

Development and benefits of automatized reporting in a performance tracking tool

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Abstract <p>With the appearance of shared service centers efforts are constantly made to improve the area of performance measurement so that reliable and meaningful data can be transferred to the organizations being served by these shared service centers. As the demand for performance measurement is increasing, the need for reliable automated tools that can handle large amount of data is also increasing.</p> <p>The objective of this research was to assess the current situation of performance measuring in a particular company as well as to explore the opportunities for automation of performance measurement by analyzing current advantages and disadvantages of KPI and SLA reporting within the organization where the case study was carried out. Automation being an important feature of reporting tools, the reasearch attemts to explore the level of automation of the diverse performance measurement tools used within the case company.</p> <p>A combination of qualitative and quantitative research methods was performed. The qualitative research was conducted in the first phase with 8 participants who were interviewed individually. The interviews were conducted with leaders and process managers heavily impacted by performance measurement activities. The first phase was followed by a quantitative phase for which a questionnaire was designed based on the preliminary analysis of the qualitative phase. A total of 47 respondents filled in the online questionnaire.</p> <p>The results of the qualitative and quantitative phases were analyzed in different chapters, their findings however were continuously compared and cross-referenced to give the readers a comprehensive insight into the findings of the research study. The results of the research were visualized with graphs wherever possible for easier understanding.</p> <p>As a conclusion an implementation strategy was formulated on how to automatize performance reporting in the case company.</p>		
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1 Introduction

1.1 Importance of performance reporting, reporting automation.

When we start talking about performance reporting and automation of performance reporting, first we have to understand just what it means and why it is being used in the corporate world. According to Business Dictionary (Business Dictionary) a performance report is a detailed statement that measures the results of some activity in terms of its success over a specific time frame.

In order to fully understand performance reporting, we have to take a look at what are the things that we can actually measure and how can we do that. First of all, we have to understand what is the action that we call measuring. According to Spitzer (2016) we spend a lot of time every day measuring things. In fact we are almost always measuring something, such as date, time, weight, speed, temperature etc.. These are common everyday examples that every single person does in their lives, but whenever we are talking about a workplace and the work life, there is even more to be measured and we are practicing this ability more than outside of work. We have the ability to measure almost everything that is around us, but in many cases, when it matters the most in the working life, we are not utilizing this powerful ability to its fullest.

“Measurement always improves performance.” (Buckingham & Coffman, 1999)

From the above information and literature we can get an idea of just how important measuring performance is and to be familiar with different indicators of performance. Reporting on performance indicators is essential to improve the quality and to identify gaps in different processes. It is also a great baseline to set targets, goals for a certain coming period in order to reach a better result and better efficiency.

As the aim of this study is to develop the automation of performance reporting in a tool that is capable of tracking the performance of different workflows, processes, it is also important to get familiar with automation in general and automation of reporting. Automation in general is quite self-explanatory.

1.2 Business Support Centers

With the appearance of business support centers, also called as shared service centers, performance measurement became a focal point for many businesses. In most of the cases the reason for establishing shared service centers is cost reduction, therefore it is highly important to operate on an optimum level price-wise.

Continuous process improvement is greatly important in a shared service center and as the basis of improvement is the data that shows where an organization, a team or a certain individual is at the moment, obtaining data through performance reporting is highly important. There are numerous tools already available on the market for measuring performance and many companies also try to develop their own tool, so that measurements are customized for their specific needs. The company I work for also decided to develop a tool to track certain areas of performance. In the later chapters of my thesis I'll attempt to introduce this particular tool, the need behind it and the opportunities it brings.

1.3 Research Objectives and Questions

The aim of my research was to understand the attitude towards performance measuring both from the side of the management and from the side of the employees.

The questions I wish to answer by the end of this study are: What is the attitude towards performance measurement within my company? What are the obstacles that prevent automation of performance measurement in my company at the moment? What are the opportunities in automation of performance measurement in my company?

I conducted both a qualitative and a quantitative research in order to find relevant and exhaustive answers to my questions. During the qualitative phase I conducted 8 in-depth interviews with leaders, managers and process specialists within my company and I designed the questionnaire based on the input they provided. A total of 47 employees of my company filled in the quantitative questionnaire that was distributed through department managers in the form of a link that led to a Google Survey page.

1.4 Case Company

I chose to carry out a case study within the organization I work in. The company operates within the FMCG sector and has shared service centers in multiple locations across Europe. I believe that this company is an ideal candidate to be the case company, as continuous improvement is an important value here and there are dedicated teams working on improving the processes, including the process of performance measuring.

Following a thorough analysis of the existing performance measurement tools used across the organization, we decided to develop and introduce a new tool customized for the needs of my organization. I will discuss the benefits of this tool and how I believe it helps the automation efforts and thereby more efficient performance reporting within my company.

2 Theoretical Framework

2.1 Shared service centers and their performance indicators

According to the Shared Services Handbook published by Deloitte, companies have been implementing shared service centers since the 1980's because it is apparent to them that these centers help them reduce their costs, improve their control and service levels as well as add strategic value to the company (Moller et al, 2011).

As Tanya Bondarouk (2014) points out, in the majority of the cases shared service centers are tasked to carry out certain services for a business unit of the company. It is important to set up appropriate Service Level Agreements, also called as SLAs between the business unit and the shared service center delivering the desired service. (Bondarouk, 2014) According to Bryan Bergeron (2003), these Service Level Agreements are legally binding, as they are involved in the contracts between a given shared service center and the business unit it delivers the services to. Having the Service Level Agreements in the contracts is particularly important in a company where management is about to be downsized, as the SLAs will always remain in the con-

tracts even after the people who agreed on them had left the company (Bergeron, 2003)

Service Level Agreements are however not the only important measuring units in the life of a shared service center. Performance is often measured by Key Performance Indicators, also known as KPIs. It is important to note that SLAs and KPIs are different in nature. As defined in the Shared Services Handbook by Deloitte SLAs define the relationship between a service center and the business unit that ordered its services and an SLA is likely to contain several key performance indicators. (Moller, et al, 2011)

Both KPI and SLA results are greatly important in case of shared service centers, Ernst and Young lists both the monthly reporting of KPIs and the recognition of employees based on KPIs among the steps they recommend in order to increase performance in a shared service center. (n.a., 2013)

2.2 Performance measurement and automation

But how can a company determine what data should be measured by KPI and SLA results? According to Bryan Bergeron the performance indicators of a shared service center should be based on the performance of the parent company, the standards in the given industry and the competitors (Bergeon, 2003).

In David Parmenter's (2010) words 'KPIs represent a set of measures focusing on those aspects of organizational performance that are the most critical for the current and future success of the organization'. As Parmenter (2010) points out, KPIs do not measure monetary results, they are being measured often, they are monitored by the management team, it is important that all employees in the organization understand them, it provides a sense of responsibility for teams and individuals and it has a significant and positive impact. Parmenter (2010) firmly believes that KPI reporting has an essential impact on the overall performance of the company, therefore KPI reporting needs to be as frequent as necessary. In his view this is very important because improvement can only occur if decision makers are promptly informed about areas of improvement and gaps in the processes or performance (Parmenter, 2010).

Although Key Performance Indicators normally do not measure monetary data, a failure of achieving the KPI targets can often lead to loss of money for an organization. I would like to provide some examples here from my own organization.

2 of the most important Key Performance Indicators within our Logistics Department are Delivery On Time (DOT) and Delivery In Full (DIF). The values here are measure in percentages and on a weekly basis. While these KPIs do not directly measure monetary values such as delivery costs or cost of delays, a failure to reach the DOT or DIF results imply significant monetary loss. A DIF value of 85% means that 15% of the deliveries contain products that have to be re-delivered and that incurs significant additional costs. Similarly, while DOT results only show how many of the deliveries were on time and not the delay costs themselves, a DOT value of 85% percent implies that 15% of the deliveries potentially incurs delay costs.

Failure has a cost and this fact is widely recognized by companies. More and more organizations strive to create a so called Lean environment whose aim is to ensure that enough attention is given to gaps in quality of products or services in order to avoid Cost of Poor Quality.

2.3 Cost of Quality

Omachonu and Ross (1994) divide the Cost of Quality in four categories: prevention, appraisal, internal failure and external failure. In the category of Prevention there are all those activities that can be done in order to prevent quality failure such as planning, training or production review. Appraisal costs occur while assessing a product or service when it is ready but before it gets to the customer, such as the cost of inspection. Internal failure occurs during the production while external failure occurs when the product or service was already handed over to the customer. It is important to note that apart from the cost of replacing a faulty product or repeating an unsatisfactory service, there is a less measurable but very significant monetary loss that can occur as a result of customer dissatisfaction (Omachonu and Ross, 1994).

Harrington (1987) offers a similar yet somewhat different and more detailed classification of poor quality costs. Firstly, he identifies two main categories, the direct and indirect costs. There are three further subcategories both within the indirect and in

the direct category. When it comes to indirect poor quality costs, he identifies controllable and resultant poor quality costs. Controllable costs refer to those occurrences that can be influenced by the management. The controllable costs consist of prevention and appraisal costs. Preventive costs refer to the cost of all those actions that are carried out so errors and mistakes can be prevented. Quality assurance efforts, trainings, conducting surveys are all examples for preventive costs. Appraisal costs on the other hand are related to actions aimed at the product or service that was already done. Audits, inspections or testing are examples for appraisal costs. XY points out that while preventive costs can be seen as investments rather than losses, as they are in place to ensure that products or services are not faulty when reaching the customer, the next category, the Resultant costs are direct losses to the company. The resultant costs consist of internal and external error costs. When an internal cost occurs, a faulty product or service does not reach the customer but it incurs extra cost for the company, as it typically has to be scrapped, redone or repaired. External costs on the other hand are related to customer complaints. The range of this cost varies between the cost of complaint handling and complex liability suits.

As for the indirect poor quality costs, the three subcategories are customer-incurred costs, customer-dissatisfaction costs and loss of reputation costs. All of these can heavily influence the customer's purchasing behavior in the future and consequently can result in lost opportunities, in other words, lost income for a company.

Harrington (1987) argues that putting a price on quality-related issues can greatly contribute to improvement efforts, as often management only starts dealing with an issue when they see how much it actually costs the company. When not being monetized, quality can be seen as an abstract concept and can be dismissed as such. According to Harrington it is also important for the employees to see the financial impact of errors, as it helps them have a better idea about the real consequences of poor quality. Furthermore, when measured accurately, these results can be the basis for initiating corrective actions and changes that will then lead to creating better quality.

As seen from the above classification, both achieving great quality and failing to achieve great quality comes at a cost. Sower and Quarles (2007) suggest that the distribution of the costs between these the above categories varies as a company

matures. He points out that initially a company will face costs resulting from external and internal failure, then more investment is made in the appraisal and internal failure categories and at the same time cost of poor quality resulting from external failure decreases. Eventually companies tend to incur the most cost in the prevention area out of these four categories.

Although it would seem logical to aim for perfection when delivering a product or service, Juran and Godfrey (1998) point out that striving for perfection has not always been the case. When considering all the investments that a company needs to make in order to prevent defects and comparing it to the cost of poor quality that results from failure, it is possible that aiming for perfection is not the optimal economic decision, especially on the short run. However, Juran and Godfrey suggest that on the long run perfection should be the goal. Among the industries where the demand is high for perfection, Juran and Godfrey mention highly automated industries. According to him automation makes it economically feasible to achieve perfection.

As I can see in the company I work for, automation occurs in many of the activities where cost of quality is concerned. One of the greatest benefits of automation, as will also be seen in my research results, is the elimination of human errors. Eliminating human errors works as a preventive action, services or products can reach the end users in a perfect condition this way. Automation can also serve as an internal quality cost, by being a tool for quality assurance by measuring quality of products or services that are already done. Through automation it is also possible to measure external costs, such as the ratio of faulty deliveries or invoices. In these cases automation can serve as the driver of improvement efforts.

Juran and Godfrey (1998) point out that performance measurement can be very different in different companies, as their focus may vary. For any company that wants to establish a reporting system, it is a very important step to establish a framework in which the results will be understood by all employees and stakeholders.

2.4 Nature and role of ISO standards

Hoyle (1998) also agrees that most companies develop their own ways of working, as they are the ones who know their customers and their customer's needs. However,

ISO was introduced as an international standard to ensure good performance of products and services through continuous improvement. Hoyle lists the 5 basic assurance requirements of ISO 9001, the first of whose is the demonstration of commitment to quality. The second one is that a company demonstrates that it can motivate its employees, so they can work to meet the customer's needs. The third one is that the company understands the needs of its customers and can also translate those into measurable objectives. This is the point where the need for performance measuring and reporting clearly appears. According to the 4th point the company needs to have an effective system where the different processes work together in order to ensure the objectives of the company are met. Finally, according to the 5th point the company needs to demonstrate that it can achieve the objectives according to the measurements.

We could see in earlier chapters that even non-monetary performance indicators can imply significant monetary loss, and in this chapter we can see that quality is in fact so important in our world that an international standard has been set up to ensure commitment to quality. Given these, it is clear why companies pay so much attention to the measuring and monitoring of Key Performance Indicators as well as to continuous improvement.

In the company I work for continuous improvement is of very high importance, and this was an important factor when I chose to carry out my case study within this organization.

3 Research Approach, Data Collection and Analysis

In the following chapter I am going to discuss the the research methodology I have chosen in order to obtain answers for my research questions. I will provide an explanation as to why I have chosen the given research methodology and I will present my sampling and data collecting strategy. Like many research, my own also had certain limitations that I will discuss along with the research ethics I followed. Besides the written analysis of my findings I will strive to help understanding of the findings by visualizing them through charts and graphs. I will introduce my chosen analytical tools, namely Google Survey that I have used for collecting data and basic

visualization and Excel that I have used for more detailed analysis and visualization. I will introduce the Sequential Exploratory Design methodology that I chose as my research approach. I will discuss the use of the analytical tools I chose, namely Google Survey for basic analysis and Excel for more detailed analysis and visualization as well as the process of conducting the in-depth interviews.

I will close the chapter with a summary that sums up the process of the research and the research results.

3.1 Research Approach

When conducting the research, I used a combination of quantitative and qualitative research methods. Given the topic of my research I found it important to first collect qualitative data from those key stakeholders and decision makers that are the most familiar with performance reporting and the use of different tools within my company. Therefore, I chose to use the Exploratory Sequential Design in which qualitative data is collected in the first phase of the research, followed by the testing of the results obtained in the first phase in a second phase, the phase of quantitative research. (Creswell and Clark, 2007). The Exploratory Sequential Design begins with constructivism given that the first phase is the qualitative phase then continues with positivism so that the quantitative phase can occur (Watkins, Gioia, 2015). This research approach was highly beneficial in my research, because in the first phase I could collect information regarding performance management from those who are mostly involved in these activities within the company. For obtaining this information I used in-depth interviews that were mostly carried out with the help of the internal instant messaging function, given the varying geographical location of the respondents. Based on the information I gained during the qualitative phase, I constructed the questionnaire for the quantitative analysis. It was important for me to create a questionnaire to which all employees impacted by performance measurement can relate to, regardless of their seniority level, the position they hold or the department they work in.

As Watkins and Gioia (2015) point out in their study, using the Exploratory Sequential Design can be time-consuming, as the 2 phases cannot run in a parallel

manner. Knowing this I scheduled the in-depth interviews well in advance, so I had time to conduct a preliminary analysis of the qualitative results before designing the questionnaire for the quantitative phase.

3.2 Data Collection

As detailed above, my research consisted of two different phases: the qualitative phase and the quantitative phase.

In the qualitative phase I reached out to those colleagues of mine that are mostly impacted by or have direct impact on the performance measurement effort of the company given their position as managers, leaders, project managers or continuous improvement experts.

As the respondents whom I have chosen to participate in my study are located in different countries and even their time zones vary, organizing a focus group discussion would have been inconvenient, therefore I opted to conduct individual in-depth interviews. Most of these interviews were conducted using the instant messaging system of my company. This gave me the opportunity to have a real time discussion and to follow up on individual opinions instantaneously. In order to be able to guide the conversation while also give the respondents the opportunity to express their opinion freely and come up with new thoughts and aspects, I chose to conduct semistructured interviews in which I used a set of previously formulated questions while allowing the discussion to take its natural course depending on the answers of each respondent (Hesse-Biber et al, 2006).

Following a preliminary analysis of the semistructured interview results, I designed the questionnaire for the quantitative phase. My aim was to design a questionnaire that most employees in my organization can relate to irrespectively of their position or department they work in. Indeed, it was my goal to gain insight from various departments and from people with diverse level of seniority within the company. As my topic is fairly sensitive and I knew that classified information can come up among the answers, I chose to reach out to department and team leaders and asked them to cascade the questionnaire to their teams, making sure that my data collection complies with ethical requirements as well as handling of sensitive and classified

data within the company. Besides this I ensured all leaders and participants that data collection is voluntary and the answers I receive remain anonymous and confidential. Transparency towards respondents as well as ensuring anonymity and confidentiality were the major ethical guidelines I adhered to during data collection as well as during the analysis of the research results.

As my research was conducted within one company, the major limitation is that the research results are limited to the case company where I chose to carry out my research. I find it important to emphasize that my research results are not representative to the shared service centers as a phenomenon, only to the particular company where I carried out the research.

When choosing the tool to carry out the quantitative research, I opted for Google Survey. I find that this tool can be accessed easily by any respondent, it is user-friendly and it provides multiple opportunities as to type of questions and answers. The tool also provides helpful analytical tools as well as visualization options. I could easily follow up on the progress during the data collection period, having the option to view individual as well as summarized results.

When analysing the research results I also used Excel for I could carry out more advanced calculations and I could customize visualization.

3.3 Implementation of the Research

While the identity of the respondents are strictly confidential, the research results will be shared with the teams responsible for improving performance management within my company. I'm hoping that my research can provide meaningful input to several departments within the organization, as respondents have a highly varied background. Management and continuous improvement teams can use my research results in various ways. It can be beneficial to understand employees' attitude towards performance management, more specifically towards the KPI and SLA reports based on which individual and team performance is measured. Understanding the attitude towards these reports can help management in their communication with regards to performance management.

On the other hand, understanding what employees consider advantages and disadvantages can help improving the tools that are currently being used for performance tracking within my company.

I strived to understand the limitations as well as the opportunities of the current performance measurement tool, so using these as a baseline I could assess the current and future opportunities for improving automation.

3.4 Data analysis

Data analysis happened in multiple phases. In the first phase I carried out a preliminary analysis of the in-depth interviews, based on which I could design the quantitative questionnaire. During this stage I didn't carry out a detailed analysis, instead I focused on those patterns that I could use for designing the questionnaire.

Given the time of the year and the vacation period, I decided to allow for a 2-week-long time window while the quantitative research questionnaire was open for respondents. During these 2 weeks however, I started the deeper analysis of the in-depth interviews that I already had on hand at this stage. I consider this the second phase of my data analysis.

Finally, I closed the questionnaire and started analyzing the quantitative results. While doing so, I continuously compared the quantitative results to the answers I obtained during the qualitative stage, thereby ensuring to fully benefit from the combined research methodology.

When analysing the quantitative data, I used the analytical features provided by Google's platform as well as Excel. Although Google Survey provides visualization options, I personally prefer the more customizable options of Excel, therefore I used Excel for creating all the charts and graphs. As for the calculations of the quantitative results, while Google provides calculations too, again I prefer Excel given the several functions it provides. Analysing data in Excel gave me more options than Google, such as being able to quickly calculate not only the mean but also the median results when necessary.

4 Research Results

4.1 Qualitative phase

I chose to use the Exploratory Sequential Design as the research methodology for my thesis, hence in the first phase of the research I conducted in-depth-interviews. The respondents were carefully chosen based on their position within the company. It was important for me to find respondents who are deeply involved in performance management, either as department leaders regularly following up on the performance of their team or process managers being in charge of improving the process of performance management within the company.

4.1.1 General findings

It is apparent that all the respondents find performance measurement highly important within the life of a shared service center. Being managers and process specialists, these respondents have an active relationship with the business for which the shared service center provides the services and that impacts their approach towards performance measuring as well. They consider KPI and SLA reports to be important not only in measuring individual or team performance but also measuring the performance of the shared service center as such. Generally the respondents of the qualitative phase look at performance measurement as a tool that not only displays the result but also actively contributes to determine areas for improvement when necessary.

As a way of summarizing the qualitative findings I prepared a table that will also be followed by quotes directly and literally cited from the respondents.

Advantages of performance measuring	Challenges in performance measuring
<ul style="list-style-type: none"> • ensuring that the service will happen as expected and agreed • provides visibility to stakeholders • immediate isualization of results • helps keeping track of the company's performance • helps setting clear and measurable targets • helps identifying and addressing gaps • has a key role in decision making • drives improvement on individual, team and company level • helps leaders assessing the performance of their team members • automation of performance measuring can decrease additional workload resulting from performance management activities 	<ul style="list-style-type: none"> • not sufficient when used as the only way of measuring performance • more suitable for measuring quantifiable performance but not necessarily suitable for measuring quality of service • difficult to measure human factors such as attitude and communication skills • measuring performance data incurs additional workload in teams and leaders • automation of performance measuring can lead to less customizable outputs

The following quotes summarize the respondents' general views very well:

'They are necessary in a business support environment because they can ensure that the service will happen in the adequate level and quality. It is important that the stakeholders would have the visibility on these levels and from the results it is immediately visibly if some attention is needed on an area.'

'I believe that KPIs help to track the company's performance. To set clear and measurable targets, to get regular feedbacks on how the company is performing vs the targets and take actions accordingly where needed. To benchmark, to identify new opportunities and to open the gap.'

'We are living in the shared service era where the leaders need to consider lot of factors where they are moving the services. The costs are a huge driver but performance can make a key role in decision making as well'

'It is really important. Without knowing the performance of my team I cannot make any improvements. Without a performance I don't have any baseline, any data I can compare my team to other teams or I can compare my team members to each other. I would not know who is performing well and deserves recognition and who has some problems'

Although all the respondents agree that performance management within the organization is of great importance, during the interviews it also came up that these measurements should not be the only way of assessing performance. It is important to note that this opinion was shared by most respondents who have a team to lead, while this wasn't spontaneously brought up by process managers. My understanding was that team leaders and team managers are also focused on human factors such as attitude or communication skills.

'It's a tool to aid the day to day running of the teams and a measurement which can be utilized to address continuous improvement. It should never be the only way to measure performance.'

4.1.2 Automation in the Case Company

According to the respondents, the level of automation is very low within the departments they work in. Most of the KPI and SLA data are recorded in Excel sheets, however, these Excel reports can be called automated, since they contain Macros and dashboards to help users. According to the respondents these reports have both advantages and disadvantages. Their biggest advantage is their highly customizable nature but this feature comes at a cost. Excel sheets are considered difficult to handle, very time-consuming to fill in, slow especially when it contains a significant amount of data and functions and unreliable due to manual input.

It was my feeling during the interviews for most respondents it is a compromise to use these Excel bases trackers and dashboards, for the lack of a better alternative at the moment. Some departments use other ticketing or performance tracking tools, these are however not customizable enough, therefore leaders still seem to prefer the Excel reporting, that, despite of its disadvantages, can accommodate any team-specific need in measurement.

'Benefit is everyone is aware of how to fill in and track and generally easily modified. Disadvantage is it is not always reliable as it is mostly driven by human input (accuracy issues) rather than reporting directly from systems.'

'With spreadsheets you have a lot of flexibility when measurements change. The downside is that it requires a lot of man-hours to generate the results'

'Excel: easy to use however contains lot of date. Not manager friendly. Reporting tools: easy to set some filters and according to that the tool will show the results with graphs, etc.'

'Excel can become heavy and difficult to handle, there is always a chance of human mistakes, plus data can be manually manipulated.'

The information I have gained during this phase of my research is very valuable to me as it shows that there is a clear need for the improving of automation. Besides confirming the need for automation, these interviews helped me to get an insight into the currently used systems and their weaknesses and benefits.

4.1.3 Designing the quantitative questionnaire based on the preliminary analysis of the findings of the qualitative phase

From the interviews I have conducted it became clear to me that performance measurement is considered extremely important on a management level. For the management it is not a question if performance should be measured, the main question is how it could be measured in a more efficient way.

The respondents in the qualitative phase have also shared their experience regarding the tools currently being used within the company and the advantages and disadvantages of certain aspects of performance measurement.

When designing the questionnaire, it was one of my aims to understand the attitude towards performance management within all levels of the organization. To gain a good understanding, I decided to assess the general awareness of performance measurement as well as its impact on employees, their performance and their career opportunities. In the quantitative phase I wish to quantify some of the data gained during the qualitative phase, so I built in questions with a ranking opportunity. At the same time I wish to give an opportunity to the respondents to express their opinion freely and thereby also provide more qualitatively inclined input, so I placed a number of open questions into the questionnaire.

4.2 Quantitative phase

4.2.1 General findings

As for the demography of the respondents, in the case of this study I felt it was more relevant to obtain information on how long and in which department they have been working for the given company and which level of seniority they have reached rather than personal demographic data such as age.

As for the departments participating in the research, Logistics and Purchasing are mostly represented with their 36% and 27% respectively, while Customer Service also had a significant presence giving 14% of the answers. Finance, Process Improvement, HR and IT departments also contributed with their answers. The latter 4 departments are supporting functions within the organization and as such, the number of the employees in these departments are significantly less than the number of the employees in the Logistics or Purchasing departments that carry out the majority or the business activities within the company.

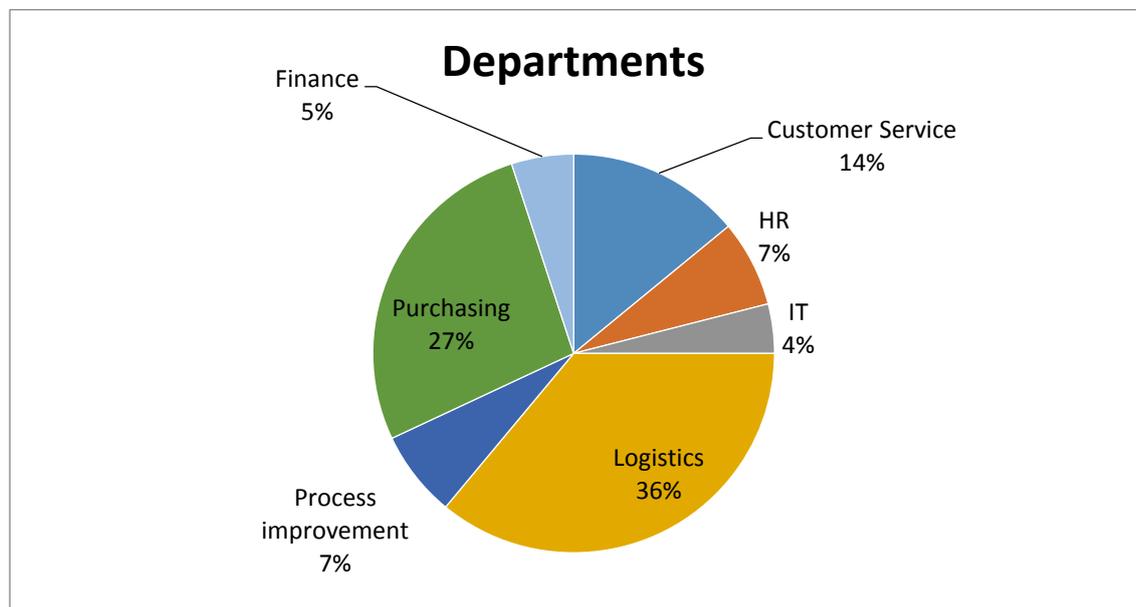


Figure 1 - Distribution of Respondents per Department

As for seniority level, participants have varied background. As seen in the chart below, the majority of the respondents are in senior or leader positions, while 20% of the respondents are junior experts.

Leaders and non-leaders are represented at an equal level, a combined 53% of the respondents being junior or senior experts while a combine 47% being leaders in teams of various sizes.

I find it greatly important to consider level of seniority level when discussing performance measurement, as I believe that this factor has a strong impact on the perception of KPI and SLA results as well as on the attitude towards performance measurement.

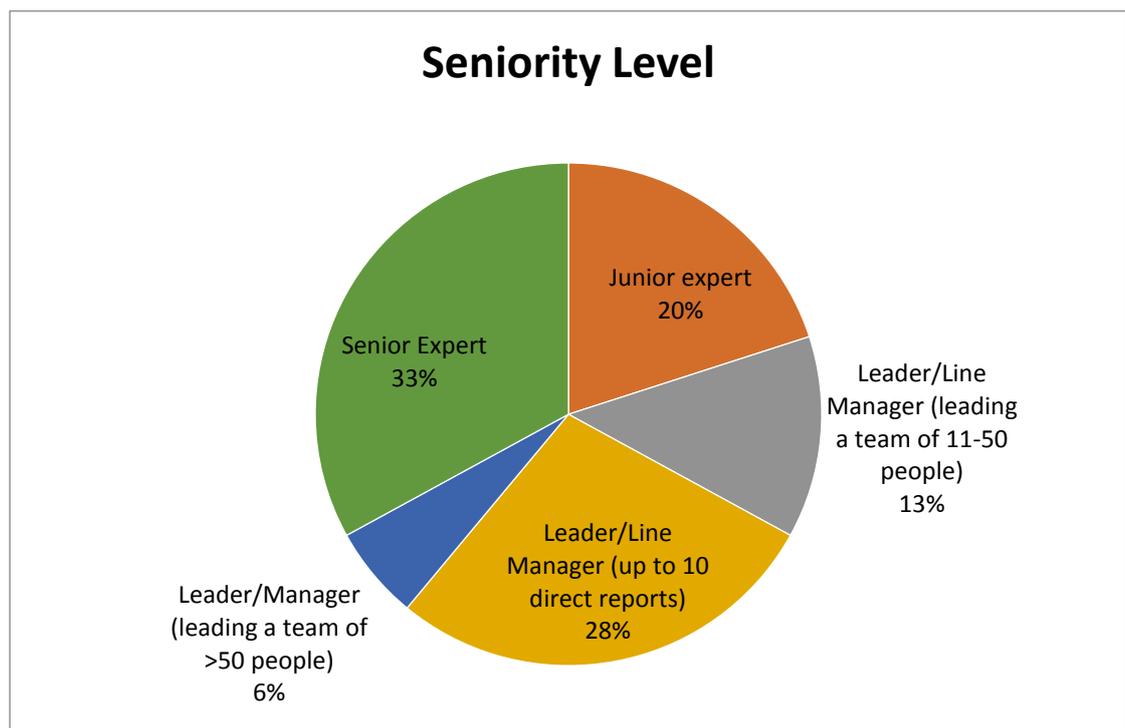


Figure 2 - Distribution of Respondents per Seniority Level

Another factor I find greatly important when it comes to attitude towards performance measurement is the number of years the respondents spend in the case company. I believe that the longer an employee has been working in a company, the more they can identify with the values of the given company and the more they understand the company goals and targets and the importance of measuring the results.

As shown on the chart below, the majority of the respondents, a combined 72%, have been working in the company for at least a year and almost half of the respondents, 46%, has been working here for over 3 years. I have however

meaningful input from a combined 26% of the participants who have been working for the company for less than 1 year.

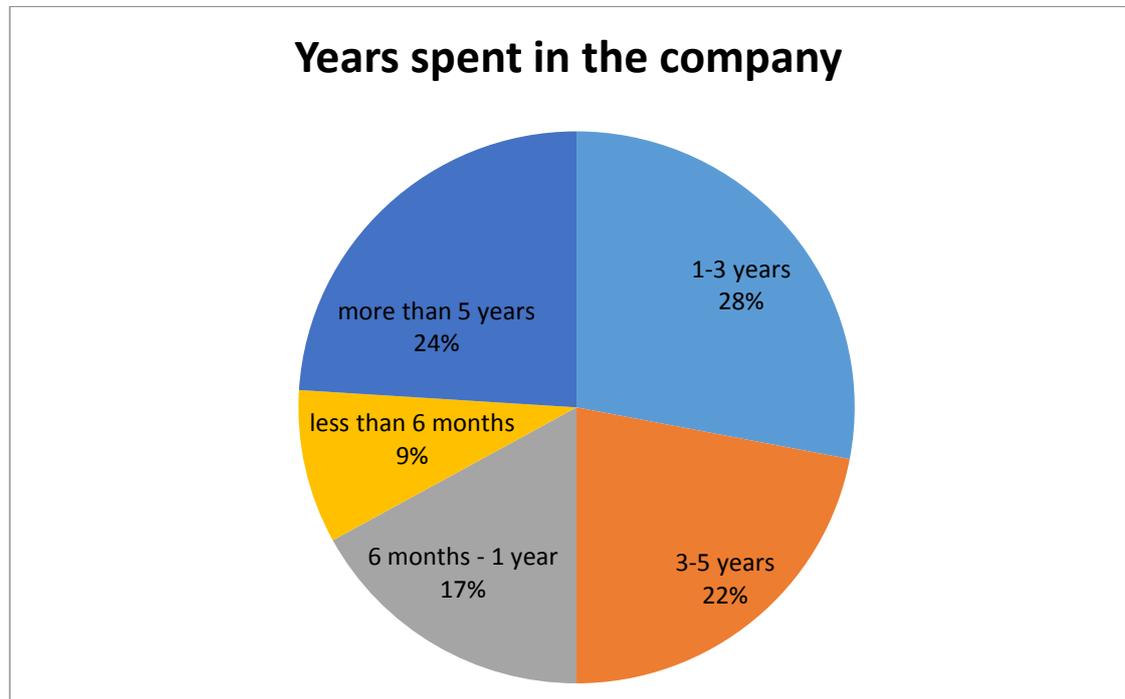


Figure 3 - Distribution of Respondents per Years spent in the company

4.2.2 Performance Indicators in the Case Company

After gaining initial information regarding the respondents' background and position within the company, I focused on performance measurement itself. With the first question I attempted to get an understanding of respondents' general awareness of performance measurement and the tools used for the related activities, therefore, without any further prompt, I started with an open question: 'How is performance mostly measured within your team?'

From this initial question it is apparent that the vast majority of the respondents, a combined 86%, are aware of their performance being measured by KPI, SLA or other team specific results. Only 14% of the respondents gave general answers such as 'productivity' or 'targets'. 48% of the respondents answered by 'KPI' or 'SLA' results while 33% of the respondents detailed their team's specific targets and goals such as 'cost savings, forecast accuracy'; 'Project delivery on time, in budget' or 'Inventory policy performance, Out of Stock, CWC level, Freshness, Losses'. As seen from the chart below, the awareness of performance measurement, the awareness of KPI and

SLA as a concept as well as the awareness of specific team goals and targets are very high within the case company. This awareness appears on all level and in all departments of the organization according to my survey results.

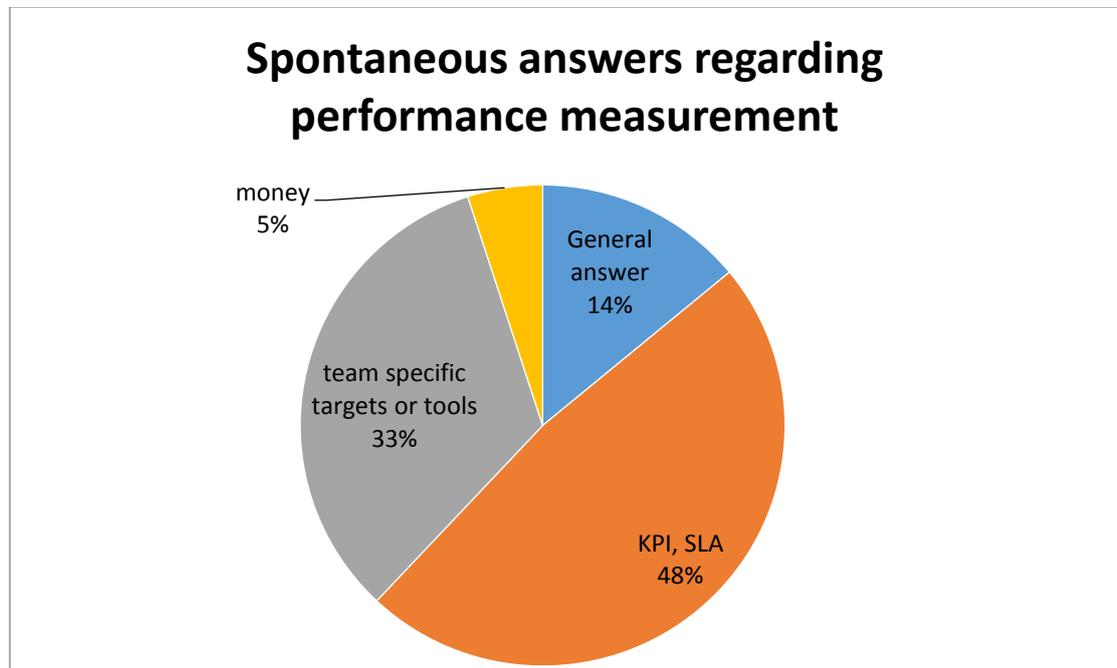


Figure 4 - Spontaneous answers regarding performance measurement

The findings above, that suggest that the awareness of performance measurement is high in this particular organization is in line with the following findings that measured how important respondents believe performance measurement is within their company. Respondents could answer on a scale from 1 to 7, where 1 meant not important at all and 7 meant extremely important. 48% of the respondents chose 'Extremely important' as their answer while a combined 83% of the respondents gave at least 5 points on this question. Only 17% of the respondents answered with 4 points or less, suggesting the performance improvement is not that important.

An interesting thing to note is that the vast majority of those who ranked the importance of performance measurement lower are in senior or management positions. This seemed surprising at first, however, the answers that these respondents gave in the later stages of the questionnaire, clarify their decision to rank the importance of performance management lower. Some of these respondents state that 'money is more important than KPI results', 'quality cannot necessarily be measured by KPI or SLA results' or 'KPI results cannot be trusted 100%'. From these answers I deduced that those who have overview on a broader perspective and are

involved in assessing other people look for more than numbers and targets quantifiable by KPI or SLA results.

However, overall it can be seen, that throughout the case company as a whole, performance measurement is deemed highly important.

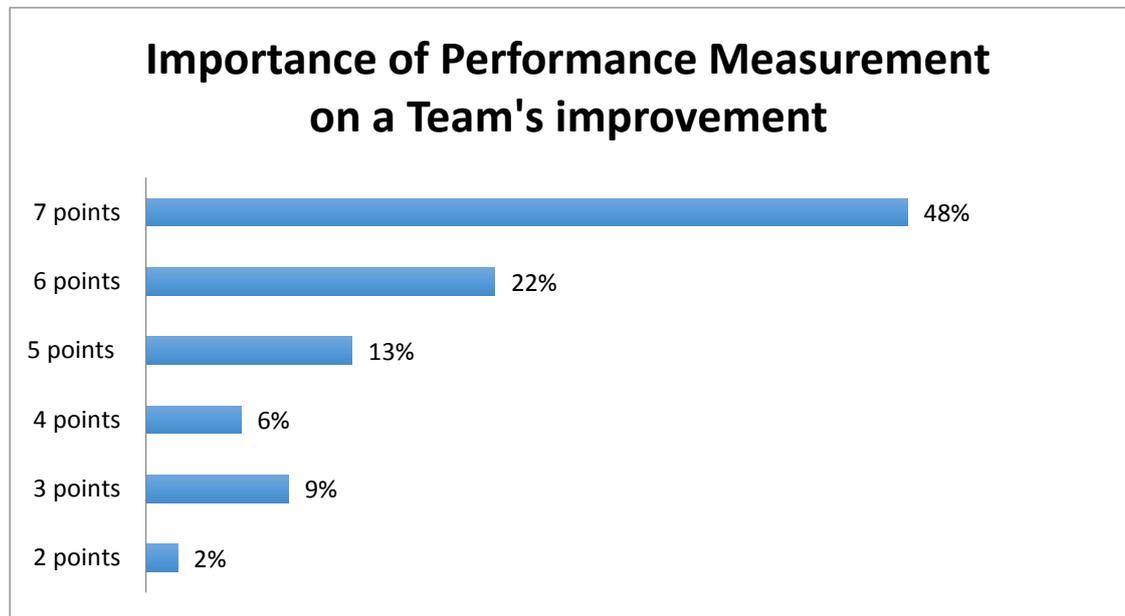


Figure 5 - Importance of Performance Measurement on a Team's improvement

In the next question I asked the respondents to share what their teams measure with KPIs or SLAs specifically. A striking 98% of the respondents were able to formulate the exact performance indicators that are measured in their teams.

After clarifying the awareness of performance indicators within the organization, I asked the respondents to rank the importance of performance measurement in the improvement of their team and of themselves individually.

When answering the question 'How much does the measuring of KPIs/SLAs help improving the performance of your team?', the average result is 5,28 while the median result is 6.

While respondents rank the impact of performance measurement on their team's improvement somewhat lower than the importance of performance management itself, it is still apparent that respondents find the impact of performance measurement on the teams' performance high.

Contrary to the previous question, in this case the vast majority, 75%, of respondents giving 4 or less points to this question are not members of the management but junior and senior experts while 25% of the respondents giving 4 or less points are from the management.

In case of those who don't see a strong correlation between performance management and the improvement of teams it can be seen that they have doubts regarding the reliability of KPI and SLA data while the lack of ability to measure quality of service by these reports also seems to have an impact on those ranking lower.

In the next question I attempted to discover how important the respondents find performance measurement. I tried to formulate the question so that participants give their individual, personal opinion by asking 'Do you personally find it important to measure these KPIs/SLAs?'

The average result for this question is higher than for the previous one, the average being 5,8 points and the median being 6 points.

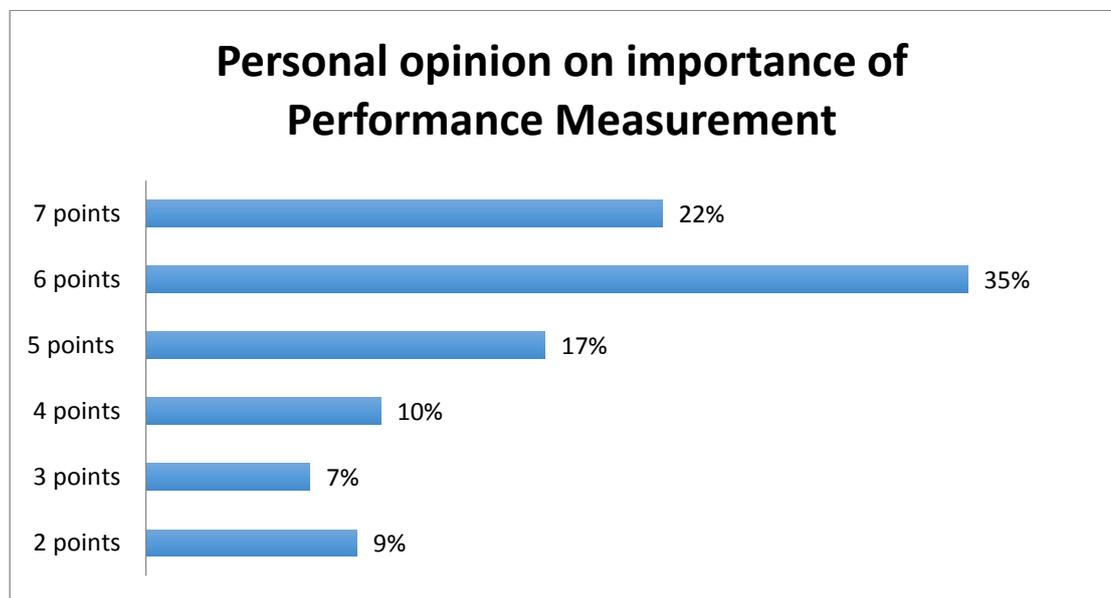


Figure 6 - Personal opinion on importance of Performance Measurement

It was an interesting finding that a 100% of those respondents who gave 4 or less points to the previous question, gave more points on this question than on the previous one. Taking into consideration all the answers these particular respondents gave to the questionnaire, it is my opinion that respondents find performance

measurement highly important as long as it is reliable and valid. Those people who didn't think that performance management greatly contributes to their teams' improvement, still believe that performance measurement is highly important.

This finding underpins my original idea that automation of performance management reports are very necessary, as it could provide the reliability that these respondents lack in case of the current tools and reports.

I believe that before working on the automation itself, it is very important to understand how employees feel about the current status of performance management, therefore in the next stage of the questionnaire I focused on gaining information about the impact on performance reporting on the employees as well as on their opinion on the currently used tool.

In the next question I asked the respondents how difficult they find achieving the KPI targets on a scale of 1 to 7 where 1 stands for Extremely easy and 7 stands for Extremely difficult.

The average result is 4,8 while the median result is 5, implying that respondents find it rather difficult to achieve their targets. When looking for possible correlation between the answer given to this question and the department, seniority level or years spent in the company, I didn't find any pattern that would suggest a correlation between these factors and the difficulty of achieving targets. As in my chosen research methodology, the Exploratory Sequential Design the qualitative phase precedes the quantitative phase, I didn't have an opportunity to further discover this question within the scope of the research but given the overall research results and my personal experience, my opinion is that a perception of how difficult it is to achieve targets does not depend on seniority, position or department. With the level of seniority responsibilities and targets are likely to grow therefore experience and seniority level doesn't necessarily make it easier to achieve one's targets.

In order to obtain more detailed answers and to discover the respondents' opinion as much as possible within the scope of a quantitative study, I continued with open questions. When looking at the answers given to the question 'In your own daily job, what are the impacts of performance measuring through KPIs/SLAs?', I saw very interesting and versatile answers.

When grouping the answers, first I differentiated those reactions that imply that a respondent has a negative impact on their daily job from those that imply a positive impact.

While the answer of 74% of the respondents suggested that their daily job is impacted positively by performance measurement, 21% of respondents seem to be impacted negatively and 5% of the respondents don't seem to be impacted very little.

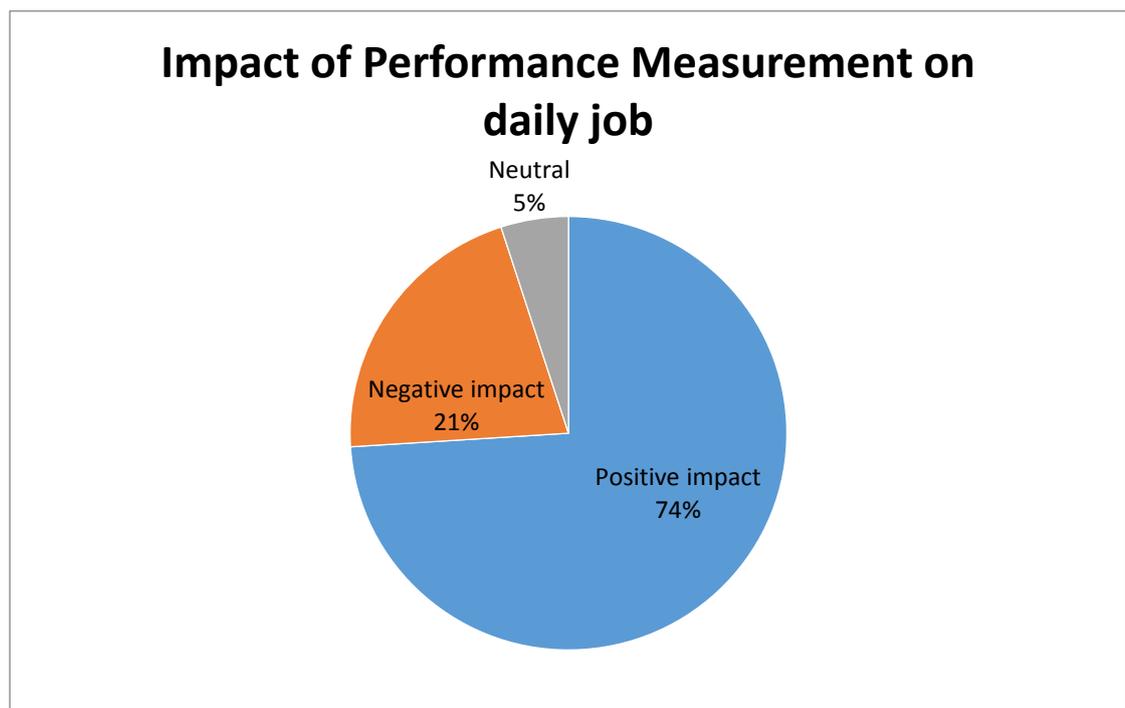


Figure 7 - Impact on Performance Measurement on daily job

During the efforts of automating performance reporting I find it important to strive to keep what is working well already while working on those areas that are working at a suboptimal level at the moment. Therefore it was important for me to carefully analyze these answers and understand what are the factors that contribute to a positive or a negative perception of the impact of performance measurement on one's daily job.

When looking at the answers of those who reported positive experience, it was often mentioned that performance measurement helps individuals and teams to keep track of their performance and thereby stay on track.

At this question there is a clear difference between the perception of those holding managerial positions and those holding non-managerial positions. Individual contributors who feel that they are positively impacted feel that performance measurement helps them in 'better time management', they 'require every day discipline, correct self time management in order to keep good results', help reach 'personal targets' or 'I can keep my carrier under control, know my weaknesses and strengths at higher level / long term'.

Managers on the other hand seem to be more focused on team and company results: 'asking ourselves if we can be better or why are we not on target'; 'Immediate actions and corrections can be performed when the monitoring is done daily', 'seeing if we are on track to deliver expecter results, helping to achieve comapny target + personal bonus'; 'financial results of company improving, budget delivery, product delivery on time to the customers'.

When looking at the answers of those who seem to be negatively impacted by performance measurement, there are two patterns that stand out from the answers: increased pressure and increased workload. According to the answers measuring performance can impose an additional workload on the employees as in some cases reporting needs manual input. This is a particularly important finding for me, as my main focus, automation can be an answer for this concerns.

To have more clarity on how much respondents believe that performance measurement contribute to their own professional developement, I asked them to do another ranking on a scale of 7. The question to answer was 'How much does the measuring of KPIs/SLAs contribute to your professional improvement?' and 1 stood for nor 'It doesn't contribute to it at all' while 7 stood for 'I contributes a lot'. The average value of the answeres is 4,43 while the median value is 4.

It is interesting to note here that a 100% of respondents answering with 7 for this question are managers. Among there reasoning there are answers such as 'KPI's show results and you can grow. results need to be measurable'; 'Good KPI performance will help your career' or 'indicator of success'. On the other hand, there are managers among the repondents answering 1 or 2 to this question with very different reasoning such as 'Only thing that matter is \$, not KPI'.

Junior and senior experts are also to be found on both end of the scale, those who think that performance management greatly impacts their career reason that 'future steps depends on KPIs achieved' or 'improving the results and services, if you stand out, new opportunities will open in order grow within the company' while those who don't think that KPIs have a great impact on their career reason that 'Hard to say, I wouldnt say that KPI and SLA are impacting my career more than skills and self improvement' or 'i just get promoted for being good, kpi's don't tell too much about that'.

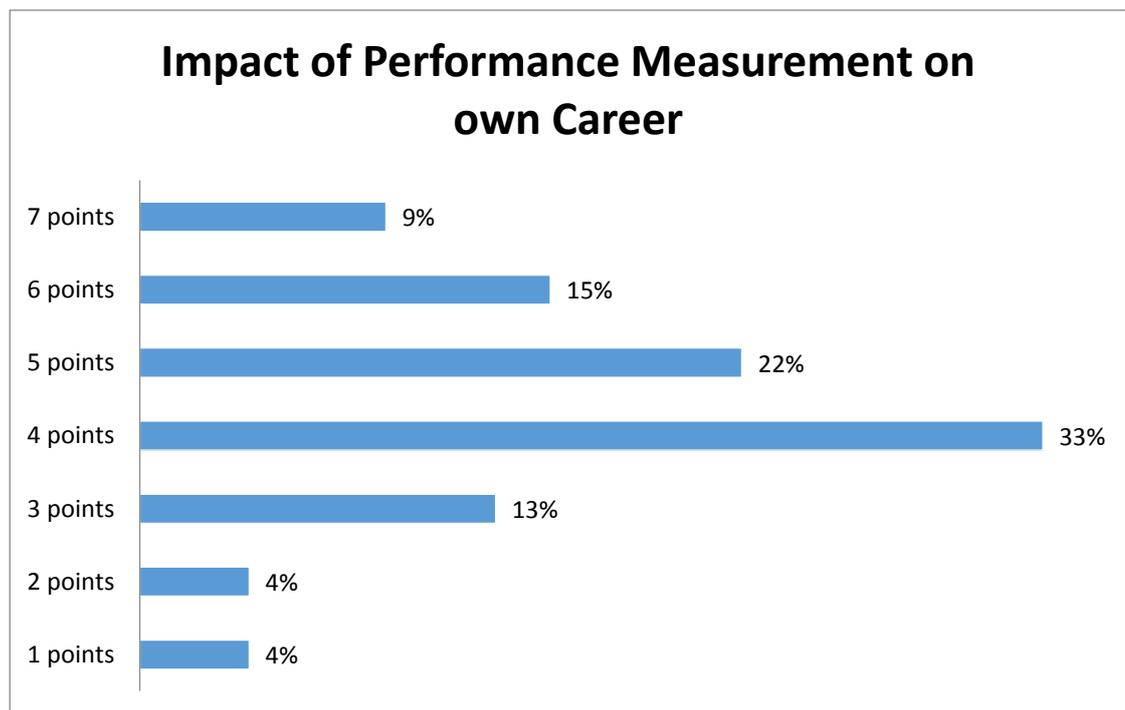


Figure 8 - Impact of Performance Measurement on own Career

In the final phase of the questionnaire I asked the respondents what they thought were the advantages and disadvantages of performance measuremet. The answers to these questions greatly contribute to my efforts in finding out the weaknesses and opportunities of performance management automation.

As I find many of the input received here highly valuable, I collected and displayed the answers within the following tables. I have not edited any of the answers for autheticity purposes.

First I collected the advantages that the responedets listed. I created five categories where most of the answers fall: Visibility, Tracking, Feedback, Behavioral and Continuous improvement.

Advantages

Visibility
• to get the clear vision of the final goal, day after day monitoring
• If set properly, it gives you perfect view of the performance
• Clear picture of the performance
• Having the overview of health of the organization
• create visibility and ability to steer a project or business
• brings transparency and measurability to the business
• to show to the internal stakeholders your added value
• To ensure required service level towards stakeholders
• Clear view on performance and achievements, comparability, clear target and expectations
• Visibility. Visibility. Visibility. For right and timely decision making
• A good view over performance
• Give a long term view / approach / accountability / taking targeted actions
• visibility, baseline for improvement
• Visibility, Clear baseline, TGT achieved or not

It is apparent that respondents appreciate that performance measurement makes their results visible for themselves as well as for stakeholders and management.

Tracking
• keeping track of data, efficiency, future team plans
• tracking and possibilities to react in right time
• Measuring KPIs is one of the keys to reach them.
• keep on track to guarantee the best service for our clients
• Tracking of Performance
• clear measurement

According to the respondents performance management comes with the great advantage of being able to continuously track and store data for future reference.

Feedback
• Objective way of measuring performance
• delivery in time, higher quality
• That you keep a certain standard on the deliverables
• Providing timely feedback
• measuring = knowing.
• steady reminder
• creates clearly defined direction
• Producing relatable results

Respondents like the way performance measurement reports provide an objective feedback on where they and their teams stand.

Behavioral
• Discipline for each Teams in order to have common target, handle responsibility together
• Keep team orientation, allow people to understand what to expect and alignment
• To know what are the results of our job and if process the orders on time
• Time management, efficiency, working under pressure, willing to do good/better
• Ownership & business excellence

According to the respondents performance measurement also helps improving important personal skills such as time-management, self-discipline or the ability to work under pressure.

Continuous improvement
<ul style="list-style-type: none"> • find inefficient areas within the process
<ul style="list-style-type: none"> • knowledge about the process, it indicates if we are on track or not, what we should improve.
<ul style="list-style-type: none"> • Just a constant pressure to make sure you keep working on what is important
<ul style="list-style-type: none"> • Keeping focus, focusing on gaps, ensuring sustainable performance
<ul style="list-style-type: none"> • opportunity to improve process, opportunity to show real results of the team
<ul style="list-style-type: none"> • makes you more focus, challenge you to find root cause of problems and constant improvement
<ul style="list-style-type: none"> • You can always define a gap to work - Know what the status is of your operations
<ul style="list-style-type: none"> • Leads to Objective fact based decision making

Respondents find it useful that performance reporting shows where they are standing and where they can further improve.

In the next step I collected the disadvantages of performance measurement that the respondents listed. Again I created five categories where most of the answers fall: Measuring gaps, Workload, Process-related, Behavioural and Interdependence.

Disadvantages

Measuring gaps
<ul style="list-style-type: none"> • not fair measurements
<ul style="list-style-type: none"> • loss of subjective assessment
<ul style="list-style-type: none"> • sometimes not objective results, not based on real data but on people's mood
<ul style="list-style-type: none"> • They do not measure quality of work intensity
<ul style="list-style-type: none"> • quantitative assessment but often not quality assessment
<ul style="list-style-type: none"> • Doesn't fully cover work achievements, doesn't show performance for 100%
<ul style="list-style-type: none"> • Staying within the scope of KPI's, lack of flexibility
<ul style="list-style-type: none"> • Even if data collection is 100 % correct / accurate, sometimes, reality is not reflected accurately
<ul style="list-style-type: none"> • Not provided the actual achievement/performance of the team

Several things were mentioned that can be considered as gaps in the measurement, these can come from a lack of flexibility, objectivity or irrelevant scope. Quality was also mentioned as an area not measurable by reports.

Workload
<ul style="list-style-type: none"> • Time consuming
<ul style="list-style-type: none"> • Increased workload, Some SLA's are almost impossible to reach which reviews badly on you
<ul style="list-style-type: none"> • Time consuming sometimes
<ul style="list-style-type: none"> • takes time
<ul style="list-style-type: none"> • "Over"focus on results, putting every single process on a KPI/SLA, too much reporting, too much tracking, too many KPIs that are not used or not needed
<ul style="list-style-type: none"> • timeconsuming sometimes, sometimes different KPIs of different departments are not aligned so it creates add complexity of job
<ul style="list-style-type: none"> • time consuming, if no proper tools to measure and monitor are in place
<ul style="list-style-type: none"> • overmeasuring - too many KPIs result in loss of overview

Most of the respondents agree that preparing or analyzing performance management reports is time consuming and imposes extra workload on the individuals and teams.

Processes-related
<ul style="list-style-type: none"> • Each SLA has to have a proper follow up and checking process, which sometimes is missing.
<ul style="list-style-type: none"> • The processes have to be streamlined to get a good overview of those
<ul style="list-style-type: none"> • If targets are not SMART, it causes stress and frustration. also sometimes things happen outside of your controll that put you in a position where you are no longer able to achieve them.
<ul style="list-style-type: none"> • Incorrectly set up KPIs can cause more harm than good.
<ul style="list-style-type: none"> • focusing merely 1-2 KPIs in day-to-day business and missing the big picture
<ul style="list-style-type: none"> • too many KPIs lead to blurred vision, need to define the key KPI which drive the KEY performance of the compnay
<ul style="list-style-type: none"> • It takes a lot of skill to set a KPI that matters, 99% of KPI seems to fall in the doesnt matter category
<ul style="list-style-type: none"> • Difficulties in correct scope definition and team who is responsible for achieving the KPI, KPIs with cross team dependance.
<ul style="list-style-type: none"> • you need to pay attention to review the KPI/PI/SLA you measure in fonction with priorities. don't loose too much time in measuring of what you are good at.
<ul style="list-style-type: none"> • things are often more compliacted that the KPI, it does not show full picture/reality, but just simplified version. cannot be used blindly and important is to think if side-effects leading to suboptiomal results (not measuring/focus on the right thing)
<ul style="list-style-type: none"> • No clear guidelines and standardizatio for all plants

According to the respondents KPI or SLA reports are often not set up correctly or there are no clear guidelines or processes governing the measurement process that can then result in decreased reporting value.

Behavioral
<ul style="list-style-type: none"> • Constant pressure
<ul style="list-style-type: none"> • Breaks team work with other areas, people focus on them self instead of a common goal
<ul style="list-style-type: none"> • brings in extra pressure, which doesn't improve performance
<ul style="list-style-type: none"> • it can be demotivating if you try a lot of time put a lot of effort and UNPAID OVERTIME into your work and still dont get the results. Especially if it is a shared SLA so no matter how great you are, or the whole team, it still can be ruined.
<ul style="list-style-type: none"> • give high level stress to workers
<ul style="list-style-type: none"> • creating unnecessary pressure, competition between teammembers
<ul style="list-style-type: none"> • can sometimes drive narrow & short term behviour & not foster creativity

It can be seen from the answers that measuring performance itself and the increased workload it imposes on people can result in work-related stress in the employees.

Interdependence
<ul style="list-style-type: none"> • need to collect information from different resources
<ul style="list-style-type: none"> • pressure on people, some areas you just can not measure with KPIs, lack of big picture understanding when you focus just on separated KPIs
<p>that not all results are depended on my work only but there are other departments who can have impact on my work (not filling results) and I can't influent them</p>

According to the answers an individual's results can depend on the results or activities of other departments or employees which can lead to frustration in those whose performance is impacted by factors that they cannot control.

I find these tables very valuable as a way of visualization as well, just a look at them shows that the amount of disatvantages is higher than that of the advantages, despite of the fact that from the answers to the previous questions it was clear that the vast majority of the respondents find performance measurement highly important in their own progress as well as in the progress of their teams and the organization as a

whole. After a careful analysis of the answers I believe that people indeed find performance measurement important and useful, however, there are many factors that can be improved in the way of measurement itself.

The advantages listed are in line with those advantages that were discovered during the previous answers and many of the disadvantages were mentioned earlier too.

Considering my original research question regarding automation, having a clear view on the disadvantages the respondents listed is very useful to me. I consider many of these disadvantages opportunities that can be addressed by automation.

When grouping the disadvantages, it can be seen that one major category is more focused on attitude or emotions while another major category is more process-related. The first category is composed of elements such as stress, pressure or unwelcome competition that performance measurement imposes on the employees. I believe that while these concerns are very important to address, they are more worth being addressed by team leaders and HR rather than a process improvement perspective, therefore I exclude these concerns from the scope of my suggestions.

The other category is composed of process-related concerns such as the preparation of reports being too time-consuming, the reports not being entirely reliable or them not being set up correctly. In my opinion these are the concerns that can be addressed and improved by process improvement and automation, therefore I will focus on this category when preparing my recommendation.

4.2.3 Automation of Reporting in the Case Company

While it is apparent from the research results that performance reporting is highly important in the case company, automation of reporting has reached different levels within the different departments. In certain departments the level of automation is very low, these departments heavily rely on manual data input.

Both the qualitative and the quantitative phase of the research revealed that KPI and SLA reports that rely on manual data input are perceived greatly time-consuming as well as prone to human error, therefore unreliable. Employees having to fill in these reports feel that manual data input imposes an unnecessary burden on them and increases their workload. Those who rely on these reports such as team leads or

managers also agree that manual reporting is far from ideal because of its time consuming and unreliable nature.

Employees working in departments where reporting is at least in part automated are not fully satisfied with the performance reporting either. The tools used in automatic reporting include ERP or Salesforce modules as well as different ticketing systems, all of which are perceived less prone to human mistakes, however, unlike manual trackers, these tools are not easily customizable therefore cannot accommodate all team-specific needs that come up.

5 Conclusions and Discussion

5.1 Conclusion

I feel that through the research I obtained answers to my research questions that help me assess the current situation of performance management and the future opportunities on the area of automation.

As for my first research question, namely the attitude towards performance measuring, it is apparent from the research results that this particular company heavily relies on performance measurement. The awareness of performance measurement and the team- and individual goals are significant within the company, all employees participating in the research seem to be able to relate to their team's goals and they are aware of the impact that performance measurement has on their job and their career. All managers as well as the vast majority of employees holding non-managerial positions find performance measurement highly beneficiary both for the company and themselves. It is safe to say that within this particular company it is worth working on improving performance measurement. As it significantly impacts the daily job and professional improvement of the employees, improving the process of performance measurement could lead to the improvement of the daily job and professional improvement of the employees.

As for my second research question regarding the obstacles in the way of automation, my understanding is that there are a number of different tools being used in the company but those that are automated are not customizable enough and those that

can be customized are not reliable enough. Therefore, presently there is no single tool that is both reliable and customizable.

KPI and SLA reports are mostly filled in manually by the different departments. Manual reporting has its advantages, the most important of which is the ability to customize the reports according to specific needs of any of the teams or departments. At the same time, the leaders of these departments realize that manual reporting has many disadvantages too such as extra workload for the team members or even creates an additional need for resource to monitor and report KPI and SLA results. Manual reporting also comes with the risk of human error and even manipulation of data is considered a valid risk.

Considering all these, I believe the direction and the answer to my third research question is clear: KPI and SLA reporting need to move toward automation. During the process of automating reports, both the advantages and the disadvantages of the current reporting tools need to be carefully assessed. Considerable effort needs to be made in order to make automated reports as customizable as possible, so departments don't lose the feature they most appreciate in manual reporting.

At the same time, automation comes with the great opportunity of workload reduction by eliminating the need of excessive manual input. At the same time this leads to a decrease reporting faults caused by human error.

5.2 Implementation of Automated Performance Reporting in the Case Company

There is a project aimed at rolling out a new performance measuring system within the case company at the moment.

It is a system that registers all details of a given request and gives a live result to the management in the system. Details of each request are duly recorded, such as the date when it was opened, when it was closed, if it was done on time, if the resolution was right at first time, how many percentage of all requests were done on time and if all requests are in the system in the form of dashboards and various reports.

This system is highly customizable and at the same time highly reliable, since there cannot be any human intervention in the actual data input. However, while manual data input is not possible in order to eliminate human error, manual customization of data display is possible, so that the reports can accommodate different needs.

Like most systems, this system is going to be maintained and operated by people. Therefore, even if a high level of automation is provided, I believe it is also important to invest money and energy in giving proper training to the employees who will use the system.

The first step however is to convince the management and all the stakeholders that the system and the data it provides is reliable. In my opinion this can be best done through a test phase with selected departments.

In my opinion any major, organization-wide change needs to be done in phases. The first step is assessing the current situation which I have done through the research I conducted within my organization. In the next step a detailed plan needs to be prepared and it needs to include each phase and each step of the roll-out. I find it very important to prepare a communication plan too, as transparency is very important when introducing a new tool or systems that will impact the majority of the employees.

It is important to manage expectations related to the new tool, as rolling out a new system takes time. It is likely that in the initial phases of the roll out the workload will increase, as results need to be constantly validated which means it is very likely that results will be measured simultaneously through the old and the new system for some time. As an increased workload resulting from performance measurement is already a problem in this organization, it needs to be very clearly communicated that these initial validation steps are temporary and they are an important means in eventually decreasing the workload through automation. Throughout the whole rollout it is very important that all stakeholders and employees impacted by the changes are made aware of the benefits and the goals of the new measurement system, so that they can be engaged in the process.

5.3 Quality of the Research

Validity of the research

According to Ridenour and Newman (2008) those who read the research findings need to be confident of the validity of the research, therefore validity is an important feature of a research. Ridenour and Newman also point out that the research methods need to be selected based on the research question and the purpose of the research. In my work I chose to follow the Exploratory Sequential Design, which I feel helped me get the right answers to my research question. This methodology allowed me to first interview those who are the most familiar with the topic of my research and based on their answers I could prepare a questionnaire that I trusted to be easily relatable on all levels of the organization.

McBurney and White (2009) introduce four types of validity, namely the Internal Validity, Construct Validity, External Validity and Statistical Validity. The Internal Validity is about the relationship between the dependent and independent variables. Internal Validity is only present if it is apparent that there is a cause-effect relationship between the dependent and independent variables. Construct Validity measures how much the research results correlate with the theoretical background. In order to ensure that Construct Validity is present in a study the researcher can use a manipulation check. External Validity measures if the results can be widened and applied to other topics as well. Statistical Validity reaches back to dependent and independent variables and measures if the correlation between them is true or accidental.

McBurney and White argues that while it is possible to measure the probability of accidental results, one can never be completely sure that results are true and there were no sampling or measuring errors. This is true to all four validity categories and possible errors impose a threat on the reliability of the research as well. Yet it is important to perform validity checks as they increase the confidence in the readers that they can trust the results of the study.

Reliability of the research

As for reliability, Yin (2003) points out that the main goal of reliability is to minimize the possible errors as well as the biases in a study. It is important that it can be demonstrated that the different actions carried out over the course of conducting the study, such as the sampling or the data collection could be later repeated with the same results.

In my own work I strived to obtain reliable and unbiased results by conducting semi structured interviews and placing open ended question in the questionnaire too. This way respondents could freely express their opinion without being influenced by the questions.

5.4 Ideas for further Research

Both performance management and automation are fields that I am confident will improve further significantly in the future, therefore both areas are well worth further research.

My suggestion for future research of these topics is to conduct researches on multiple levels of organizations. It is very important to understand the performance management and automation needs of companies, so that the right measurements and actions can be set up. During the phase of the data collection multiple respondents reported that the measurements in their companies are not relevant and do not cover the topics that would really need to be measured. Further research of performance management needs and the drivers behind them could help companies set up their measurements correctly thereby optimizing costs and workload. Automation in itself is also important to research, I believe that and important topic to be researched is the long term effects of automation on the quality of the services.

On the other hand, I suggest that further research is carried out among employees of companies that conduct performance management. Several of the respondents reported that performance measurement imposes additional pressure on them. While it clear from my research that performance management is vital for companies and for service centers in particular, I believe it is also important to understand what im-

pact performance measurement has on employee retention. In my opinion further research exploring the relation between the performance measurement activities and employee satisfaction could be highly beneficial.

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Appendices

Appendice 1. Quantitative questionnaire

1. Which of the following best describes the department you work in? *

- Customer Service
- Human Resources
- Marketing/Sales
- Purchasing
- Logistics
- Process improvement
- IT
- Administration/Back office
- Egyéb:

2. Which of the following best describes your position here? *

- Trainee
- Junior expert
- Senior expert
- Leader/Line Manager (up to 10 direct reports)
- Leader/Line Manager (leading a team of 11-50 people)
- Leader/Manager (leading a team of >50 people)
- Egyéb:

3. How long have you worked at the company? *

- Less than 6 months
- 6 months - 1 year
- 1-3 years
- 3-5 years
- More than 5 years

4. How is performance mostly measured within your team? *

5. How important KPI/SLA measurement is within your team? *

1 2 3 4 5 6 7

1 = Not important at all

7 = Extremely important

6. What does your team measure with KPIs/SLAs? *

7. How much does the measuring of KPIs/SLAs help improving the performance of your team?*

1 2 3 4 5 6 7

1 = Not at all

7= Very much

8. Do you personally find it important to measure these KPIs/SLAs? *

1 2 3 4 5 6 7

1 = I don't find it
important at all

7 = I find it extremely
important

9. How difficult do you find it to reach your KPI/SLA targets? *

1 2 3 4 5 6 7

1 = Extremely easy

7 = Extremely difficult

10. In your own daily job, what are the impacts of performance measuring through KPIs/SLAs? *

11. What are the impacts of KPI/SLA measurement on your career within the company? *

12. How much does the measuring of KPIs/SLAs contribute to your professional improvement? *

1 2 3 4 5 6 7

1 = It doesn't contribute at all

7 = It contributes a lot

13. In your opinion what are the advantages of measuring KPI/SLA results? *

14. In your opinion what are the disadvantages of measuring KPI/SLA results? *

Appendice 2. Guiding questions for the in-depth interviews

1. What do you think of KPI's and SLA's?
2. So far in your career (in other companies as well) what are the systems that have been used for measurement of KPI's and SLA's, generally performance?
3. What were the benefits and disadvantages of each of these systems?
4. Has the measurement of performance changed since you joined the corporate life, if yes, how? N
5. Has it become more essential for the companies to measure performance?
6. If you have ever worked not in a BSC, what do you think are the key differences between performance measurement in a BSC and in a non-BSC environment?
7. As a leader, how important do you feel performance reporting is and why?
8. What do you use these reports for?
9. Is there any improvement points in the current and existing KPI/SLA reports that would make your job easier/more effective? (even considering your previous leadership positions)
10. What do you think the benefits and disadvantages of performance reporting are for the organization?