

**Work term report on**

# **Time and Motion Study**

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Dear Dr. Hamilton,

I am pleased to submit my first work term report titled “Time and Motion Study.” This report summarizes my experiences during the Winter and Fall 2024 Work Term at SaskPower. Working with Saskatchewan’s Top Employers and Canada’s Top Employers for Young People has been a remarkable opportunity.

During my work term, I was part of the Work Force Management (WFM) department at SaskPower. Our team, comprised of incredibly diverse and talented individuals, is responsible for conducting the Time and Motion Study. This study plays a crucial role in SaskPower’s 5-year optimization plan, especially as the organization undergoes structural changes.

In this report, I delve into the intricacies of the Time and Motion Study and discuss my contributions to the project. I would like to express my gratitude to my manager, Wayne Piper, who provided guidance and assistance in gathering materials for this report.

Sincerely,

Joshi Jay

Student, COOP, Work Force Management



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## **Executive Summary**

I had the honor of taking part in a Time and Motion Study, a crucial project in the Work Force Management (WFM) division, during my work term at SaskPower. The objective of this study was to maximize productivity and efficiency throughout the company, in line with SaskPower's ongoing operational excellence commitment and structural adjustments.

An essential method in industrial engineering, the Time and Motion Study carefully examines how long a given operation will take to complete. It has a major effect on worker efficiency and productivity, particularly as SaskPower goes through structural changes. SaskPower has been able to find and remove inefficiencies thanks to the study, which has opened the door to cost reductions, increased employee satisfaction, and efficient resource planning.

The study was carried out through job shadowing, careful data collecting, in-depth analysis and preparing a report.

The gathered data was put to use for process optimization and forecasting, which increased the overall effectiveness of SaskPower's System Support, Care and Billing Services. Through job shadowing and data visualization, tools like Calabrio One and Power BI were utilized, providing insights into task efficiency, Specialists, BAs(Business Assistants), Coordinators and CSR's performance, and task completion rates.

Several recommendations have been proposed to enhance and sustain SaskPower's productivity and operational efficiency. These suggestions, derived from various reports, include improving communication across all departments to ensure clear and effective information flow. Encouraging Customer Service Representatives (CSRs) to log their own time is also recommended to promote better time management and accountability. Implementing continuous improvement initiatives is essential to foster a culture of ongoing enhancement within the organization. Additionally, leveraging technology strategically can streamline processes, enhance productivity, and reduce operational inefficiencies. Identifying and removing unnecessary resources will optimize resource allocation and reduce waste. Proper documentation of Business Intelligence (BI) reports is crucial to support data-driven decision-making. Shifting certain tasks to other roles can balance workloads and improve overall efficiency. Finally, promoting better communication and collaboration between system support, technology, and business teams in all aspects of projects and initiatives is vital for cohesive and effective operations.

My experience at SaskPower has been enhanced by working together with fellow COOP students. It has been a great environment for learning and development to work with four other students from the University of Regina and the University of Saskatchewan, who come from a variety of academic and cultural backgrounds, including finance and human resources. My responsibilities, which included research, analyzing and visualizing data, and leading group activities have equipped me with priceless skills and knowledge that I will carry into my next endeavors.

To sum up, SaskPower's Time and Motion Study represents a deliberate attempt to improve resource management and operational effectiveness. It is anticipated that the team's combined efforts will set a standard for similar research in the future, highlighting the need of precise data collecting, efficient communication, and the use of advanced analytical techniques. The ultimate goal is to create an environment at work that is characterized by increased production, efficiency, and satisfaction among employees.



# Introduction

My experiences, contributions, and learnings during my time working at the Work Force Management (WFM) department are summarised in this report. I'll give background information, go into the Time and Motion Study's importance, and talk about my involvement in this important study as we delve into its complexities.

## **Context and Purpose**

This extensive report explores my tenure with SaskPower, a well-known energy provider in Saskatchewan. I had the honour of working with the team in the Work Force Management (WFM) department this term, which is in charge of carrying out the Time and Motion Study, an essential method in industrial engineering.

## **The Significance of this Study**

The Time and Motion Study was created in the early 1900s with the goal of streamlining work procedures by a careful examination of the amount of time needed to complete particular jobs. Its influence on labour efficiency and productivity is enormous. Time study aids in the selection of different job execution options as well as in the determination of the workforce required for a certain task, and thus assist in increasing manpower efficiency.[\[1\]](#) The implementation of good personnel management is imperative as SaskPower experiences substantial transformations, and the Time and Motion Study is a critical tool in accomplishing organisational objectives.

## **Why Does It Matter?**

- **Efficiency Enhancement:** Work processes are broken down into the fundamental elements by the Time and Motion Study. Workflows are identified and streamlined by examining task length and execution techniques. For SaskPower, this entails maximising task execution, which eventually results in higher productivity and efficiency.
- **Cost Savings:** This study concentrates on both the motion aspect (the manner in which activities are carried out) and the time aspect (the length of tasks). SaskPower may be able to cut expenses by doing away with inefficient procedures that result in time wasted on work.
- **Worker Satisfaction:** It is via an understanding of work processes that SaskPower is able to make data-driven decisions. Process optimisation reduces worker weariness and frustration. A happier workforce enhances productivity and fosters a positive work atmosphere. For instance, effective scheduling that takes into account the results of the Time and Motion Study can lower employee stress and improve output.
- **Resource Planning:** The study's findings can be used by SaskPower to efficiently allocate resources. For example, if it takes one minute to serve a customer and there are usually 120 transactions in an hour, the study helps establish how many workers are needed to cover the workload.

## **My Role and Contributions**

Enriching and enlightening, my work term with SaskPower has involved facilitating group activities including workshops and meetings. As a member of the Work Force Management (WFM) department, I was able to participate in the Time and Motion Study, a vital project that tries to increase productivity and efficiency in the company.

SaskPower has been able to identify and remove inefficiencies through the Time and Motion Study, which has also made cost reductions and increased worker satisfaction possible. The results of the study have been crucial for efficient resource planning and have made a substantial contribution to SaskPower's five-year optimisation plan.

It has been a fulfilling opportunity to collaborate with other COOP students and work in a varied team. It has given me a platform to develop, learn, and successfully contribute to the project. My duties, which included conducting research, analysing and visualising data, and leading group activities, have given me invaluable experiences and abilities that I will use in my future undertakings. We shall examine their execution and go into subjects like the Time and Motion Study in this study. In the sections that follow, this study will also provide insightful recommendations.

## **What is Time and Motion Study**

A business efficiency method called the Time and Motion Study is used to ascertain "the one best way to perform a task" as well as the "correct time" needed to finish a given work. This scientific study searches one of the most efficient method of doing a task by conserving the resources [2]. The Time and Motion Study aims to determine what makes a fair day's work and to remove inefficiencies. It guarantees that there are no pointless movements made by the employee on the job under review.

### **History**

Frederick W. Taylor and his adherents created and improved the Time Study. Frank B. Gilbreth and his spouse Lillian created and improved the Motion Study at the same time. These two studies were traditionally discussed separately, although they are now typically discussed together.

### **Application in Organizations**

Time and Motion Studies were historically used in the manufacturing sector to modify pay scales, based on the belief that compensation was the exclusive incentive for labour. These days, these studies can be used for time cost analysis, problem identification and solution creation, performance evaluations, and planning to estimate the potential level of output.

### **Objective**

Using observers to track the precise amount of time spent on each task, the Time and Motion Study aims to establish a "normal" or average time for a job.

## Procedure

A Time and Motion Study process consists of the following steps:

1. Define the regular work procedure.
2. Divide the work into manageable chunks.
3. Research the position.
4. Evaluate the employee's output.
5. Determine the mean duration.
6. Determine the standard time:  
 $Nt = (t)(RF)$ , where  $t$  is the elemental average time,  $RF$  is the rating factor, and  $Nt$  is the normal time.
7. Use the formula to calculate the standard time:  $ST = (Nt)(1 + AF)$ , where  $Nt$  is the normal time,  $AF$  is the allowance factor, and  $ST$  is the standard time.

## In Action

The way that medical residents use their time at the hospital is an illustration of a Time and Motion Study in action. The exact minutes needed for each task were estimated, activities were divided into several groups, and the percentage of time spent on each task was computed. The eight occupants engaged in activities for a total of 13,383 minutes. Each of these tasks took an average of 7.75 minutes, with a 14.5-minute standard deviation.

## Exercise

Use the following calculation to find the typical time for a job with a 20% allowance factor:

$$Nt(1 + AF) = ST$$

For instance, the standard time would be  $1.73(1 + .20) = 2.08$  minutes if the average time for each task component is 1.73 minutes.

## Challenges

- **Competency of Observers:** It's possible that observers lack the expertise needed to precisely document and evaluate labour operations. Erroneous observations may result in incorrect inferences.
- **Proficiency of Study Conductors:** It's possible that the study's researchers are not experts in the particular job being watched. Insufficient comprehension may affect the calibre of information gathered.
- **Representativeness of Actions Observed:** It's possible that some study participants' behaviours weren't representative of the group as a whole. The validity of the study may be impacted by worker variability.
- **Worker Cooperation:** Workers may object to taking part in the study out of mistrust, worry about the study's possible outcomes, or simple inconvenience.
- **Resentment and Motivation:** If the study affects their work pace or pay range, employees may get resentful of it. Errors may arise from the study's increased demand.

- **Disruption of Normal Work Methods:** Productivity may suffer if work schedules are changed for the benefit of the study. Employees may purposefully alter their behaviour, which would affect the accuracy of the study.

Time and Motion Studies are an important resource for businesses looking to increase production and efficiency. Notwithstanding the difficulties, these studies offer important insights into work practices and employee performance, which boosts operational effectiveness.

## ➤ Implementation

Accurate data collection of a significant magnitude is required for the successful completion of a time and motion study. Our team chose to job shadow the Business Assistants (BAs), Specialists, Coordinators, and Customer Service Representatives (CSRs) working on SaskPower's billing, system support, and care services after realising this requirement.

We observed the tasks for which we were to gather data throughout the first few days of our study. We were able to fully comprehend the involved processes over this observation time. In order to improve comprehension and enable us to divide the work more effectively later on, we recorded these procedures and made the accompanying graphs.

Talking with our peers who had the same tasks as us about the documented processes was an important part of this phase. This phase verified that everyone participating understood the methods and guaranteed uniformity between all observers. The accuracy of the amount of time needed for each activity could be jeopardised in the absence of this information.

After the observation and discussion stage, we got to work on creating a spreadsheet for the current job. The work was broken down into variables, and we updated it every day while the job shadowing was going on. We were able to maintain an organised record of the data acquired and monitor the development thanks to this scientific methodology. We started the process of cleaning and sorting the data when the data collecting was finished. In order to make sure the data was consistent, presentable, and prepared for analysis, this step was required.

After being cleaned, the data was used for forecasting purposes. Using this information, the Workforce Management (WFM) team calculated the optimal amount of time needed to finish the tasks. The WFM team was better able to plan tasks and distribute resources based on these forecasts.

Additionally, the gathered and examined data played a crucial role in process optimisation. By creating task reports, it was able to pinpoint areas where the current techniques needed to be changed, which improved the overall effectiveness of SaskPower's System Support, Care, and Billing Services. These reports offered crucial suggestions and evaluations of each worker's performance in addition to general task inefficiencies and trends, revealing problems with certain procedures.

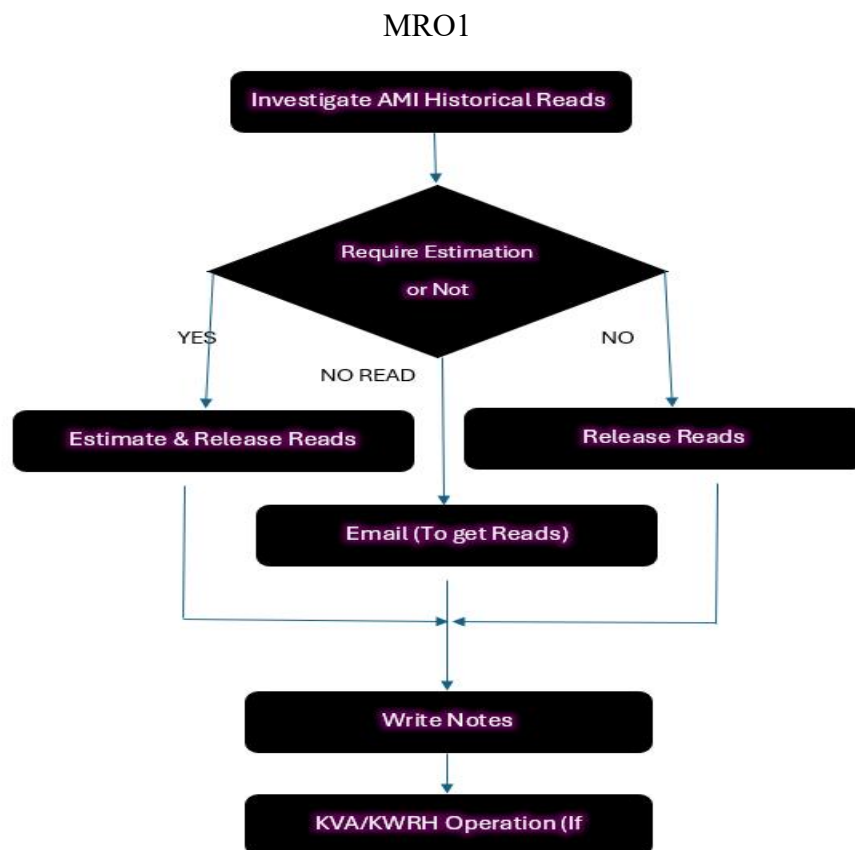
Our methodical approach to the time and motion research, which included work shadowing, painstaking data gathering, in-depth analysis, and report writing, was successful in raising SaskPower's Care and Billing Services' level of efficiency.



I've attached screenshots of the procedures we utilised to complete our time and motion studies so that you can clearly comprehend our work. Data collection, data cleaning, data analysis, data visualisation, and report creation are some of these procedures. The reports are made so that upper management may quickly grasp them and act upon our advice and insights. I've detailed each procedure we use in the sections that follow. I have removed some names and details to make sure they follow the rules and regulations.

For the data collection process before we start timing processes, we required to create charts explaining each process and identifying where we can collect the time. This step is crucial to ensure uniformity in the timing process, which will make our data accurate and consistent throughout. Additionally, this process is also important for providing necessary feedback and recommendations for improvements.

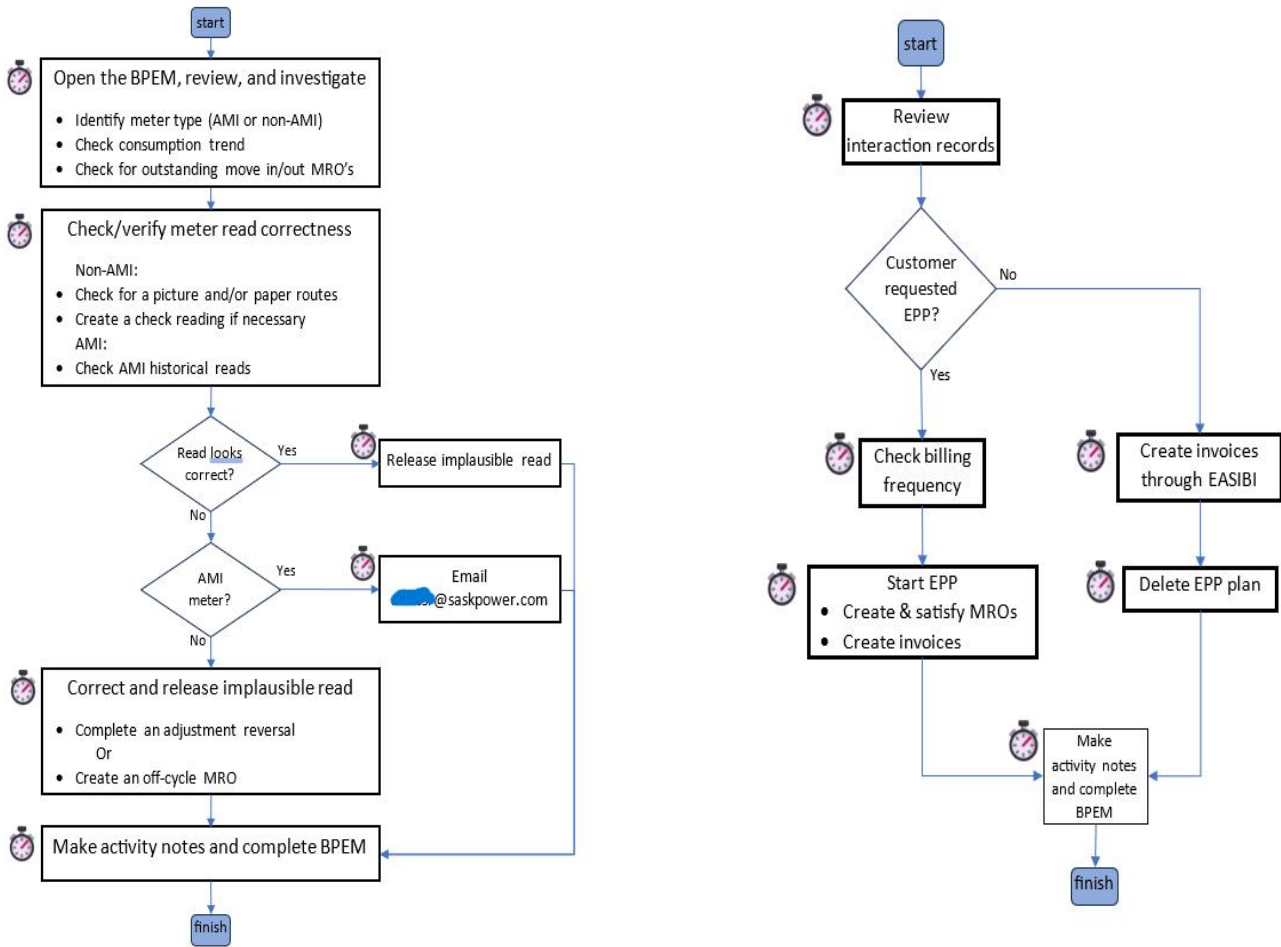
Due to privacy constraints and the length of the report, it is not possible to describe all the processes we have reviewed. Below are three examples of such processes:



**Fig:1 MRO1**

**MRO1 Process:** MRO1 is a meter reading operation that includes estimating processes for meter reading. The above graph describes the process of completing each MRO1 task. Here, AMI refers to automatic meter, and KVA/KWRH indicates the amount of kilowatt consumed.

Similarly, the graphs for the IM04 and EI06 processes are provided below.

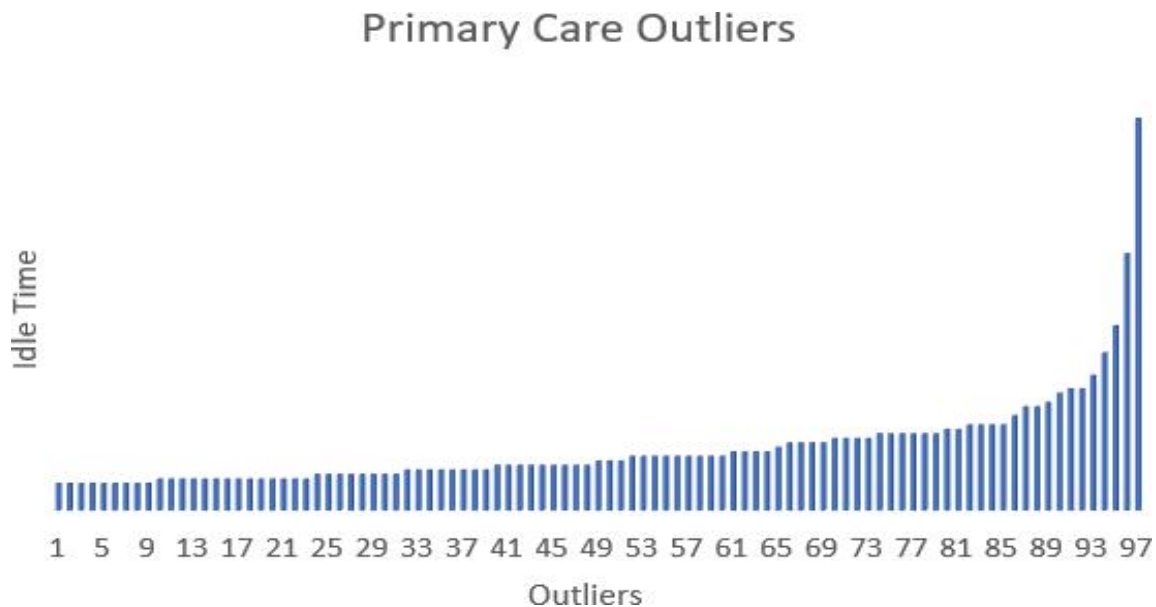


**Fig:2 IM04 and EI06**

Here, EASIBI is the billing system used by SaskPower, and EPP is the billing plan offered to customers. The Watch symbol identifies the variables (areas) that need attention and require timing for data collection. These are just a few examples of BPEM processes. There are over 25 BPEM tasks that we work on, and BPEM is just one of the many processes performed by SaskPower employees.

A program known as Calabrio was used to collect the data. Job shadowing allowed us to obtain the required information. To guarantee accurate results, we then cleansed the data that had been gathered. Standardisation, normalisation, data imputation, and the elimination of null values were all part of this data processing. To preserve data integrity, we also eliminated outliers and prorated the data.

During our study, we thoroughly evaluated outliers. Outlier detection is the process of detecting outliers in a data set, usually used in the preprocessing phase of data analytic[3]. For example, we found excessive durations when analysing samples for the Primary Care Coordinator's idle time. In order to ascertain whether these samples were outliers that were to be excluded, this necessitated additional study.

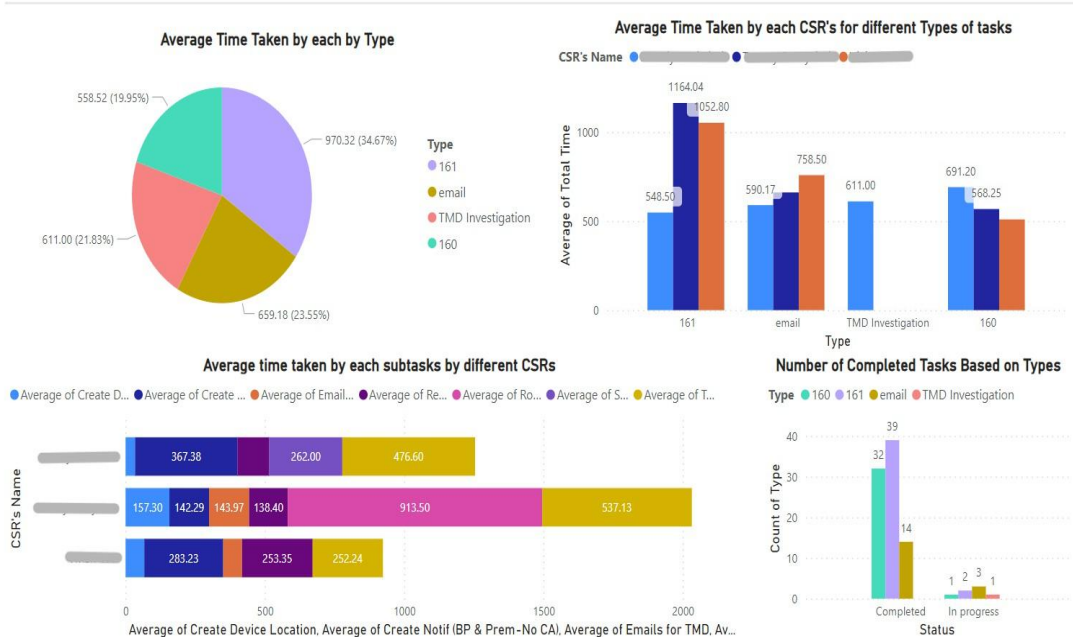


**Fig:3 Data Cleanup Example (Outliers)**

As shown in Fig:1, Quartiles and the interquartile range (IQR) were computed in order to identify outliers. These results are known as outliers because they differ noticeably from the norm and may be the product of shadowing errors or may not be typical data, both of which call for additional research. The outliers of 30, 35, 41, 57, and 87 were found after more investigation. Rather than reflecting real idle time that wasn't productive, these figures seemed to be the result of observational gaps.

We cleaned up the data, then we looked at it and used data visualisation to find patterns and inefficiencies in the workflow. After that, we appended these visualisations to our written reports for the leadership, making sure that the data and comments could be clearly understood. The Power BI analysis and visualisations for three tasks that Customer Service Representatives (CSRs) are responsible for are shown in the screenshots below for an example. It is crucial to remember that the duties we completed for SaskPower are far from being represented by these instances, these three examples are just to understand how we used to analyze the data, there were numerous tasks like these three example which were performed by CSRs and we were responsible to analyzed them. Numerous assignments for Coordinators, Business Analysts (BAs), and Specialists were also completed using the same procedure.

## Summary for TMD



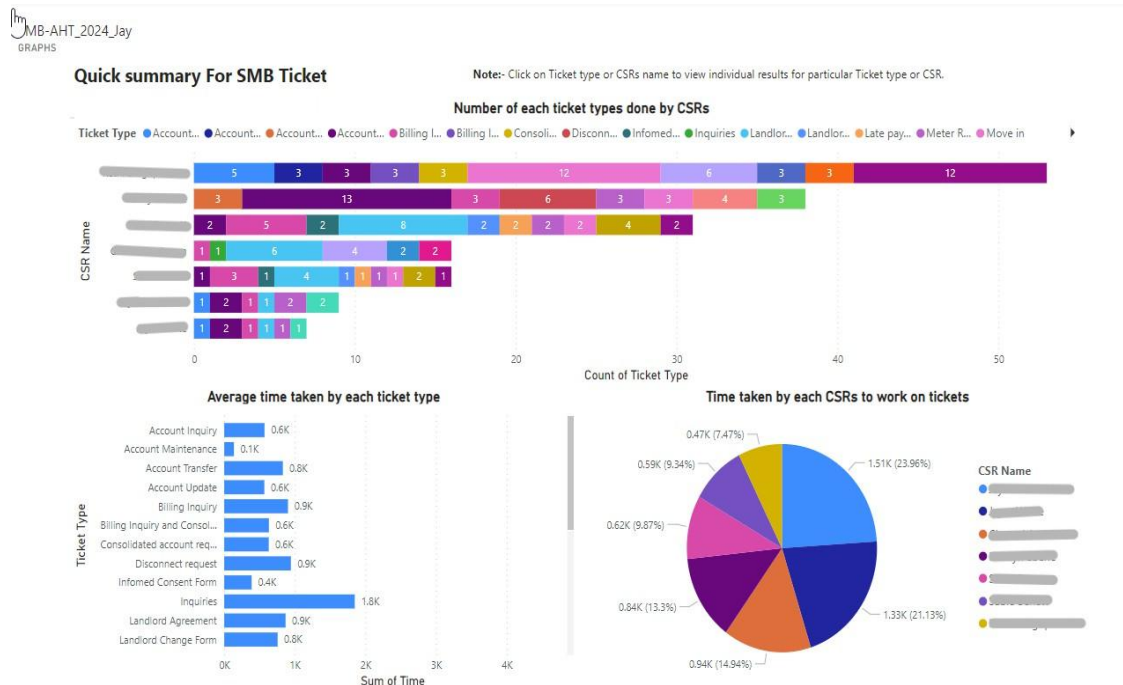
**Fig:4 Data Analysis and Visualization Example for “TMD” (Outliers)**

The above graph in Fig:2 is a overview of “TMD tickets”. Here’s a brief use of these graphs for TMD:

**Task Efficiency:** The average time required for each kind of task is shown in this pie chart. This might be used to determine which jobs take longer and might benefit from process improvements. Additionally, a bar chart displays the average handling time required for each CSR to do various task types.

**CSR Performance:** The average time required by various CSRs to complete subtasks is displayed in the horizontal stacked graph. This could be useful in figuring out how well each CSR is performing and what training they might require.

**Task Completion:** The bar graph displays the quantity of tasks finished according to their types. This can reveal information about the jobs that are being finished more frequently.



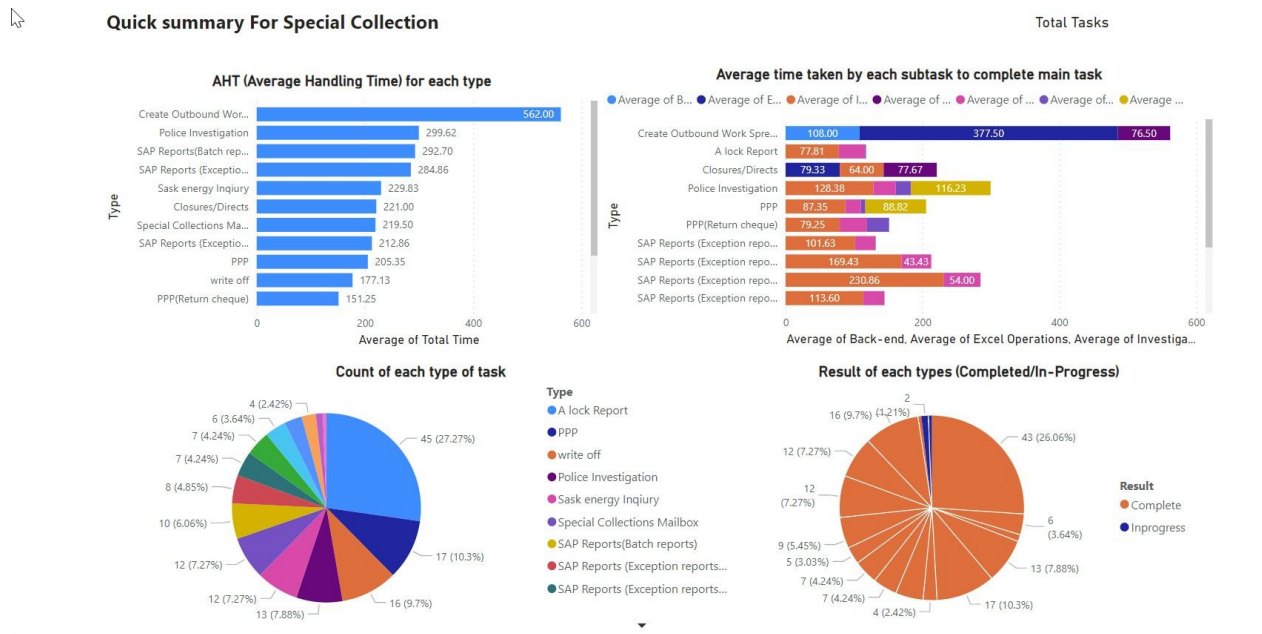
**Fig:5 Data Analysis and Visualization Example for “SMB”(Outliers)**

The above graph in Fig:3 is a statistical overview of “SMB(Small Medium Business) tickets”. Here’s the use of these graphs,

**Ticket Types:** The number of each sort of ticket that the CSRs handled is shown in the bar graph. Ticket kinds such as Account Maintenance, Account Update, Billing Inquiry, etc. are represented by distinct colours. Every CSR has a bar that displays the total number of tickets they have handled for each kind of ticket.

**AHTs of Ticket Types:** A graph displaying the typical time required for each type of ticket is located beneath the stacked bar graph. It represents time length with horizontal graphs; longer graphs correspond to longer times. This could be helpful in scheduling and resource allocation, as well as in determining which ticket categories require more time and may benefit from process enhancements.

**AHTs of CSRs:** The amount of time each CSR spends working on tickets is displayed in a pie chart on the right. Different CSRs are represented by different colours, and percentages show how much time each CSR spent on each ticket overall. This could make it easier to comprehend how each team member's task is distributed.



**Fig:6 Data Analysis and Visualization Example for “Special Collection” (Outliers)**

The above graph in Fig:4 was used to get a quick summary of “Special Collection tickets”. Here’s the use of these graphs,

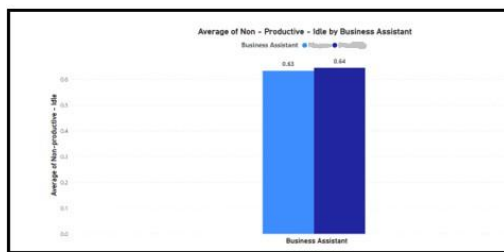
**AHT of a Team:** The team's average handling time for each type of task is shown in the blue bar graphs. Additionally, in the stacked bar graph, various colours correspond to various subtask kinds. Every task contains a bar that indicates how long it took to do each of its smaller tasks.

**Frequency of Tasks:** The Special Collection's job counts are displayed in the pie charts on the left. Tasks are represented by different colours, and their corresponding shares in the overall number of tasks are indicated by percentages. This could make it easier to comprehend how the tasks' workloads are distributed. On the other hand, the right graph shows the outcomes of every kind of work, regardless of whether it was finished or still in progress.

Through aesthetically pleasing graphical representations, this graph offers an intuitive summary of task performance data for special collection jobs. It also clarifies the workload distribution and task efficiency. Evaluating team performance and pinpointing areas in need of development could be beneficial.

Following the shadowing, data cleaning, and analysis procedures, we produced comprehensive reports that clearly communicated our results to higher-ups. Leadership was able to take well-informed action thanks to the recommendations and insights these reports offered on both the processes and the persons. Screenshots of the recommendations and feedback section of one such report we created for business analysts (BAs) are attached. Due to the report's length and privacy restrictions, it is not possible to describe or display the entire document, but this will help illustrate the work we did as part of our time and motion study.





#### Recommendations:

##### Workload Assessment for BA1 and BA2: A Single BA Perspective:

Please consider the following points to understand the workload assessment of BAs

##### • Productive Time:

BA1 and BA2 are productive for approximately 72.89% of their total work hours.

Given their 7.78-hour workday, their average productive time is around 340.25 minutes per day.

##### • Task Workload:

If we multiply the Average Handling Time (AHT) of tasks by their frequency, we get a total workload of 336.57 minutes per day.

Notably, we haven't included AHT for Paper Routes and Mail tasks due to the lack of individual AHT data for these tasks.

##### • Comparison to Single BA:

The workload performed by both BAs could potentially be handled by a single BA within their productive time.

However, this conclusion should be approached with caution, considering the excluded tasks (mail and paper routes).

##### • Overall Assessment:

BA1 and BA2 effectively manage a diverse range of tasks and maintain high productivity levels.

While they divide tasks well and manage time efficiently, it's worth exploring whether a single BA could accomplish the workload.

**Task Allocation:** It appears that the BAs have divided tasks among themselves, which is an effective strategy for managing workload. However, it might be beneficial to review this division periodically to ensure it remains balanced and efficient.

**Reducing AHT Through Streamlined Communication:** Observations during shadowing revealed that the Average Handling Time (AHT) of physical tasks could be significantly reduced if BAs limit in-person communication. This is due to the fact that unnecessary communication tends to prolong the process. For tasks that require BAs to communicate such as assisting Customer Service Representatives (CSRs), it would be more efficient to communicate via team messages or calls. This method of communication could help in reducing the AHT of tasks.

#### Conclusion

In conclusion, the analysis of the Business Assistants' (BAs) tasks provides a comprehensive understanding of their roles, responsibilities, and productivity. The BAs, BA1 and BA2, effectively manage a diverse range of tasks, categorized into Daily, Weekly, Monthly, and One-off Requests. They have successfully divided tasks among themselves, which is an effective strategy for managing workload. However, it might be beneficial to review this division periodically to ensure it remains balanced and efficient.

The Average Handling Time (AHT) of tasks reveals that while some tasks are time-consuming, others are completed relatively quickly. It is also observed that BA1 and BA2 demonstrate similar productivity patterns, with only a negligible variation in their non-productive work-related time.

The analysis suggests that the workload performed by both BAs could potentially be handled by a single BA within their productive time. However, this conclusion should be approached with caution.

Lastly, the study recommends reducing AHT through streamlined communication. Observations during shadowing revealed that the AHT of physical tasks could be significantly reduced if BAs limit in-person communication.

Overall, this analysis offers valuable insights into the BAs' tasks, their time management, and areas for potential improvement.

**Fig:7 Example of Report Writing (Recommendation Section)**

The part on recommendations from a report I wrote about business analysts (BAs) is screenshotted above in Fig:5. The findings of our study and process observations are presented in this section, together with our recommendations for lowering Average Handling Times (AHTs) for particular jobs and our input on workload and task distribution. The duties carried out by BAs were not very resource-intensive, according to our analysis, and one BA could do them all. As a result, the department could optimise overall efficiency by reallocating workers to regions with higher workloads.

In general, we collected data, cleaned it up, analysed and visualised it, and created reports for the time and motion studies. Due to privacy concerns, I haven't gone into too much depth in the samples of these tasks I given above. To comply with these limitations, certain details in the screenshots were also colour-coded.

System Support, Care, and Billing Services at SaskPower are now much more efficient thanks to the team's extensive time and motion study, which included painstaking work shadowing, data gathering, and in-depth analysis. In my opinion, the utilisation of Power BI for data visualisation has not only enabled a more profound comprehension of the assigned tasks but has also identified potential opportunities for process enhancements. Important information on task performance, completion rates, and efficiency has been made available via the graphical representations. The Workforce Management team may be able to improve scheduling and resource allocation with the use of these insights, which would increase the overall effectiveness of the services. This meticulous and data-driven methodology provides evidence of the effectiveness of well-conducted time and motion studies in enhancing resource management and operational efficiency. The team

hopes that by demonstrating the value of precise data collecting, clear communication, and the application of cutting-edge methods for data analysis and visualisation, their work will serve as a model for similar research in the future.

## **Recommendations**

The Time and Motion Study has shown to be an effective instrument for raising production and efficiency at SaskPower. Nonetheless, there are a few suggestions that could enhance the investigation's methodology and results even more:

### **1. Continuous Improvement**

- Periodic Studies: To monitor changes over time and consistently spot areas for improvement, do the Time and Motion Study on a regular basis. This aids SaskPower in adapting to shifting conditions.

### **2. Consistent Messaging and Education**

- Educate Workers: Employees should be informed about the Time and Motion Study's goal in order to avoid misunderstandings regarding performance reviews. Fears or anxieties might be allayed by clear communication.
- Focus on Processes: Make sure employees are aware that work processes, not individual performance, are the subject of the study. This encourages collaboration and makes workers feel encouraged rather than questioned.

### **3. Understanding Work Processes**

- Comprehensive Understanding: Go beyond just listing each duty and gain a deep grasp of it. To guarantee proper data collection, understand the subtleties and complexity of each role.
- Standardized Questions: To guarantee uniform data collection, job shadowers should standardise the questions they ask employees. This facilitates the collection of consistent and comparable data from various tasks and workers.
- Collaboration Among Job Shadowers: Promote cooperation amongst job shadowers in order to preserve uniformity in the outcomes that are recorded and reported. Meetings and conversations on a regular basis can aid in coordinating methods and observations.
- Standardized Coding Definitions: If more than one shadower is working on the same assignment, standardise the definitions of the codes. This guarantees consistent data recording, which lowers disparities and improves dependability.



#### **4. Idle Time Calculation**

- Universal Method: Before the study begins, decide on a standard approach for calculating idle time. This guarantees that idle time is recorded precisely and consistently for various tasks and employees, giving an accurate picture of productivity.

#### **5. Sample Size Determination**

- Adequate Sample Sizes: Calculate appropriate sample sizes according to labour volume and statistical principles for every task. This guarantees the reliability and representativeness of the data gathered.
- Task Frequency Awareness: To prevent wasting time on sampling, be mindful of chores that only happen occasionally or during certain periods of the day. It is possible to get a more realistic picture of regular work patterns by concentrating on more routine chores.

#### **6. Mix of Experience Levels**

- Diverse Experience: In order to determine a normalised Average Handling Time (AHT), include both new hires and veteran employees in the study. By doing this, it is ensured that the data represents a variety of expertise levels and offers a more thorough insight of work processes.

By implementing these recommendations, SaskPower can further enhance the effectiveness of its Time and Motion Study. The ultimate goal is to create a more efficient, productive, and satisfying work environment for all employees, leading to sustained improvements in operational efficiency and productivity.

### **➤ Conclusion**

One of the most important things I've learnt from my work term at SaskPower is the Time and Motion Study. It has given me a better appreciation for how crucial production and efficiency are to a company. In addition to assisting SaskPower in locating and removing inefficiencies, the study cleared the path for financial savings, increased employee satisfaction, and efficient resource allocation.

Using data visualisation tools such as Power BI could make it easier to comprehend the tasks at hand and point out areas where the process could be improved. The Workforce Management team may be able to improve scheduling and resource allocation with the help of the insights gleaned from these visualisations, which would increase the overall effectiveness of the services.

The suggestions made in this report are intended to increase the Time and Motion Study's efficacy as well as SaskPower's operational productivity and efficiency. SaskPower may make sure that it provides a more effective, fruitful, and fulfilling work environment for each and every employee by putting these suggestions into practise.

To sum up, the Time and Motion Study is a valuable research tool for enhancing operational

effectiveness and resource management. It is hoped that the team's work would serve as a model for other research, highlighting the significance of precise data collecting and good communication.

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