Service process improvement: improving the order to cash process

Summer Internship Report On SERVICE PROCESS IMPROVEMENT: IMPROVING THE ORDER TO CASH PROCESS By Anirudh Subramaniam A0101910336 MBA Class of 2012 Under the Supervision of Mr. Shyamsunder Pal Professor Department of Operations & Decision Science In Partial Fulfillment of Award of Master of Business Administration AMITY BUSINESS SCHOOL AMITY UNIVERSITY UTTAR PRADESH SECTOR 125, NOIDA – 201303, UTTAR PRADESH, INDIA 2011 DECLARATION

I, Anirudh Subramaniam student of Masters of Business Administration from Amity Business School, Amity University Uttar Pradesh hereby declare that I have completed Summer Internship on " Service Process Improvement: Improving the order to cash process" as part of the course requirement. I further declare that the information presented in this project is true and original to the best of my knowledge. Date: Anirudh Subramaniam Enroll.

No: A0101910336 Place: Noida MBA Class of 2012 CERTIFICATE I Mr. Shyamsunder Pal hereby certify that Anirudh Subramaniam student of Masters of Business Administration at Amity Business School, Amity University Uttar Pradesh has completed the Project Report on " Service Process Improvement: Improving the order to cash process at Tata Teleservices Ltd. ", under my guidance. Mr. Shyamsunder Pal Professor Department of Operations and Decision Making Acknowledgement

My indebtedness and gratitude to the many individuals who have helped shape this thesis in its present form cannot be adequately conveyed in a few sentences. Yet I must record my immense gratitude to the brains and hands that worked overtime to support my efforts in the summer project " Service

Process Improvement: Improving the order to cash process". I express my sincere gratitude to my industry guide Mr. Manmohan Arora, Senior Manager, Enterprise Business at Tata Teleservices Ltd. for his able guidance, continuous support and cooperation throughout my project, without which the present work would not have been possible.

I would also like to thank Mr. Sourav Bhattacharya & the entire team of Tata Teleservices Ltd, for the constant support and help in the successful completion of my project. Also, I am thankful to my faculty guide Mr. Shyamsunder Pal of my institute, for his continued guidance and invaluable encouragement. Anirudh Subramaniam List Of Tables and Figures List of Tables S. No. | Name of the Table/Figure| 1. 1| Operations Model| 3. 1| Order to Cash Process| 4. 1| March Rejection Reasons| 4. 2| April Rejection Reasons| 4. | May Rejection Reasons| 4. 4| Circle wise rejections March Bar graph| 4. 5| Circle wise rejections March pie chart| 4. 6| Circle wise rejections March Excel| 4. 7| Circle wise rejections April Bar graph| 4. 8| Circle wise rejections April pie chart| 4. 9| Circle wise rejections April Excel| 4. 10| Circle wise rejections May pie chart| 4. 11| Circle wise rejections May Excel| 4. 12| Product wise rejections March pie chart| 4. 134. 144. 154. 164. 174. 184. 194. 204. 214. 224. 234. 244. 254. 264. 274. 284. 294. 304. 314. 324. 334. 344. 354. 6| Product wise rejections March ExcelProduct wise rejections April pie chartProduct wise rejections April ExcelProduct wise rejections May pie chartProduct wise rejections May ExcelMarch SLA StabilityApril SLA StabilityMay SLA StabilityMarch Rejection StabilityApril Rejection StabilityMay Rejection StabilityMarch CapabilityApril CapabilityMay Bulk CapabilityMay Strategic CapabilityMay GSM CapabilityMay TC SMEA CapabilityMarch Circle

wise SLAApril Circle wise SLAMay Circle wise SLAScree PlotRotated MatrixCross Tabulation of Experience vs Avg time to handle CAFCross Tabulation of Experience vs No. f CAFs handled| Table of Contents Sr. No. | Topic| Page Number| 1| Declaration| ii| 2| Certificate| iii| 3| Acknowledgement| iv| 4| List of Tables and Figures| v| 5| Abstract| viii| 6| Chapter 1: IntroductionIntroduction to OperationsTelecom Industry in IndiaCompany Profile| 1| 7| Chapter 2: Literature ReviewLiterature Review| 14| 8| Chapter 3: Research MethodologyOrder to Cash ProcessAbout the Research| 16| 9| Chapter 4: AnalysisAnalysis of RejectionsAnalysis of Delays| 25| 10| Chapter 5: Conclusions & Recommendations| 54| 1| Chapter 6: References| 56| Abstract1) Topic| | | | Service Process Improvement: Improving the order to cash process at Tata Teleservices Ltd. | | | | 2) Project Objective| | | | a) To collect the data provided by the MIS team and get primary data from the data entry team. b) To analyze the secondary data to present my findings on the reasons for rejection of applications. c) To analyze the primary data to find out the reasons for the delay in overall process. d) To give my recommendations to improve the process. | | | |) Methodology to be adopted| | | | * Research Type/ Category: To analyse the reasons for the rejections of the application forms, I decided to use the secondary data which was already present with the MIS team. This data was used for tracking the status of the application forms in progress until they were finally completed and closed. As the order entry team continues to work on application forms, the Information system used by Tata Teleservices Ltd. – ePOS, tracks every move of the form. This kind of analysis would form the basis of applied research.

To analyse the delays in the process, I planned to prepare a questionnaire which needed to be filled up by the data entry team. This would give me an idea from the data entry team about the problems and issues they face while performing the data entry and the login check in the overall order to cash process. * Research Design: My research would follow a descriptive research methodology. Tata Teleservices Ltd. is aware of the rejections and the delays in their process which is leading to the loss in revenue to the company.

My research will allow the company to understand why these problems are occurring and what would be the right corrective action to take to improve the process. * Employee survey plan: The survey created will be passed on to the data entry team for them to specify the issues they are facing while validating and entering the data into the system. The delays in the process occur in these phases. 4) Software planned to be used: a) M S Excel b) SPSS 17 c) Minitab| CHAPTER – 1 Introduction What is Operations Management?

Operations Management (OM) deals with the design and management of products, process, services and supply chains. It considers the acquisition, development and utilization of resources that firm nee to deliver the goods and services their clients want. The purvey of OM ranges from strategic to tactical of manufacturing plants, deciding the structure of services or telecommunications networks and designing technology supply chains. Tactical issues include plant layout and structure, projects management methods and equipment selection and replacement.

Operational issues include production scheduling and control, inventory management, quality control and inspection, traffic and material handling

and equipment maintenance policies. Every organisation has an operations function whether or not it is called ' operations'. The goal or purpose of most organisations involves the production of goods and or services. To do this, they have to procure resources, convert them into outputs and distribute them to their intended users. The term operations embraces all the activities required to create and deliver an organisation's goods or services to its customers or clients.

Within large and complex organisations is usually a major functional area, with people specifically designated to take responsibility for managing all or part of the organisation's operations processes. It is an important functional area because it plays a crucial role in determining how well an organisation satisfies its customers. In the case of private-sector companies, the mission of the operations function is usually expressed in terms of profits, growth and competitiveness, in public and voluntary organisation, it is often expressed in terms of providing value for money.

Operation Management is concerned with the design, management and improvement of the system that creates the organisation's goods or services. The majority of most organisation's financial and human resources are invested in the activities involved in making products or delivering services. Operation management is therefore critical to organisational success. 3. 1 The Transformation Model The discussion above has highlighted the role of operations in creating and delivering the goods and services produced by an organisation for its customer. This section introduces the transformation model for analysing operations.

This is shown in Figure 1, which represents the three components of operations: inputs, transformation processes and outputs. Operations management involves the systematic directions and control of the processes that transform resources into finished goods or services for customers or clients. This basic transformation model applies equally in manufacturing and service organisations and in both the private and not for profit sectors. Fig 1. 1 3. 2 INPUTS Some inputs are used up in the process of creating goods or services; others plays a part in the creation process but are not used.

To distinguish between these input resources are usually classified as: * Transformed resources-those that are transformed in some way by the operations to produce the goods or services that are its outputs. * Transforming resources-those that are used to perform the transformations process. Inputs includes different types of both transformed and transformation process. Three types of resources that may be transformed in operations are: * Materials-the physical inputs to the process. * Information that is being processed or used in the process. Customers-the people who are transformed in some way. Many people think of operations as being mainly about the transformation of materials or components into finished products, as when limestone and sand are transformed into glass or an automobile is assembled from its various parts. But all organisations that produce goods or services transform resources: many are concerned mainly with the transformation of information (for example, consultancy firms or accountants) or the transformation of customers (for example, hairdressing or hospitals).

Galloway (1998) defines operations as all the activities concerned with the transformation of materials, information or customers. The two types of transforming resource are: * Staff-the people involved directly in the transformation process or supporting it * Facilities-land, buildings, machines and equipment. The staff involves in the transformation process may includes both people who are directly employed by the organisation and those contracted to supply services to it. They are sometimes described as 'labour'.

The facilities of an organisation-including buildings, machinery and equipment-are sometimes referred to as ' capital'. Organisations vary greatly in the mix of labour and capital that make up their inputs. Highly automated operations depend largely on capital; others rely mainly on labour. 3. 3 OUTPUTS The principal outputs of a doctor's surgery are cured patients; the outputs of a nuclear reprocessing plant include reprocessed fuel and nuclear waste. Many transformation processes produce both goods and services.

For example, a restaurant provides a service, but also produces goods such as foods and drinks. Transformation processes may result in some undesirable outputs (such as nuclear waste in the example above) as well as the goods and services they are designed to deliver. An important aspect of operations management in some organisations is minimising the environmental impact of waste over the entire life cycle of their products, up to the point of final disposal. Protecting the health and safety of employees and of the local community is thus also responsibility of operations management .

In addition, the operations function may be responsible for ethical behaviour in relation to the social impact of transformation processes, both locally and globally. 3. 4 TRANSFORMATION PROCESS A transformation process is an activity or group of activities that takes one or more inputs, transforms and adds value to them and provides output for customers and clients. Where the inputs are raw materials, it is relatively easy to identify the transformation involved, as when milk is transformed into cheese and butter. Where the inputs are information or people, the nature of the transformation may be less obvious.

For example, a hospital ill patient (the inputs) into healthy patient (the output). Transformation processes includes: * Changes in the physical characteristics of materials or customers * Changes in the location of materials, information or customers * Changes in the ownership of materials or information * Storage or accommodation of materials, information or customers * Changes in the purpose or form of information * Changes in the physiological or psychological state of customers Often all three types of input- materials, information and customer- are transformed by the same organisation.

For example, withdrawing money from a bank account involves information about the customer's account, materials such as cheques and currency and the customer. Treating a patient in hospital involves not only the customer's state of health, but also any materials used in treatment and information about the patient. One useful way of categorising different types of transformation is into: * Manufacture-the physical creation of products(for example cars) * Transport-the movement of materials or customers(for

example a taxi services) * Supply-change in ownership of goods (for example in retailing). Service-the treatment of customers or the storage of materials for example hospital wards , warehouses). 3. 5 The Telecom Industry in India The Indian telecommunication industry is the world's fastest growing industry with 826. 93 million mobile phone subscribers as of April 2011. It is also the second largest telecommunication network in the world in terms of number of wireless connections after China. As the fastest growing telecommunications industry in the world, it is projected that India will have 1. 159 billion mobile subscribers by 2013.

Furthermore, projections by several leading global consultancies indicate that the total number of subscribers in India will exceed the total subscriber count in the China by 2013. The industry is expected to reach a size of 344, 921 crore (US$76. 92 billion) by 2012 at a growth rate of over 26 per cent, and generate employment opportunities for about 10 million people during the same period. According to analysts, the sector would create direct employment for 2. 8 million people and for 7 million indirectly.

In 2008-09 the overall telecom equipments revenue in India stood at 136, 833 crore (US$30. 51 billion) during the fiscal, as against 115, 382 crore (US$25. 73 billion) a year before. A large population, low telephony penetration levels, and a rise in consumer spending power have helped make India the fastest-growing telecom market in the world. The market's first operator was the state-owned Bharat Sanchar Nigam Limited (BSNL), created by corporatization of the Indian Telecommunication Service, a government unit formerly responsible for provision of telephony services.

Subsequently, after the telecommunication policies were revised to allow private operators, companies such as Bharti Airtel, Reliance Communications, Tata Teleservices, Idea Cellular, Aircel and Loop Mobile have entered the market (Bharti Airtel currently being the largest telecom company in India). In the fiscal year 2008-09, rural India outpaced urban India in mobile growth rate. The total number of telephones in the country stands at 861. 48 million, while the overall tele-density has increased to 72. 08% as of April 30th, 2011.

Mobile telephony experiences growths at rates such as 15. 34 million subscribers a month, which were added in April 2011. With a subscriber base of more than 811 million, the Mobile telecommunications system in India is the second largest in the world and it was thrown open to private players in the 1990s. The country is divided into multiple zones, called circles (roughly along state boundaries). Government and several private players run local and long distance telephone services. Competition has caused prices to drop and calls across India are one of the cheapest in the world.

The rates are supposed to go down further with new measures to be taken by the Information Ministry. In September 2004, the number of mobile phone connections crossed the number of fixed-line connections and presently dwarfs the wireline segment by a ratio of around 20: 1. The mobile subscriber base has grown by a factor of over a hundred and thirty, from 5 million subscribers in 2001 to over 826 million subscribers as of Apr 2011 (a period of 10 years). India primarily follows the GSM mobile system, in the 900 MHz band. Recent operators also perate in the 1800 MHz band. The dominant players are Airtel, Reliance Infocomm, Vodafone, Idea

cellular and BSNL/MTNL. There are many smaller players, with operations in only a few states. International roaming agreements exist between most operators and many foreign carriers. India is divided into 22 telecom circles. They are listed below: * Assam * Andhra Pradesh * Bihar * Delhi & NCR * Gujarat * Haryana * Himachal Pradesh * Jammu and Kashmir * Karnataka * Kerala * Kolkata * Madhya Pradesh * Maharashtra & Goa * Mumbai North East (Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, & Tripura) * Orissa * Punjab * Rajasthan * Tamil Nadu * Uttar Pradesh (East) * Uttar Pradesh (West) * West Bengal 3. 6 COMPANY PROFILE There is a difference between making money for oneself and creating wealth for others. This is the story of a business house that has created wealth for a nation. It is a story of struggle, anxiety, adventure and achievement. This is the story of our pioneers. Jamsetji Tata: The founder of the Tata group began with a textile mill in central India in the 1870s.

His powerful vision inspired the steel and power industries in India, set the foundation for technical education and helped the country leapfrog from backwardness to the ranks of industrialised nations. Sir Dorab Tata: Through his endeavours in setting up Tata steel and Tata power , this elder son of Jamsethji Tata was instrumental in transforming his father's grand vision into reality. It was also under his leadership that the Sir Dorabji Tata Trust, the premier charitable endowment of the Tata was created, propelling the Tata tradition of philanthropy.

JRD Tata: The late chairman of the Tata Group pioneered civil aviation on the subcontinent in 1932 by launching the airlines now known as Air India. That was the first of many path braking achievements that JRD, who guided the

destiny of the group for more than half a century, came to be remembered for. Naval Tata: Naval Tata's many contributions in the fields of business, sports administration and labour relation symbolised all that is best in the Tata spirit of giving back to society and the communities in which its enterprises grow. 3. 7 VALUES and PURPOSE

At the Tata group we are committed to improving the quality of life of the communities we serve. We do this by striving for leadership and global competitiveness in the business sectors in which we operate. Our practice of returning to society what we can earn evokes trust among consumers, employees, shareholders and the community. We are committed to protecting this heritage of leadership wit h trust through the manner in which we conduct our business. Tata has always been value-driven. These values continue to direct the growth and business of Tata companies.

The five core Tata values underpinning the way we do business are: * Integrity: We must conduct our business fairly with honestly and transparency. Everything we do must stand the test of public scrutiny. * Understanding: We must be caring, show respect, compassion and humanity for our colleagues and customer around the world and always work for the benefit of the communities we serve. * Excellence: We must constantly strive to achieve the highest possible standard in our day to day work and in the quality of the goods and services we provide. Unity: We must work cohesively with our colleagues across the group and with our customer and partners around the world, building strong relationships based on tolerance, understanding and mutual cooperation. * Responsibility: We must continue to be responsible, sensitive to the countries, communities and environments

in which we work always ensuring that what comes from the people goes back to the people many times over. 3. 8 TATA TELESERVICES LTD Tata Tele services Limited spearheads the Tata Group' s presents in the telecom sector. The Tata Group includes over 90 companies, over 395, 000 employees worldwide and more than 3. million share holders. Incorporated in 1996, Tata Teleservices is the pioneer of the CDMA 1x technology platform in India. It has embarked on growth path since the acquisition of Hughes Telecom(India)Ltd [renamed Tata Teleservices(Maharashtra)limited] by the Tata Group in 2002. It launched mobile Operations in January 2005 under the brand name Tata Indicom and today enjoys a pan –India presence through existing operations in all of India's 22 telecom circles. The company is also the market leader in the fixed wireless telephony market.

The Telecom Regulatory Authority of India through independent surveys has rated the company's network as the ' Least Congested' in India for six consecutive quarters. Tata Teleservices Limited has also become the first Indian private telecom operator to launch 3G services in India under the brand name Tata DOCOMO, with its recent launch in all the nine telecom Circles where it bagged the 3G LICENSE. In association with its partner NTT DOCOMO, the Company finds itself favorably positioned to leverage this first mover advantage. With 3G, Tata DOCOMO, stands to redefine the very face of telecoms in India.

Tokyo –based NTTDOCOMO is one of the world's leading mobile operators-in Japan, the company is the clear market leaders, used by nearly 55 per cent of the country's mobile phone users. Tata Teleservices Limited also has a significant presence in the GSM Space , through its joint venture with NTT

DOCOMO of Japan and offer differentiated products and services under the TATA DOCOMO brand name. Tata DOCOMO arises out of the Tata Group's strategic alliance with Japanese telecom major NTT DOCOMO in November 2008. Tata DOCOMO has received a pan-India licence to operate GSM telecom services-and has also been allotted spectrum in 18 telecom Circles.

The company has rolled out GSM services in all of these 18 telecom circles in the quick span of just over a year. Tata DOCOMO marks a significant milestone in the Indian telecom landscape and has already redefined the very face of telecoms in India, being the first to pioneer the per second tariff option –part of bits ' Pay for What You Use' pricing paradigm. Tokyo-based NTT DOCOMO is one of the world's leading mobile operators-in the Japanese market, the company is the clear market leader, used by over 50 per cent of the country's mobile phone users.

The Tata Teleservices Limited bouquet comprises four other brands as well-VIRGIN MOBILE Walky (which is the brand for fixed wireless phones), the PHOTON family (the company's brand that provides a variety of option s for wireless mobile broadband access and T24. TTSL recently entered into a strategic partnership agreement with Indian retail giant FUTURE GROUP to offer mobile telephony services under a new brand name-T24-on the GSM platform. The exciting new brand was unveiled in February and the company announced the commercial launch of GSM operations under the brand name T24 in June, starting with the city of Hyderabad.

It has now launched T24 GSM services in Kolkata, Bhubaneswar, Lucknow and Ahmedabad. Today, Tata Tele Services Ltd, along with Tata Teleservices

announced a unique reverse equity swap strategic agreement between its telecom tower subsidiary, Wireless TT Info-Services limited, and Quippo Telecom Infrastructure Limited-with the combined entity kicking off operations with 18, 000 towers, thereby becoming the largest independent entity in this space and with the highest tendency ratios in the industry. Today, the combined entity-which has been rechristened as VIOM Networks-has a portfolio of nearly 45, 000 towers.

TTSL's bouquet of telephony services includes mobile services, wireless desktop phones, public booth telephony, wire line services and enterprise solutions. Tata Teleservices believes that for accelerating growth and competitiveness in the rapidly developing economy, organizations must promote and expand job/income generation opportunities for all sections of society. Within this framework, Tata Teleservices commits to Affirmative Action for social equity for the disadvantaged section of the society (particularly Scheduled Castes and Scheduled Tribes) in the work place.

Tata Teleservices will encourage development of business entrepreneurship from members of the socially disadvantaged communities through their participation in the company's Distribution Channels and other business arenas on the basis of equal merit. Tata Teleservices will undertake to provide scholarship and help materially and through various other initiatives like voluntary coaching/mentoring of meritorious / deserving students across the country. Affirmative action initiates will conform to the corporate Sustainability objectives of Tata Teleservices and will aim at developing the disadvantaged section of the society.

Business Excellence Model Tata Business Excellence Model is a framework which helps companies to achieve excellence their business performance. This is the chosen model by the TATA group to help in building competitive organizations across TATA Group companies. TBEM is based on the MALCOM Balridge National Quality Model of the U. S. The Criteria have three important roles in strengthening competitiveness: * To help improve organizational performance practices, capabilities and results. * To facilitate communication and sharing of best practices information among all organizations within Tata Group. To help in guiding organizational planning and opportunities for learning. TBEM Criteria is designed to help organization use an integrated approach to organisational performance management that results in * Delivery of ever improving value to customer and stakeholders, contributing to organizational sustainability. * Improvement of overall organisational effectiveness and capabilities. * Organisational and personal learning. The Criteria are built on the following set of 11 Interrelated Core Values and Concepts: * Visionary Leadership. * Customer –driven Excellence. Organisational and Personal Learning. * Valuing employees and Partners. * Agility. * Focus on the future. * Management for Innovation. * Management by Fact. * Social Responsibility. * Focus on result and Creating Value. * Systems Perspective. The Core Values and Concepts are Embodied in seven categories, as follows: * Leadership * Strategic Planning. * Customer and Market Focus. * Measurement, Analysis and Knowledge Management * Work force Focus * Process Management * Business Results. The TBEM criteria are the operational details of the core values, applied to the different facet of a Business organization.

The 7 Criteria Categories are divides into 18 items and 32 Areas to Address. The TBEM framework has the following characteristics: * Focus on business results * Non-prescriptive and adaptable * Maintains System perspective * Support Goal based diagnosis TBEM in still a process centric approach in an organization as a means to achieve the chosen Business Goals. Tata Teleservices Limited as a part of the TATA Group has adopted the TATA Business Excellence model as an intricate part of its operation structure and uses it to grow from strength to strength, keeping Operational Excellence and Business results in focus. . 9 CORPORATE SUSTAINABILITY Working for the disadvantaged sections of the society is a way of life at the Tata Group. As Mr JRD Tata believed, " Society is an important stakeholder in the development of any organization". Social Responsibility has been central to the core value of the Tata Group for over a century now and Tata companies have not only been proactive on compliance with regulatory requirements but have also had a farsighted vision in ensuring sustainability of business process, restoration of bio diversity and conserving wildlife where possible.

Keeping in tune with the changing business, environmental and social scenarios the Tata Group has adopted the term' Corporate Sustainability' instead of Corporate Social Responsibility. Sustainable livelihood is the demands of all social initiative in the Group. The main objective behind the CS initiative of TTL is to use telecom to impact the life of underprivileged sections of society. The company endeavors to make a positive contribution to the community by supporting a wide range of socio-economic, educational and health initiatives. Keeping in ind the Tata Group guidelines and the objectives mentioned above we have identified and implemented many CS

initiative since 2006 end. Toward the end of 2008, with the then new TTL Corporate Sustainability team having come on boards, Tata Teleservices Limited began the process of joining the select few Tata group companies that, under the guidance of the Tata Council for Community Initiatives, had put together their, CSBIG Picture. Education and Environment were identified as the two primary pillars for CS for TTL, with all projects and activities stemming from there.

That having been said, it was also decided than rather than put a stop to all the good work that many of TTL's 22 circle offices were doing (but which were not aligned to the Big Pictures), the Cs team would let these carry on for the cause of continuity in the target communities, slowly bringing them under the pillars identified-the process of Big Pictures Alignment at TTL, thus, began. CHAPTER 2 LITERATURE REVIEW The Status of Business Process Improvement Methodologies in the Public Sector

What is Business Process Improvement Methodology in the Public Sector and, why is it being implemented? Business process improvement methodologies within the public sector include the application of Lean, Six Sigma and BPR together with Kaizen, TQM and Systems Thinking. A few organisations have attempted to implement Theory of Constraints but this is not widespread. Many of the approaches have their roots in the Toyota Production System and the ideas of Deming. Of these approaches Lean currently appears to the greatest uptake particularly in Healthcare. Some authors (e. . Proudlove et al. , 2008) have argued that Lean has had the most application because of its participative nature. In a review of the literature on Lean carried out on behalf on the Scottish Executive in 2006 the authors

concluded that " There is little doubt of the applicability of Lean to the public sector… many of the processes and services within the public sector can gain greater efficiency by considering and implementing aspects of Lean. However, there is still little evidence of the complete Lean philosophy being applied in the public sector" (Radnor et al. 2006). From the evidence presented in this review this opinion has not altered. Lean, and to a lesser degree Six Sigma, is still applicable and very few organisations have implemented the complete philosophy within the UK. It could be argued that organisations such as the Royal Bolton NHS Trust and HM Revenues and Customs (HMRC) are the closest of any public service organisation to date in implementing the complete Lean philosophy. Although as the HMRC evaluation concludes " HMRC is not a Lean organisation" (Radnor and Bucci, 2007).

What do Business Process Improvement Methodologies consist of and where are they being applied? Various applications of Lean, Six Sigma, BPR and Kaizen have been reported across a number of public services. Many authors recognised that business process improvement methodologies are based on established tools and techniques, and therefore could be argued to merely draw on " any good practice of process/operations improvement that allows reduction of waste, improvement of flow and better concept of customer and process view" (Radnor et al. , 2006).

It could then also be argued that the implementation of Lean, Six Sigma or BPR is not new, as basically their fundamental ideas lie in continuous improvement, elimination of waste, process flow and Systems Thinking developed throughout the organisation that has been evident in other forms

including Total Quality Management. CHAPTER – 3 Research Methodology || ||||||||||||| The Order to cash process is the main revenue generating process at Tata Teleservices Ltd. To put it into simple terms, it basically is the process of accepting an order from the client, validating it, entering it and executing it.

The process is shown below. Various terminologies used in the process are – 1. CRM – Customer Relationship Manager 2. CAF – Customer Application Form 3. OE – Order Entry 4. SLA – Service Level Agreements 5. COE – Central Order Entry 6. Circle Desk – Company service desk at different circles 7. DMS – Document Management System 8. ePOS – e Point of SaleThis process is related to the enterprise business, i. e the corporate customers of Tata Teleservices Ltd. Each circle has a sales team that approaches the client and gets the details filled up from them.

This is done on a physical form which states the company name, employee name, the type of connection needed along with the plan details. The sales team also collects the related documents such as Proof of Identity, Proof of Address, Company details etc. The sales team reports back to the circle manager and a minimal order entry is done of the details mentioned in the CAF. All the related documents are scanned along with the CAF and uploaded on the DMS. This is then forwarded to the Login Desk and Central Order Entry Desk. The Login desk does a validation of all the documents and the details that are provided on the CAF.

If any discrepancies are found, the team can reject the application form and send it back to the Circle team (Minimal OE team). Following are some of the

reasons for rejecting a form – 1. Complete documents not uploaded on the DMS 2. Specific documents like proof of address, proof of identity etc are not uploaded. 3. Scanning of the document is not clear and the details are not visible. 4. Plan specific details are not provided. 5. Installation address is not provided. If the CAF is rejected for any of the reasons, then the CAF is sent back to the circle team to make the necessary changes.

If the CAF is accepted, the team at the Central Order Entry Desk proceeds to do the Order Entry. Tata Teleservices Ltd. Uses a system called ePOS which stands for Electronic Point Of Sale which helps them track all the orders. Once the CAF is approved, the data entry team inputs the details on ePOS relating to that CAF. This process is succeeded by a step called Pre Audit. This is basically done to check the data entry in the Order Entry stage. If all the data has been entered right, the process moves to the receipt cutting stage, which is validating the billing of the client. Once it has reached this phase, the nly thing left is the activation and installation. Fig 3. 1About the Research: Tata Teleservices Ltd. enterprise business department has been facing a lot of issues in its order to cash process after it has been centralized and shifted to Noida from Hyderabad. These issues were regarding the huge increase in number of escalations in its order to cash process; escalation here means that because of the delays in the order processing the customer escalates the issue. Since this process at Noida is basically concerned only with corporate customers of Tata Teleservices Ltd, escalations cannot be taken lightly.

Orders here are relating to the application form, which a customer fills up in order to use or get any of the services offered at TTSL. Services offered to

corporate customers at TTSL include: A| Audio Conferencing| | B| Centrex| | C| C Mobility| | D| Fixed HSIA| High Speed Internet Access| E| GSM Mobile| DOCOMO| F| ISDN BRI| | G| ISDN PRI| | H| Level DID| | I| V-Data| Photon +| J| Walky10| Wireless Landline| K| Wireless| | L| Wire line| | M| GSM Dongle| GSM Dongle for accessing internet| N| Lease Line| | O| Flexi-Toll| | Escalations are caused by delays in processing the orders.

I found out that delays are caused either because the order's get rejected or there is a delay in processing the order. Thus the research was divided into two parts as to: 1. What are the reasons for rejections, and from where are the maximum numbers of rejections coming from? 2. What are the reasons for delay in the processing of order? For the first part of the research I used the data provided by the MIS team that prepares the reports, I used these reports for analysis of the rejection reasons. For the second part I drafted out a questionnaire that was filled by the data entry team in order to find ut that as to what are the reasons according to them that the processing of the orders get delayed. For the analysis for the delays in the process, I prepared a questionnaire that needed to be filled up by the data entry team. Since the population was only the data entry team, which was a team of 54 people, I got the questionnaires filled up by all of them. Given below is the questionnaire. QuestionnaireThe following details will be used only for research purposes. Name: Age: Qualification: Job responsibility: 1. Which sector do you handle? a. NBA b. Non NBA c. GSM d. Lease Line e.

Others 2. What is the average number of CAFs you handle in a day? a. 5-10 b. 11-15 c. 16-20 d. 21 and above 3. What is the average time taken by you to complete login check and Order entry of a CAF? a. 10 – 20 mins b. 20 – 30

mins c. 30 – 40 mins d. 40 mins and above 4. How long have you been part of the login and order entry team? a. 0 – 2 months b. 2 – 4 months c. 4 – 6 months d. 6 months and above 5. Do you feel that your peers are helpful and assist you when required? a. Yes b. No 6. Do you feel that your team leader is motivating enough? a.

Yes b. No 7. According to you, rate the following reasons from(1 to 7) that cause delay in accepting the CAF – Sno. | Particulars| 1| 2| 3| 4| 5| A| Circle team not responding to rejected CAFs| | | | | | B| Scanning is not clear of the documents| | | | | | C| Lack of knowledge regarding the product| | | | | | D| Connectivity with ePOS / System problems| | | | | | E| Complicated process| | | | | | F| Documents not Uploaded in DMS| | | | | | G| Improper assigning of CAFs to the team| | | | | | H| Assignment of varied product CAFs| | | | | | I| Lack of team support| | | | | |

J| Others (Pls Specify) _____| | | | | | 8. Rate the products in order of difficulty in regard to data entry – Sno. | Particulars| Rank| A| Audio Conferencing| | B| Centrex| | C| C Mobility| | D| Fixed HSIA| | E| GSM Mobile| | F| ISDN BRI| | G| ISDN PRI| | H| Level DID| | I| V-Data| | J| Walky10| | K| Wireless| | L| Wireline| | M| GSM Dongle| | N| Lease Line| | | | | | CHAPTER – 4 Analysis Analysis for the rejections of the CAF during the Login Check Process Using the secondary data provided by the MIS team, I first created standard reasons for rejection.

This needed to be done, as the data entry team was using their own language to write down the rejection reasons. This was making it very tough to track down the exact reasons for the rejections and to know exactly why

the CAFs were getting rejected. Following are the standard rejection reasons created by me – 1. Add On Account Issue| 2. Address Error Issue| 3. Bill Plan Error/Not Reflecting| 4. CAF Issue| 5. Complete Docs not provided/not matching| 6. Del No. Error| 7. Documents Not Uploaded in DMS| 8. Minimal OE Error| 9. Others (Pls Specify)| 10. POA missing/unclear/not matching| 1. POI missing/unclear/not matching| 12. Scanning not Clear| 13. SOID/TARID/RID/ESNno. /CUG Issue| 14. Switch Details Error| Given below is the monthly data analysis based on the standard rejection reasons created by me. I took the data for 3 months – March, April and May. Fig. 4. 1 The above graph shows that the highest rejection reason for the month of March was due to documents not being uploaded on the DMS by the circle team. Fig 4. 2 The above graph shows that for the month of April, almost 30% of the rejections came due to the documents not being uploaded by the circle team.

This causes the login desk to reject the application form. The second highest reason for rejection is the entry done by the circle team. The team has not entered some data correctly in the CAF. Given below is the data for the month of May – Fig. 4. 3 For the month of May, we can again see, the highest reason for rejection of CAFs is again due to the circle team not uploading the documents on the DMS. In comparison from the earlier month, we can see a reduction in the rejections due to Minimal OE error (entry made by the circle team). After looking at all the 3 graphs, we can see a trend.

Although majority of the rejections is due to documents not being uploaded on the DMS, we see that this percentage has been reducing over the last 3 months. Based on the Telecom circles in India, the following analysis was

done Fig. 4. 4 The above graph shows the number of accepted and rejected CAFs based on circles for the month of March. Fig. 4. 5 The above graph shows, that West Bengal has the highest rate of rejections in March. Fig. 4. 6 Comparing Fig. 5. 4, 5. 5 and 5. 6 we can say that there were many cases in West Bengal circle, where the documents were not uploaded, hence causing a rejection in the CAF.

Taking the month of April – Fig. 4. 7 The above graph shows the number of accepted and rejected cases circle wise for the month of April. Fig. 4. 8 The above pie chart shows the circle wise rejections for the month of April. Fig 4. 9 From the above three figures, we can see that Karnataka had the majority of rejections with the main reason being documents not being uploaded on the DMS. There is a dip in the number of rejections from March, but still a big enough number. For the month of May – Fig 4. 10 The above graph shows that Karnataka again had a majority of rejection of CAFs in the month of May.

Fig. 4. 11 From the above two figures we can see again that Documents not being uploaded on the DMS is one of the major reasons for the rejections. A number of such cases seem to be coming from Karnataka. Tata Teleservices has a number of Products in its arsenal. Some of them are – A| Audio Conferencing| B| Centrex| C| C Mobility| D| Fixed HSIA| E| GSM Mobile| F| ISDN BRI| G| ISDN PRI| H| Level DID| I| V-Data| J| Walky10| K| Wireless| L| Wireline| M| GSM Dongle| N| Lease Line| O| Flexi-Toll| Based on the above products, I did the following analysis month wise again – Fig. 4. 12 Fig 4. 13

Looking at the above 2 figures, we can see VDATA has the maximum number of rejections in the month of March and the major reasons are again

Documents not being uploaded on the DMS. Fig 4. 14 Fig 4. 15 For the month of April, we again see that VDATA has the maximum number of rejections. This month, the main reasons for rejections are spaced between documents not being uploaded and an order entry issue by the circle team. Fig 4. 16 Fig 4. 17 The month of May shows us similar results as the previous months. This tells us that the circle team needs to be more competent in uploading the documents on the DMS before forwarding it to the Login Desk.

The next analysis I did is to show the overall Process Capability and Process Stability, month wise. The first set of charts are based on the SLA set by Tata Teleservices Ltd. for the login check, which is set at 2 hours. I created u-charts for this as I was calculating the number of defects in the data. An order out of SLA is a defect. March – Fig. 4. 18 April – Fig 4. 19 May – Fig 4. 20 From the above figures we can see that the process is not stable at all. There are many points that lie out of the limits. Although, we can see that the process does seem to be getting under control.

Process stability based on Rejections – I created p charts for this analysis as I was calculating the defectives. From all the orders, the accepted ones were fine and the rejected ones were the defectives. March – Fig 4. 21 April – Fig 4. 22 May – Fig 4. 23 For the stability based on rejections, we can again see a trend of the process gaining stability over time. March has a number of points lying outside the limits that is lesser in April and May. But the process is still not very stable. For the process to be stable, every point must lie within the limits. The next analysis is based on the process capability.

This is also done month wise. March – Fig 4. 24 April – Fig 4. 25 For the month of May, the process changed at Tata Teleservices Ltd. Instead of having a standard SLA, the SLAs were based on different market segments. For eg – For Bulk products (orders over 20) – the SLA was kept at 2 hours. For GSM products – the SLA was kept at 2 hours. For Bulk 2 products (order over 50) – the SLA was kept at 4 hours. Here is the capability for a few of the segments. Fig 4. 26 Fig 4. 27 Fig 4. 28 Fig 4. 29 From all above graphs, we can see that the process is not capable. Majority of the orders are going out of SLA.

This is being caused by some delays in the process. This will be discussed further with the analysis of the process delays. The next analysis is based on the Service Level Agreements (SLA). An order can either be in SLA or out of SLA. Tata Teleservices Ltd has set the SLA for the Login check process as 2 hrs. Based on this an analysis on the products as well as the circles were done. Following is the month wise circle details for 3 months – March, April and May March – Fig 4. 30 April – Fig 4. 31 May – Fig 4. 32 From the 3 graphs we can see, that New Delhi circle has majority of the applications that are out of SLA.

Starting from March with 61% out of SLA, to April with 80% out of SLA and May with 73% out of SLA. These orders are accepted but get delayed while processing. The reasons for this delay are discussed further. To analyze the delays in the process, I created a questionnaire that needed to be filled up by the data entry team. Following is the analysis. I started by doing a factor analysis of the various factors that the data entry team thought caused delays in the process. Following were the factors on the questionnaire –

According to you, rate the following reasons from(1 to 7) that cause delay in accepting the CAF – Sno. Particulars| 1| 2| 3| 4| 5| A| Circle team not responding to rejected CAFs| | | | | | B| Scanning is not clear of the documents| | | | | | C| Lack of knowledge regarding the product| | | | | | D| Connectivity with ePOS / System problems| | | | | | E| Complicated process| | | | | | F| Documents not Uploaded in DMS| | | | | | G| Improper assigning of CAFs to the team| | | | | | H| Assignment of varied product CAFs| | | | | | I| Lack of team support| | | | | | J| Others (Pls Specify) _____| | | | | | A factor analysis showed the below results – Fig 4. 33

This scree plot shows that 3 factors can be contributed to the delays in the process. Fig 4. 34 The rotated matrix gives us the 3 factors – a. Delays due to assignment of CAFs – The team is not able to get CAFs assigned in clear and proper way. This process seems to be unstructured and causes delays in the system. b. Team members not cooperating – Whether it's the circle team or the peer members of the data entry team, coordination is missing. The circle team takes too long to respond back to the orders rejected by the Login Desk. If any team member has a doubt regarding a particular problem, his peers are unwilling to help him. . System issues – The connectivity to the IT software ePOS has issues. Constant disconnects cause delays. Sometimes the scanning of the documents by the circle team is not clear and the login desk is unable to read the details on the CAF. This causes the Login desk to reject the order and send it back to the circle team in turn causing a delay. I did a cross tabulation of the Avg time taken to complete a CAF with the experience as part of the Login Team. Fig 4. 35 The data shows that team

members who are new to the team (0-2 months) spend about an average of 20 – 30 mins on a single CAF.

As the team gets more and more experienced they tend to spend lesser time in processing a CAF (Above 6 months experience members spend about 10 mins per CAF. Fig 4. 36 The above figure shows a cross tabulation between the experiences of the Login team with the number of CAFs handled by each member of the team. The analysis shows that the less experienced members of the team are able to handle only 5 – 10 CAFs in a day. As the team gets more experienced, they are able to handle 21 or more CAFs in a day. CHAPTER – 5 Conclusions & Recommendations Looking at this analysis and the process at Tata Teleservices Ltd. he recommendations have to be divided into two parts, one for reducing the rejections in the number of orders and second for reducing the delays in the process. 5. 1 Reducing Rejections 1. As per the analysis, one of the main reasons for the rejection was the document not being uploaded on the DMS. Every circle must setup a control system of uploading all the documents before actually forwarding the mail to the data entry team. They should have one dedicated team member to check if the documents are uploaded for each CAF before it is forwarded to the login desk. 2.

To overcome the process stability and process capability, Tata Teleservices Ltd. has an option to increase its SLA since we see that most of the orders seem to be going out of SLA. 5. 2 Reducing Delays in the process 1. As per the factor analysis we see that there are 3 main factors that seem to cause a delay in the order to cash process. The first factor is on the assignment of CAFs. The team must have a structured process of assigning the CAFs.

Currently this system is missing and in some cases, the same order is assigned to multiple team members by mistake and that slows down the process.

The team lead must create a structured system of assigning the orders to the data entry team. 2. The second factor is the non-cooperation of team members. Once an order gets rejected and is sent back to the circle team, the circle team is not fast enough to respond back and hence causes a delay. The circle team must have a resource monitoring the CAFs and making sure they provide the required information back to the login desk so that the process can go on. 3. The third factor is the system issues. There are connectivity issues the data entry team has with the IT system ePOS. Constant disconnects cause delays in the system.

This fix is dependent on the IT team. They need to be able to provide a disconnect free connection to the login desk. Also the login desk has an issue with the scanning of the documents. The circle team scans the documents and uploads it on the DMS for the login desk. The circle team must make sure that any scan done must be clear and must redo the scan if it does not look clear. CHAPTER – 6 References 1. " India is one of the world's fastest growing and biggest mobile phone markets" (stm). BBC News. 2010-04-07. Retrieved 7 April 2010. 2. " Indian telecommunications industry is one of the fastest growing in the world" (doc).

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