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Baseline Parameters for IT Transformation Strategy in Telco's

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Abstract;
During IT Transformation, the base lining technique is used while managing solution scope and requirements, and is defined as part of this specific task in the Business Analyst Body of Knowledge. A baseline is a view of the reviewed and agreed-upon requirements at a specific point in time. A baseline is like a snapshot of the status and state of a project deliverable, after having a baseline state progress to those requirements can be recorded and tracked. According to Information Technology Infrastructure Library (ITILv2), Baselining is a Process by which the quality and cost effectiveness of a service is assessed, usually in advance to the service. Baselining usually includes a comparison of the service before and after the Change or analysis of trend information. The term Benchmarking is normally used if the comparison is made against other functions. According to Project Management Professionals, Baseline is the value or condition against which all future measurements will be compared. A baseline is a fixed schedule, which represents the standard that is used to measure the performance of the project. A baseline provides a starting point from which a comparison can be made. It is conducted prior to the beginning of the intervention and is the point of comparison for monitoring and evaluation data. The bulk of baseline studies focus on the intended outcomes of a Program. They can also take into account secondary outcomes and assumptions, though these are not the primary emphasis.

Keywords: *Operational Support System (OSS), Business Support System (BSS), Lead to Cash (L2C), Trouble to Repair (T2R), Data Integrity, Customer Satisfaction (CSAT),Project Management Professionals (PMP) Service Level Agreements (SLA's), ITIL (Information Technology Infrastructure Library), Process Methods Framework (PMF), Commercial of the Shelf (COTs), Out Of The Box (OOTB)*

1. Introduction

Telecom Transformation is a term that describes the evolution of the telecommunications industry from a capital-intensive, technology-focused model to a user-centric service-delivery model. In order to maintain the market, the service providers are introducing new attractive services to the end-users, which require modifications to their current infrastructure (legacy infrastructure) into what is typically termed as a Next-Generation infrastructure. The process of converting or modifying the network elements, end-user services and business-processes of the service provider to achieve the competitive advantages offered by the newer technologies is known as Transformation.

1.1. Transformation Sub-processes

The telecom transformation process is a combination of the following three sub-processes.

- Telecom Network Transformation: The Network Transformation sub-process refers to the activities adding new elements in the Core Network, Backbone network and Access network.
- End-user Services Transformation: This sub-process is aimed at ensuring that the services offered in the legacy network and availed by the end-users continue to be available during the transition phase and up to a planned future. This sub-process is also concerned with introduction of new end-user services into the next-generation network.
- *IT Systems Transformation:* IT systems transformation refers to the sub-process that involved in aligning the Operations Support System and Business Support System infrastructure with the transformed network. The typical sets of activities that characterize this sub-process like Streamlining processes, Rationalizing existing applications to merge, consolidate or retire systems and Designing and implementing end-to-end solution. The IT Transformation can be broadly divided into four phases i.e. Define, Benefits realization, Business transformation and System rationalization (as shown in Fig. 1).

- **Define:** This phase forms the foundation for entire transformation; it would define the transformation strategy, Architecture design, Transformation Roadmap and set the Customer Experience targets.
- **Benefits Realization:** This phase would ensure the desired benefits are accomplished as a result of transformation. Monitoring and tracking mechanism will be defined so that these parameters can be measured and compared against baseline. There will be process to set up monitor user adoption. Operator will continue to monitor reduction in Total Cost of Ownership (TCO) and other business benefits.
- **Business transformation:** The IT Transformation is a business process led transformation, most of design activities carried out in this phase would be around designing high level process, defining change management strategy, roll out strategy etc.
- **System rationalization:** This phase would further be divided into design and "Build & Test".
  The design phase would cover e2e design, solution architecture, system level design, Proof of Concepts (POC), design to cover in-life service management during transformation. The Build & Test phase would build conference room pilots based on generic process, build functionality on target stack proposed by solution architecture and address deployment, rollout and migration. The activities in various phases (horizontal layers) are logically segregated into vertical logical groups namely blueprinting, To-Be, Migration and change.
- **Blueprinting:** This vertical would deal with generic requirements by defining blueprint processes that are based on ITIL, PMF and out of the box functionality offered by COTs. These generic processes will form the basis for building Conference room Pilot which is scaled down version of the functionality implemented for a product using COTs features.
- **To-Be:** The activities in this vertical would cover activities like defining to be processes, e2e design, system design, implementation and testing.
- **Migration:** This vertical deals with the migration activities like defining change management strategy, migration & rollout strategy, data quality analysis, designing migration solution and its implementation.
- **Change:** Change management activities broadly cover defining change management strategy, data cleansing activities, in-life service management during actual transformation, deployment trials & migrate.

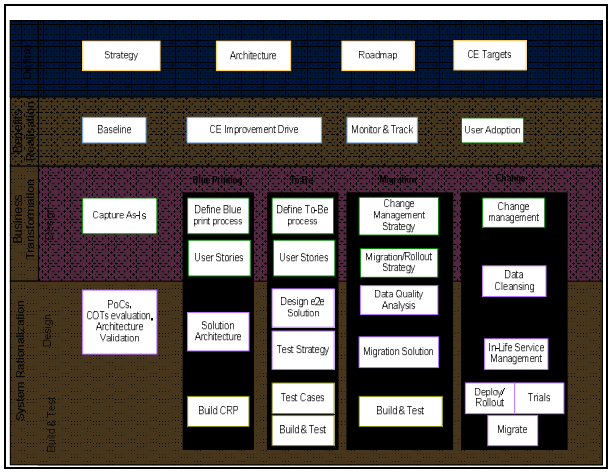

Figure 1: Transformation Activities

1.2. Significance of Baseline Parameters for OSS and BSS

Leading global operators have tested the concept that Base line parameters are excellent first step in the journey to Transformation of the OSS/BSS infrastructure (and of the business processes and policies they support). They are beginning to achieve the benefits anticipated from breaking up monolithic and inflexible OSS/BSS environments by inserting a centralized stack and found that it delivers some important benefits, like:

- **Faster time to market for new services:** The majority of new services introduced today are billing-based. New bundles that attract new discounts, or new usage-based or content-based services that don't need new hardware rolled out into the network can be defined, tested, and launched in days, not months, because Product Managers can access the Product Catalog and see exactly which products and product components exist, which rating Parameters exist, which OSS/BSS applications are involved and they can then put together the best possible package available.
- **Lower cost of ownership:** Every group involved in delivering service to customers can pull the information they need from the Baseline Parameters. They don't need to maintain their own analysis and enhancement process; they can simply get what they need from the common centralized repository.
- **Improved customer satisfaction:** When the Baseline Parameters are linked to the Customer Self Service environment, customers can put together packages of service components to meet their needs and can choose only from valid components. That means that when they finish building their product and hit "Order," their order is accepted, because only acceptable product models are presented to them.

- **Accelerated Transformation:** With the Baseline Parameters in place, Operators can decide which systems to integrate with the Catalog based on pragmatic business drivers, since the Catalog can deliver immediate benefits even when standing alone. Logical projects to align with the Product Catalog implementation are changes to the CRM, especially customer self-serve functionality, as well as Network Inventory, Rating, Settlement, and Invoicing.
- **When coupled with a Solution Oriented Architecture (SOA) orientation:** The acceleration can be achieved even more quickly. It is now possible to choose one of several ways forward that each can lead to success. Getting a secure hold on your current products and services, rationalizing the Service Definition process while you organize your thousands of product components and pricing combinations appears to be a solid place to start, yielding some highly-visible, quick wins. Quick wins are always a great way to defuse that other alligator lurking in the swamp that kills projects: resistance to change. Involving people in bringing themselves new tools that actually help them do their jobs will set the stage for a much more successful Transformation program.

2. Objectives of the Study

- To identify the Business Baseline parameters for successful Operational and Business support system's (OSS/BSS) Transformation.
- To understand the Technical parameters which are being used as baseline for IT Transformation
- To capture process parameters considered as baseline parameter for IT Transformation.

3. Methodology

- Systematic Random Sampling method is used for data collection. A questionnaire was prepared and data was collected fromFull Time Employees (FTE's) working on Service Fulfillment, Assurance & Billing and Product Management processes across below mentioned 5 Organizations.
  - Reliance Communication Limited
  - Bharti Airtel Limited
  - Bharat Sanchar Nigam Limited
  - Mahanagar Telephone Nigam Limited
  - Tata Teleservices (Maharashtra) Limited
- These operators are being chosen based of customer base, operating circles and Business growth with the Enterprise Product range
- 323 FTE (Full Time Employees) of fixed line operators operating from National Headquarters, Network Operations Center and Circle Offices have been interviewed; these respondents covered the complete Operational Support processes and Business Support processes including Customer relationship management, billing systems etc.
- Primary Data collected via :
  - Face-2-Face discussions
  - Email communication
  - Online Surveys and response
  - Audio Conferencing with the different level groups.
- Secondary Data collected through Webinars, online reports and websites.
- Statistical Analysis using Chi square and ANOVA are being used.

4. Analysis and Findings

4.1. Business Baseline parameters

Business teams are engaged in validating the "To-Be" processes and providing details on specific business issues and requirements. Solutions to adhere the 70:20:10 principles including maximize re-use of existing solutions and deploying COTS out of the box where general market availability and lead-times for deployment are not prohibitive. Solutions to ensure minimal impact on business as usual operations Organizational impact to be limited and rigorously managed.

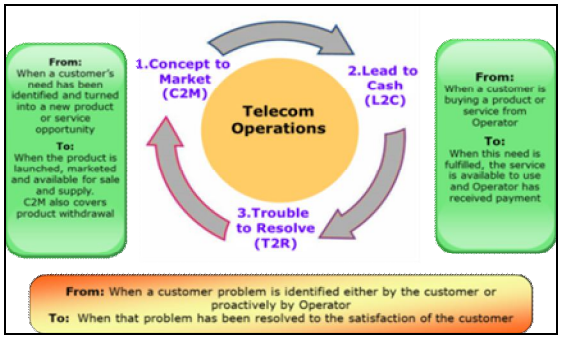

Figure 2: Process Framework

Fig.2 represents the complete Telecom Operator's process journeys like Lead to Cash – this journey starts when a customer is buying a product or service from Operator to When this need is fulfilled, the service is available to use and Operator has received payment. Trouble to Repair i:ewhen a customer problem is identified either by the customer or proactively by Operator to the point where that problem has been resolved to the satisfaction of the customer. Concept to Market i:e When a customer's need has been identified and turned into a new product or service opportunity to the point where the product is launched, marketed and available for sale and supply. C2M also covers product withdrawal

4.2. Lead to Cash(L2C) Journey

L2C is the experience whereby a customer buys an existing service from Telecom operator. It starts with a sales opportunity and the communication between the customer and Telecom operator to understand and agree the customer's needs. It completes when the need is fulfilled, the service is available to use and Telecom operator has received payment.

Sub Process	Account Management & Sales	Service Delivery	Billing	Average
Average No of FTE's	13	13	7	11.00
Average No of OSS Systems	6	7	6	6.33
Average No of BSS systems	9	15	7	10.33
Average Cycle Time (in Days)	6.37	10.76	6.33	7.82
Average CSAT	2.58	2.74	2.62	2.65

Table 1: Lead to Cash (L2C)

In most of the Business functions like Account Management & Sales, Service Delivery and Billing there are few dependent parameters like Average No of FTE's, Average No of OSS Systems, Average No of BSS systems, Average Cycle Time (in Days) and Average CSAT. These factors triggers to the Business case, Business case proposes the level and priority of the IT Transformation in the lines of Business. IT has been observed that Average FTE's and number of Operational Support systems deployed in Account Management & Sales are almost in proportional with Service Delivery. Average number of BSS systems and Average Cycle time are very high in Service Delivery function which needs rationalization and optimization respectively. Moreover Customer Satisfaction score is marginally less than Satisfactory Level across all the functions. Billing function is close to Average in all the parameters, therefore it is concluded that billing function is on least priority w.r.t other Functions for IT Transformation in Lead to Cash scenario.

4.3. Trouble to Repair Journey

It starts when a customer problem is identified either by the customer or proactively by Telecomand ends when that problem has been resolved to the customer's satisfaction.

Sub Process	Service Assurance	Revenue Assurance	Customer Retention & Billing	Average
Average No of FTE's	21	17	16	18
Average No of OSS Systems	7	8	6	7.00
Average No of BSS systems	15	15	10	13.33
Average Cycle Time (in Days)	12.30	7.61	8.25	9.39
Average CSAT	2.71	2.74	2.94	2.80

Table 2: Trouble to Repair

In most of the Operational and Business supporting functions like Service Assurance, Revenue Assurance, Customer Retention & Billing, there are few dependent parameters like Average No of FTE's, Average No of OSS Systems, Average No of BSS systems,

Average Cycle Time (in Days) and Average CSAT. These factors baseline the Business case and proposes the level and priority of the IT Transformation. IT is observed that Average No of FTE's are more in Service Assurance function followed by Revenue assurance and retention and Billing. Average no of OSS systems are uniform in all the functions however Business Support systems are more in Service assurance and Revenue assurance inviting system rationalization. Average Cycle Time is high in Service assurance however moderate in other functions. Moreover Customer Satisfaction score is marginally less than Satisfactory Level across all the functions

4.4. Concept to Market Journey

The Concept to Market process starts when a customer need has been identified. This need is turned into a new product or service opportunity, and the C2M process ends when the new product or service is launched, marketed and available for sale and supply via the Lead to Cash (L2C) journey. Thereafter proactive service management and support is supplied via the Trouble to Resolve (T2R) journey. C2M also covers product withdrawal.

Sub Process	Product Marketing	New Launches	Marketing Strategies	Average
Average No of FTE's	7	5	4	5.33
Average No of OSS Systems	6	5	5	5.33
Average No of BSS systems	6	5	6	5.67
Average Cycle Time (in Days)	5.46	4.70	3.17	4.44
Average CSAT	2.81	2.74	2.78	2.77

Table 3: Concept to Market

In most of the Sales and Marketing functions like Product Marketing, New Launches, Marketing Strategies there are few dependent parameters like Average No of FTE's, Average No of OSS Systems, Average No of BSS systems, Average Cycle Time (in Days) and Average CSAT. These factors helps in taking the decision for level of IT Transformation required in different sub functions. It has been observed that Average No of FTE's are on higher side as compared with New Launches and Marketing strategies teams. Numbers of OSS and BSS systems are uniform across functions however Cycle time is on higher side for Product Marketing. Same as in another Process groups Customer Satisfaction score is marginally less than Satisfactory Level across all the functions.

4.5. Right First Time(RFT)compliance in Lead to Cash and Trouble to Repair processes.

Right First Time (RFT) is the fulfilling or exceeding the customer's expectations perfectly as perceived by the customer. Lead to Cash RFT measurement across Account Management, Service Delivery and Billing will create a baseline for IT Transformation. Level of IT Transformation can be concluded as the Inverse function of Average RFT compliant in that Sub function. It is observed that Right First Time is low in most of the sub process functions of Lead to Cash journey, however Billing function is leading with 30.66% as Right First Time followed by Account Management with 29.25% and Service Delivery with 27.61%. Trouble to Repair RFT measurement across Service Assurance, Revenue Assurance and Billing will create a baseline for IT Transformation. Level of IT Transformation can be concluded as the Inverse function of Average RFT compliant in that Sub function. It is observed that Right First Time is low in most of the sub process functions of Trouble to Repair journey, however Revenue Assurance is leading with 31.14% as Right First Time followed by Service Assurance with 31.00% and Billing with 24.70%.

4.6. Technical Baseline parameters

- The target technical architecture to be based on a combination of best of breed/reusable components and Out Of The Box (OOTB) Commercial Off The Shelf (COTS) systems solutions – the early deployments will adopt a reuse strategy to leverage existing technical assets and reduce risk of non-delivery for leading-edge COTS products
- Customization of COTS to be kept to a minimum, with users migrating towards best practice OOTB processes except where there are exceptional requirements that cannot be accommodated by the COTS solution (e.g. regulatory requirement), the Program will look to externalize the function through a manual or automated workaround that can incorporated at a later stage if the COTS vendor modifies/enhances their product as part of a new release or version of the software
- The target COTS/technical stack that support C2M, L2C, T2R and enterprise support processes to be aligned to the Independent software Provider's (ISP's) strategy, where there is a fit for purpose in the market place – where this is not the case a best of breed approach will be used by enhancing existing solutions
- The target COTS/technical stack that support Service Management processes to be geared towards Independent software Provider's (ISP's) solutions, where there is a fit for purpose product in the market place – functional gaps in the product will be met through the reuse and extension of existing solutions where this does not compromise closure targets
- Platforms will be the fundamental building blocks of the architecture and should allow de-coupling and re-grouping of the architecture layers into meaningful architecture domains
- Platforms will be developed to deliver capabilities that can be reused to assemble services, customer experiences and ultimately products

- Master data management (MDM) disciplines will be central to architecture design and on-going application development and support to ensure product catalogues remain flexible and consistent and ensuring that product models and reference data can be distributed to all consuming platforms
- Apply and enhance the Matrix Architecture and adhere to the guidelines and principles
- In defining target solutions, maximize re-use across LOB's by adhering to the Rule of one principle
- Maintain service during change

4.7. Number of changes / corrections on OSS and BSS Systems

Various numbers of changes /corrections needs to be done on the system to ensure compliant delivery of system indicating slippage against the objective of RFT (Right First Time). Most of the Be spoke systems which are not scalable and difficult to augment with the increase in number of products, product diversification, bundling solution, new system integrations. Therefore all these factors impacting the Number of changes or correction needed on the system in use. These pain points trigger the IT Transformation requirement however the level of severity depends upon Product and Service complexities, it is observed that Public sector operators like BSNL and MTNL need to do 0 to 5 corrections or changes to improve the RFT however RCoM and TTML number count is up to 10. However Bharti follows moderate approach.

4.8. Level of Data Integrity

Data Base is consumed by all the process functions of an operator, therefore for the smooth Technical function, it is imperative that customer, commercial and inventory data are in sync and available across the complete OSS, BSS stack depending upon retrieval requirements. Hence Data Integrity at different functional level is taken as a Baseline parameter for IT Transformation and the level of integrity depicts the priority of IT Transformation in the relevant Data Base.

- **Hypothesis:** There is no significant difference in average level of integrity (table 4) with respect to customer data, commercial data and inventory data.

Groups	Count	Sum	Average	Variance
Level of integrity of Customer data	323	846	2.61	0.83
Level of integrity of commercial data	323	875	2.70	0.51
Level of integrity of inventory data	323	815	2.52	0.77

Table 4: Level Of Integrity

Source of Variation	SS	df	MS	F	P-value
Between Groups	5.5748	2	2.78	3.94	0.019
Within Groups	683.38	966	0.70		
Total	688.96	968			

Table 5: ANOVA

According to table 5 statistical analysis carried out by ANOVA, the hypothesis is not accepted at 5% significance level. This indicates that average level of integrity is different for customer, commercial and inventory data and hence it implies the base lining to daft a Transformation strategy.

4.9. Customer Validation

One Step customer validation is an ideal scenario for any Telecom Operator, every step validation triggers to the non-integrity of Operator's OSS's. Therefore these technical changes in OSS create a Technical Baseline parameter for taking the decision of IT Transformation for the involved systems. 77% of respondents provide a feedback that the Customer validation repeated at every step if subscribers call at customer care/billing helpdesk/technical helpdesk; however 23% of respondents provide a feedback that there is no Customer validation repeated at every step if he/she calls at customer care/billing helpdesk/technical helpdesk it is response in successive follow ups.

4.10. Automation in the Service Fulfillment activities

Degree of automation in Service fulfillment function represents the efficient Order delivery and management which depends upon the Technical orchestration of Service Fulfillment systems. Therefore level of automation required in the Service fulfillment activities like Service Design,

Service Cataloging, Inventory Management, Network Configuration, Capacity Assessment, Capture Service Order Request, Order Validation, Order Analysis, Order Fulfillment, Order Completion and Failed Order Management can be treated as Baseline parameters for IT Transformation.

4.11. Automation in the Service Assurance activities

Degree of automation in Service assurance function represents the efficient Fault and Billing management which depends upon the Technical orchestration of Service assurance systems. Therefore level of automation required in the Service assurance activities like Fault Monitoring,

Processing Fault notifications, Root Cause Analysis, Fault Reporting, Bill Data Collection, Bill Data Processing, Bill Generation and Bill collection can be treated as Baseline parameters for IT Transformation.

4.12. Process Baseline parameters

- The process development is an integral part of developing the Transformation Journeys for the changes required to deliver the IT Transformation objectives and subscribes to a process management life cycle which includes documentation, deployment and in-life management cycles with a governance wrap
- Future state "to-be" processes will be industry best practice based on the Target architecture and ITIL.
- Future state processes will be derived with a perspective to achieve a complete set of common processes that can reasonably serve the full range of products and services for different customer segments, regions and contracts, taking account of local legal and regulatory requirements.
- The processes will support delivery of the agreed IT Transformation objectives. Specifically has defined key requirements that are critical to quality for the customer experience. Expected improvements will be delivered by:
  - CT & RFT
  - Self Service
  - Zero Touch
  - Real Time
- The To-Be processes will be reviewed by both Subject Matter Experts (SMEs) and validated by the Operating teams using a set of up-front agreed validation criteria in line with the agreed methodology for developing the Transformation Journeys
- The future state process architecture design will be maintained by the transformation management enterprise architecture team based on inputs from the work streams
- Process and application alignment will be maintained within the design documentation.

4.13. Effect of As-Is-Efficiency

As is process term is commonly used in the industry and it means the current state landscape of process, system, governance, resource split, etc. This typically includes a deliverable called As Is document, which details the baseline architecture of processes, systems, etc.

4.14.Methodology to Capture As Is

Process	As-Is will be captured by having walkthrough/meetings with Operations, workshops with Product managers, studying available design/process documentation, user guides etc.
Tools	Questionnaire, Visio, MS-Office
Input & Output Templates	Questionnaire
Stakeholders	Product Managers, Operations Users, Business Analysts, Process Expert, Designers
References	Design/Process documentation, user guides

Table 6

The existing in-scope Product-wise As-Is processes would be captured in detail in accordance with the scope of the process improvement targets. During the Due diligence exercise the 'Level C' processes have already been captured in many instances. The product modeling exercise, requirements capturing exercise and the transition exercise at different levels will help to extend capture As-Is processes up to Level D, i.e. Level 4.

These As-Is processes captured for each in-scope product would cover various aspects such as process owners, inputs, outputs, operational activities, geography specific variations, issues and pain points across geographies. The As-Is process flows captured in Visio would be structured along the lines of Process Methods Framework (PMF) in terms of presentation and content.

These processes will need to be signed off by the stakeholders and agreed in the Process Governance Structure and will be considered as a baseline for the To-Be process design.

- **Hypothesis**: There is no difference among Operators on their opinion on the "Effect of efficiency of As Is" Capture on transformation success

Effect of "As Is" efficiency	Bharti Airtel		BSNL		MTNL		Reliance		TTML	
	Count	%	Count	%	Count	%	Count	%	Count	%
No Effect	1	1%	0	0%	0	0%	0	0%	0	0%
Less Effect	11	16 %	0	0%	0	0%	0	0%	9	21%
Moderate Effect	31	44 %	11	12 %	7	13%	31	46%	15	36%
High Effect	25	36 %	42	47 %	25	47%	34	50%	18	43%
Very High Effect	2	3%	37	41 %	21	40%	3	4%	0	0%

Table 7: Effect of Efficiency of As Is

- **Interpretation:** P value is less than 0.05. Therefore null hypothesis is rejected. It is observed that most of the Operators respond high to very high effect of efficiency of As Is Capture. Therefore it is imperative that all the Operators agreed to the fact that best capture of As Is process not only help in capturing Business As Usual however this is an important baseline for the IT Transformation strategy. With efficiently captured operating model, the pain points across people, processes and systems can be addressed with a better approach. This will help management to put the proportionate focus for IT Transformation requirements across lines of business or departments.

4.15. Service Request Closure Time

Any Change in existing Service including Modification, Addition, Change and Deletion (MACD) included under Service Requests. Generally Service requests are the signs of Up selling or selling bundling solutions or additional services to an existing customer. These can be included both One-time MACD charges and rentals. Shorten the time to close a Service Request better for the Operator's business therefore Service Request Closure Time is the process baseline parameter on which decision of IT Transformation can be taken

4.15.1. Fault Criticality across SLA's

Service Level agreements depends upon the contact between the operator and customer, therefore faults due to network failure or service failure will impact the ongoing agreements and hence resulting into revenue losses. After the Root Cause Analysis of these faults it has been identified that most of faults across criticality e:g Critical, Major and Minor are due to internal systems of the operators and taking a long journey to fix the faults within the agreed SLA. Therefore Fault Criticality across SLA's inviting the rationalization and up gradation of the OSS and BSS systems.

4.15.2. Non satisfactory services

Satisfaction is being considered as the long-term relationships between a customer and a service provider and ensuring the Win Win situation for both Operator and Customers. More number of complaints led to dissatisfaction among existing customers and losing the customer associations. The quantification of Non-satisfactory performance of Operators Products and Services is done with the help of complaints due to failure or non-satisfactory services. Therefore it has been treated as Process baseline parameter with the help of which Operators can decide the viability and level of IT Transformation addressing and mitigating customer pain.

4.15.3. Engagement and alignment with other Programs

Operating models will be aligned for business engagement. IT Transformation Program will engage with operating teams to establish a group of SMEs that will support various activities throughout the life of the Program. Operating teams will be engaged during the future state validation workshops. The outputs from these sessions will inform the transformation planning. Operating teams will be engaged in planning and delivering the activities that fall within their domains. The IT Transformation Program will identify overlaps and dependencies with other milestone Programs. Where appropriate it will build on and align its activities to these Programs. It is crucial to manage and align the operational areas to ensure the successful delivery of the Program. These include:

- **Demand Management**: Management of overall demand of services from the business
- **Transition Management**: Co-ordination with transition with a perspective of aligning transition and transformation plans
- **Alignment with other Programs**: alignment with milestone Programs and in-flight Programs

5. Conclusion

5.1. Composition of Baseline parameters

- Baseline parameters for IT Transformation comprises of Business, Technical, Process parameters, Engagement & alignment with other programs and dependencies.
- Business teams are engaged in validating the "To-Be" processes and providing details on specific business issues and requirements.
- Solutions to adhere the 70:20:10 principles including maximize re-use of existing solutions and deploying COTS out of the box where general market availability and lead-times for deployment are not prohibitive.
- Architecture to focus on demonstrating improvements on business parameters such as Full time employees, number of OSS, BSS, customer experience, cycle time and right first time.
- Technical baseline parameters include number of changes and corrections on Operators' IT Systems to enhance RFT, Data Integrity across Data Bases, customer validation at different storefronts and automation is Service Fulfillment and assurance activities.

5.2. As Is Effect

- It is observed that most of the Operators respond high to very high effect of efficiency of As Is Capture. Therefore it is imperative that all the Operators agreed to the fact that best capture of As Is process not only help in capturing Business As Usual however this is an important baseline for the IT Transformation strategy.
- With efficiently captured operating model, the pain points across people, processes and systems can be addressed with a better approach. This will help management to put the proportionate focus for IT Transformation requirements across lines of business or departments.

5.3. Shorten Time to Response

Shorten the time to close a Service Request better for the Operator's business therefore Service Request Closure Time is the process baseline parameter on which decision of IT Transformation can be taken.

5.4. Service Level agreements

Service Level agreements depends upon the contact between the operator and customer, therefore faults due to network failure or service failure will impact the ongoing agreements and hence resulting into revenue losses. After the Root Cause Analysis of these faults it has been identified that most of faults across criticality e:g Critical, Major and Minor are due to internal systems of the operators and taking a long journey to fix the faults within the agreed SLA.

5.5. Customer Complaints

The quantification of Non-satisfactory performance of Operators Products and Services is done with the help of complaints due to failure or non-satisfactory services. Therefore it has been treated as Process baseline parameter with the help of which Operators can decide the viability and level of IT Transformation addressing and mitigating customer pain.

5.6. Effective Operating Models

- Operating models will be aligned for business engagement. IT Transformation Program will engage with operating teams to establish a group of SMEs that will support various activities throughout the life of the Program; where appropriate it will build on and align its activities to these Programs.
- It is crucial to manage and align the operational areas to ensure the successful delivery of the Program. These include Demand Management, Transition Management and Alignment with other Programs.
- The IT Transformation implementation framework for Program alignment activities will depend on the degree of alignment ("low touch", "IT Transformation had driven" or "full alignment") that is to be performed with the non-IT Transformation Program.
- Every operator operating in a different model and encompasses with unique dependencies which influences the Level of IT Transformation in that function.

6. Recommendations

- During IT Transformation initiation stage, Operators should focus on aligning Business parameters with Technical cost effective solutions and achievable process functions.
- IT Transformation programs needs to be aligned with other Programs within operators to ensure that there is minimal impact on Business As usual due to Data integrity and migration issues.
- Reusability of existing systems needs to be taken care of priority and strong business cases needs to be worked out for new procurements with Cost Benefit Analysis

- Key Responsibility Areas of FTE's need to be clearly identified and measure w.r.t the core Business functions like Service Delivery Team membersshould be answerable for achieving Right First Time and Service Assurance Team members should be accountable for more Uptime with less SLA penalties.
- All operators should focus on Right First Time (RFT) improvements across functions to secure One Time deployment fees (activation fee) & earliest Billing Trigger. Moreover improvement in System and Service Uptime will earn the Bonus points and increased revenue share from customers.

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