IMPLEMENTING ITIL METHODOLOGY WITHIN A COMPANY. A SURVEY ON 10 ORGANIZATIONS ABOUT THE PRE-IMPLEMENTATION, DURING AND AFTER-IMPLEMENTATION PERIOD

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ABSTRACT

This paper presents and analyses the findings of a multi-case study on ten companies that have recently finished the implementation of the ITIL(Information Technology Infrastructure Library) methodology and provided us a full overview of the entire process, together with feedback on how the business has changed after the ITIL implementation. The study was designed to collect data related to how ITIL was implemented within the organizations, but also how the pre-implementation and post-implementation periods look like. All this information is collected in a structured way with the purpose to find a common approach of the companies that may fit the best for this kind of organizational change.

One of the main questions for this paper is: is there any change management model applied for the ITIL implementation process within a company? This study will partially help us find an answer.

The main research method involved questionnaires in the organizational environment and the persons involved in this research were part of the ITIL implementation processes. The questions addressed are also presented in this paper, together with diagrams and a structured view of all answers received. At the end of this paper are presented some conclusions.

KEYWORDS: *case study, ITIL implementation, methodology, survey*

1. INTRODUCTION

Considering the global competitive pressure, service companies are in continuous search for the best ways to improve the quality of the IT&C cost-effectively, improving customer feedback. Iden (2013) claims that one of the best solutions, in this case, is the ITIL methodology, designed for improving IT&C and improving service quality.

What is ITIL?

According to Gervala et al. (2018), ITIL helps IT departments improve their service quality, including improvement upon project deliverables and time, resource utilization, a decrease in rework, and providing services that meet business, customer, and user demands. The Information Technology Infrastructure Library is a set of concepts for managing IT infrastructure, development, and operations (Jantti & Hotti, 2015). The ITIL methodology is the most accepted approach to ITSM in the world. (Cusick, 2015). Some areas of focus include service support, service delivery adding also features like Infrastructure Management, Application Management, and Risk Management. Image 1 presents the relationship between ITSM and ITIL methodology.

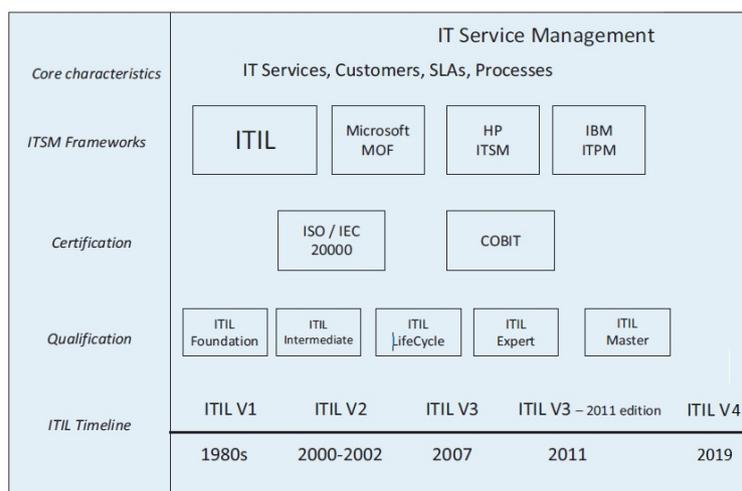[*] Corresponding author. E-mail address: mada.albulescu@gmail.com

Figure 1. Relationship between ITSM and ITIL
Source: J. Iden & T. Eikebrokk (2013)

"ITIL contains 7 core aspects: security management, service support, service delivery, ITC infrastructure management, application management, planning of service management, and business perspective" (Gunawan, 2019). In the following table are presented some of the main processes/functions with a short description.

Table 1. ITIL processes/functions with short description

Process/Function	Description
Incident Management	The process implemented with the scope of "reducing the impact of information service problems" (Lahtela & Jantti, 2010). The purpose of this process is to find a quick solution for the reported problems rather than analyzing the cause of the incident.
Problem Management	"This process is an extension of the Incident Management process and has the scope to analyze the causes of the incidents reported so that the customer loss is minimized" (Mesquida et al., 2012). This way all similar errors will be avoided in the future.
Change Management	This process refers to all providers using methods of assessment, implementation, check, and verification to manage all change operations. (Selig, 2016)
Configuration Management	Controls all service components and defines them so that accurate management is ensured. In this case, "CMDB (configuration management database) is the most important step of the configuration management process" (AlShamy et al., 2012).
Service Desk	This function offers an integrative platform for service providers and users. According to (Cartlidge et al., 2012), "SD is also responsible for fixing easy issues in a short time and helping customers to solve their information-needing problems".

Given the attractiveness of ITIL methodology advantages (reduced downtime, increased efficiency, and productivity), "more and more companies across the world embraced and implemented ITIL" (Egger & Ebner, 2019).

But is this ITIL methodology implementation process truly flawless?

As Orta & Ruiz (2019) present, even if there are a lot of consulting companies that help an organization start and proceed with the ITIL implementation process, "lots of managers decide to take this action internally and organize it with internal resources, with no external help". One of the main scopes of this paper is to highlight all difficulties encountered by the companies that took part in our questionnaire, during this organizational change. Besides this, in the paper is also presented information regarding the before and after the implementation process, providing us the improvements felt by the company's managers.

2. CASE STUDY DESIGN

This case study included 10 companies from different domains, with a different number of employees, all of them having the ITIL methodology implemented in the last 5 years. As mentioned in the introduction, the main method of interviewing for this study case is the questionnaire. For this study case, the questionnaire presented to the companies contains 4 parts. The first part includes the main information about the company (name, domain, seniority, the role of the person responding to the questions, and the period of the ITIL implementation process).

Further, the next part highlights details about the period before the ITIL process and includes questions regarding the reasons for the ITIL implementation, if the implementation was a reactive or proactive decision, etc.

The third part of the questionnaire focuses on the specific implementation process, with all details needed: difficulties, way of handling them, first processes/functions implemented.

Ending the questionnaire, information is collected about the current status of the ITIL processes within the company, together with feedback on how did ITIL methodology met the expectations.

All the persons who responded to the questionnaire are current employees of the organizations and were somehow involved in the ITIL methodology implementation entire process, so they have a full overview of the entire process, including the before and after the implementation period. At this form answered 5 IT Directors, 2 Service Delivery Managers, 2 Operations Managers, and 1 Project Manager.

Because of confidential terms, the name of the companies is unknown, so there will be used dummy names from A to J to represent them. The domain, seniority, and several employees of the companies are summarized in figures 2, 3, and 4.
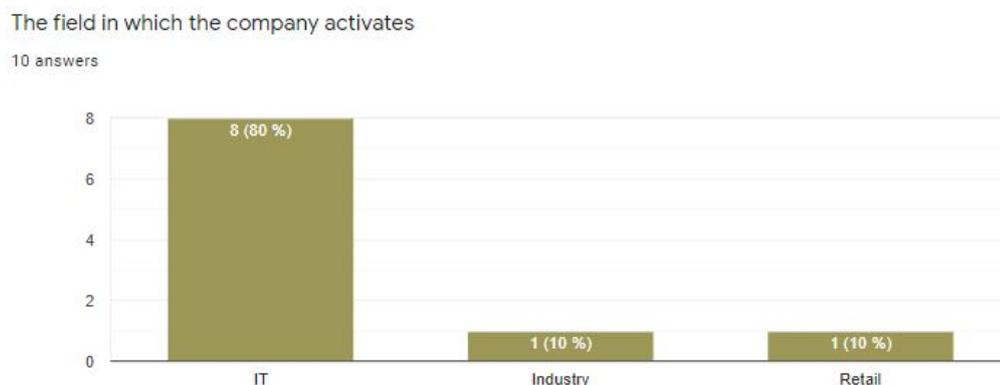

Figure 2. Company domain

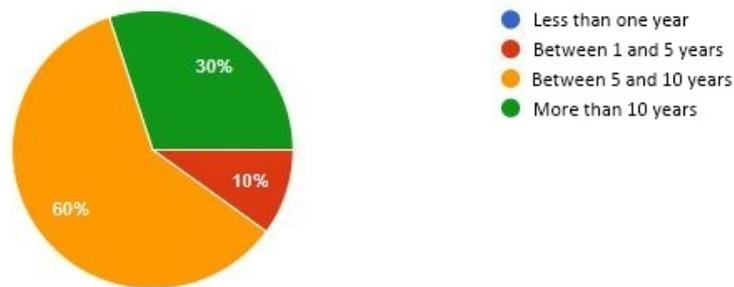Since when is the company active in the market?

10 answers

- Less than one year
- Between 1 and 5 years
- Between 5 and 10 years
- More than 10 years

Figure 3. Company age

How many employees does the company have?

10 answers

- Less than 50 employees
- Between 50 and 100 employees
- Between 100 and 500 employees
- Between 500 and 2000 employees
- More than 2000 employees

Figure 4. Number of employees

There is an interest in interviewing companies that implemented the ITIL methodology some time ago, to have an overview of the entire process and some feedback after the implementation. Therefore, the timeframe for the ITIL methodology implementation process for the companies included in this questionnaire is 2016 (start) – 2019 (end).

3. FINDINGS AND DISCUSSIONS

As mentioned in the previous chapter, 10 companies joined this questionnaire, all companies having the ITIL methodology implementation process finished. 8 out of 10 companies belong to the IT domain, 1 company is active in the industry domain and 1 activates in the retail domain.
Out of all companies interviewed, there is only one case where the implementation of ITIL methodology lasted approximately 2 years. The average period of this process is one year.
As described, after the introduction part of the form, where some general aspects are covered, such as the domain, the number of employees, implementation period, the questionnaire continues with 3 parts: pre-implementation period, during implementation, and post-implementation period.

3.1. Pre - implementation period
Taking into consideration that all companies are part of active domains and dealing with big competitors, this part of the questionnaire starts with the main focus points of the organizations. After all answers, the most common interests are customer feedback, short response time, and service quality. These three interests were named by all companies' parts of this form. Because usually, ITIL comes as a solution for different problems, it is a curiosity to know which were the main pain points within the companies that represented a problem in achieving the targets. It is

interesting to find out that the long response time, the big number of incidents reported by the customer (which leads to bad customer feedback), missing documentation, and weak coordination between teams were mostly named as primer problems faced by the organizations during the ITIL pre-implementation phase.

Having a clear image of both targets and problems, another aspect highlighted within the questionnaire was if the ITIL implementation process was part of a reactive or proactive strategy. Six out of ten companies planned this implementation as a reactive action, as we can see in figure 5.
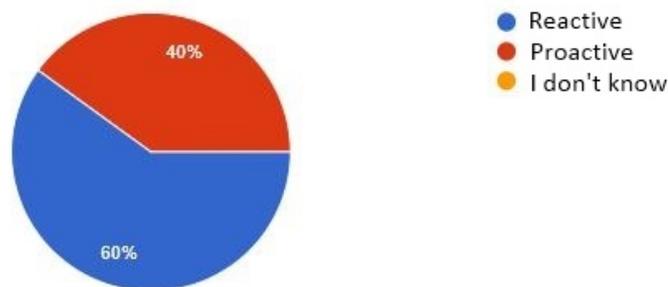
Figure 5. Reactive/Proactive decision

Also, 2 out of 10 companies described the ITIL implementation process as part of an ISO certification, while 8 companies implemented ITIL as a strategic move for the business development.

Even if the ITIL methodology was not implemented yet, there was a chance that some companies may have some ITIL processes in place. So, there is a question about what ITIL processes were already functional before the official ITIL implementation process. 3 companies stated that they had the Incident Management, Change Management, and Configuration Management processes applied, but not following the ITIL principles.

3.2. ITIL implementation period

Because the companies can find support from consultants when it comes to ITIL implementation, it was interesting to know if there were other external parties involved in this process. None of the interviewees requested help from other groups or firms for this process. More than that, the implementation, in all cases, was initiated by the management team (or global management team when in the case of multinational firms).

As mentioned in the introduction, the study is focused also on the possibility to point out a change management model approached by any company for the ITIL implementation. From our responses, this process was initiated after long discussions and preparation, but without following any change management model. No company from our interview followed any change management model for the ITIL implementation, as summarized in figure 6.
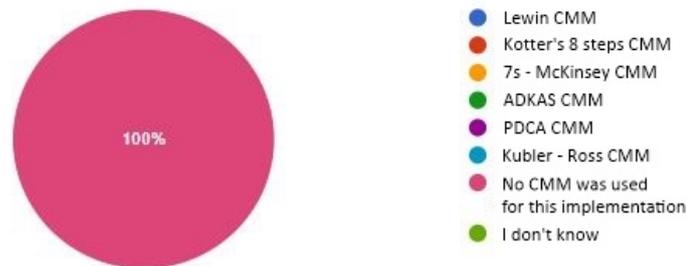
Figure 6. CMM used for ITIL implementation

As we know, a methodology does not need to be implemented entirely within a company to make a difference. Also, when it comes to ITIL, for a company some processes may not be necessary. In this direction, the first interest was to see which the functions/processes were requested for implementation. As we can see in figure 7, Incident Management and Change Management processes together with Service Desk function were required by all companies involved in the survey. Because some of the processes (for example Change Management) figure as already applied before the ITIL strategy, they were again selected for implementation to centralize them and adapting to the new structure.
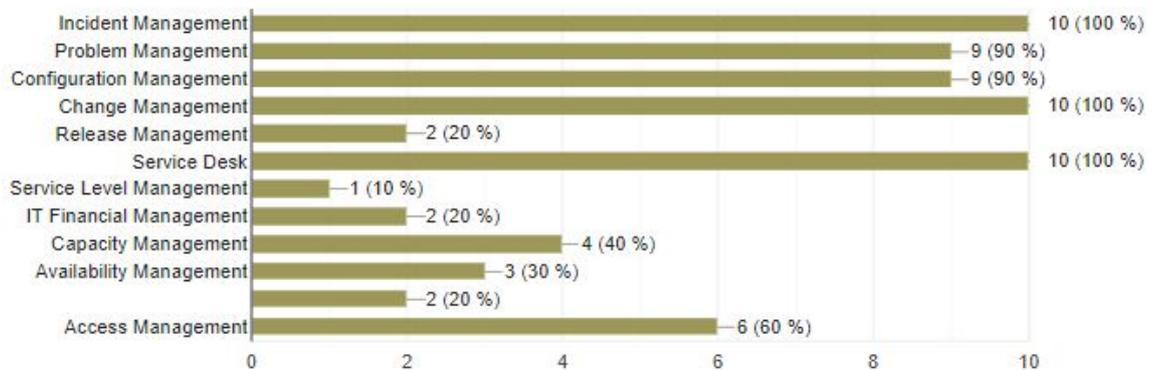

Figure 7. Processes selected for implementation

Even if such a big step as the ITIL implementation can be addressed in different ways, some approaches are similar. For example, the first 3 teams involved in this process were, in all companies, the team management, support and service delivery management teams.

In all cases there was a need for recruiting new colleagues, because new roles were created. Also, all companies faced employee's reticence to this change and all of them tried to solve this using trainings and regular meetings for current status and extra information when needed.

Besides the employee's resistance, the ITIL methodology implementation process brings some common struggling reported by most of the companies' part of the questionnaire. Figure 8 and 9 illustrate the difficulties faced by the companies during the implementation process.

What difficulties were encountered within the company during
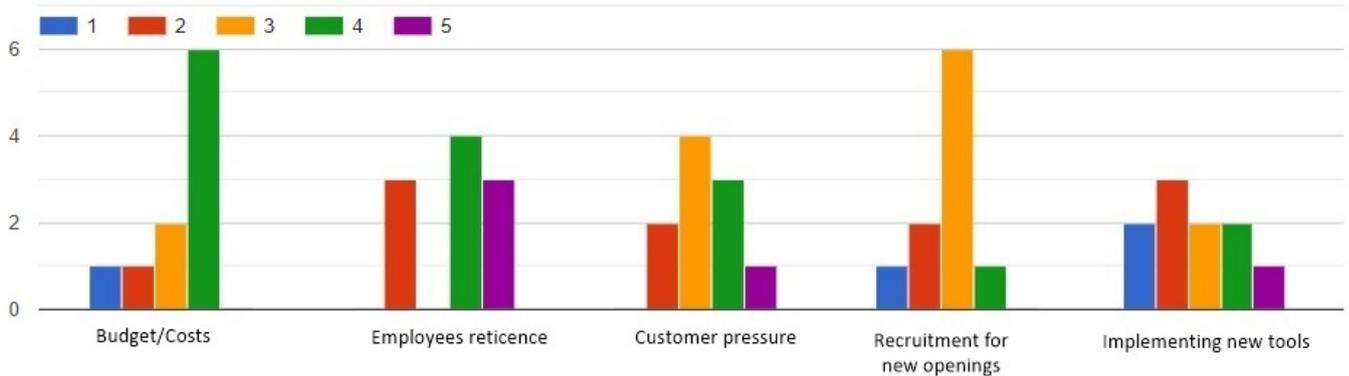the ITIL implementation process? (1 - rarely met, 5 - frequently encountered)

Figure 8. Challenges during implementation part 1

What difficulties were encountered within the company during
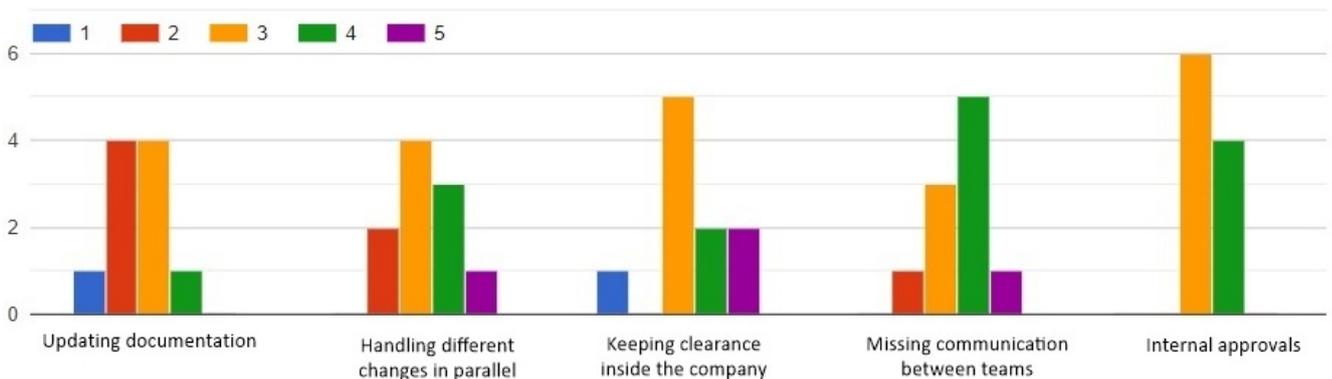the ITIL implementation process? (1 - rarely met, 5 - frequently encountered)

Figure 9. Challenges during implementation part 2

One of the issues mentioned by most of the companies is the budget/investment. The ITIL implementation needs big support from the management team when it comes to funding. Costs represent a problem especially when the initial estimation was exceeded and there is a need of completing the investment. When it comes to this, managers tend to be restrictive. This is because the implementation of the ITIL methodology does not bring improvements from one day to another, and since the corrections are not visible in a short time, the management is skeptical to invest more money or resources. Another pain point reported by the companies is the reticence of the employees when it comes to new business approach. This aspect represents a problem from many points of view: first is the fear of having a new way of work, new processes and new documentation. The second aspect that creates employee's reticence is caused by the group's interests. The ITIL implementation requires long term battles in terms of cross departmental negotiation. The final reason highlighted is the fear of working more. Because ITIL methodology does not have an immediate effect, the implementation and keeping the current business flow in track need to go in parallel. This way, the workload increases, and the employees tend to be reticent. Considering the challenges faced during the implementation process we can relate that the smaller companies experienced issues regarding budget, fear of losing clients and approvals.

3.3. Post-implementation period and current status

The final part of the form starts with an overview of the current situation of the ITIL processes and functions.

Even if all companies that took part in the questionnaire have the ITIL implementation process finished, there are some phases that are still ongoing as declared in the following images. This is mostly because the phases are still part of an improvement action.
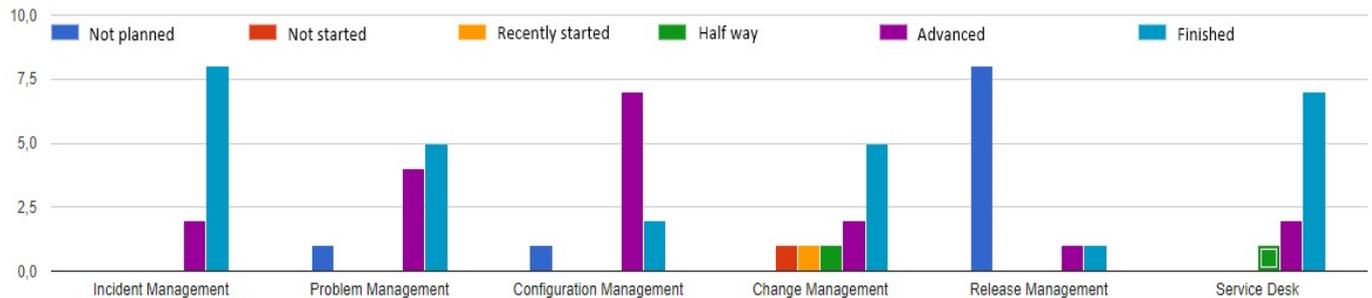
Figure 10. Status of implementation part 1

Figure 11. Status of implementation part 2

The improvements that ITIL brings into the company are visible at different levels such as service quality, visibility, and responsiveness, but when it comes to reliability, sympathy, durableness, all these are defined by customer's perception and intuition. In this questionnaire, most common ITIL benefits found in the literature are presented and asked the interviewees to rate them using a scale from 1 to 5, where 1 is the least and 5 is the most rated. The following image summarizes the feedbacks.
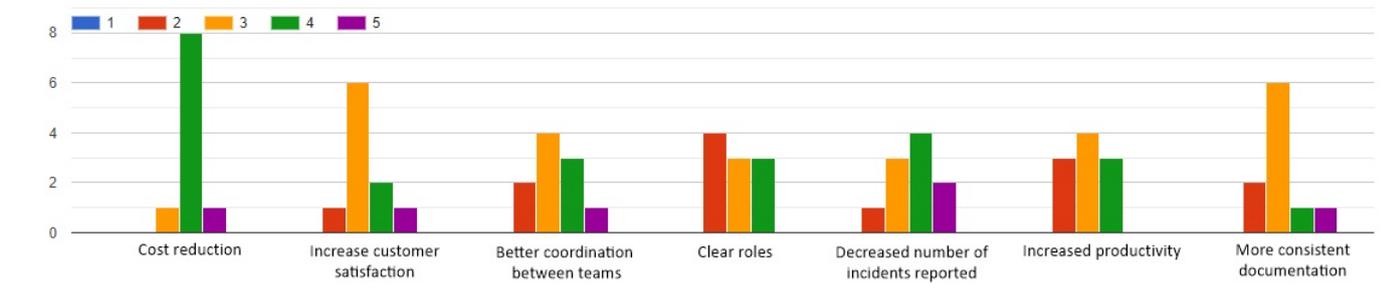
Figure 12. ITIL benefits

In the fourth part of the survey, I asked which the main key success factors were. The top 3 key success factors mentioned by the companies were: management support, dedicated teams for the implementation process, and good project tracking.

Overall, many of the companies stated that the ITIL implementation process exceeded the expectations. Most interviewees felt that the ITIL method simplified the existing way of working and processes which lead to maximizing the company resources.

Because all companies that took part in the survey have finished the ITIL implementation process some time ago I haven't received any answer from the category "Too early to answer". Figure 13 summarizes the answers to the final question.
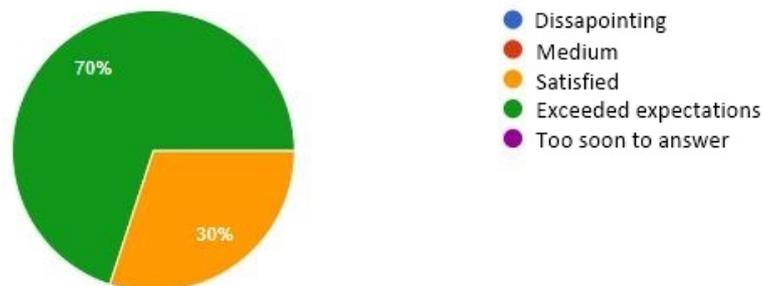

Figure 13. Final feedback

4. CONCLUSIONS, LIMITATIONS AND NEXT STEPS

The ever-increasing customer demands and the heightened global competition necessitate a re-examination of the role that an improved IT service process pays in creating business value and shaping a firm's competitive capability.

"The ITIL implementation process can bring many challenges for the company" (Gunawan, 2019). Even if these challenges can belong to several categories, most of them can be overtaken with classical approaches such as communication, training, and documentation.

This research points out the fact that ITIL implementation is not a simple process and requires resources, time, and employee commitment. Even if there is no change management model approach within the companies that took part in the survey there can be proposals. One of the limitations of this research is the small number of companies interviewed. Processing the information from these ten companies the data cannot be generalized. Another limitation of this research represents the companies' activity domain. Most of them activate in the IT domain, there is a chance that when it comes to other different approaches can fit other domains. This research is focused on companies in the private sector.

As the next steps, companies from the public sector can be approached.

Because I couldn't identify a change management model used by the companies part of our survey a next step can be a proposal in this area. In order to suggest a change management model that fits the best for the ITIL implementation process, there is a need for an extended survey in which more than fifty companies should participate.

REFERENCES

AlShamy, M. M., Elfakharany, E. & ElAziem, M. A. (2012). Information Technology Service Management (ITSM) Implementation Methodology Based on Information Technology Infrastructure Library Ver.3 (ITIL V3). *International Journal of Business Research and Management (IJBRM), 3,* 91.

Cartlidge, A., Rudd, C., Smith, M., Wigzel, P., Rance, S., Shaw, S. & Wright, T. (2012). *An Introductory Overview of ITIL® 2011*. Norwich, England: The Stationery Office.

Cusick, James J. (2015). Business Value of ITSM – Requirement or Mirage? *IEEE Computer Society*. NY, USA.

Egger, G. & Ebner, M. (2019). Modern IT-Infrastructure and IT-Managment in Small and Medium Enterprises. *Global Journal of Computer Science and Technology: G Interdisciplinary Volume 19 Issue 2*. Global Journals.

Gervala, M., Preniqi, N. & Kopacek, P. (2018). IT Infrastructure Library (ITIL) framework approach to IT Governance. *IFAC Conference*. Wien, Austria.

Gunawan, H. (2019). Strategic Management for IT Services Using the Information Technology Infrastructure Library (ITIL) Framework. *International Conference on Information Management and Technology (ICIMTech)*. Jakarta/Bali, Indonesia, pp. 362-366, doi: 10.1109/ICIMTech.2019.8843711.

Iden, J. & Eikebrokk, T.R. (2013). Implementing IT Service Management: A systematic literature review. *International Journal of Information Management*, 33 (3), 512– 523.

Jantti, M. & Hotti, V. (2015). *Defining the relationships between IT service management and IT service governance*. New York, USA: Springer Science – Business Media. Doi: 10.1007/s10799-015-0239-z

Lahtela, A. & Jantti, M. (2010). Implementing an ITIL-based IT Service Management Measurement System. *Fourth International Conference on Digital Society*. Kuopio, Finland.

Orta, E. & Ruiz, M. (2019). Met4ITIL: A Process Management and Simulation-based Method for Implementing ITIL*, Computer Standards & Interfaces, 61*, 1-19. doi: 10.1016/j.csi.2018.01.006.

Mesquida, A. L., Mas, A., Amengual, E. & Manzano, J. A. (2012). IT Service Management Process Improvement based on ISO/IEC 15504: A systematic review. *Information and Software Technology, 54 (3),* 239-247.

Selig, G. J. (2016). IT Governance-An Integrated Framework and Roadmap: How to Plan, Deploy and Sustain for Improved Effectiveness. *Journal of International Technology and Information Management, 25 (1),* Article 4. Retrieved on June 15, 2020, from: http://scholarworks.lib.csusb.edu/jitim/vol25/iss1/4