PLAINWEAR CASE

By Plainwater

Nguyen Phat Thien Phuc (Mark)
Stefan Angelov
Jędrzej Kajkowski
Tim Van Lierop
Anouk Min
Chandler Greff

Business Advice

Group 3

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Executive Summary

Plainwear is a Dutch apparel company that specialises mainly in menswear but also has a womenswear department. The company opened its doors in Amsterdam and now has 64 different locations across the globe and has no plans of stoping.

Along with opening new stores, the company occasionally closes down some stores for refitting or for renovation. The closure of a store usually lasts a few months. Occasionally, some stores are closed permanently for underperforming.

In a highly competitive environment that is the modern fashion industry, the use of data is invaluable in keeping track of the performance of a business's retail stores. Plainwear's executive management recently adopted a Like For Like (L4L) reporting method to monitor the performance of existing stores in their business and have a large amount of data regarding its stores.

However, Plainwear's current reporting system does not reflect the changes on a store's status. The company is left with the combined data from both opened and closed stores which make their way into regular reports. This can have great consequences especially when major business decisions are made based on those reports.

Simply put, in the current state of affairs, the executive management cannot make use of the company's data properly to make meaningful decisions albeit with some difficulty.

In response, Plainwear's CFO has asked us to completely redesign and automate the company's reporting system.

This paper details our analysis of Plainwear's reporting issues and proposals to mitigate those issues with the creation of a Power BI dashboard along with improving the reporting process altogether.

Broaching the Subject

In period of 17 weeks, we need to come up with solutions to improve Plainwear's reporting system and make the newly adopted L4L reporting easier, faster, and more reliable than the current system. Our ultimate goal is to design a brand new and functional dashboard with neatly displayed KPIs using the company's data. This dashboard will make use of the organisation's data to monitor

the performance of operational retail stores across the globe and would allow upper management to quickly draw conclusions.

The project is essentially divided into 3 different phases. The first stage, on which this paper is based, consists of identifying the problems along with potential solutions regarding Plainwear's case. The second phase involves carefully understanding the things that need to be done for the solutions to materialise. The third and final phase consists of actually creating the solutions into functional and commercial products for our client, Plainwear.

Stakeholders

We felt it necessary to identify the stakeholders in the project and define their position. This gives us an idea of where work needs to be allocated and prioritised.

There are a number of parties that have a stake in project. However, we will focus on the major ones only, including: *Plainwear* as a company, Plainwear's *employee* and *managers*, the *IT consulting staff*, and us, *Group 3*.

Plainwear, the client, is by far the most important stakeholder in the project and the one that needs the most attention. We need to be able to provide a solution that revamps its reporting system in an attempt to grow its business in the highly completive fashion industry.

Plainwear's employees and managers are also important. It is they who will be using the dashboard we will provide after all. Therefore, we not only need to deliver a dashboard with all the required KPIs and functionalities, but also make it user friendly so that minimal technical training is required. Our goal is to essentially relieve the pressure Plainwear's staff have when putting together reports.

Even though the IT consulting staff are employees of Plainwear as well, we consider them as separate stakeholders in the project. It is with them that the information between Plainwear and us is communicated. Along with the general information they provide us, we need to carefully consider their concerns regarding the current reporting system.

Finally, we have a stake in the project as well. The goal of this project to is to give us, students, the opportunity to practice the theory we learn in class on a real life business case. Above all, we are here to learn how to manage a project as a team.

For more details, we provided a stakeholder quadrant:

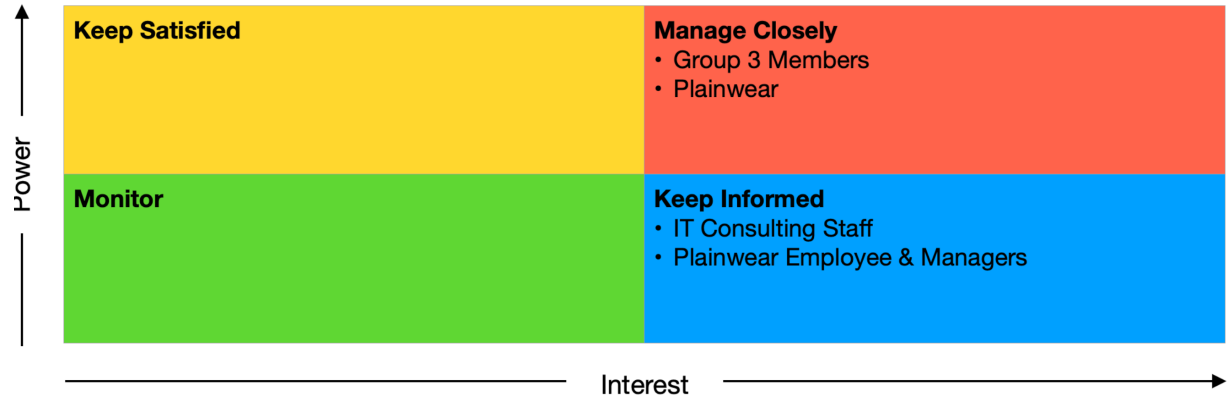

Figure 1, Stakeholder Quadrant Diagram

We have not found any stakeholders of high power, low interest and of low power, low interest in the project.

Current Reporting Process

In order to identify issues and bottlenecks in the current system, we have constructed a process chart which takes into account every step of the reporting process:

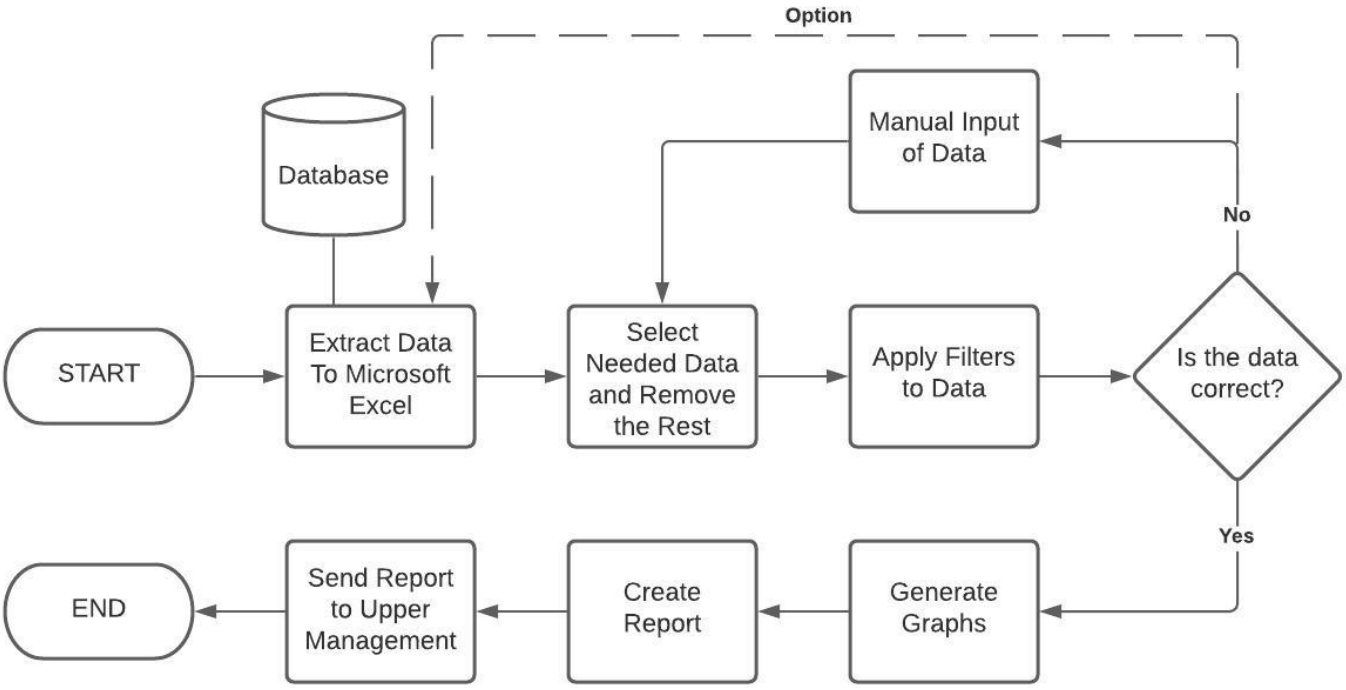

Figure 2, Current Reporting Process

Note: The *Database* in the process is simply an Excel file on which the data is printing on but still acts as a database.

Employees need to extract the data from a database into Microsoft Excel. The data is then scrutinised and the IT department needs to make sure the data is correct before any kind of reporting is done. If the data is indeed correct, graphs are generated and a report is created. If not, employees either spend time manually inputting the data. Occasionally, the data is re-extracted and the process begins once again.

SWOT Analysis

A SWOT analysis gives us an idea of the resources we have at our disposal and the things we need to look out for:

STRENGTHS	WEAKNESSES
• Global presence • Large supply of useful data	• Microsoft Excel for reporting • Too reliant on IT staff for analytics
OPPORTUNITIES	**THREATS**
• Willing to change • Unified comparison between all the stores (L4L)	• Large corporation, difficulties implementing company wide changes

Figure 3, SWOT Analysis

We identified is that the current system is too reliant on IT when it comes to retrieving analytics for the reports. We believe that something can be done to completely remove the input of the IT department in the reporting process.

Also, we need to take into consideration that Plainwear is a company of international scale. With such a scale, it may be difficult to apply changes in a process. It is critical that our solution is easy to implement.

Identifying Issues

We already know what kind of issues Plainwear is facing internally, however we still don't know what are the causes. The rest of this paper will attempt to answer the question 'why' followed by potential solutions.

Bottlenecks

We begin by looking at the bottlenecks present in the reporting process from above:

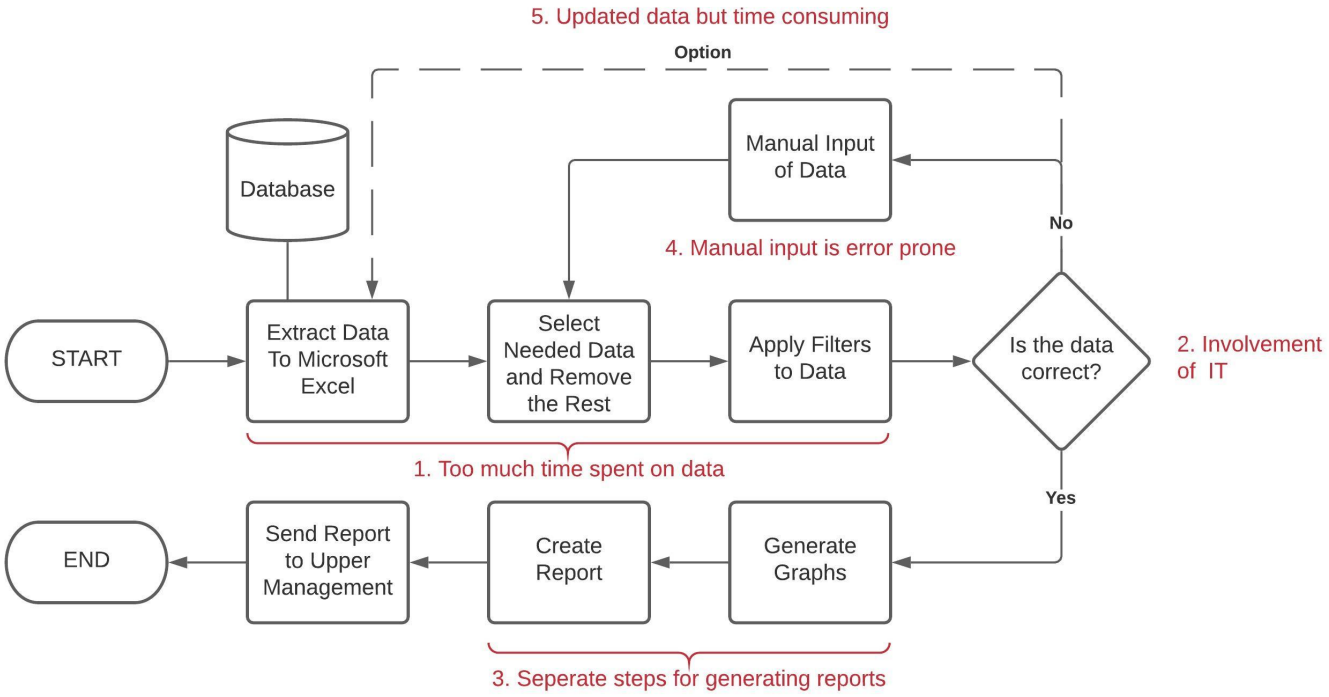

Figure 4, Bottlenecks in the Reporting Process

Below we list all the bottlenecks we identified above long with a few additional ones:

Bottlenecks	Explanation	Reason
1. Time spent preparing the data	Too much of the reporting process revolves around preparing the data rather than actually generating reports.	There is no system/program that automates this process and employees need to take care of this themselves. Currently, queries need to be made inside Excel which is tedious and time consuming.
2. Involvement of IT department for data checking	Due to the poor reporting process, extract the right information from the data. It is a big task only IT can do.	Since employees need to prepare and filter the data, IT needs to check.
3. No automation for generating reports	There is no proper dashboard/ reporting tool all the data must be filtered manually.	Lack of automated program that generates reports/graphs immediately.

Bottlenecks	Explanation	Reason
4. Manually entering data entries	Occasionally, the data is being entered manually which is very error prone.	Because the data is incomplete/ faulty to be used for generating graphs.
5. Restarting the reporting process	Occasionally, the whole reporting process may be repeated again.	The data may get too messy to be used and would require re-extraction of data.
Static data	The data is not connected to a dynamic source like an online SQL server, the data is static.	Due to lack of automation for data to be displayed on reports and change in realtime.
Difficulties understanding the data	Due to no proper and easy to use dashboard/reporting tool it is hard to understand the data.	Due to employees being overloaded with data to work with.

Fishbone Diagram & Root Cause Analysis

Here, we focus our attention on the causes or symptoms that make the current process a poor reporting system. Note that some of the branches are empty as we either don't have enough information or don't feel it necessary to include:

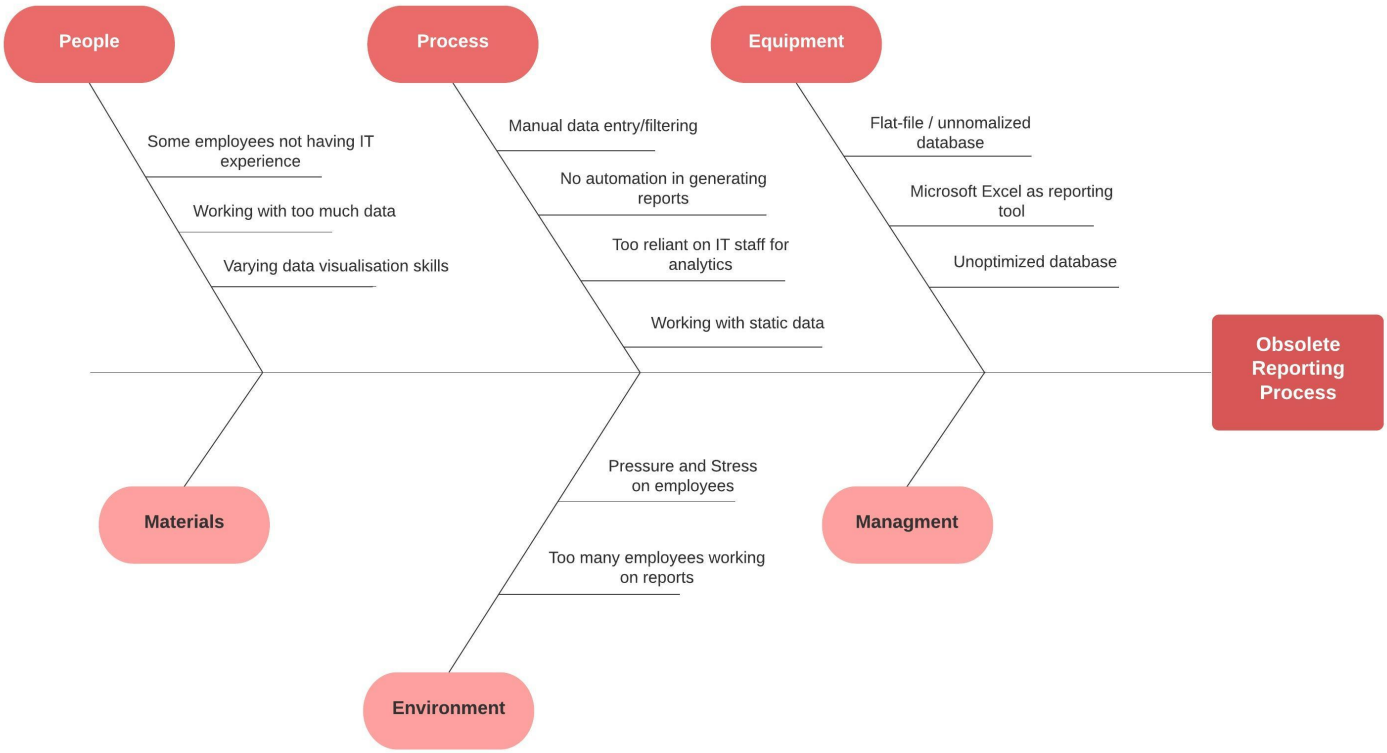

Figure 5, Fishbone Diagram

The root-cause analysis describes to the client the reasons why certain issues arise using the causes identified in the fishbone diagram:

Area	Root Cause	Reason
People	• Some employees not having IT experience • Working with too much data • Varying data visualisation skills	In the reporting process, staff members cannot complete a report without the IT department as generating reporting involves the database directly which requires knowledge not everyone has. This ultimately leads to some employee working with too much data and may unintentionally create an error. Also, if reports are to be consist, the same employees with the same level of knowledge in Excel can work on them.
Process	• Manual data entry/filtering • No automation in generating reports • Too reliant on IT staff for analytics • Working with static data	Every time a report is needed, the process of generating one is repeated. This means that some KPIs may be absent in the final result along with varying report layouts. The time it takes for a report to be created may be enough to render the data displayed on them outdated already. There needs to be a more dynamic solution that does not require a lot of IT skills if any.
Environment	• Pressure and stress on employees • Too many people working on creating reports	There seems to be too many people working/involved in the reporting process when fewer people can accomplish the similar results. This can also endure a lot of stress and confusion on employees which can be mitigated.

Area	Root Cause	Reason
Equipment	• Flat-file/unnormalised database • Microsoft Excel as reporting tool • Badly designed database	There is a lot of data to work with in the database, however, in its current state, the data cannot be used. On top of not being fully normalised, some columns are not properly formatted, especially with dates. Also, some values are missing. Microsoft Excel is useful to generate graphs but not powerful enough; data extraction is manual, graphs may be glitchy, etc.

GAP Analysis

Current state:

In the current situation Plainwear uses excel for their reporting. The data is downloaded from a SQL server. After downloading the employees manually adjust and filter the data in excel. IT and management then receive this data. IT will then extract the necessary data for the management, so they are able to get insights.

The stores are categorised via the Like4Like system. This means that only stores in the same category can be compared. The chosen categories are: New store, Open store, Closed store and Re-fitted store. This makes sure that the stores are equally compared.

Future state:

In the future state there will be an interactive dashboard which is connected to the database. It will be an easy to use system so that every employee in the company can use it. IT is not needed to extract data, because there will be drill-down options in the dashboard.

The drill down options will be based on location of store, Like4Like category and revenue. More can and will be added. The UI framework will be built in next sprint. Therefor UI will be simple and easy to read, a clickable solution which is intuitive.

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Gap description:

The big difference between the current state and the future is that the usage of data is changed from static to dynamic. Aside from this, an actual dashboard will be used so there is no need to filter all the data manually, which makes sure that the chance of errors is significantly reduced. Also, the data will be easier to access and easier to understand, for each employee in the business.

Next steps:

The first steps would be to take a close look at the data and determine all the needed drill-down options. Then the work can start on the first ideas of the dashboard, keeping in mind that everyone in the company must use it and because of that it should also be intuitive.

Our Advice

Main Takeaway

A new system needs to be put in place that makes not only reporting faster but also much more reliable. This new system must take into account changes on the stores' status without human input and display plentiful KPIs neatly arranged to make comparisons easy to do.

We propose that the company withdraw from using Microsoft Excel and make use of a Power BI dashboard instead as a primary reporting tool.

Power BI can enable Plainwear employees and managers to quickly display data from the dashboard and the interface capable of changing dynamically and would both eliminate the need to prepare data and the involvement of the IT department altogether. This solution works right out of the box and no setup is required. No additional technical training is needed. Using a dashboard versus writing queries and formulae in Excel can significantly reduce time spent generating reports. The latter is error-prone, while the former is less error-prone and more robust on top of being more user-friendly and faster.

Also, there is a high degree of freedom and the client has the possibility to completely customise the interface according to its needs. This signifies that reports will no longer look different from one report to another but the design will remain constant.

Technical Details

Below is a table detailing more information regarding some of the things the client and us can except to see in the future. More detail will be available in the *Implementation Plan*:

Problem	Solution
• Some years missing or misplaced in the database	• Consult the client to provide data cleaning/tidying before using it in Power BI
• Unable to clearly make sense of daily data and filter data	• Consult the client for KPIs for revenue and performance in general as well as implementing a number of slicers to make filtering easier
• Incorrect data entries for certain store names	• Consult the client in making sure all repeating names/descriptions/labels are correct
• Missing stores name in dimensional tables	• Consult client in making sure there are no missing stores or stores to be added in thereafter, making the database ever so future proof
• Unclear dimensional tables on for store and suppliers	• Consult the client to get dimensional tables right
• No data validation	• In order to make sure the data is right on the dashboard, we may use R in to validate the dashboards

Business Requirements

In this section we clearly define our objective for future initiatives. We divided them into two separate perspectives; the *Deliverables* and the *Research & Investigation*.

The *Deliverables* section includes our current solutions we will create and provide to the client at the end. The *Research & Investigation* involves the things that we will be investigating to further improve our solution.

We gave ourselves priority list in which *HIGH* priority is given the most attention and absolutely needs to be complete, *MEDIUM* priority where a task is not required but would still enhance our solution, and *LOW* priority is given to out-of-scope tasks:

Deliverables

Deliverable	Explanation	Priority
Dashboard	• Minimise time spent creating reports and ultimately make business decisions faster. • Maximise amount of data displayed all while keep things easy to understand and use.	**HIGH**
Instruction Plan	• An instruction plan that describes how our solution should be used or setup if needed. • This would have no effect over the dashboard but may improve the implementation process of our solution.	**LOW**

Research & Investigation

Research	Explanation	Priority
Further Consult the Client	• Among other things, we need to understand precisely the level of flexibility we have regarding the data we've been given.	**HIGH**
Improve Reporting Process	• The dashboard will prove significant improvements to the reporting process. However, we can investigate to further improve the reporting process by eliminating additional steps in the process elsewhere.	**HIGH**
Add a Validation Process	• Coming up with a process to further validate the data displayed on the dashboard is needed. • This may also help if the upper management wishes to see a specific portion of data for further analyse for a decision.	**MEDIUM**