business successfully. Robert Bosch Engineering and Business Solutions (RBEI) offer a basket of business services which enable our customers to cut down on costs and time to market. With a strong amalgamation of skilled people, mature processes, and high quality culture, we have evolved as a major business services provider.

The services we offer run across the spectrum – from routine transactions to high-end, knowledge-based business processes to suit every requirement of your business. They are broadly divided into three areas:

Figure 1.4 – Figure showing the services offered under Business stream

RBEI works with our clients to evaluate their respective business models in order to customize the solution offered. It leverages from its experience of serving both Bosch (as a captive centre) and Non-Bosch customers to help implement your off-shoring solution both effectively and efficiently.

V. RBEI Products:

RBEI, apart from providing value-added services for various engineering and business domains, is actively involved in product development. We have well established processes ranging from conceptualization to maintenance and support.

RBEI's involvement in product development was first marked by the development of CANvas – a development and debugging tool for Controller Area Network.

Engineers at RBEI work on cutting-edge technology to develop state-of-the-art products. Some of our flagship products include:

CANvas - a generic development and debugging tool for Controller Area Network.

IRIS - a compact, low cost, light weight system used to simulate vehicle and engine conditions in the laboratory in order to validate the ECU hardware and software during the development.

FRAME - FRAME is the latest addendum of the automotive bus monitoring and simulation tools conceptualized, designed and developed by RBEI. This is a generic, user-friendly development and debugging suite for FlexRay based system.

STAR - (Software Tester for Auto Radios) is an innovative tool which is a low cost, light weight, table-top, automated test system which is used for testing car radios.

iSolar - Integrated Development Environment for AUTOSAR-compliant ECU embedded software. ISolar supports configuration and integration of all layers (Basic, RTE and Application).

CPS and Bootloader - CPS (CAN Protocol Stack) and Bootloader can be embedded on the ECU for software reprogramming and downloading the updated application.

ECUProg - Tool used to program the ECU software and data at the end of production line. This consists of a PC based configurable software and hardware interface between PC and ECU.

1.3.5 Managing Director: Mr. Vijay Ratnaparkhe, Managing Director (RBEI)

Mr. Vijay Ratnaparkhe is President and Managing Director of Robert Bosch Engineering and Business Solutions Limited has taken over the role of Managing Director from 1st September 2010.

In the role just prior to this, he was Senior Vice President at Robert Bosch GmbH, Germany. His role included responsibility for Quality, Processes and Innovation for a global business unit of Bosch GmbH. Prior to joining Robert Bosch, he was Business Unit Head for Infosys Canada and also part of Infosys Management Council, reporting to the Board of Management.

Born on 22nd of February, Mr. Vijay Ratnaparkhe holds a Master of Technology from Indian Institute of Technology (IIT) Mumbai and an Undergraduate degree in Chemical Engineering from Bombay University.

1.3.6 Corporate Social Responsibility at RBEI:

Even in tough times, sustainable business management practices must ensure that commitments to society are upheld to the best of our ability. They believe that the success of RBEI is dependent on the ability to balance the diverse interests of our associates, business partners, customers, the wider community and the environment in which we operate.

As CSR is a very vast area, the approach is to carefully choose a small number of initiatives that generate large and distinctive benefits for society and our community.

The main focus areas are:

Philanthropy
Culture and Art
Community.

n India, the Bosch Group operates through the following companies -

- Bosch Ltd.
- Bosch Chassis Systems India Ltd.
- Bosch Rexroth India Ltd.
- Robert Bosch Engineering and Business Solutions Ltd.
- Bosch Automotive Electronics India Private Ltd.
- Bosch Electrical Drives India Private Ltd.

1.3.7 ORGANIZATION STRUCTURE

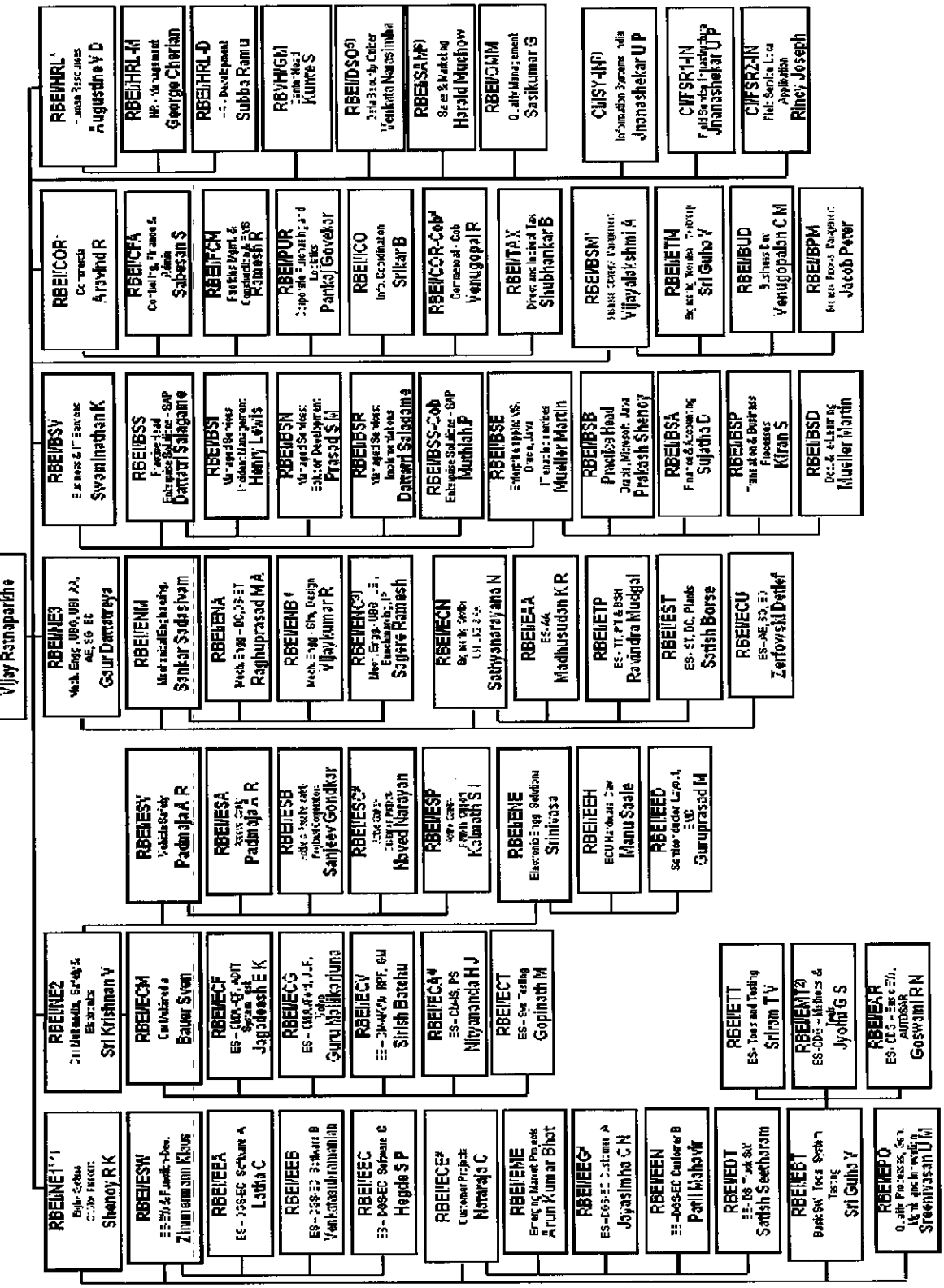

Figure 1.5 – Figure showing the organizational structure

1.4 Statement of the Problem:

RBEI, Coimbatore is confronting payment delay to it's vendors. There exist flaws in the internal payment process. The turnaround time of total payment process is usually 70 to 80 days starting from receiving the invoices by Logistics, verification by Purchase Department, scanning and uploading in SAP by BSD Department, user approval by BSA Department to payment by finance department. There is lack of coordination between the internal departments involved in the payment process. The whole payment process should be streamlined to minimize the turnaround time of payment to the suppliers.

1.5 Objective of the Study:

- To minimize the turnaround time of payment by streamlining invoice verification process at Robert Bosch engineering and Business Solutions Limited.
- To investigate the flaws in the existing system of payment and study the reason for the delay in payment.
- To educate the suppliers and vendor to make timely submission of invoices without any discrepancies.
- To study whether the proposed system of payment process is successful

1.6 Scope of the Study

The study deals with only the total payment processes and the reason for delay in payment to suppliers in RBEI, Coimbatore.

The internal departments that are involved in the payment process are only included in the study and the process carried out by them with respect to the invoice verification and streamlining process is studied.

The analysis of payment improvement for the year 2012 is made only for the month of February, March and April'12 and compared with the 2011 data.

CHAPTER 2

REVIEW OF LITERATURE

CHAPTER 2

REVIEW OF LITERATURE

[1]Flynn Michele J (1997), the article discusses how Liberty Mutual streamlined its procurement system. By introducing a front-end electronic data interchange order and payment system, the firm was able to drastically shorten turnaround time for orders, reduce its number of suppliers, eliminate paper requisitions, and make better use of space previously devoted to storing supplies. Three key lessons that emerged from the process were the importance of educating users on the system's benefits, the need to address early in the process any issues related to financial control, and the value of going outside the firm for leading-edge methodologies.

[2]Gramling, Robert W(1999) Pursuant to a congressional request, GAO provided an interpretation of certain parts of Title 7 of its Policy and Procedures Manual for Guidance of Federal Agencies, focusing on whether it is acceptable: (1) for disbursing officers to authorize payment without reviewing evidence transmitted directly by an authorized employee attesting to the receipt and acceptance of goods and services; (2) for disbursing officers to authorize payment after reviewing the vendor's invoice and vendor maintained delivery data without first reviewing evidence of receipt and acceptance by a government official; and (3) to verify receipt and acceptance after payment authorization based on review of a statistically selected sample of invoices in lieu of conducting prepayment verification.

[3]IM@T.Online (2008). The article focuses on the use of the BasWare Invoice Automation and Kofax scanning and captures products developed by Panasonic Batteries for their sales network in Europe. Panasonic has deployed their advanced invoice automation solution to boost its productivity, contour its finance operations and minimize its invoice processing costs.

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[1]Flynn Michele J, Creating an electronic ordering system. Financial Executive, Sep/Oct97, Vol. 13 Issue 5, p41-45, 3p

[2]Payment Processing: Validation of Receipt and Acceptance: AIMD-99-111R. By: Gramling, Robert W.. GAO Reports, 4/14/1999, p1, 12p;

[3]IM@T.Online, automated invoice processing system powers cost savings for European sales network. IM@T.Online, Feb2008, p7-7

[4]Aberdeen (2006), Invoice Processing Costs-Processing an invoice involves capturing key ata, entering it into the proper financial systems, and kicking off the related business processes. lthough straightforward, this task needs to scale to handle the large numbers of invoices your usiness will receive each day. Accuracy and efficiency, therefore, are major concerns. Costs ssociated with managing this volume of data, the human labor typically required, and the need to atch and errors along the way can grow quickly. The actual cost of processing each invoice, from eceipt to payment, can balloon to $80. Actual costs depend on the level of process automation you nd your business partners implement. The main steps in processing an invoice are Invoice receipt, nvoice verification / matching, Invoice approval, Invoice payment. When looking at these equential steps, companies spend a lot of time matching invoice data to the original purchase rder (PO) or contract (invoice verification), and acquiring approval (invoice approval). It's in hese areas that technology can increase efficiency and offer the greatest cost savings. Having the bility to electronically capture invoice data, regardless of its form, helps to eliminate errors that nay otherwise be introduced by manual processing. The way invoice capture is implemented letermines the efficiency of the overall invoice process.

[5]Gary Smith (2007),Year End Verification of Invoices financial resources, University of Ottawa Journal. This procedure is designed to help managers perform their invoice-verification esponsibilities effectively. Invoice verification involves reviewing vouchers and receipts to ensure he invoice's accuracy and reliability. Managers must apply this procedure by taking into account he following policies: Business and study trips, Petty cash, Materials Management, Receptions nd business meetings, offering of flowers or gifts. Remember that all expenses drawn from esearch or operating funds must serve a legitimate purpose and serve the interests of the Jniversity or the research projects in question, and not those of individuals.

Aberdeen (2006) 5 Steps to Automating Accounts Payable How to Achieve Process-Ready ™ Data White aper.

Gary Smith, Year End, Verification of Invoices- financial resources-university of Ottawa Journal, February 8, 2007

[6]Pay on Time (1998)- Payment Terms and Breach of Contract Sellers normally stipulate conditions of sale. In practice, the power of a large purchaser often means that it can impose its own terms. Buyers should, however, ensure that any variations to the seller's standard terms are agreed by both parties. An example is the condition of sale relating to the allowed period of credit, i.e. the 'payment term'). When an order is placed for specific goods or services at an agreed price payable at an agreed date, all those aspects are legally binding. Delaying payment is in breach of contract terms. Negotiating the Payment Terms Any contractual term is only valid if it is agreed at the order stage.

[7] Supplier Invoicing (2011)- Many would agree that the accounts payable process is paper intensive and laborious. In most companies, particularly SMBs, supplier invoices are forwarded to the accounting staff from all over the company for payment. They key the invoice data into their accounting software and then it's up to them to figure out if the goods or services have been received and the payment is authorized. Depending on how long it takes to verify the invoice, the company could end up paying the vendor late and missing a possible discount for early payment.

For many services, verifying the invoice may be just a matter of having the requesting manager OK it for payment either by email or preferably, by returning the paper invoice with their written authorization. Then the accountant can release it for payment. Some invoices require more careful verification which often includes matching. Matching is the process of comparing a supplier invoice to the original PO to make sure the price being charged is correct and ensuring the quantity of physical goods being billed reconcile to what was actually ordered and received by the company.

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[6]Pay on Time. The Complete Guide to the late Payment of Commercial Debts (interest) Act 1998-Helping UK businesses get paid on time since 1998,Pay on time supporter e-journal.

[7]Supplier Invoicing-What SMEs Can Do to Reduce Workload and Errors Posted March 16, 2011 with 132 reads- my venture pad.

CHAPTER 3

RESEARCH METHODOLOGY

CHAPTER 3

RESEARCH METHODOLOGY

.1 Research Design:

The research design adopted in this study is descriptive research design. A descriptive esearch design is the one which is description of the state of affairs as it exists at the present. Here : depicts the turnaround time of the existing total payment process, the proposed payment process nd the improvement in payment to the suppliers of Robert Bosch Engineering and Business olutions limited, Coimbatore.

.2 Data and Source of Data:

Primary Data: The primary data was collected from various departments involved in the payment rocess by administering interview schedule. It was designed in consultation with the experts of he organization in such a manner that it would facilitate the respondents to reveal maximum nformation. It collects information on various dimensions like the reason for the delay in rocessing the invoices, the difficulties faced by them, understanding the difficulties of the lepartments, identification of the failed areas etc., and it bears ten questions each.

Few brain storming sessions and group discussions were organized to identify the failed reas and to understand the difficulties of department in processing payment on time.

Secondary Data: Secondary data was collected to study the payment delay in 2011 from the past ecords like mail archives, Tracking excel sheets, SAP etc.

.3 Time Period Covered:

The time period covered for the data collection is 3 weeks ranging from 12th of March to 31st of March, 2012.

3.4 Statistical Tools used:

- Graphs and charts
- Simple Average

.5 Limitation of the Study:

- In depth analysis was not possible in certain areas as it was considered as highly Confidential.
- No where the actions or methodology of timely payment were scrutinized initially so data collection and analysis was difficult

CHAPTER 4

EXISTING TOTAL PAYMENT SYSTEM

CHAPTER 4

EXISTING TOTAL PAYMENT PROCESS

4.1 Existing Total Payment Process

The existing total payment process has difficulties in making payment to the Suppliers on time and it is time consuming as it takes 70-80 days for the payment to happen. There is an improvement required in coordination between the internal departments like Logistics, Purchase, BSD, BSA and CFA (Cost and financial accounting) that are involved in the payment process.

Upon the delivery of the goods the suppliers would submit the invoices to logistics department or to the user and in case of services the invoices will be either submitted to the user department directly or to the purchase department. The sequence or the flow of invoices stage by stage is discussed below.

4.1.*1* Logistics Department:

At the time of the delivery of the goods the suppliers would submit the invoices to logistics department along with the material. GRN (Goods receipt note) will be made by this Department and only then process for payment.

As they would receive many invoices and materials for a day, there is a great chance of misplacing the invoices or delay of processing it to payment on time. Once the GRN is done the invoices will be processed to purchase department. No lead time were given to them to process the invoice to the scan centre. So, on an average it would at least take 4-6 days to process it.

4.1.*2* User Department:

The user department is the one who avail the services or use the goods that is delivered by the suppliers. So the invoices will be directly submitted to them by the suppliers. There are few user departments that receive the invoices regularly like FCM (Facility Management), HR, and few engineering departments.

These departments are not aware of the payment terms, invoice specifications, purchase guidelines, line items, contents in the purchase orders etc.., so the discrepancies in the invoices will not be known and they would just process it to the scan centre as per their convenience. Once verified by the BSA department these invoices will be rejected or sent back to the vendor as there is a discrepancy. So the payment will be processed only after the submission of the revised invoices.

No lead time is given to them to process it. Moreover it is time consuming as there is a tedious approval processes.

Purchase department was not directly involved in tracking the invoices even though they are the concerned department for all commercial contacts and purchases.

4.1.*3* Supply Chain Management in RBEI:

The Supply chain Management in RBEI work towards a common goal of customer satisfaction and relationship management. Purchase Department is the first contact for the employee needs in the following areas and is taken care by different Group Heads.

Purchasing
Logistic
Corporate Insurance
Travel and Accommodation

4.1.*4* Purchase Department Role in Payment:

Purchase department is responsible for the front end support to vendors and on time procurement. They are the point of contact for any commercial interactions and discussions.

This department which should actually have the total control of processing the invoices and have a track of it does not have a proper control of the invoices in the existing system. Lot of complication in tracking the invoices exists. This study deals with streamlining the invoice verification process by the purchase department.

.1.5 Corporate Purchase Activity

Approve Purchasing Policies

Purchase Order (PO) Approvals

Rate contract approval

Product Standardization

Supplier Selection, Negotiation

Logistics Control

Approve payment advice

Investment Status Follow-up

Asset control, Travel, Lodging, Mobile Phone

STP & Customs, Imports & Re-exports

Purchase staff development include training

Exports of Hardware

Corporate Insurance

PUR MSR

Purchasing Scope:

Imported hardware and components ➔ Communication equipment ➔ Networking equipment ➔ IT equipment ➔ Lab equipment	**Software and IT HW Add ONs** ➔ Software ➔ Desktops and Laptops ➔ Advertisement ➔ RAMs, HDDs etc
Local Hardware, components & projects ➔ FCM projects ➔ IT equipment ➔ Communication related ➔ Lab related ➔ Miscellaneous	**Services** ➔ AMC – HW and SW ➔ FCM services ➔ Software consultancy services ➔ Trainings ➔ Translations ➔ Outsourcing

Figure 4.1 – Figure showing the purchase scope

The general activity carried out by the purchase department is explained in the following figure.

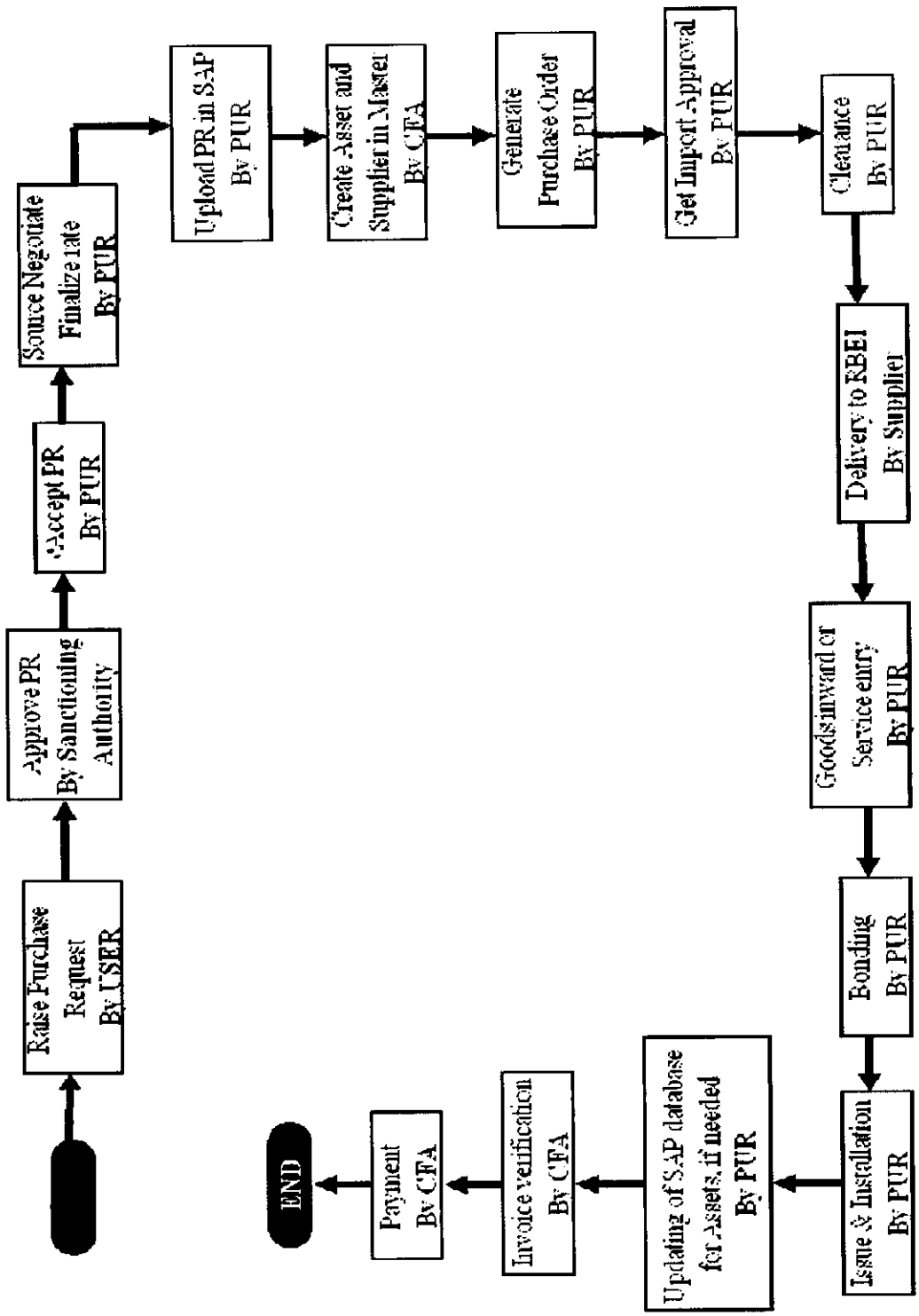


Figure 4.2 – Figure showing activity carried out in purchase department

4.1.6 BSD Department (Scan Centre):

This department is responsible for scanning and uploading invoices into SAP system. Only after the invoices are uploaded into SAP the clearance and verification by BSA and finance department takes place.

They receive invoices from various departments like logistics, purchase, FCM, HR and other user department. Once they receive it they will scan the invoices and upload it into SAP system.

This process will normally take 4-5 days on an average to get uploaded. They do not have lead time to process the invoice. Since they receive the invoices from various departments at various times, there is a high chance of misplacing the invoices and loss of data. No fixed time was allotted for them to scan the invoices.

4.1.7 BSA department:

Business solutions accounting (BSA) delivers the back office support to the cost and financial accounting department (CFA). The major activity of this department is to verify the invoices, get approvals from the user department and analyze whether there is sufficient quantity in the purchase order against the invoices.

The clearance process is made by this department. Since they will have too much of invoices to be verified and approved by the user they take a longer lead time than any other departments. Exhaustive verification process also takes place at this stage. Due to this manual error also takes place. Normally this process takes up to 25 days on an average. If there are any discrepancies in the invoices then they will raise a query in the SAP system regarding the mismatch of either value or the item that is dispatched or about the backup paper attachment issues. The buyers in the purchase department will intervene at this stage and clarify the query in SAP. In case the discrepancy is not sorted out they will short close the invoice and request the suppliers to submit a revised invoice.

The vendors will get annoyed most of the time when asked to submit the revised invoices. This is because they get the intimation to revise it only after a month of submission of the invoices. At this point the delay of payment would've already crossed a month's time.

After the query code is resolved the invoices are processed to the finance department for payment.

4.1.8 CFA (Cost and financial Accounting):

CFA department takes care of the final settlement of amount to the vendors. Payment will be either made in the form of cheque or as RTGS – Real-time Gross Settlement (amount will be directly credited to the vendor's bank account) or NEFT.

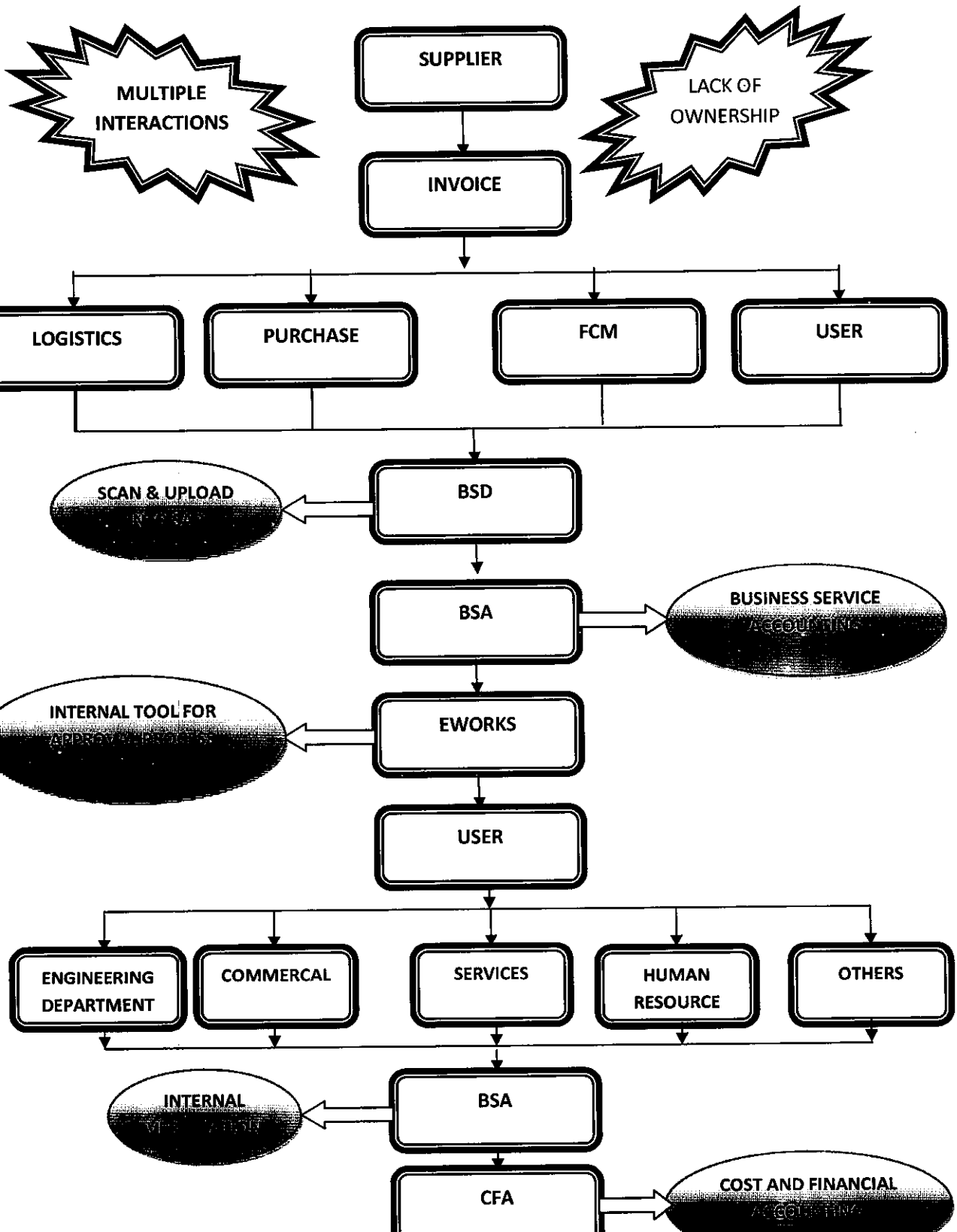
They take 10-15 days to dispatch the cheque on an average. The delay is because the cheque printing for the Bosch, Coimbatore happens only in Bangalore and then it is couriered back to Coimbatore. It takes at least 2-3 working days to reach the office and only then it is dispatched to the vendors.

RBEI follows 4 eye concept which means verification or any approval process will be done by two persons as this would minimize the errors and increases efficiency.

Finally the vendor receives the payment after 75-80 days of submission of the invoices.

The whole process is explained by the following figure

Figure 4.3 – Figure showing the existing total payment process



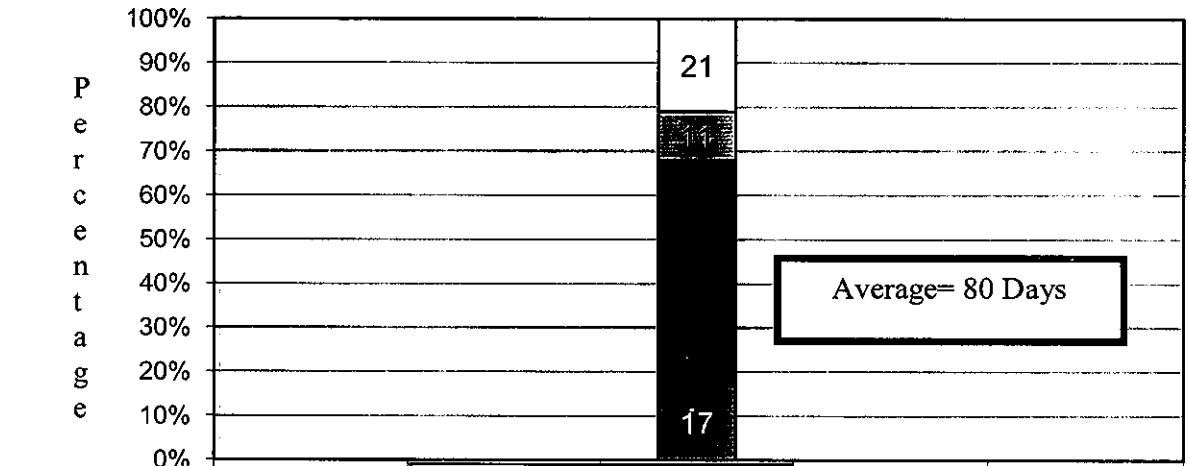
4.2 Consolidated Payment Status Review Of 2011

The payment status of the year 2011 is analysed and the number of days taken for each processes involved in the payment is discussed below.

It is divided into four stages namely Total process, Scanning process, Posting process and Payment process.

4.2.*1* Total Process: Invoice Date to Payment Date

The chart shows the percentage of invoices that has been paid between 0-30 days, 31-45 days, 46-60 days, 61-100 days and more than 100 days. The average number of days taken for payment from the date of invoice is also shown.



No of Days taken - 2011	
>100 days	21
61-100 days	11
46-60 days	11
31-45 days	40
0-30 days	17

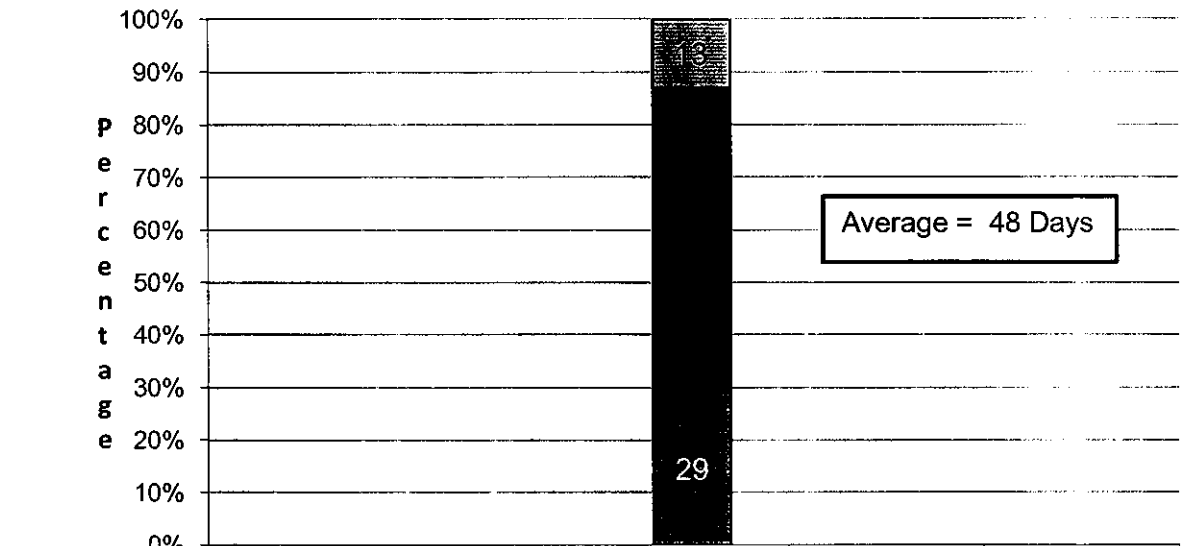
Figure 4.4 – Figure showing percentage of invoice date to payment date

Interpretation:

The chart shows 17% of the invoices have been paid between 0-30 days. 40% of the invoices have been paid between 31-45 days. 11% of the invoices have been paid between 46-60 days. 11% of the invoices have been paid between 61-100 days. 21% of the invoices have been taken more than 100 days for payment. Hence the average number of days taken for payment is 80 days which is a delay in payment.

.2.2 Scanning Process: Invoice Date to Scan Date

The chart shows the percentage of invoices that has been scanned between 0-30 days, 31-45 days, 46-60 days, 61-100 days and more than 100 days. The average number of days taken for scanning from the date of invoice is also shown.



	No of days taken- 2011
>100 days	13
31-100 days	16
11-30 days	42
0-10 days	29

Figure 4.5 – Figure showing percentage of invoice date to scan date

Interpretation:

The chart shows the number of days taken for the invoices for scanning from the date of invoice in the year 2011. 29% of the invoices have taken 0-10 days for scanning. 42% of the invoices have taken 11-30 days for scanning. 16% of the invoices have taken 31-100 days for scanning and 13% of invoices have taken more than 100 days for scanning. Hence the average number of days taken for the invoices to scan is 48 days.

4.2.3 Posting Process: Scanning Date to Posting Date

The chart shows the percentage of invoices that has been Posted between 0-30 days, 31-45 days, 46-60 days, 61-100 days and more than 100 days. The average number of days taken for posting from the date of scanning is also shown.

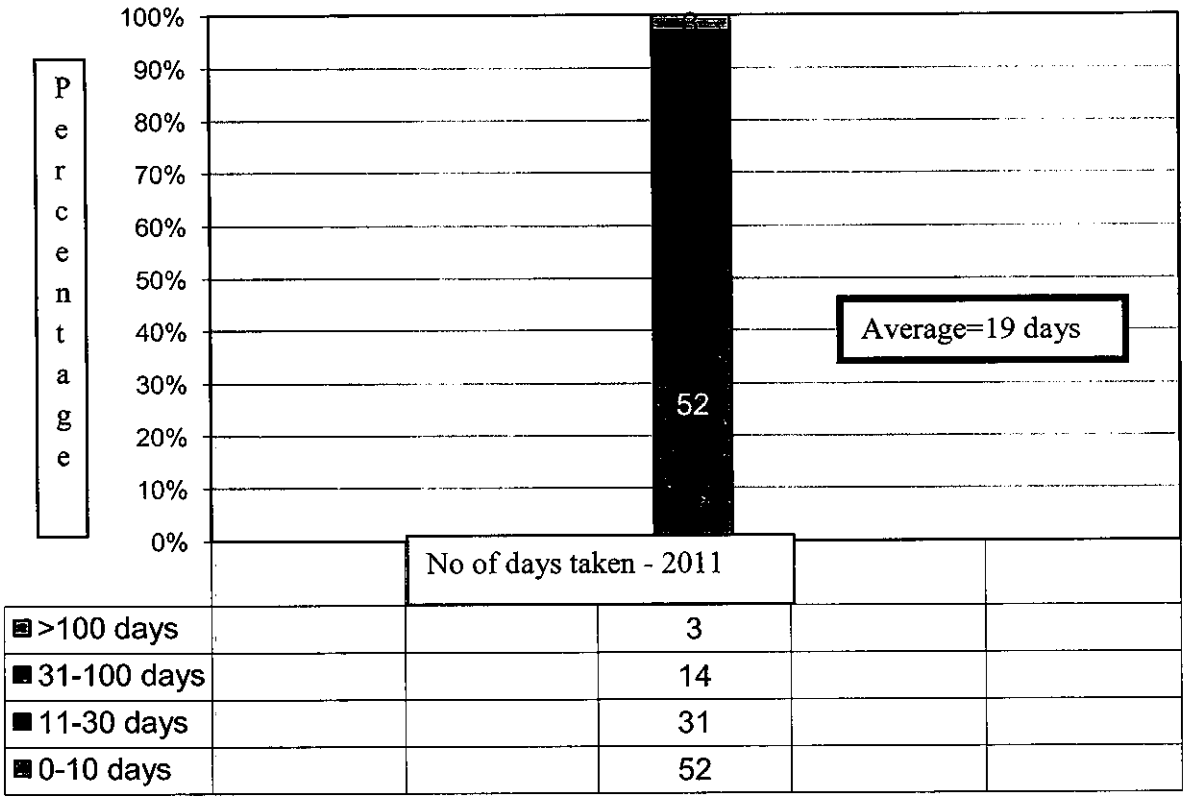


Figure 4.6 – Figure showing percentage of scanning date to posting date

Interpretation:

The chart shows the number of days taken for posting from the date of scanning in the year 2011. 52% of the invoices have been posted between 0-10 days. 31% of the invoices have been posted between 11-30 days. 14% of the invoices have been posted between 31-100 days and 3% of the invoices have taken more than 100 days. Hence the average number of days taken for posting from the date of scanning is 19 days.

.2.4 Payment Process: Posting Date to Payment Date

The chart shows the percentage of invoices that has been paid between 0-30 days, 31-45 days, 46-60 days, 61-100 days and more than 100 days. The average number of days taken for payment from the date of posting is also shown.

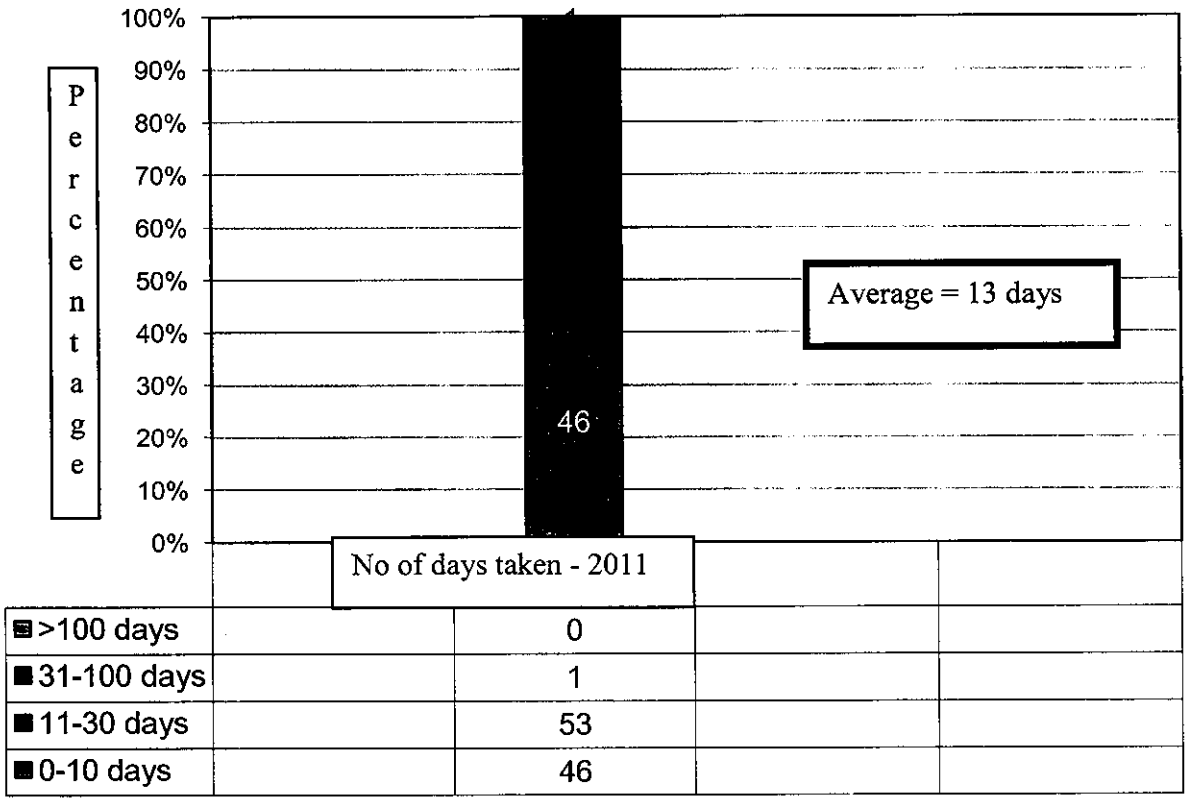


Figure 4.7 – Figure showing percentage of posting date to payment date

nterpretation:

The chart shows the number of days taken for payment from the date of posting in the year 2011. 46% of the invoices have been paid between 0-10 days from the date of posting. 53% of the nvoices have been paid between 11-30 days. 1% of the invoices have been paid between 31-100 lays and no invoices have been paid more than 100 days from the date of posting. Hence the verage number of days taken for payment from the date of posting is 13 days.

.3 Reasons for the Delay of the Payment:

- Delay of submission of the invoices by the Suppliers or vendors.
- Discrepancies in the invoices where it does not match with the Purchase order.
- Insufficient balance in the purchase order.
- Lack of coordination between the internal departments that are involved in the payment processing.
- Lack of proper records of invoices and tracking system.
- Lack of awareness of the suppliers.
- Multiple interactions of suppliers with various departments before submitting the invoice to the purchase department.
- Service tax and address issue will exist and in this case the invoices will be sent back to the suppliers for revision.
- No lead time given to the Departments to process the invoice for payment.
- Delay in user approval.
- Misplacement of invoices or the supporting documents by the BSD department.

CHAPTER 5

CHAPTER 5

PROPOSED TOTAL PAYMENT SYSTEM

5.1 Proposed Total Payment System

A workshop on the total payment process was organized by the Department head of RBEI and he following measures were decided to be implemented.

- Educate the suppliers to send the invoices with certain specifications, content that has to be included and guidelines to be followed in order to get the payment on time.
- Appoint a person in purchase department exclusively to ensure that the invoices are received and processed on time and to track the delay in process.
- Make periodic analysis for the month of January, February and March 2012 to see the process improvement at each stage.
- Set a lead time for each department to process the invoice to the next stage and have a track of it.
- Multiple interactions of the vendors with various departments for approval to be reduced as it is time consuming process.
- All the invoices should be routed for payment only by the purchase department and they are solely responsible for the payment issues.
- A separate tracking sheet to be maintained in order to have a complete track of the invoices at each stage.
- The departments involved in the payment process are to be divided into three teams and these teams would compete with each other to minimize the process team. The department head would declare the winner at the end of each month and the winning team would be rewarded with a note of appreciation.

The entire payment processing team is divided into three buckets as

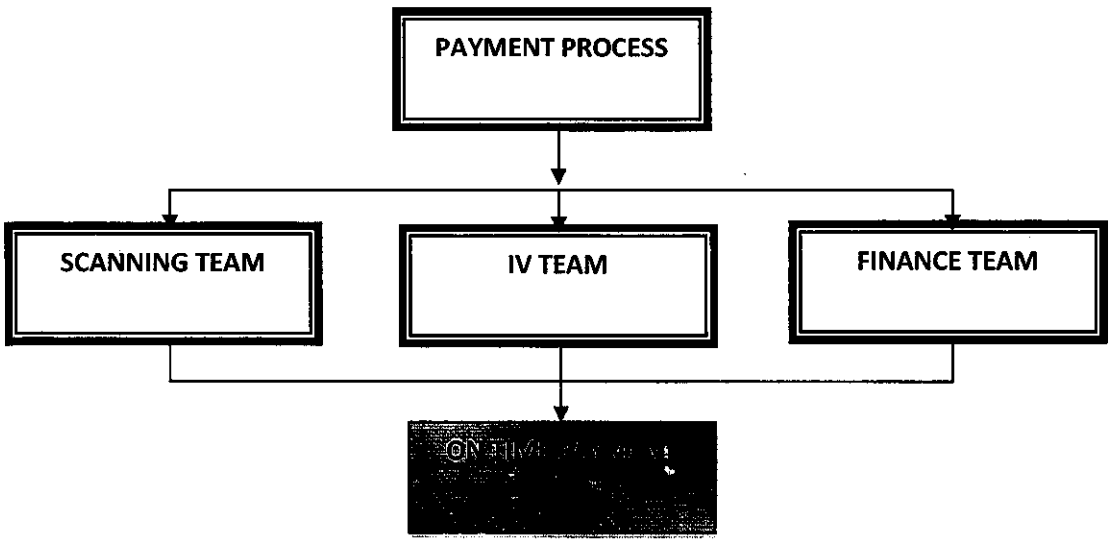


Figure 5.1 – Figure showing entire payment process

5.1.*1* Scanning team:

The scanning team comprises of the Logistics, Purchase and BSD where they would receive the invoices once the material/service is delivered, make an entry in the invoice tracking sheet, verify it in SAP against the Purchase order, sent for scanning and finally uploaded into SAP.

Verification of invoices starts in the initial stage so that in case of any errors or mismatch of invoices with the purchase order the vendor can be informed to revise it within 2 days from the date of submission. This will minimize the delay of payment as it will not get rejected or short closed by the BSA department at the later point of time.

Filtering of invoices is possible at the earlier stage. The lead time given is from the date of receipt of the invoice is 2-3 days.

5.1.*2* IV team:

The IV (Internal verification) team is the BSA department. Their main activity is to send the invoices to the user for approval through SAP system. This process is called as e-works or Posting process.

e-works is the internal tool used for the approval process.

Once the user approves it then they make a complete verification of the invoices with the urchase order (PO) whether the value of invoice matches with the value in the PO.

Then check whether the quantity for all the line items are available or not and clears it for ayment. The lead time given for IV team is 10-12 days.

.1.3 Finance Team:

Once the clearance is made, the finance team will remove the payment block for the invoices nd release the payment by dispatching the cheque. The lead time given to them s 5-7 days.

Finance team will make payment only with the original documents attached with TDS ertificate, Bill of entry, ECC copies etc..,

The cheque printing process has changed where in the printing of cheques happen from Coimbatore location itself from a single bank (HDFC). No signature approval is also required in he cheque. This would greatly minimize the delay by at least 3-4 days.

- All these three departments coordinate with each other and ensure on time payment
- There exist a competition between these three departments and by the end of each month the Total payment process improvement is analyzed using the invoice tracking data and SAP and the star Performing team will be appreciated.

Workshops and repeated meeting with the suppliers are carried out to streamline and minimize he turnaround time much further.

CHAPTER 6

CHAPTER 6

IMPLEMENTATION AND IMPROVEMENT

The proposed system of payment process is implemented and the improvement is monitored periodically.

- The suppliers were educated to submit the invoices with right content, time period within which they have to submit the invoices and the point of contact for commercial interactions.

- Repeated mails and telephonic conversation with the vendors with respect to the discrepancies in the invoices were made so that the mistakes from the supplier side were minimized.

- The invoices which took more than 50 days to from the date of receipt of the purchase department were sorted out and analyzed for the cause of delay.

- Most of these invoices were import bills and the major cause for the delay was loss of certain document like bill of entry, TDS certificates, etc.., Rigorous steps were taken to minimize this kind of delay and ensured that no such delay will happen in the future.

- The respective buyers the particular materials or services were instructed to make repeated follow ups with the vendors as well as the internal departments to make the payment happen on priority.

- The logistic department was advised not to accept the invoices from the vendors without the necessary documents.

The process improvement is evident by the following analysis.

.1 Number of Days Taken To Scan the Invoices from the Date of Receipt

The chart shows the number of days taken to scan the invoices from the date of receipt. The ays are categorized between 0-20 days, 21-40 days, 41-60 days and more than 60 days.

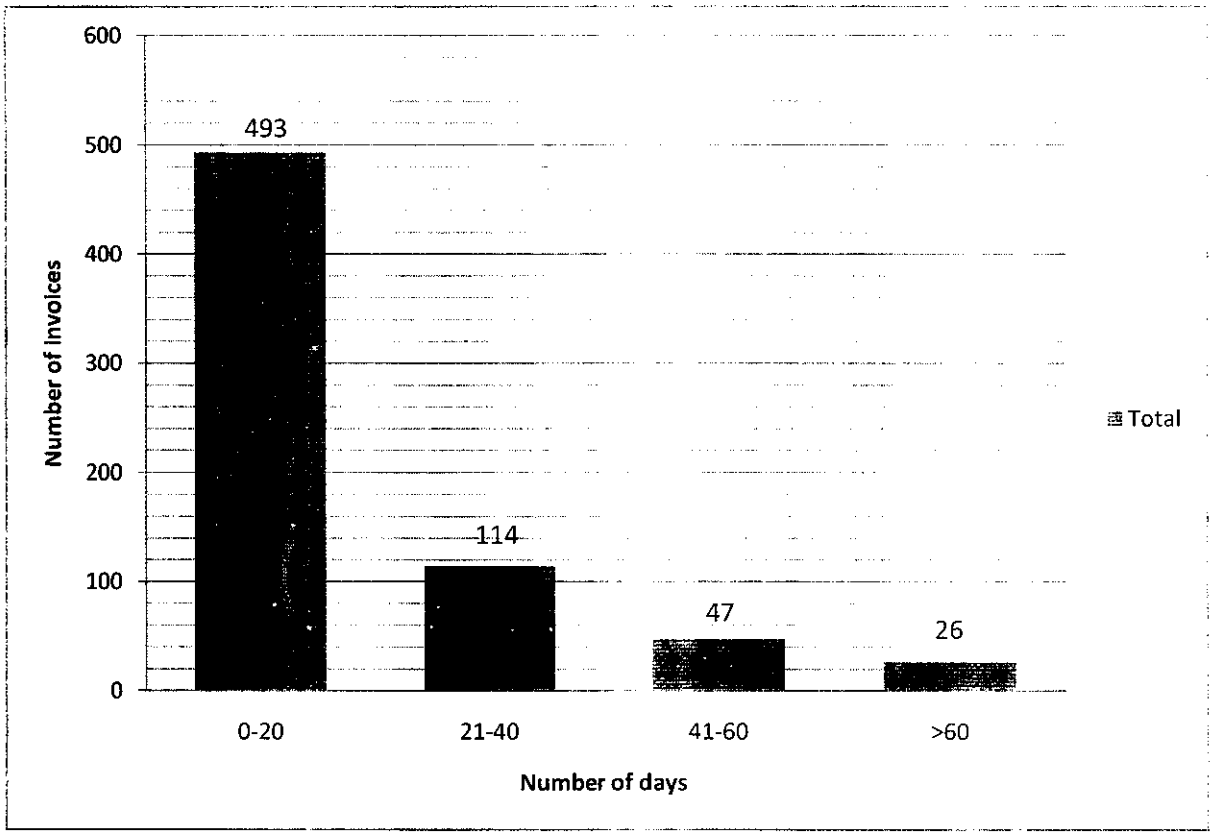


Figure 6.1 – Figure showing number of days taken to scan the invoices from date of receipt

Interpretation:

The chart shows the number of days taken for scanning from the date received. 493 invoices have taken between 0-20 days for scanning. 114 invoices have taken 21-40 days for scanning. 47 invoices have taken 41-60 days for scanning and 26 invoices have taken more than 60 days for scanning. This chart clearly shows that most of the invoices have been scanned between 0-20 days and there is some delay in the payment process of invoices.

6.2 Number of Days Taken To Upload the Invoices into SAP from Date of Submission

The chart shows the number of days taken for the invoices to get uploaded into SAP system from the date of submission of the invoices to the scan department. The days taken are categorized as 0-5 days, 6-10 days and more than 10 days.

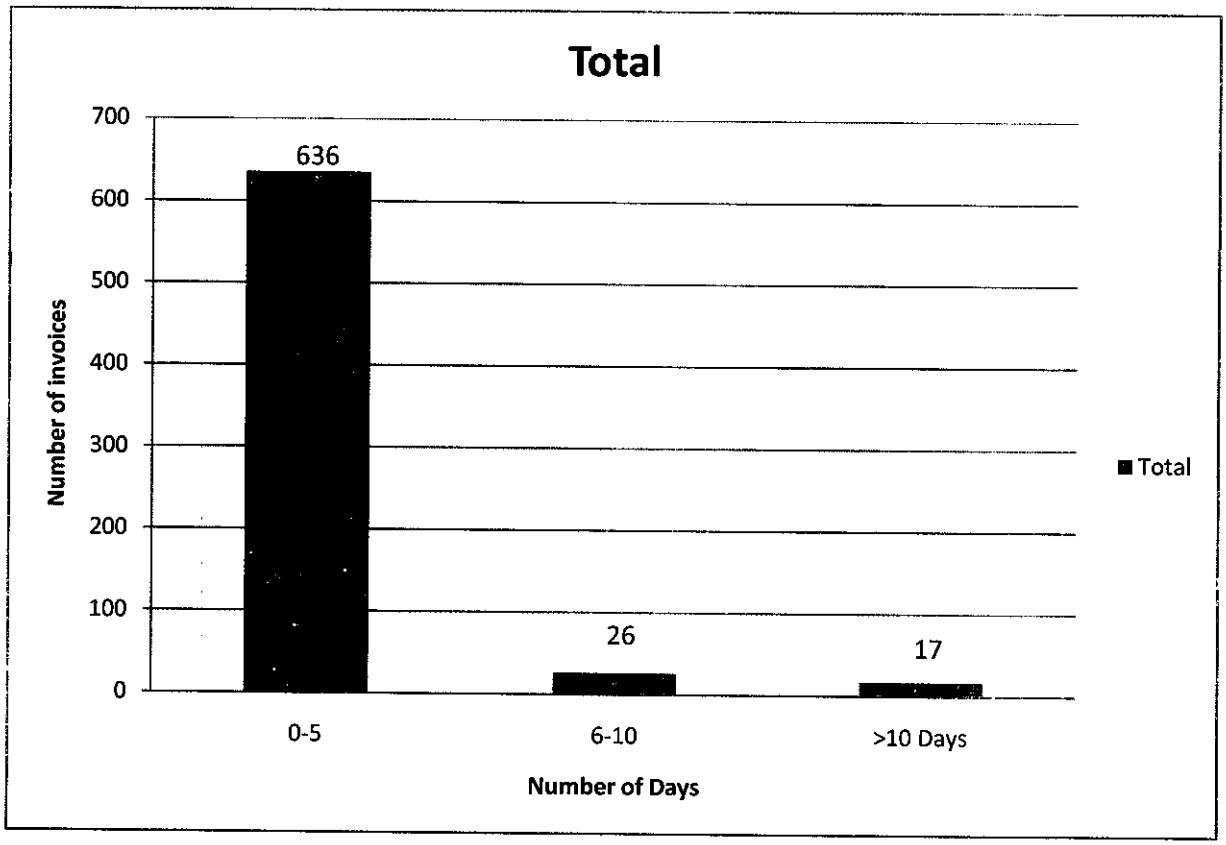


Figure 6.2 – Figure showing number of days taken for invoice to get uploaded in SAP system from date of submission

Interpretation:

The chart shows the number of days taken for uploading the invoices from the date of submission. Most of the invoices have been uploaded in SAP system between 0-5 days. Few invoices have been uploaded into SAP system between 6-10 days and some have taken more than 10 days to get uploaded.

6.3 Invoices Scanned After 100 Days from the Date of Invoice

The table shows the invoices of the concerned vendors which have taken more than 100 days for scanning from the date of invoices. The corrective steps taken to minimize such delay are discussed below the table.

ate of eceipt	Name of the Vendor	Invoice No	Invoice Date	Amount	No of days taken
eb-12	Verdexo facilities Management	PSI/TN/SEP11/00191-B	9-Sep-11	6,875	150
eb-12	Verdexo facilities Management	PSI/TN/SEP11/00190	9-Sep-11	2,661	150
eb-12	Verdexo facilities Management	PSI/TN/SEP11/00191-A	9-Sep-11	8,250	150
eb-12	Apline Technologies	1338	20-Sep-11	8,900	143
eb-12	Apline Technologies	1336	20-Sep-11	290,300	143
eb-12	Apline Technologies	1337	20-Sep-11	34,000	143
eb-12	WINLAB Limited	11300071	11-Oct-11	93,786	122
eb-12	WINLAB Limited	11300072	11-Oct-11	26,075	122
Feb-12	Sealgirri Engg Co.(p) Ltd.,	3278	26-Sep-11	13500	148
Feb-12	Sealgirri Engg Co.(p) Ltd.,	3265	21-Sep-11	40150	153
Feb-12	Sealgirri Engg Co.(p) Ltd.,	3279	28-Sep-11	19102	146
Feb-12	Sealgirri Engg Co.(p) Ltd.,	3250	26-Sep-11	38000	148
Feb-12	Sealgirri Engg Co.(p) Ltd.,	3223	9-Aug-11	17400	196
Feb-12	Sealgirri Engg Co.(p) Ltd.,	3224	9-Aug-11	170000	196
Feb-12	Hotel TAG Bride	FOA2976	26-Jun-11	69617	240

Table 6.1 – Table showing details of the vendors and their invoices which have taken more than 100 days for scanning from the date of invoice

Interpretation:

The table clearly shows the details of the vendors and their invoices (Date of receipt, Invoice No and amount to be paid) which have taken more than 100 days for scanning from the date of invoice. One invoice of Hotel CAG pride has taken more than 240 days for scanning. The reason for the delay of this process is identified and corrective steps have been taken as discussed below.

Note: *The name of the vendors have been changed to ensure confidentiality of the Company.*

Corrective Steps taken:

1. Sealgirri & Verdexo invoices - The concerned Buyer was instructed to check and ensure no further delay from supplier in submission of invoices.
2. Apline & Winlab – Logistics department was instructed to make GRN (Goods receipt note) and clearance on time. The buyer was advised to intimate the vendor to ensure scanning of invoices on time and asked to get a statement of payment pending details.
3. TAG Bride – the Supplier did not submit the invoice so is sent for rescanning.

6.4 Invoices Scanned Between 50-100 Days from the Invoice Date

The table shows the invoices of the concerned vendors that have taken around 50-100 days for scanning from the date of invoice. The corrective steps taken to minimize such kind of delay is discussed below the table

Date of Receipt	Name of the Vendor	Invoice No	Invoice Date	Amount	No of days taken
30-Jan-12	Hardware tools and machinery mart	INV/1100/11-12	9-Dec-11	19,351	56
30-Jan-12	Hardware tools and machinery mart	INV/1099/11-12	9-Dec-11	4,645	56
30-Jan-12	Hardware tools and machinery mart	INV/1101/11-12	9-Dec-11	7,220	56
3-Feb-12	Metrological testing and calibration	236	2-Dec-11	6783	67
3-Feb-12	wavetech Instrumentation	SO314125	16-Dec-11	34,850	53
6-Feb-12	Rajeshwari Computer Inc	ECI110444	13-Dec-11	3,525	59
9-Feb-12	Rajeshwari Computer Inc	ECI110443	13-Dec-11	2,820	63
10-Feb-12	Yokogawa	5000219556	7-Dec-11	1,750	69
13-Feb-12	Oscar E-Office Solutions	7	1-Dec-11	1275	76
13-Feb-12	Oscar E-Office Solutions	26	22-Dec-11	150	55
13-Feb-12	Oscar E-Office Solutions	27	22-Dec-11	2622	55
13-Feb-12	Oscar E-Office Solutions	28	22-Dec-11	2558	55
13-Feb-12	Oscar E-Office Solutions	29	22-Dec-11	4854	55
13-Feb-12	Oscar E-Office Solutions	30	22-Dec-11	6070	55
13-Feb-12	Oscar E-Office Solutions	31	22-Dec-11	3383	55
13-Feb-12	Oscar E-Office Solutions	32	22-Dec-11	2100	55
13-Feb-12	Oscar E-Office Solutions	33	22-Dec-11	2100	55

13-Feb-12	Oscar E-Office Solutions	34	22-Dec-11	2595	53
13-Feb-12	Oscar E-Office Solutions	35	22-Dec-11	2595	55
13-Feb-12	Oscar E-Office Solutions	36	22-Dec-11	1875	55
13-Feb-12	Oscar E-Office Solutions	37	22-Dec-11	14628	55
13-Feb-12	Oscar E-Office Solutions	38	22-Dec-11	14623	55
13-Feb-12	Oscar E-Office Solutions	39	22-Dec-11	1120	55
13-Feb-12	Oscar E-Office Solutions	40	22-Dec-11	90	55
13-Feb-12	Oscar E-Office Solutions	41	22-Dec-11	1584	55
13-Feb-12	Oscar E-Office Solutions	42	22-Dec-11	3185	55
13-Feb-12	Vector Infomatik Gmbh	90242858	20-Dec-11	139,020	62
13-Feb-12	Elektroswitch Automotive Gmbh	R215018	12-Dec-11	600	70
14-Feb-12	Vinesh Business Services Pvt Ltd	DO494	26-Dec-11	2371	56
14-Feb-12	Vinesh Business Services Pvt Ltd	DO498	26-Dec-11	4181	56
14-Feb-12	Vinesh Business Services Pvt Ltd	DO500	26-Dec-11	4263	56
14-Feb-12	Vinesh Business Services Pvt Ltd	DO503	26-Dec-11	4916	56
16-Feb-12	Sree Murugan agencies	RB1211	31-Dec-11	20955	52
17-Feb-12	STI INFOTECH PRIVATE LTD	SPR/11-12/157	16-Dec-11	2677	67

Table 6.2 – Table showing details of the vendors and their invoices which have taken 50 - 100 days for scanning from the date of invoice

Interpretation:

The table clearly shows the details of the vendors and their invoices (Date of receipt, Invoice No and amount to be paid) which have taken between 50-100 days for scanning from the date of invoice.

Corrective steps taken:

1. Hardware tools and machinery mart & Rajeshwari Computer Inc - The logistics Department was asked to submit the invoices on time. The CHIL-Seal says the invoice reached the office on 14.12.2011 but it was submitted only on 30th January'2012.

2. Yokogawa – Logistics department was advised to ensure submission on time as the GRN was done on 31.12.2011 itself.

3. Oscar E-Office Solutions - Logistics department was advised to ensure submission on time as the delay was during reconciliation with the vendor.

4. **Vector Infomatik Gmbh** - Logistics department was advised to ensure submission on time as the GRN was done on 31.12.2011 itself

5. **Elektrobit Automotive Gmbh** –Delay in creation of GRN. So logistics department was instructed to create GRN within the lead time given to them.

6. **STI Infotech Private Ltd** –GRN delay.

7. **Metrological testing and calibration centre** – The concerned was asked to intimate the vendor that they have submitted the Invoice after 1 month by referring PTR (Mail Room) Receipt Date & Invoice Date.

8. **Vignesh Business Services Pvt Ltd** – The front end logistics department was asked to intimate the supplier to ensure submission of invoice ONTIME.

9. **Sree Murugan agencies** - Received the invoice after 52 days from Invoice Date. This was received from FCM and was approved only on 15.02.2012 which is a violation in process. So the buyer was asked to intimate vendor for a direct submission of invoice to the purchase department.

Note: *The name of the vendors have been changed to ensure confidentiality of the Company.*

6.5 The Stream lined process

The whole process was streamlined, monitored and analyzed in four stages. They are:

A) Total Process: Invoice date to Payment date

- Number of days taken for payment from the date of invoice

B) Scanning Process: Invoice Date to Scan date

- Number of days taken for scanning from the invoice date

C) Posting process: Scan date to Posting date

- Number of days taken for posting from the date of scanning.

D) Payment process: Posting date to Payment (Cheque) date

- Number of days taken for dispatching cheque from the date of posting.

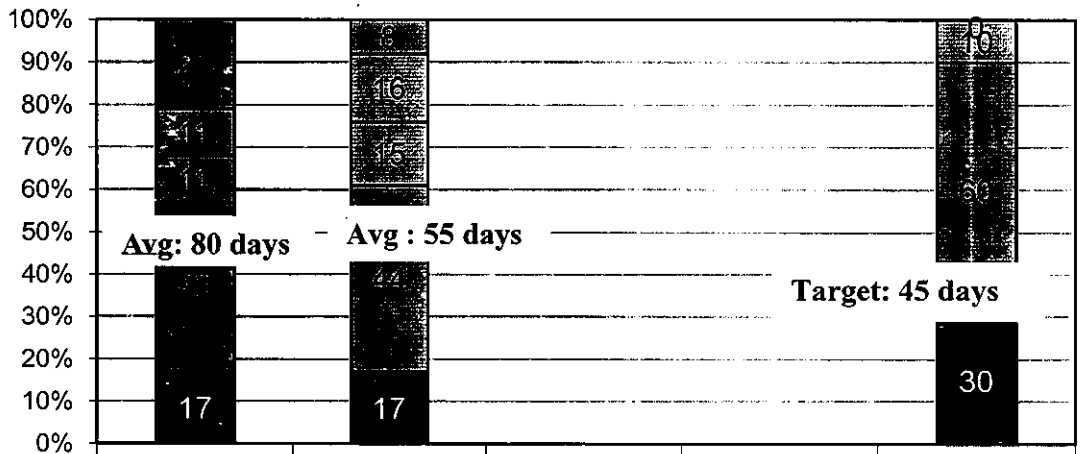
The process improvement was analyzed for all the four stages for the month of February, March and April'2012 and compared against the 2011 data. It was analyzed as the average number of days taken for each process.

At the end of each month the Section head would organize a meeting to review the status and have a brain storming session with all the members involved in the payment process to improve the process further and to stabilize it.

6.6 Supplier Payment Process: Status Review – Feb'12

6.6.1 Total Process: Invoice Date to Payment Date

The chart shows the status review of Total process for the Month of Feb'12 and it is compared against the Total process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	'Apr '12	Target (End 04/12)
■>100 days	21	8			0
■61-100 days	11	16			0
■46-60 days	11	15			10
■31-45 days	40	44			60
■0-30 days	17	17			30

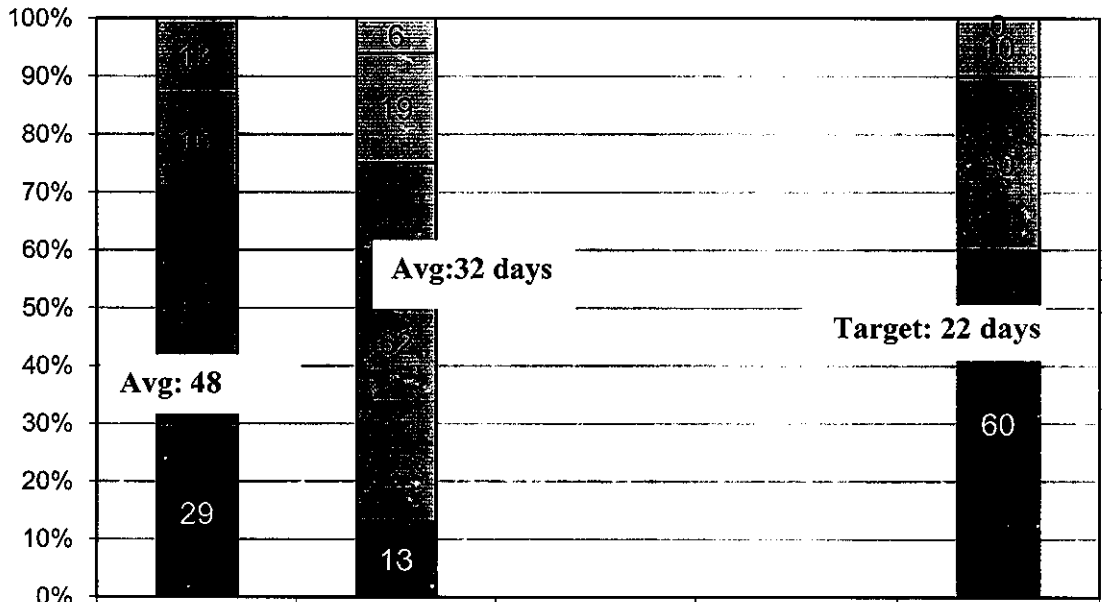
Figure 6.3 – Figure showing review of Total process for the Month of Feb'12

Interpretation:

From the table it is evident that 17% of the invoices have been paid between 0-30 days as same as the 2011 data. 44% of invoices have been paid between 31-45 days from the date of invoice as against 40% during 2011. 15% of the invoices have been paid between 46-60 days from the date of invoice against 11% in 2011. 16% of the invoices have been paid between 60-100 days as against 11% in 2011 and only 8% of the invoices have been paid after 100 days as against 21% in 2011. Hence the average number of days taken for payment from the date of invoice is 55 days in the month of February 2012.

6.6.2 Scanning Process: Document to Scanning

The chart shows the status review of Scanning process for the Month of Feb'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	13	6			0
31-100 days	16	19			10
11-30 days	42	62			30
0-10 days	29	13			60

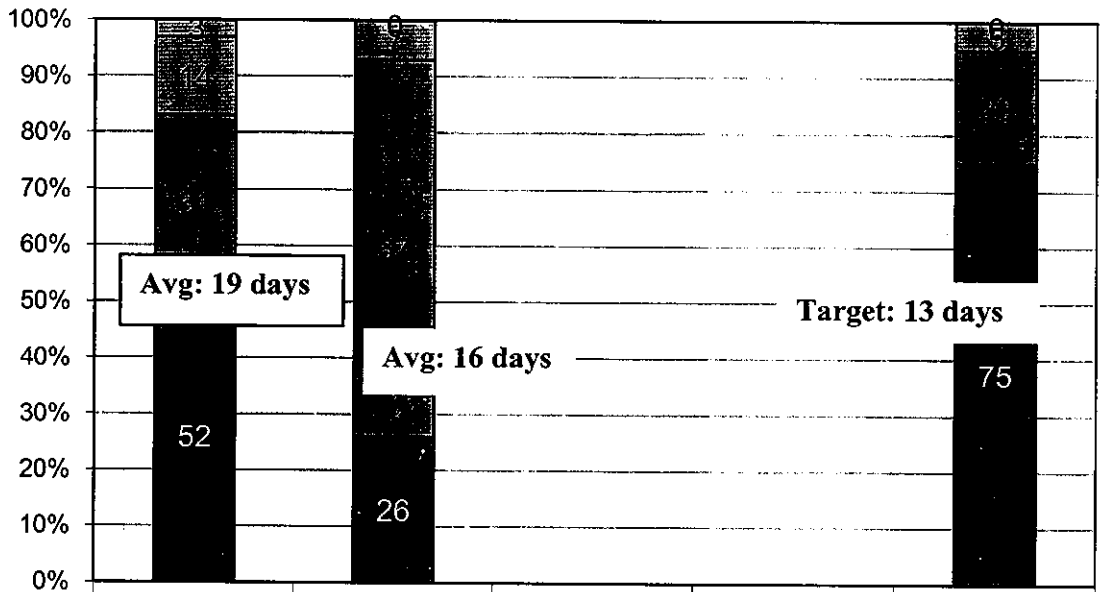
Figure 6.4 – Figure showing review of scanning process for the Month of Feb'12

Interpretation:

The table shows that 13% of the invoices have been scanned between 0-10 days from the date of invoice as against 29% in 2011. 62% of the invoices have been scanned between 11-30 days as against 42% in 2011. 19% of the invoices have been scanned between 31-100 days from the date of invoice as against 16% in 2011. 6% of the invoices have taken more than 100 days for scanning as against 13% in 2011. Hence the average number of days taken for scanning for the month of FEB'12 from the date of invoice is 32 days as against 48 days in 2011.

6.6.3 Posting Process: Scanning To Posting

The chart shows the status review of Posting process for the Month of Feb'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	3	0			0
31-100 days	14	7			5
11-30 days	31	67			20
0-10 days	52	26			75

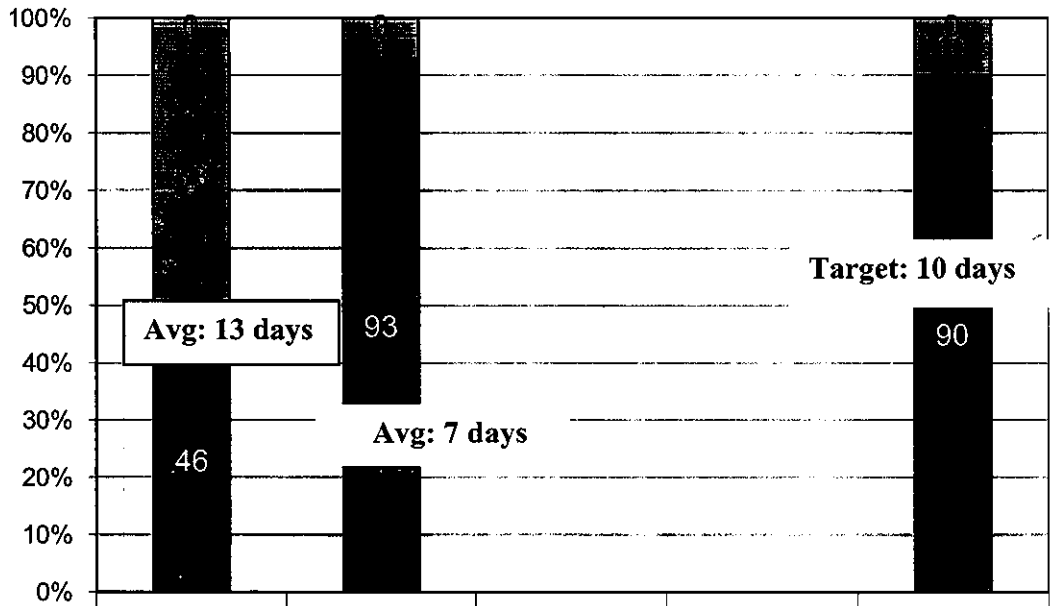
Figure 6.5 – Figure showing review of posting process for the Month of Feb'12

Interpretation:

The Chart shows that 26% of the invoices have been posted from the date of invoices between 0-10 days as against 52% in 2011. 67% of the invoices have been posted between 11-30 days from the date of invoices as against 31% in 2011. 7% of the invoices have been posted between 31-100 days from the date of invoice as against 14% in 2011. No invoice has taken more than 100 days for scanning from the date of invoice as against 3% in 2011. Hence the average number of days taken for the Posting process from the date of invoice is 16 days as against 19 days in 2011.

6.6.4 Payment Process: Posting To Payment

The chart shows the status review of Posting date to Payment for the Month of Feb'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	0	0			0
31-100 days	1	3			0
11-30 days	53	4			10
0-10 days	46	93			90

Figure 6.6 – Figure showing review of payment process for the Month of Feb'12

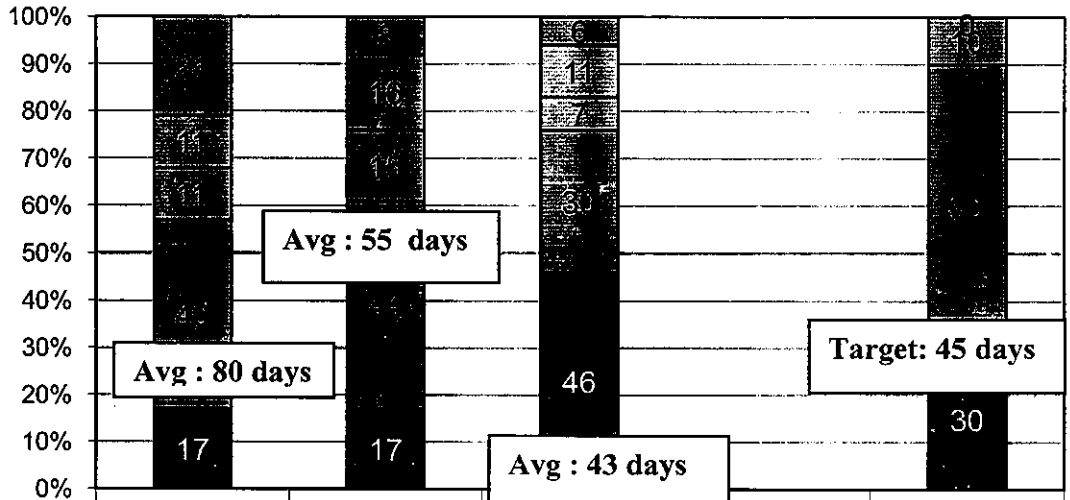
Interpretation:

The chart shows that 93% of the invoices have been paid between 0-10 days from the date of posting as against 46% in 2011. 4% of the invoices have been paid between 11-30 days from the date of posting as against 53 in 2011. 3% of the invoices have been paid between 31-100 days as against 1% in 2011. No invoices have taken more than 100 days for payment. Hence the average number of days taken in FEB'12 for payment from the date of posting is 7 days.

6.7 Supplier Payment Process: Status Review – Mar'12

6.7. *1* Total Process: Invoice Date to Payment Date:

The chart shows the status review of Total process for the Month of March'12 and it is compared against the Total process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	'Apr '12	Target (End 04/12)
>100 days	21	8	6		0
61-100 days	11	16	11		0
46-60 days	11	15	7		10
31-45 days	40	44	30		60
0-30 days	17	17	46		30

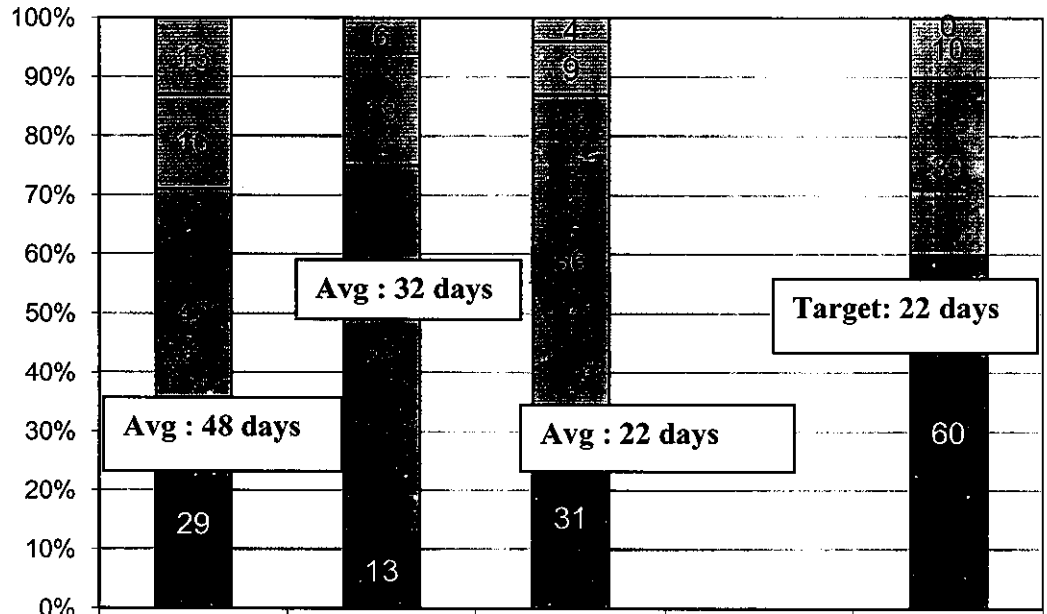
Figure 6.7 – Figure showing review of Total process for the Month of March'12

Interpretation:

From the table it is evident that 46% of the invoices have been paid between 0-30 days as against 17% in 2011. 30% of invoices have been paid between 31-45 days from the date of invoice as against 40% during 2011. 7% of the invoices have been paid between 46-60 days from the date of invoice against 11% in 2011. 11% of the invoices have been paid between 60-100 days as against 11% in 2011 and only 6% of the invoices have been paid after 100 days as against 21% in 2011. Hence the average number of days taken for payment from the date of invoice is 43 days in the month of March 2012. This has surpassed the target days which shows a good improvement.

6.7.2 Scanning Process: Document to Scanning

The chart shows the status review of Scanning process for the Month of March'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	13	6	4		0
31-100 days	16	19	9		10
11-30 days	42	62	56		30
0-10 days	29	13	31		60

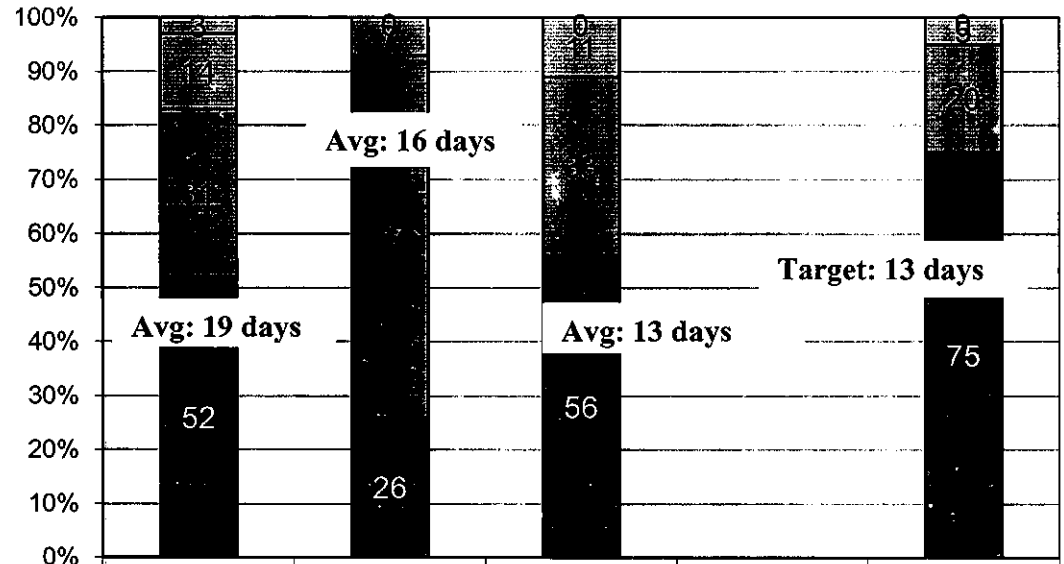
Figure 6.8 – Figure showing review of scanning process for the Month of March'12

Interpretation:

The table shows that 31% of the invoices have been scanned between 0-10 days from the date of invoice as against 29% in 2011. 56% of the invoices have been scanned between 11-30 days as against 42% in 2011. 9% of the invoices have been scanned between 31-100 days from the date of invoice as against 16% in 2011. 4% of the invoices have taken more than 100 days for scanning as against 13% in 2011. Hence the average number of days taken for scanning for the month of March'12 from the date of invoice is 22 days as against 48 days in 2011. It is a s same as the target and show a 10 days reduction from the month of February.

6.7.3 Posting Process: Scanning To Posting

The chart shows the status review of Posting process for the Month of March'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	3	0	0		0
31-100 days	14	7	11		5
11-30 days	31	67	33		20
0-10 days	52	26	56		75

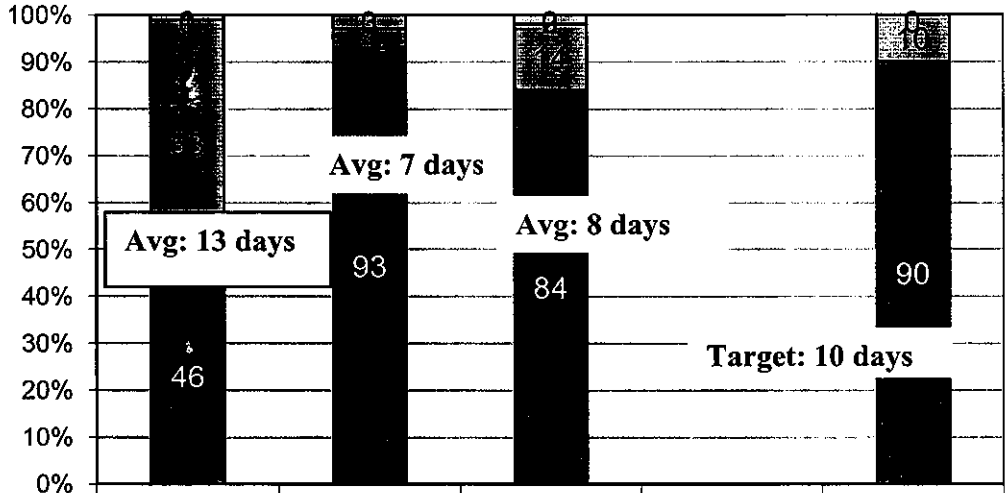
Figure 6.9 – Figure showing review of posting process for the Month of March'12

Interpretation:

The Chart shows that 56% of the invoices have been posted from the date of invoices between 0-10 days as against 52% in 2011. 33% of the invoices have been posted between 11-30 days from the date of invoices as against 31% in 2011. 11% of the invoices have been posted between 31-100 days from the date of invoice as against 14% in 2011. No invoice has taken more than 100 days for scanning from the date of invoice as against 3% in 2011. Hence the average number of days taken for the Posting process from the date of invoice is 13 days as against 19 days in 2011. There is improvement from the month of February.

6.7.4 Payment Process: Posting To Payment

The chart shows the status review of Posting date to Payment for the Month of March '12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	0	0	0		0
31-100 days	1	3	2		0
11-30 days	53	4	14		10
0-10 days	46	93	84		90

Figure 6.10 – Figure showing review of payment process for the Month of March'12

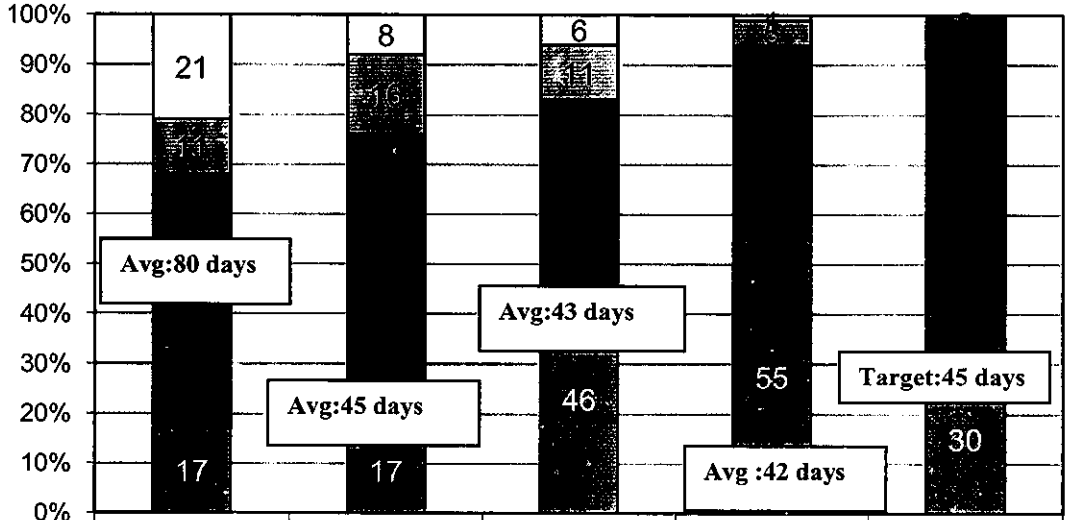
Interpretation:

The chart shows that 84% of the invoices have been paid between 0-10 days from the date of posting as against 46% in 2011.14% of the invoices have been paid between 11-30 days from the date of posting as against 53 in 2011. 2% of the invoices have been paid between 31-100 days as against 1% in 2011. No invoices have taken more than 100 days for payment. Hence the average number of days taken in March'12 for payment from the date of posting is 7 days. It has increased by a day from the month of February.

6.8 Supplier Payment Process: Status Review – April'12

6.8.*1* Total Process: Invoice Date to Payment Date

The chart shows the status review of Total process for the Month of April'12 and it is compared against the Total process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	'Apr '12	Target (End 04/12)
□ >100 days	21	8	6	1	0
▨ 61-100 days	11	16	11	5	0
■ 46-60 days	11	15	7	10	10
■ 31-45 days	40	44	30	29	60
▩ 0-30 days	17	17	46	55	30

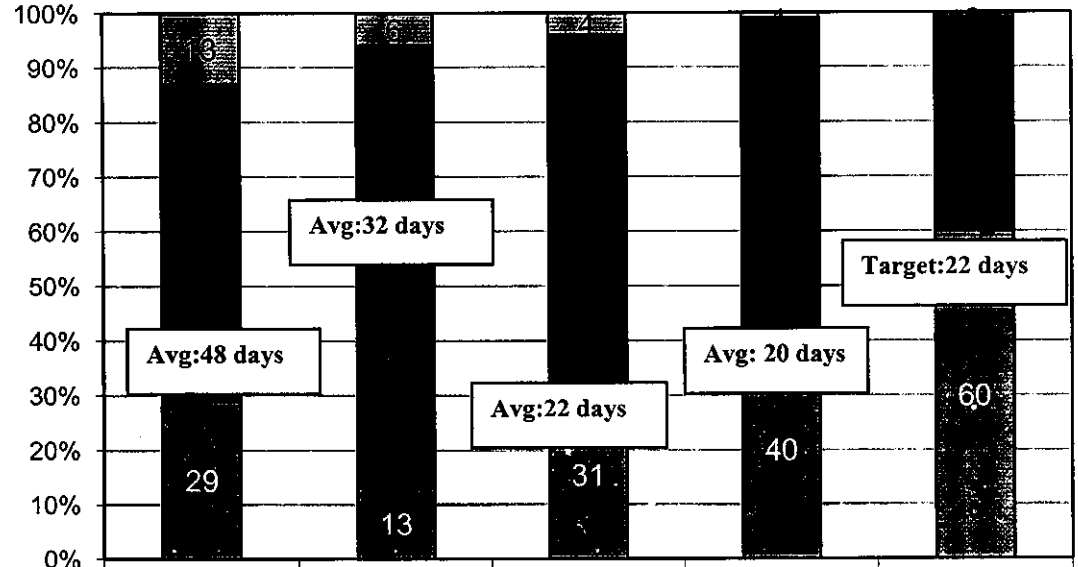
Figure 6.11 – Figure showing review of Total process for the Month of April'12

Interpretation:

From the table it is evident that 55% of the invoices have been paid between 0-30 days from the date of invoice as against 17% in 2011. 29% of invoices have been paid between 31-45 days from the date of invoice as against 40% during 2011. 10% of the invoices have been paid between 46-60 days from the date of invoice against 11% in 2011. 5% of the invoices have been paid between 60-100 days as against 11% in 2011 and only 1% of the invoices have been paid after 100 days as against 21% in 2011. Hence the average number of days taken for payment from the date of invoice is 42 days in the month of April 2012. This has surpassed the target days which shows a good improvement.

6.8.2 Scanning Process: Document to Scanning

The chart shows the status review of Scanning process for the Month of April'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	13	6	4	1	0
31-100 days	16	19	9	7	10
11-30 days	42	62	56	52	30
0-10 days	29	13	31	40	60

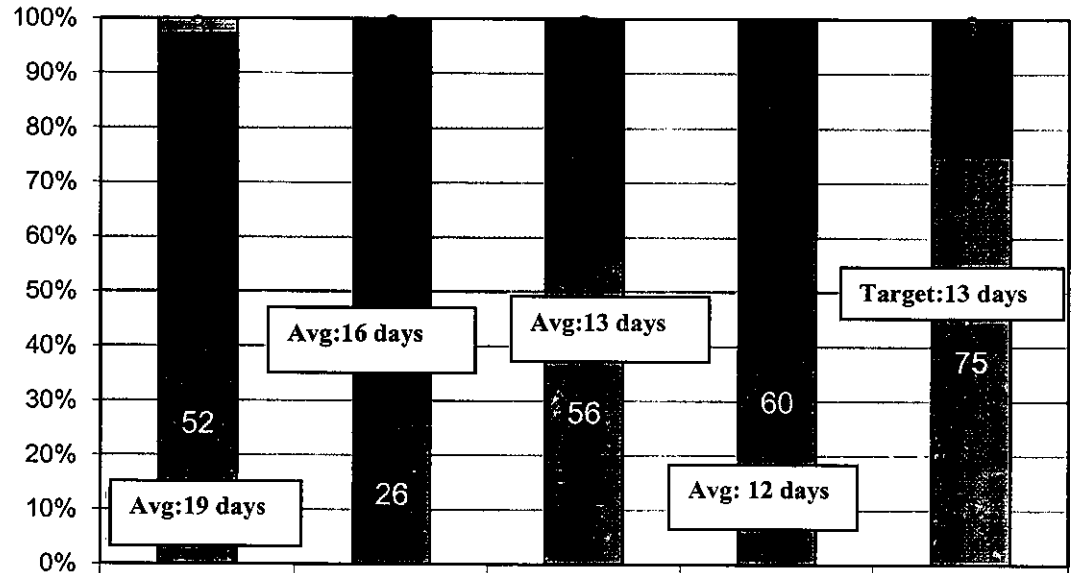
Figure 6.12 – Figure showing review of scanning process for the Month of April'12

Interpretation:

The table shows that 40% of the invoices have been scanned between 0-10 days from the date of invoice as against 29% in 2011. 52% of the invoices have been scanned between 11-30 days as against 42% in 2011. 7% of the invoices have been scanned between 31-100 days from the date of invoice as against 16% in 2011. Only 1% of the invoices have taken more than 100 days for scanning as against 13% in 2011. Hence the average number of days taken for scanning for the month of April'12 from the date of invoice is 20 days as against 48 days in 2011. It is two days lesser than the result of March.

6.8.3 Posting Process: Scanning To Posting

The chart shows the status review of Posting process for the Month of April'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	3	0	0		0
31-100 days	14	7	11	5	5
11-30 days	31	67	33	35	20
0-10 days	52	26	56	60	75

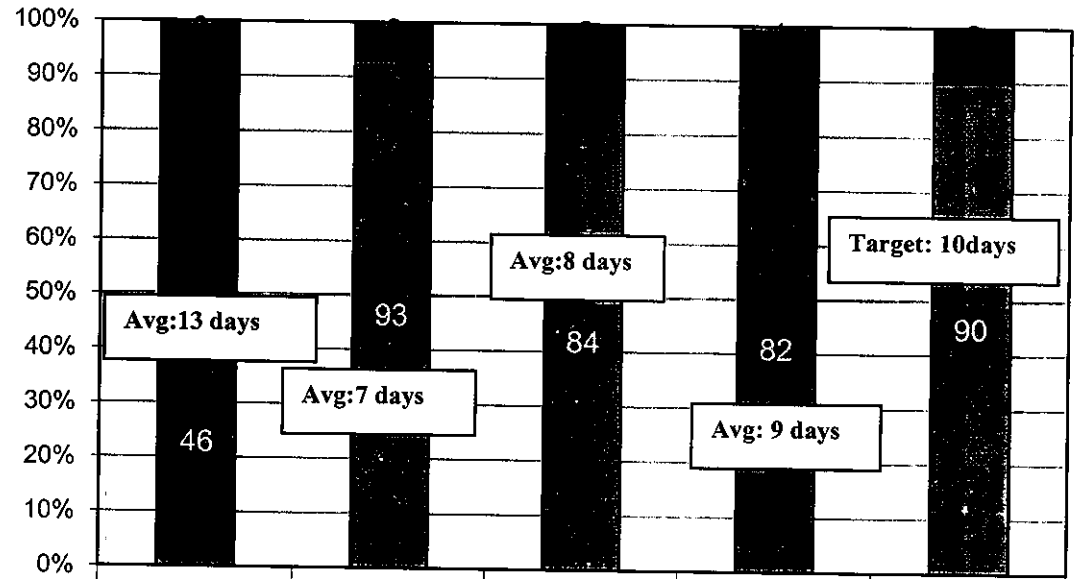
Figure 6.13 – Figure showing review of posting process for the Month of April'12

Interpretation:

The Chart shows that 60% of the invoices have been posted from the date of invoices between 0-10 days as against 52% in 2011. 35% of the invoices have been posted between 11-30 days from the date of invoices as against 31% in 2011. 5% of the invoices have been posted between 31-100 days from the date of invoice as against 14% in 2011. No invoice has taken more than 100 days for scanning from the date of invoice as against 3% in 2011. Hence the average number of days taken for the Posting process from the date of invoice is 12 days as against 19 days in 2011. There is improvement from the month of March.

6.8.4 Payment Process: Posting To Payment

The chart shows the status review of Posting date to payment for the Month of April'12 and it is compared against the process of 2011.The target number of days is also shown.



	Act '11	Feb '12	Mar '12	Apr '12	Target (End 04/12)
>100 days	0	0	0		0
31-100 days	1	3	2	1	0
11-30 days	53	4	14	17	10
0-10 days	46	93	84	82	90

Figure 6.14 – Figure showing review of payment process for the Month of April'12

Interpretation:

The chart shows that 83% of the invoices have been paid between 0-10 days from the date of posting as against 46% in 2011.15% of the invoices have been paid between 11-30 days from the date of posting as against 53 in 2011. 1% of the invoices have been paid between 31-100 days as against 1% in 2011. No invoices have taken more than 100 days for payment. Hence the average number of days taken in April'12 for payment from the date of posting is 9 days. It is decreased by 1 day from the month of March.

CHAPTER 7

FINDINGS, SUGGESTIONS AND CONCLUSION

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7.1 Findings

- The turnaround time of the total payment process has been streamlined and reduced from 80 days in 2011to 42 days in April'2012 after a rigorous change in the payment process.
- Verification of the invoices at the initial stage has minimized the rejection rate of invoices at IV stage so that the delay in payment has been minimized.
- Proper tracking of invoices at each stage helped in knowing where the delay is and minimized the turnaround time periodically.
- Discrepancies in the invoices have been reduced as the suppliers were educated repeatedly so that the invoices are properly aligned with the purchase order.
- Purchase department has overall control of the payment process and any commercial interactions are only through them.

7.1.*1* Existing System of Payment

- The existing system of payment shows high delay in the scanning process where the average number of days taken for the invoices to scan from the date of invoice is 48 day. The major reason for this delay is as follows:

    a) Delay in submission of the invoices by the suppliers.
    b) Delay in creation of GRN (Good receipt Note).
    c) Multiple interactions of the suppliers with various departments.

- The average number of days taken for posting the invoices from the date of scanning is 19 in 2011. This is due to the exhaustive verification process, e-works and delay in the user approval. More than half of the invoices are posted only in between 11-30 days.

- The Payment process i.e. payment from the date of posting has taken nearly 13 days on an average from the date of invoice.

- It is evident that the entire payment process has gaps in all the stages of the total payment process.

7.1.2 New payment process

- The initial improvement in the streamlining process shows that most of the invoices have been scanned between 0-20 days against 48 days in 2011.

- Most of the invoices have been uploaded between 0-5 days itself as there is a prompt submission of the invoices from purchase and scanning department.

- The invoices which have taken more than 50 days and 100 hundred days have been sorted out and the reason for the delay is analysed. One invoice of Hotel TAG bride has taken more than 240 days for scanning. The reason for the delay is identified and corrective steps have been taken. The concerned people in the department were instructed to ensure no such delays in future.

- The details of the vendors and their invoices (Date of receipt, Invoice No and amount to be paid) which have taken between 50-100 days for scanning from the date of invoice are sorted out and corrective measures were taken up internally.

7.1.3 STATUS REVIEW: FEBRUARY'2012

Total Process

- It is evident from the analysis that more than half of the invoices have been paid before 45 days. Only 24% of the invoices have been paid after 60 days from the date of the invoices. Hence the average number of days taken for payment from the date of invoice is 55 days.

Scanning process:

- 75% of the invoices have been scanned before 30 days as against the 2011 data. Only 6% of the invoices have taken more than 100 days for scanning as against 13% in 2011. Hence the average number of days taken for scanning for the month of FEB'12 from the date of invoice is 32 days as against 48 days in 2011.

Posting Process

- Nearly 93% of the invoices have been posted within 30 days from the date of invoice. Only 7% of the invoices have been posted between 31-100 days from the date of invoice as against 14% in 2011. No invoice has taken more than 100 days for scanning from the date of invoice as against 3% in 2011. Hence the average number of days taken for the Posting process from the date of invoice is 16 days as against 19 days in 2011.

Payment Process

- 93% of the invoices have been paid between 0-10 days from the date of posting as against 46% in 2011. 4% of the invoices have been paid between 11-30 days from the date of posting as against 53 in 2011. No invoices have taken more than 100 days for payment. Hence the average number of days taken in FEB'12 for payment from the date of posting is 7 days.

7.1.4 STATUS REVIEW: MARCH'2012:

Total Process:

- It is evident that 76% of the invoices have been paid within 45 days and only some invoices have taken more than 60 days for payment. Hence the average number of days taken for payment from the date of invoice is 43 days in the month of March 2012. This has surpassed the target days which shows a good improvement.

Scanning Process

- Nearly 87% of the invoices have been scanned within 30 days. Only 9% of the invoices have been scanned between 31-100 days from the date of invoice as against 16% in 2011. Hence the average number of days taken for scanning for the month of March'12 is 22 days as against 48 days in 2011.

Posting Process

- 90% of the invoices have been posted within 30 days from the date of scanning.11% of the invoices have been posted between 31-100 days. No invoice has taken more than 100 days for posting. Hence the average number of days taken for the Posting process from the date of invoice is 13 days as against 19 days in 2011. There is improvement from the month of February

Payment Process

- 98% of the invoices have been paid within 30 days from the date of posting and no invoices have taken more than 100 days for payment. Hence the average number of days taken in March'12 for payment from the date of posting is 7 days. It has increased by a day from the month of February.

7.1.5 STATUS REVIEW: APRIL'2012

Total Process

- It is evident that nearly 84% of the invoices have been paid within 45 days from the date of invoice. Only 6% of the invoices have been paid after 60 days. Hence the average number of days taken for payment in the month of April 2012 from the date of invoice is 42 days. This has surpassed the target days which shows a good improvement.

Scanning Process

- Nearly 90% of the invoices have been scanned within 30 days from the date of invoice. Hence the average number of days taken for scanning for the month of April'12 from the date of invoice is 20 days as against 48 days in 2011. It is two days lesser than the result of March.

Posting Process

- 95% of the invoices have been posted within 30 days from the date of invoice as against 14% in 2011. No invoice has taken more than 100 days for scanning from the date of invoice as against 3% in 2011. Hence the average number of days taken for the Posting process from the date of invoice is 12 days. There is improvement from the month of March.

Payment Process

- Most of the invoices have been paid within 10 days from the date of posting. No invoices have taken more than 100 days for payment. Hence the average number of days taken in April'12 for payment from the date of posting is 9 days. It is decreased by a day from the month of March.

7.2 Suggestions

- As the invoices are mostly couriered and sent to the purchase or logistics department, it takes at least two days to reach the company. So the soft copy of the invoices can be mailed to the concerned person to process it for payment and the original copies can be posted directly to the Finance department. By this process two days can be saved.

- A note can be included in the purchase order stating that any invoice that is not matching with the Purchase order will be rejected. So that the vendors will be cautious in generating invoices each time.

- Rigorous payment follow-ups with various departments can reduce the delay in payment much further.

- Accountability and sense of ownership from each person involved in the payment processing should be increased and swap of responsibility should be reduced.

- Rather than calculating the turnaround time from the date of invoice it can be analysed from the date of receipt since it is the actual number of days taken for payment processing.

7.3 Conclusion

The payment to suppliers has been streamlined by implementing necessary steps and minimizing the Gaps in the existing payment system. Minimizing multiple interactions, proper tracking systems, close follow ups for the payment, repeated meetings and discussions, etc., helped in reducing the turnaround time from 80 days to 42 days in the month of April'2012. The vendors have also been educated to submit a valid invoice which will ensure their payment on time and maximize the trust and relationship with the organization. There is a good level of coordination between the departments involved in the payment process. The results of the proposed system was monitored and analysed against the 2011 data and the status review for the month of February, March and April was made which shows that the proposed system is highly successful.

7.4 Further Scope of the Study

- The geographic boundary of the study can be increased by applying the same process to other locations of RBEI and study the delay in payment.
- The technical processes and the difficulties involved in generating the payment in each step of the proposed process can be studied.
- The same analysis and processes can be studied for the upcoming months in 2012 as the study of proposed payment system is made only for the first quarter of 2012.
- The satisfaction level of the vendors from the present payment system can be studied and accordingly the payment process can be improved further.
- The effect of the payment process on reputation of RBEI, Coimbatore can be studied.

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APPENDIX

INTERVIEW SCHEDULE

Department: Logistics	**Date:**
Name of the Person:	Location:
Designation:	
Start time:	End time:

1. When and how do you receive the invoices?

2. What are the various means by which the supplier submits the invoices?

3. How long do you take to process the invoice to the purchase department?

4. Do you find any difficulty in receiving or processing the invoices? If yes, what is the reason?

5. What is the lead time given to you to process the invoice?

6. How many invoices do you receive every day?

7. What is the reason for the delay of invoices?

8. Do you receive necessary support from other department to process the invoice on time? If no, Why?

9. Please share your suggestions to improve the payment process

10. Is there any improvement in the Total payment process this year after streamlining the entire payment process?

Department: BSD	**Date:**
Name of the Person:	Location:
Designation:	
Start time:	End time:

1. When and how do you receive the invoices?

2. How long do you take to scan and process the invoice for uploading it in SAP?

3. Do you find any difficulty in receiving or processing the invoices? If yes, what is the reason?
4. Do you find any difficulty in receiving or processing the invoices? If yes, what is the reason?

5. What is the lead time given to you to process the invoice?

6. How many invoices do you receive every day?

7. What is the reason for the delay of invoices?

8. Do you receive necessary support from other department to process the invoice on time? If no, Why?

9. Please share your suggestions to improve the payment process

10. Is there any improvement in the Total payment process this year after streamlining the entire payment process?

Department: Purchase	**Date:**
Name of the Person:	**Location:**
Designation:	
Start time:	**End time:**

1. When and how do you receive the invoices?

2. What are the various means by which the supplier submits the invoices?

3. How long do you take to process the invoice to the scanning department?

4. Do you find any difficulty in receiving or processing the invoices? If yes, what is the reason?

5. What is the lead time given to you to process the invoice?

6. How many invoices do you receive every day?

7. What is the reason for the delay of invoices?

8. Do you receive necessary support from other department to process the invoice on time? If no, Why?

9. Please share your suggestions to improve the payment process

10. Is there any improvement in the Total payment process this year after streamlining the entire payment process?

11. What are the steps taken from your department to minimize the delay of payment?

Department: BSA	**Date:**
Name of the Person:	**Location:**
Designation:	
Start time:	**End time:**

1. When and how do you receive the invoices?

2. How long do you take to process the invoice for payment?

3. Do you find any difficulty in receiving or processing the invoices? If yes, what is the reason?

4. What is the lead time given to you to process the invoice?

5. How many invoices do you receive every day?

6. What is the reason for the delay of payment?

7. Do you receive necessary support from other department to process the invoice on time? If no, Why?

8. Why does the user department take a long time for approval?

9. What are the steps taken from your department to minimize the delay of payment?

10. Please share your suggestions to improve the payment process

Department: Finance	**Date:**
Name of the Person:	**Location:**
Designation:	
Start time:	**End time:**

1. When and how do you receive the invoices?

2.How long do you take to process the invoice for payment?

3.Do you find any difficulty in receiving or processing the invoices? If yes, what is the reason?

4.What is the lead time given to you to process the invoice?

5.How many invoices do you receive every day?

6.What is the reason for the delay of payment?

7.Do you receive necessary support from other department to process the invoice on time? If no, Why?

8.Please share your suggestions to improve the payment process

9.Is there any improvement in the Total payment process this year after streamlining the entire payment process?

10. What are the steps taken from your department to minimize the delay of payment?