1. Introduction

This chapter of the dissertation focuses on the most fundamental components of the thesis, which are very vital to set the direction and objective of the study. The major topics covered in this chapter are background for the opting this research topic, objectives of the project, the purpose of the research and the hypothesis for verifying the results of the research.

1.1 Background

Information Technology Infrastructure or ITIL and the Project in Controlled Environment Two or Prince-2 are two very important standard frameworks for planning, executing and monitoring the projects and the services respectively. In the standard form of framework, Prince2 provides with a detailed procedure of best practices to manage the entire project while ITIL is a service development and operational framework of best practices (Hinde, 2009). Prince2 details a holistic approach to the whole project with with help of different procedural steps to manage the project in a controlled environment so that the project does not go over time and over budget limits; (Hinde, 2009) further suggests that ITIL is a multiple step framework for development of an effective and productive IT service that produces the best value for the customer. The presentation delivered by (Dorst, 2006) in ISACA Perth Annual Conference suggests that for a better business results based on IT governance would only be effectively achieved when the ‘BUILD’ is properly done by Prince2 framework and the ‘RUN’ of the services is implemented on the basis of the standard framework of the ITIL service management Lifecycle. It is further suggested in (Dorst, 2006 presentation) that both ITIL and Prince2 are developed by OGC and they work very effectively for the how to develop and run the project/services. The IT governance is very important for a better business bottom line as per (Dorst, 2006) and IT governance can be achieved with the help of ITIL process of continual service improvement or CSI. Although, Prince2 does not cover the long-term smooth and effective operation of the services, it covers many other aspects of the project/services that can be helpful in producing the best value for the customers; similarly, ITIL covers many aspects of the development of an IT service that can be implemented into the project management procedure offered by Prince2 framework for more accurate and productive results of the whole project (Hinde, 2009). Prince2
has a set of the procedures that target to achieve the successful completion of the project within the time and budget limits while the ITIL focuses on continual service improvement with the help of the CSI stage of service management life cycle along with the on-time delivery of the project. If we look investigate the processes of the both standards for managing the projects and services, we would be able to understand that, there are a few shortcomings in both of the standards for a perfect delivery of Project/service – these both standards, if implemented in complimentary to each other, would produce the perfect results. But, how this can be beneficial and what are the grounds, which help to make consolidated procedure or approach to project/service management, are a few questions, which would be researched in this dissertation. In such situations, we can say that project management is a larger standard for planning, executing, monitoring and closing a project while the IT service development based on service management Lifecycle is a part of the entire domain of the project-management with some additional features that can be more useful if implemented into the planning of the fundamental project procedures. The procedures of the project management based on Prince2 guide the project manager and its team to use and manage and optimize the available resources like human capital, budget, time, energy and space available under the jurisdiction of an entire project. The ITIL standard framework guides the teams for effective assessment and planning of the resources for developing and operating an efficient and attractive service that can create value to the customers and the monitoring of the results of the service for taking suitable measures is an additional step of the ITIL framework. For a perfect business bottom line, an IT governance is strongly required to achieve the goals of the company and for achieving the goals of the company the integration of ITIL, COBit, Prince2 and Sigma Six are very important as per the presentation at the Perth Conference delivered by (Dorst, 2006).

There are many standards for efficient project management in the world that are being used in different companies across the globe; among these standards PMBoK, ITIL, Prince2, MSP, COBIT, P3M3 and Agile are important to mention. All these standards possess numerous merits for better project management, but still, many project managers believe that there are some shortcomings in all these standards that do not allow these standards to qualify for a comprehensive standard for project management. Recently, many project managers, management experts and researchers have started researching about the mixed form of standard that combine two or more project management standards to overcome the shortcomings of using one single standard. Many researches are being carried out to study the combined impact of PMI-ITIL, PMI-Prince2 and Prince2-ITIL methods. This thesis is one of such efforts to establish that both the ITIL (Information Technology Infrastructure) and the Prince2 (PRoject IN Controlled Environment) are not competitors to each other but they are complimentary to each other. A research guide written by (Siegelaub, 2009) suggest that Prince2 does not cover all the knowledge area required for robust project planning and it needs some useful help from PMBoK project management
tools for better project development results. But, that does not mean that Prince2 is useless as compared to PMBoK – (Siegelaub, 2009) suggests that Prince2 offers a more smooth procedural and stepwise mechanism to project management as compared to PMBoK. In the concluding phase of (Siegelaub, 2009), he concludes that using two prominent project management methodologies (PMBoK & Prince2) together provides the most desirable business results in the domain of project management. According to the case study of a company conducted by (Scott, 2010) suggests that there are many areas where Prince2 project management tools supported the IT infrastructure library or ITIL these areas are business justification, management by stages, lesson learned and risk management. Meanwhile (Scott, 2010) case study reveals that ITIL supports the effective use of Prince2 management procedure on many grounds like Startup of the project, communication, balance in quality against cost, and plugging a gap. Thus, the case study conducted by (Scott, 2010) proved practically that OGC-OGC combination of ITIL and Prince2 produced wonderful results and they are complimentary to each other. The project observed some conflicts but the overall performance was good as per the report by (Scott, 2010). Like the case study by (Scott, 2010), many other companies are also using the Prince2-ITIL combination for getting better project results. Similarly, there are many other organizations in the world that use PMBoK-ITIL approach for their project/service management. This new trend of combining the different standards and framework is being implemented in many projects and organizations by their respective project managers. Here, the main goal of this thesis is to investigate the level of the suitability of implementing both approaches in the projects.

1.2 Abstract

There are many project management and service management standards and frameworks that are being used in the domain of different industries especially in IT industry and service sectors. Among these standards, PMBoK, ITIL, Prince2, Six Sigma, COBIT, Agile and others are the prominent ones. Each and every management framework has its merits and drawbacks – these drawbacks create some sort of conflicts on the project flow or the smoothness of the project activities and thus, the entire project digresses from its predefined goals or objectives. Many project managers have now embarked on a new methodology of project management, which uses the power of two or three frameworks to cover any kind of flaw or drawback of a single standard. These managers opt different combination of methodologies like OGC-OGC, OGC-PMI and others. This research report would deal with the OGC-OGC approach of project management and service management; in this methodology, the complementary areas of ITIL and Prince2 framework would be studied to establish a link between these two frameworks to interlock both of the frameworks for the achievement of better business bottom lines. The drawbacks of
the Prince2 project management procedure would be patched up with the help of best practices and tools offered by ITIL service management Lifecycle.

1.3 Purpose of Research

The modern frameworks of project management or service management have taken high importance in the development and operation of new services, applications and project in all domains of the modern industry. The impact of these frameworks is very pervasive in terms of achieving the objectives and the goals of a company or business entity. These frameworks help to keep the projects and services smooth while development of the same and then very customer oriented while in operation. So, there are two major aspects of services or the projects one is the BUILD and the other one is RUN. Another very important aspect that govern the entire business processes is the governance of the IT services, which creates a supervisory or monitoring of the smoothness and identifies the snags of the systems and refers to the respective section for rectification or ramification. The entire process of development and operation of the business service is really an encompassing mechanism that involves different knowledge bases, frameworks and standards. According to the investigative paper done by (Tudor, 2007), ITIL, DSDM and Prince2 frameworks can work together because their nature of implementation is overlapping. There are many projects/service management activities and processes (collectively key disciplines) that overlap within the jurisdiction of each other like a project plan, risk management, configuration management, change control, business case and a few others, according to the technical article by (Tudor, 2007). This article (Tudor, 2007) further describes that there are different kinds of scenarios of project development and integration of existing applications or services in which, it is very important to take care of the availability management function for maintaining the smoothness of the project flow. At the conclusion of her article (Tudor, 2007) suggests that all ITIL, Prince2 and DSDM are the mature frameworks of present day industry; they possess very exciting features for fulfilling better requirements of any business but they are not likely to provide the desired 100% results if they are used in isolation. Meanwhile, (Tudor, 2007) concludes that if they are used together for controlling and benefiting from the best practices of these frameworks, a substantial set of benefits can be achieved, which are desirable for any business entity. Likewise, in the case study conducted by (Scott, 2010) also verifies that both the ITIL and the Prince2 project/service management frameworks should be used in collaboration rather in isolation to produce the most efficient and effective results of the business. On the basis of these researches and notions from the experts in the industry, it is clear that the collaborative approach of different standard frameworks is required for achieving the desirable bottom line. The purpose of this dissertation is to investigate that how ITIL and Prince2 are interrelated with each other and how much impact can they leave on the project or the service management of a company if they are used in
collaboration or together in the development and operation of the projects and the services respectively. The research would be based on the assumption or the hypothesis that the impact of using both frameworks is very high and desirable; this hypothesis would be further investigated and verified with the help of different kinds of research studies that have been done in the domain of project management for establishing the relationship between different frameworks related to project management and service management life cycles. The details and results of those researches would be verified with the help of a focus group discussion based on some measurable questions. These questions would be discussed and the feedback would be achieved from different managers and experts of this domain of industry. These questions would mostly move around the drawbacks and merits of different frameworks popular in the domain of modern industry across the globe. On the basis of the entire research the hypothesis would be vetted to prove that whether the assumptions were correct or not and they are really supportive to each other. Thus, it will be verified that ITIL (Information Technology Infrastructure) is a complimentary framework to the Prince2 or (P)R(ROject IN Controlled E)nvironment) framework.

1.4 Research Objectives

The main objectives of this research study are to prove that ITIL service management life cycle is a complimentary tool for Prince2 project management framework. This objective would be achieved by getting some sub-goals or objectives as mentioned in the following list.

- Identification of Merits and Demerits of Prince2 Project management Framework
- Identification of merits and demerits of ITIL service management Lifecycle.
- Identification of the areas of ITIL framework that are in complement to the Prince2 project management framework.
- Developing a concluding axiom about the research with the help of feedback and comments from the focus group interview or discussion with industry experts.
- Verification of research hypothesis.

These objectives, once achieved would automatically verify the fact that ITIL is a complimentary tool for Prince2 project management framework.

1.5 Research Hypothesis

As described in the purpose of the research section that this dissertation will explore the entire processes and stages of ITIL and Prince2 frameworks to establish that ITIL is a supportive tool to the Prince2 project management framework. This will be done
on the basis of different researches and explorations that would verify the research hypothesis; this hypothesis can be described as given below:

“ITIL framework and Prince2 are good to use together for better business results and ITIL is a complementary tool to Prince2 project management framework”

If the objectives of this research (as mentioned in objective section) are achieved through a suggested research mechanism then the hypothesis would prove automatic.

2. Literature Review/Rationale

This is one of the most important chapters of this thesis that covers many technical aspects of ITIL service management life cycle and Prince2 project management framework. The merits and demerits of these two frameworks, existing research in this domain and identification of supportive areas between these two frameworks would be done in this chapter.

2.1 Introduction to ITIL Framework

The ‘ITIL’ is a phrase that is fast attaining prevalence round the IT world. Frequently, It is wrongly referred to as ‘IT governance’ – in fact, on its very own, it certainly is not this. As per the details mentioned in the report by (Thomas M., 2011), ITIL is an accumulation of guidelines that helps companies implement an IT Service Management culture. However, its growing recognition reflects the substantial impact it will make on a company’s IT and business performance and also the fact that, in combination with other frameworks, it is an important component in creating a true IT governance.

What is IT Service Management?

Present day companies are progressively configured or enabled using it. Business and Companies IT management requires regulation and support on managing IT infrastructure so that companies can cost-effectively improve quality and functionality. IT Service Management deals with defining and delivering the guidance and support required by the companies for better functionality and better quality results. In common with other modern management practice, it sets things from the customer’s perspective. It may be comprised of hardware, communication facilities and software.
What exactly is ITIL?

Meaning ‘Information Technology (IT) Infrastructure Library’, ITIL is some guidelines that are the focus of IT Service Management approach. It offers guidance on how to keep it in check infrastructure, to streamline IT services in line with business anticipation. According to the article written by (Thomas M., 2011), ITIL is a best practice framework, showing the consolidated experience with organizations worldwide on the best way to keep a check on services to meet business anticipation. ITIL was initially developed throughout the eighties through the UK’s Central Computer and Technology Agency (CCTA), a government body, which produced ITIL version 1 being an approach to integrating various vendor technologies and serving organizations with varying technical and small business. CCTA is now an area of the Office of presidency Commerce (OGC), which, as an official writer from the ITIL library, up-to-date it released version 3 and continues to develop and support it. ITIL has since become broadly adopted around the globe in both private and public industries and is recognized as well as practice, being used in organizations of different shapes and dimensions.

The Effectiveness of the ITIL Cycle

ITIL cycle implemented by Business Value includes the Service Strategy that drives Service Operations, Service Transition and Service Design. Many U.S. companies working with the ITIL framework can say that the effectiveness of the framework and just how it can benefit business solutions and keep an eye on customer support. The ITIL framework focuses on different areas of the service management; among these areas service, processes and functions and the roles are important to note. All these areas are covered in each and every phase of this framework. Following figure depicts the impact of the ITIL framework for the management of service lifestyle.

ITIL Certification

Many IT companies are encouraging employees and students to go through the ITIL framework so that the methodology could be incorporated into their systems. Effective control over a person base is something both big and small information mill always trying to find, and lots of will discover it helpful to train a choose staff in the more knowledge about ITIL V3. Students with the ITIL framework now get a certification based on their degree of learning and understanding. Probably the most fundamental certification, Foundation, demonstrates that one has a simple knowledge of the concepts and terminology of the methodology. Foundation should be accomplished before greater certifications can be purchased. Specialist certification has different levels dependent upon ITIL V3 processes used by a person.
This level stands for an advanced of understanding of a single part of the ITIL. Expert (formerly known as Manager) signifies the greatest degree of certification achievable and demonstrates a concentrated and comprehensive discernment from the framework.

The Easiest Way to Manage Your IT Services

The ITIL framework offers companies among the quickest turnaround occasions for reactions. The methodology in the end was created with customer support in mind. ITIL V3 is a wise system for companies since it separates issues, analyzing each process carefully, ensuring the results are measured and setting targets for guidance and improvement. With the advance ITIL framework, Not just large companies can use ITIL; even smaller companies can use it. The most recent revision of the software, ITIL V3, and it is forerunners are generally known to as some guidelines for controlling its services. If you’ll need a competent way to manage your customer support base and cut response time in half, possibly the ITIL framework could affect your organization almost as much as it’s accomplished for a number of other U.S. companies in the past few years – by changing the landscape of the way in which that companies interact with clients on a far more personal level.

There are five major stages or the phases of the ITIL V3 framework that are the core components of this entire framework. These five components are described and explained with the help of five comprehensive books that guide the managers through the processes, activities, principles and concepts of managing the services effectively. These five components are given below.

- Service Strategy or SS
- Service Design or SD
- Service Transition or ST
- Service Operation or SO
- Continual Service Improvement or CSI

The details of these components or stages of ITIL service management Lifecycle are described in the next section.

2.1.1 Stages of ITIL V3 Framework for Service Lifecycle

According to the guide written by (Cartlidge A., Hanna A., Rudd C., et al, 2007), there are many critical issues that are faced by the managers while managing the life cycle of the services. For addressing those problems the IT infrastructure library service
management life cycle is divided into five phases. These phases help managers to resolve the problems and issues that come across during the process of service development and management of the same. These issues are summarized as per guidelines provided by (Cartlidge A., Hanna A., Rudd C., et al, 2007) booklet for the managers; they are given below.

- Strategic planning for business and information technology
- Alignment of business goals with information technology
- Continuous monitoring and improvement in the services
- Assessment and measurement of efficiency of the organization
- Achieving the return on interest or ROI
- Optimization of total cost of ownership or TCO
- Use of IT for achieving competitive advantages
- Managing changes in both business and IT
- Display of most effective and efficient IT governance
- And a few others

For overcoming and gaining control over these issues, ITIL framework defines five (5) fundamental phases; these phases are listed below.

- Service Strategy or SS
- Service Design or SD
- Service Transition or ST
- Service Operation or SO
- Continual Service Improvement or CSI

These five core phases of the ITIL service management life cycle are detailed in separate five books dedicated for every phase of the ITIL framework. These five books provide the detailed and easy to follow procedural set of best practices for achieving the value for customers out of the IT services and the cost efficiency for the business entity or the organization. There is another book (sixth); this book provides the introduction to the ITIL and its other books. These phases are depicted in the following figure and defined in details as given below.

Service Strategy or SS

Service Strategy is a very fundamental phase of ITIL service management life cycle;
this phase deals with many strategic, analytic, and visionary activities and processes for conceiving, developing and operating of the IT services. This sits at the core of the entire framework of ITIL service management as shown in above figure. We are going to figure out the main features of this phase here. The purpose of service strategy phase in ITIL is to research, identify, conceive, plan, measure the competitive edges and to achieve the customer satisfaction (Cartlidge A., Hanna A., Rudd C., et al, 2007). The main aspects that service strategy or SS phase covers, are described in the following list.

- Researching for suitable service to be offered i.e. what type of service is feasible to be offered to the existing or prospective customers.
- Identification of the market segment – means, which section or segment should be focused for offering the services under consideration.
- How the market places should be developed irrespective of the nature of the market i.e. internal or external market places.
- Analytical and critical analysis of the existing or prospective market that the company is focussing to introduce the service to; this will help companies to get an insight of the competition, weakness, strengths and values of the services that will be offered to the customers.
- The development of most suitable and feasible business cases for securing the strategic investment in both the service management and the service asset capabilities.
- Understanding the perception of customers and the stakeholders in terms of their concept of service-value.
- Identification of competitive edges of the service over the existing similar or similar-like services available in the market place.
- Understanding the psychology of the customer to opt for the service in existing and prospective marketplace.
- The devising of the measurement mechanism for customer value of the service and procedure to monitor the progress.
- Identifying the ways to maintain control and visibility over the creation of value via financial management.
- How to measure the performance of the service to assess the effectiveness of the service and efficiency of the organization.
- Figuring out the means to optimize the available resources for operating the entire portfolio of the services.

Thus in the nut shell, service strategy or SS phase of ITIL framework helps the
organization and its management to understand not only the stakeholders, markets and competitors but also the creation of value out of the services to keep its customers satisfied and content.

Meanwhile, ITIL-SS defines some of the concepts called as the key-concepts, which help understand and devise the strategy for better value of the services for customers and the desired business bottom lines for the organization. These key concepts are given below.

- Strategy Developing Factors: The Four Ps
- Service Value
- Competition
- Market Places
- Types of Service Providers
- Critical Success Factor or CSF
- Service Management – A Strategic Asset
- Models of Service Provisioning
- Accounting in terms of Services
- Restructuring and Development of Organization

The above mentioned key concepts are introduced with detailed information and procedures to implement into the strategy of service development and provisioning. For example, the basic procedure followed to develop a strategy of the service is based on the four Ps (Perspective, Position, Plan & Pattern); it is very clear from this concept that the entire life cycle of a service is managed through proper implementation of these concepts to get a proper direction and evaluation of strengths to achieve a competitive edge and then devising plans and patterns for achieving the business vision and goals. ITIL guides the managers to understand the competition and the marketplaces whether internal or the external ones for getting competitive advantages with the help of another important factor called as competition and market space. Meanwhile, the types of providers and the definition of service value are done in service strategy phases of the ITIL framework. This section of ITIL service management Lifecycle develops the concepts of critical success factor or CSF, which helps the managers to identify and assess and periodically review the CSF based requirement of strategic assets for implementing the service strategy of the company. Similarly, different types of services are also developed and provided to the customers in achieving the customer satisfaction – this requires a proper business strategy that can be easily formulated in the section...
of the ITIL framework. This section also deals with the well structured, well developed and effective organization of the company to implement the strategy of services in properly, efficient and effective way. Other major areas, for development of a service in a competitive environment, that are covered in this section of ITIL framework are the risk management, service analytics, sourcing strategy and others. The definition of roles and the management of many activities like service portfolio management, financial management, demand management and service level management are also integrated into the strategy here in this section of this framework. The definition of different roles for proper planning and implementation of the business goals is also done in this section where different controlling and service managing roles are defined.

Service Design or SD

The service design or the SD phase of ITIL service management life cycle is very crucial phase of the framework. It is a stage within the entire service Lifecycle. The SD also plays a vital role in the process of business change. As per the study guidelines specified in the Introductory Overview of ITIL V3 (Cartlidge A., Hanna A., Rudd C., et al, 2007), the process of business change is defined as “The designing of innovative and suitable IT services that include their processes, policies, architecture and documents for meeting the agreed both present and future business needs”.

There are many activities and the processes that are the base of this stage of the service management Lifecycle. These activities, principles and processes are designed to achieve the following objective and goals of this stage of the ITIL framework.

- Designing of the service that is in agreement with the predefined business bottom lines.
- Designing of such processes that are supportive to the service life cycle.
- Identification of risks and management of the same.
- Designing of measuring mechanism or the metrics
- Designing of reliable, resilient and secure environment, information resources, applications, infrastructures, and capabilities to achieve the desirable results.
- Development and the maintenance of the standards, policies, processes, plans, documents and architectures to produce highest quality IT services.
- Capability and skill development in IT services.

In short, we can say that service design section or stage of ITIL framework takes in the requirement of a business based on certain service and produces a complete solution to that fulfills the documented requirements identified in the earlier stage.
The Service Design stage provides the organization with a complete service design package or SDP. This SDP can further be handed over to the next section or the stage of ITIL framework called as service transition.

There are five different aspects of SD, which should be properly understood and considered in the development of the services – one more important thing about the SD section is that it is based on a holistic approach of service design (Cartlidge A., Hanna A., Rudd C., et al, 2007). It is very important for every manager to adopt the holistic approach while designing the services at this stage of the ITIL framework. The main factors that affect the design of a service in this section are the Four Ps approach of service design. These Four Ps deals with the people, process, partners and products; here in this 4 Ps’ approach people deals with the skill, capabilities and competencies of the human resources required for the development of an IT service. According to the study manual written by (Cartlidge A., Hanna A., Rudd C., et al, 2007), the second P deals with product, which means what types of systems and technology is required to deliver a desirable IT service. The third P denotes the partners, which relates to the stakeholders of the organization like vendors, suppliers, and manufacturers required for providing better support to service provisioning. The fourth P denotes the processes – all the processes, roles, or the activities required to provide a perfect and high quality service to the customers are covered under this component of the service design approach. These all aspects and other factors related to creating, modifying or ending any service are consolidated into the main package called as service design package SDP.

The major processes that are covered under this stage of the ITIL service management framework are given in the following list. All these processes are properly properly planned and designed in this section or the phase of the service life cycle.

- Service level management or SLM
- Service Catalogue Management or SCM
- Availability Management
- IT Service Continuity Management or ITSCM
- Capacity Management
- Supplier Management &
- Information Security Management

All these processes are not only defined in the documents but they are properly researched, studied and implemented in the service management plans so that the ideal solutions to the targeted problems can be achieved with the help of perfect service designing. The above mentioned processes are very vital for not only
development of a new service but also for all existing services; these processes transform below average quality of the services into the most dynamic and customer oriented services in the market place. This phase of ITIL service management life cycle also defines some of the very important roles and responsibilities that are very vital for developing and provisioning of pre-agreed services to the customers. These roles include Service catalogue manager, service design manager, IT design / IT architecture, service level manager, Capacity manager, Supplier manager, security manager, IT service continuity manager, availability manager and others.

**Service Transition or ST**

The service transition or ST is another very important component for the delivery of an effective IT service to the customers. According to the guideline manual written by (Cartlidge A., Hanna A., Rudd C., et al, 2007), this phase deals with different principles, processes and roles that are highly required for smooth implementation of either new IT service or the modifying the existing IT services. This stage encompasses all the fundamental processes and activities that cover the risk, fault, incident or any other such types of problems that can arise during the implementation of the service developed under the service design package. The entire guidelines are provided in an ITIL framework book called as the Service Transition. These guidelines help the manager or the teams of an organization to smoothly integrate the modified product into the production or implement the newly developed service into the service. This stage of the ITIL service management Lifecycle once properly understood would help the manager to be able to understand the principles, processes, roles, organization and activities of service transition; meanwhile, the procedure to implement the newly designed or modified service (Cartlidge A., Hanna A., Rudd C., et al, 2007). It also helps to analyze and manage the risks, challenges, and critical success factor CSF. The purpose of this phase can be summarized as given below.

- The delivery of service required for operational needs.
- Providing every support required for ongoing service or newly developed services
- Managing the modification required in the service module if the requirements have been changed during the service design processes.
- Make sure that the service will be able to operate both in normal and unforeseen situations or circumstances
- Make sure the availability of support for any kind of error or failure.

There are certain requirements that are highly needed to realize above mentioned purposes; these requirements include the understanding of the potential business value and the understanding of the stakeholders like customers, suppliers and others
(Cartlidge A., Hanna A., Rudd C., et al., 2007). The understanding and capability of adaptation of services design and modification of the same if required. The key principles that support the service transition stage of the ITIL service management framework are given below:

- Clear knowledge of all services and the utilities and warranties of the same so that it is made sure that all the objectives and constraints of the services are fulfilled.

- A properly documented plan and policy for the implementation of service transition so that no stakeholder, service or event is missed out to avert any kind of failure of the service.

- A proper framework and procedure to transfer the knowledge and required support to the stakeholders before the service is handed over to the service operation.

- Proper management and the anticipation about any correction or change in services and also the proper documentation of those events.

The service transition handles all its activities and processes based on the principles described in the above list. The key activities and processes are given in the following list.

The major processes of service transition are normally based on the whole project basis (holistic approach) because they are important for the entire service Lifecycle and their impact is widespread across the service management Lifecycle.

- Among such processes, transition planning and support are important ones.

- Service validation, release management, testing, and deployment management are also very crucial ones.

- Evaluation is a very important process that deals with the entire framework of service life cycle.

There are some other very important processes meant for whole Lifecycle processes are listed in the following list.

- Knowledge Management

- The Service Asset Management & Configuration Management or SACM

- Change Management

There are many other activities associated with the procedure implementation of service transition stage of the ITIL service management Lifecycle. These activities mostly relate to the operations of the service transition stage; they are summarized in the below given list.

- The management of stakeholders
- Organization of key roles and service transition.
- Management of stakeholders and organizational changes
- Management of commitment and communication across the ITIL service management

Other than above mentioned activities and processes, one of the most important aspect of service transition is the definition of the key roles that steer the entire stage of service transition; these key roles are not developed separately for the service transition stage but, it is highly required to assign the activities and responsibilities to the existing teams from both the service operation and the service design stages of this IT service framework.

Service Operation or SO

Service Operation is at the heart of day-to-day, business as always, Service Delivery. It is like factory of Service Delivery incorporated with Application delivery and infrastructure management (Cartlidge A., Hanna A., Rudd C., et al, 2007). Service Operation focuses on the actual execution and delivery of processes and services to deliver business value for clients and customers in a regular, reliable and repeatable manner. A frequently overlooked advantage of Service Operation is that additionally, it provides Operational Validation from the Services delivered. Service Operation is subject to Continual Service Improvement and eventually the delivery and service information excellence. The primary aim for Service Excellence is based on attaining the global standard ISO/ IEC 20000 Service Management. The main goals of ITIL services Operation, according to the guide book written by (Cartlidge A., Hanna A., Rudd C., et al, 2007), are as given below:

- Enable responsive, repeatable and stable IT Service Delivery
- Deliver enhanced Processes for example Incident and Problem Management
- Provide vigorous start-to-finish working practices
- Deliver new Processes for example: Event Management and repair Request Fulfillment
- Promote more adaptive, agile, and responsive Service Operation functionality
- Help defining and shaping the Service Strategy, service transition, service design and continual service improvement.

The pictorial description of the entire phase of Service Operation or SO of the ITIL service management life cycle is shown in the following figure. This figure has been taken from the manual written by (Cartlidge A., Hanna A., Rudd C., et al, 2007).
The major purposes of Service Operation are summarized in the following list. These purposes can be easily achieved with the help of best practice guideline provided in the Service operation book as mentioned in (Cartlidge A., Hanna A., Rudd C., et al, 2007).

- For coordinating and delivering key focus functions and methods which are required for delivering and managing services at the level decided by the clients and customers

- To manage we've got the technology and tool sets that are utilized to deliver and support services

- To manage, measure, control and feedback enhancements in your day to day procedures

- For monitoring performance, collection of data, assess metrics for continual service improvement plans

The needed worth of what a service ought to provide to the company is really modeled in Service Strategy and that model manifests itself in a far more structured way within Service Design. The dwelling and price of the Service are then designed and validated in Service Design and repair Transition. The particular measures for needed amounts of optimization are recognized in Continual Service Improvement; a vital point that is covered in the book is:

“The only real value that matters is that perceived through the customer. Service Procedures is in which the value is shipped and judged.” According to the guidelines of service operation phase of the ITIL framework, the very first principle and services information Operation is concerned with choosing the best balance between:

- The interior IT view in comparison to the exterior business view

- The themes of ‘Reactivity’, ‘proactively’ and ‘control’ are important

There are many processes and activities involved in ITIL phases, it can be broadly classified into operational and tactical layers; the service operation activities are covered here in this section. The service operation phase of the ITIL framework covers a number of management processes such as the ones described below:

- Service Desk Management – The advantages to be looked at are enhanced customer support, better ease of access, quick change on issues, good productivity and overall enhanced management

- Change Management – It is essential for any business to be aware of the impact of change to attain the business goal. Change could be broadly classified into three groups as low, major or radical. The Modification Advisory Board is set up to assess change demands with regard to business. Generally CAB indicates change
implementation, further analysis, or cancellation. The top step is that they look at the request change, and inspections if it is achievable.

- Incident Management – This is the entire process of dealing with an unpredicted event that interrupts IT service and reduces quality. The primary goal of incident management is to restore normal activities as quickly as possible.

If we look at the entire scope of this phase of the ITIL service management Lifecycle, we would be able to understand the following major activities are part of the scope of this phase.

- Physical organizing of the service information operations
- Work practices and work processes
- Executing the ongoing activities which are crucial for delivering and support services
- Service Management processes
- Controlling and managing the infrastructure and resources used for delivering the services

Those who manage we've got the technology, processes and services

As per the sequence of the holistic approach of the ITIL framework for IT governance, after service operation, a major phase of the IT governance starts that is called the continual service improvement, which is discussed in the next topic.

Continual Service Improvement or CSI

Continual service improvement or CSI is one of the most powerful and useful stage of the ITIL service management life cycle because this is the only stage that always tries to evaluate, assess and improve the quality and value of the services (Cartlidge A., Hanna A., Rudd C., et al, 2007). All other major stages and processes are modified and changed with the help and feedback of continual service improvement stage, according to the newly identified issues with the service. Thus, the CSI always keeps all processes focused on the customer value and quality of the service, which is the only objective of any service based business (Cartlidge A., Hanna A., Rudd C., et al, 2007). If we summarize the purpose of this stage, the following list will be sufficient for the same.

- Maintenance of the value of the service for the customers with the help of continual evaluation and improvement.
- Continual efforts to improve the entire IT service management as well as the processes that fall under ITSM.
- Bringing Improvements in all stages of ITIL service management life cycle with the help of regular changes and modification in the processes and the activities under each stage of the service management.

- Bringing the fruits of modern technologies and developments for the better value of the customer services.

- Regular monitoring of business requirements, latest technologies and the quality of the services offered to the customers with the help of different evaluation and assessment activities.

- Creating room for improvement on regular basis.

- These purposes in the form of objectives can be achieved, according to (Cartlidge A., Hanna A., Rudd C., et al, 2007), with the help of different assessment and improvement activities as shown in the CSI model shown in the following figure.

To be continued