

IT Customer Relationship Management supported by ITIL

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Abstract. *Information Technology Infrastructure Library (ITIL) is de facto standard for establishing Information Technology Service Management (ITSM) processes within the IT organization. IT Customer Relationship Management has an important role in the alignment between the business and IT strategy as well as a significant impact on the quality of IT services. The goal of the paper is to conduct the analysis of the business cooperation and negotiating between the business organization (customer/user) and the IT organization (service provider) through strategic, tactical and operational levels applying the ITIL concept. Furthermore, it is necessary to assess the maturity level of the usage of ITIL practice in the Customer Relationship Management through all the three levels.*

Keywords. ITIL, IT Customer Relationship Management, assessment of the usage of ITIL practice.

1 Introduction

IT organizations have to provide the quality of IT services related to the business requirements and to concentrate on customer oriented approach. Information Technology Infrastructure Library (ITIL) is de facto standard for establishing Information Technology Service Management (ITSM) processes within the IT organization.

The quality of IT services depends on good relationships with the customer (users) of the IT organization. The purpose of the paper is to research the relationships between IT organization (service provider) and business organization (customer/user) through the strategic, tactical and operational levels of their cooperation and negotiation.

Furthermore, it is necessary to examine the maturity level of the usage of ITIL practice in the Customer Relationship Management through all three levels.

Service Level Management (SLM) has the central role in the IT Customer Relationship Management supported by ITIL concept. SLM process is used to ensure that adequate levels of services are delivered to all IT users in accordance with business needs and priorities within acceptable level of quality and costs. In general, SLM process provides the balance between the areas of IT service support and IT service delivery[5].

The concept of IT Customer Relationship Management supported by ITIL is described in the Chapter 2.

The practical application of this concept for the concrete IT organization is described in the Chapter 3.

The maturity level assessment of the usage of ITIL practice in IT Customer Relationship Management is conducted and described in the Chapter 4.

The research method is mainly based on the interviews with the process owners within the IT organization and their documentation.

2 Concept of IT Customer Relationship Management supported by ITIL

The concept of the horizontal and vertical communication between the business organization and IT organization supported by ITIL is shown in Fig.1[3].

Strategic level of communication has very important role in the alignment between the business and IT strategy. ITIL practice such as *Service Portfolio Management, Financial Management and Demand Management* provides IT management with the general requirements and the guidelines for the implementation of the requirements in order to define the strategy of IT services according to the business goals with regard to the IT assets and potential risks[4].

Tactical level of communication focuses to service design and transition. The SLM process is

very important for negotiating with the user of IT services and has the following goals:

- to align IT strategy with the business needs;
- to describe the service provided to the customer(user) in a terminology that they understand;
- to create the documents that clearly describe the services;
- to integrate the elements required for the provision of IT services;
- to improve the IT service delivery.

If a customer wants to change out of the Service Level Agreement (service extensions or modifications), the changes will be implemented within the Change Management and the requirements will be involved in the SLM.

At the operational level, users can contact Service Desk and other support groups for all operational issues, incidents and problems.

Policy and quality plans of the Service Management System must be reviewed and continuously improved. Accordingly, it is important to measure customer satisfaction as well as the quality of the practice in the Customer Relationship Management. According to ITIL, each of the ITIL process has the defined quality plans, critical success factors and key performance indicators.

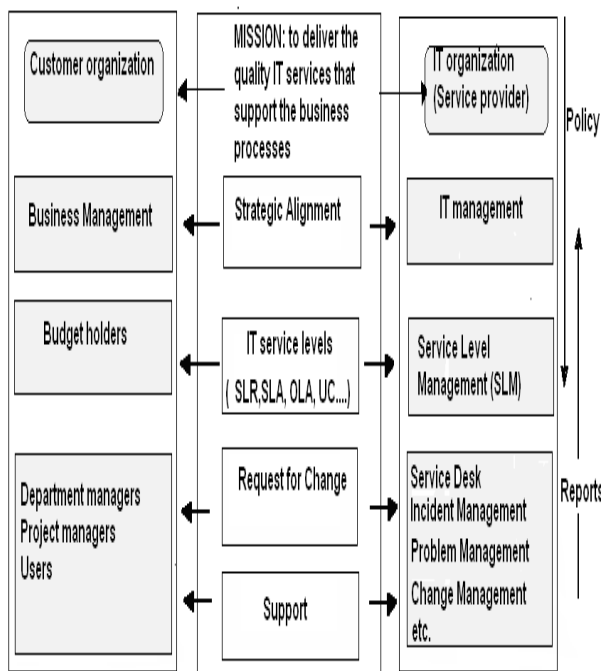


Fig. 1. IT Customer Relationship Management supported by ITIL

3 IT Customer Relationship Management in the practice

Applying the method of interviewing, a research was conducted on the usage of IT CRM concept in the specific company. Further text will show how company uses ITIL processes at decision-making levels and accordingly will determine the maturity of the usage of ITIL practice within the company.

Internal provider of IT services in company is IT department that provides infrastructure and availability of IT services, configuration and change management practice, as well as the continual service improvement.

Service development strategy is based on the needs for automatic process control, integration of business processes and tasks as well as the need for optimization in order to achieve greater business value. Given that the company has a large number of automated processes, there are also a large number of IT solutions that require maintenance.

IT services in the company generate the business value having influence on the company assets which include capabilities and resources. The business value is estimated by KPIs (Key Process Indicators) that support the overall business goals. In the context of capabilities, IT services have the impact on the management, organization, processes and knowledge.

In the context of resources, labor productivity is improved, duration of the production and product development are shortened, production costs are reduced and thereby increased profits. KPIs include overall equipment efficiency, productivity – defined in kilograms of product per unit of time and the used volume of the production equipment, duration of the production cycle one batch or one campaign compared to other batches or campaigns manufacturing the same products as well as other generally accepted non-financial measurements that reflect manufacturing success [6].

Following table represents how and to what extent the company uses ITIL practice in the CRM by analyzing responses of the interviewed process owners.

Table 1. IT Customer Relationship Management supported by ITIL within the company (source: Authors)

| ITIL Process | Questions | Answers |
|---|--|--|
| Service Level Management (SLM) | <ol style="list-style-type: none"> 1. What is your main documentation for SLM? 2. What do you incorporate in SLA when contracting services? 3. When you receive a request for a new service or modifying existing ones, which responsibility do you take and to whom you forward the requests? 4. Are there any OLA (Operation Level Agreement) between IT department (IT service provider) and working groups within the organisation? 5. Do you conduct supervision over the realization of IT services and what do such reports contain? | <p>Our main documentation for SLM is SLA (Service Level Agreement). When contracting services, in SLA we incorporate the following important components: service definition, service support organization, roles and responsibilities, problem and incident definition, support process flow, escalation, KPIs and communication.</p> <p>Operating with requests for a new service or modifying existing ones, responsibilities we take are application maintenance, infrastructure maintenance and service desk while other requirements are addressed to vendor. We conduct supervision over the evaluation of IT services and such reports contain monthly, quarterly and annual reports, resolved ticket statistics, planned and executed tasks and activities, analysis of customer satisfaction survey, etc. Unfortunately, there is no OLA (Operation Level Agreement).</p> |
| Capacity Management | <ol style="list-style-type: none"> 1. Do you follow to ensure capacity utilization for delivery of IT services? 2. Do you work with capacity plans and what information do you need for that? | <p>Depending on the existing service, capacity utilization is monitored to ensure the delivery of IT services. Required data for capacity planning are disk space usage increase, test transactions, etc.</p> |
| IT Service Continuity Management | <ol style="list-style-type: none"> 1. Do you conduct a Business Impact Analysis (BIA) i.e. do you evaluate the business processes of the company that are critical given the interruption of IT services? 2. Do you perform any IT service continuity plans? | <p>To ensure continuity of IT services we conduct a Business Impact Analysis, therefore we estimate which business processes of the company are critical given the interruption IT services. Also, we develop and implement the adequate IT service continuity plans.</p> |
| Change Management | <ol style="list-style-type: none"> 1. How and who carries out the Change Impact Analysis of financial, technical and business aspects of the impact? 2. Do you have a special procedure for the implementation of immediate changes? 3. Do you evaluate the implemented changes and who is responsible for those? How do you measure the success of the change management process? | <p>Change management is represented by analyzing how any change will affect the everyday work and is dealt with so that users are trained after each introduced changes. There are no special procedures for implementation of immediate changes. Every implemented change is considered successful if there is user satisfaction.</p> |
| Configuration Management | <ol style="list-style-type: none"> 1. Have you implemented a configuration management process? 2. Do you have a CMDB base and is it regularly audited? | <p>Configuration management is slightly less represented because there is no CMDB, but there are implemented activities of the configuration management process.</p> |
| Service Desk | <ol style="list-style-type: none"> 1. What types of requests does the Service Desk receive? | <p>Service desk has largely represented ITIL practice. Service desk can receive the various types of the</p> |

| | | |
|--------------------------------------|--|--|
| | <p>2. What is the main role of Service Desk in the first line of support to resolve incidents?</p> <p>3. How do you measure the success of the Service Desk?</p> | <p>requests such as incident related to the computers, computer networks, telephony, mobile devices, user software and business applications. Main role of service desk in first line of support for incident resolving is to provide a single point of contact (SPOC) for all users, resolve all requests that can be solved, and the other to escalate to the next line (expert teams – L2). The success of the customer service is measured by using pre-defined key performance indicators (KPI) like number of solved tickets in 24 hours, average time to resolve a ticket, the average response time of second level support.</p> |
| Incident Management | <p>1. Do you categorize incidents and do you determine their priority?</p> <p>2. On which part of the IT infrastructure are usually related incidents occurred?</p> <p>3. When resolving incidents, do you use the <i>known errors</i> database?</p> | <p>Incident and problem management in IT department also largely use ITIL recommendations. Incidents are categorized and prioritized. The resulting incidents are most often related to computer networks. Database known errors is used in handling incidents. Escalation of the incidents has been resolved so that the first line of support redirects requests to the expert teams L2 or L3.</p> |
| Problem Management | <p>1. Do you also categorize problems?</p> <p>2. During the diagnosis of the problem, do you use the workaround solutions to restore service as soon as possible?</p> <p>3. Is there any incidents and problems database created?</p> | <p>Problems are also categorized and introduced into the base of incidents and problems. During the problem diagnosis we use workaround solutions to restore services as soon as possible.</p> |
| Continual Service Improvement | <p>1. Do you measure the quality of the ITSM performance?</p> <p>2. Do you measure the IT service quality level ?</p> <p>3. Do you conduct improvements of the IT service management processes?</p> | <p>To ensure Continual Service Improvement (CSI) we measure the quality of the ITSM performance as well as the quality level of IT services. We have implemented the process of continual service improvement. Service reports contains details about what should be measured and reported, the basic calculations and definitions of upper and lower limits, gap analysis and customer satisfaction analysis, process compliance report, quality, performance and business value reports. The metrics used in CSI are related to the technology, processes and services.</p> |

The next chapter represents practical assessment of the usage of ITIL practice in IT CRM for the company. Input data for the assessment is based on the responses of the process owners (as shown in table 1).

4 Practical assessment of the usage of ITIL practice in IT Customer Relationship Management

To determine the maturity level of the utilization of ITIL practices in IT CRM within the company, we used four main criteria: awareness on the

implementation requirements of the ITIL process (AWARENESS AND COMMUNICATION), knowledge and responsibility for requirement implementation (RESPONSIBILITY), structuring and documentation for the ITIL processes (PLANS/PROCEDURES) and measurement and improvement (MEASUREMENT/IMPROVEMENT). Below is shown the scale to satisfy the criteria expressed in percentages:

- a) not satisfied: 0-10%
- b) partially satisfied: 10-50 %
- c) largely satisfied :50-80 %
- d) satisfied: 80-100 %

The maturity model provides a foundation for process improvement and describes an evolutionary improvement path from *ad hoc, immature process to a mature, disciplined process*. Main goal is to improve efficiency, return on investment and effectiveness. There are five levels of process maturity:

0 Incomplete – the process is not implemented or fails to achieve its purpose. All criteria are unsatisfied.

1 Initial – processes are ad hoc, organization usually does not provide a stable environment. Awareness and Communication are satisfied and other criteria are unsatisfied.

2 Repeatable – basic processes and responsibilities are established with no documented procedures. Awareness and communication are satisfied and other criteria are partially satisfied.

3 Defined – processes are well characterized, defined, documented and integrated into each other.

Measurement/improvement is partially satisfied and other criteria are satisfied.

4 Managed and measurable – processes are measured by collecting detailed data on the processes and their quality. Measurement/improvement is largely satisfied and other criteria are satisfied.

5 Optimizing – continuous process improvement is adopted piloting new ideas and technologies. All criteria are satisfied[2].

Following table represents maturity level of each ITIL process used within IT CRM in the company according to decision levels on which the final score is made for ITIL practice in IT CRM.

Table 2. Practical assessment of ITIL usage in IT Customer Relationship Management within the company (source: Authors)

| ITIL Process | Criteria | Maturity level |
|---|--|----------------------------|
| Service management level | Awareness and Communication = SATISFIED Responsibility = SATISFIED Plans/Procedures = SATISFIED Measurement/Improvement=PARTIALLY SATISFIED | 3 - DEFINED |
| Capacity Management | Awareness and Communication = SATISFIED Responsibility = PARTIALLY SATISFIED Plans/Procedures = PARTIALLY SATISFIED Measurement/Improvement = PARTIALLY SATISFIED | 2 – REPEATABLE |
| IT Service Continuity Management | Awareness and Communication = SATISFIED Responsibility = SATISFIED Plans/Procedures = SATISFIED Measurement/Improvement=PARTIALLY SATISFIED | 3 - DEFINED |
| Change Management | Awareness and Communication = SATISFIED Responsibility = SATISFIED Plans/Procedures = SATISFIED Measurement/Improvement=PARTIALLY SATISFIED | 3 - DEFINED |
| Configuration Management | Awareness and Communication = SATISFIED Responsibility = SATISFIED Plans/Procedures = SATISFIED Measurement/Improvement=PARTIALLY SATISFIED | 3 - DEFINED |
| Service Desk | Awareness and Communication = SATTISFIED Responsibility = SATTISFIED Plans/Procedures = SATTISFIED Measurement/Improvement = LARGELY SATTISFIED | 4 – MANAGED AND MEASURABLE |
| Incident Management | Awareness and Communication = SATTISFIED Responsibility = SATTISFIED Plans/Procedures = SATTISFIED Measurement/Improvement = LARGELY SATTISFIED | 4 – MANAGED AND MEASURABLE |
| Problem Management | Awareness and Communication = SATISFIED Responsibility = SATISFIED Plans/Procedures = SATISFIED Measurement/Improvement=PARTIALLY SATISFIED | 3 - DEFINED |
| Continual Service Improvement | Awareness and Communication = SATISFIED Responsibility = PARTIALLY SATISFIED Plans/Procedures = PARTIALLY SATISFIED | 2 – REPEATABLE |

| | | |
|--|---|--------------------|
| | Measurement/Improvement = PARTIALLY SATISFIED | |
| Overall maturity level of ITIL usage in IT CRM in the company | | 3 - DEFINED |

5 Conclusion

This study, conducted in the paper, show how much a specific company invests in strategic IT assets (capabilities and resources) in order to increase the maturity of IT CRM and quality assurance for IT services. IT services include potential that have an impact on the user assets and achieve the business outcomes. The study was conducted in one of the major companies of the pharmaceutical industry having a very high level of process and ICT development.

According to obtained results, IT CRM in the company, supported by ITIL practices, has the maturity level 3 (defined). It means that majority of business processes in the IT department within the company are documented, have defined responsibilities, required knowledge, conducting measurements and improvements according to the ITIL recommendations. It delivers qualitative and quantitative benefits for the company (service quality, user satisfaction, improved efficiency and productivity, lower production costs, etc.) The overall maturity level of ITIL usage in the company is higher than average of other companies in the country.

However, improvements are needed, especially for the capacity management and continual service improvement- currently on the maturity level 2 (repeatable). Awareness and communication do exist but other criteria are only partially satisfied. Processes should be repeated in order to be measured and improved. In addition, it is very important the management support for the implementation other processes and modules of the ITIL practice. This would increase the overall level of ITIL to CRM.

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