1 DATA RESULTS

1.1 Access database use

While investigating the usage logs of the Spotfire BI tool, a colleague pointed out that several users still connect to the tool using Access databases, even though IT provides more stable and flexible solutions. The question arose why these users chose to use Access and an email was sent asking them to, if they were willing, elaborate further. Of the seven people approached, six replied indicating why they still used Access to store data. For reference all the answers are added to this document in the appendices.

In general the users come from three departments, these being SU Analytics & Business Support, GL Supply Chain Management and TF LAB. The first department was polled in the survey as well and probably the user gave his feedback in the survey.

Although users give various reasons why they keep using Access, one general reason keeps returning as a baseline motivator for not using standard IT provided solutions. This reason is time and money.

One user describes this issue as: "The reason we chose (again) for Access is on one side the budget (every IT change costs a lot of money) and the inflexible nature of IT which makes that if we use an IT managed tool, we can't provide to the continuous changing business needs (every change must be handled by request, takes a long time before it is picked up and costs a lot of time to manage it)" (Appendices 5, email 1).

Another reason is the ease of access of the data. One user indicated the data he needs for reporting "is not readily accessible through tables to link the data to Spotfire" (Appendices 5, email 5). This means the department needs to buy in external programming which leads us back to the first issue being cost and time.

It was also mentioned that Access was used to connect to legacy data sources and it was preferred to match the data source instead of making connectors to transform or change the data to a new source.

The last reason mentioned was the ability to enrich or change the provided SAP data before use. One user replied: "We primarily use SAP data, but we have to enrich this with some non-SAP data (ideally this data should be in SAP as well but that's another discussion). Unfortunately we don't really have other tools available besides building an Access database ourselves, since you need to combine these data sources outside Spotfire to something useful" (Appendices 5, email 5). The same user indicated this could be solved with an IT managed non-standard change, but then "the delivery time takes more than a year and it's nearly impossible if something needs to be changed after delivery." (Appendices 5, email 5). The same user also asked for a more Agile approach of developing BI solutions.

As possible solutions for these issues, one user said a better cooperation between business and IT is required. Business should have an open and direct

communication to IT and IT should be more flexible with changes. The same user also proposes to grant more rights to key users so they can make changes like adding a column in a data source, a feature that currently requires a non-standard change and a lot of time.

1.2 Analysis for Office use

Besides browsing through Spotfire logs, usage logs of Analysis for Office were explored as well. Because there are too many data sources available, a selection was made. The ASML_ADM_005 InfoAreas were selected for further study. These belong to the Finance department, which also participated in the initial user survey.

While there is much information available about the report use, there was a specific focus to the navigational steps per individual report per day. Investigating the amount of navigational steps per report pointed out that there were reports that had 0 steps per day, meaning the query ran and the data was requested from the InfoArea, but the report wasn't used.

Parent InfoArea	Report		Calendar Day	Nav Steps	No. of unique users
ASML_ADM_005_001_001	MP_0041_Q001	FI Currency Balance	02.01.2018	0	1
	SSR_MP_0018_Q001	P&L per quarter for Corporate Dashboard	07.02.2018	0	1
ASML_ADM_005_002_001	HCP_0024_Q001	Sales Margin (SQL Base Query)	03.01.2018	0	1
			04.01.2018	0	2
			15.01.2018	0	2
			18.01.2018	0	1
			22.01.2018	0	1
			23.01.2018	0	2
			25.01.2018	0	1
			26.01.2018	0	1
			31.01.2018	0	1
			05.02.2018	0	1
			21.02.2018	0	2
			23.02.2018	0	1
			07.03.2018	0	1
			12.03.2018	0	1
			15.03.2018	0	1
			16.03.2018	0	1
			19.03.2018	0	2
			20.03.2018	0	1
			22.03.2018	0	1
			23.03.2018	0	1
			28.03.2018	0	1
			05.04.2018	0	1
			06.04.2018	0	1
			13.04.2018	0	1

Figure 9-1: Report (partial extract) in Analysis for Office indicating the amount of navigational steps and individual users per report and InfoArea.

To find out what was happening to the data, four users that used the report almost on a daily basis were selected to politely ask about their workflow with these reports. Two users replied to my question. The answers are added in full for reference in the appendices.

One user indicated that they use the requested data on a monthly basis, but it needed to be enriched to be able to be used: "[what] we are going to compare are actuals to the budget and enrich the data from the query with deviations to the

budget to be able to make forecasts on a quarterly basis. We do this in Excel" (Appendices 6, email 1).

This answer confirms the hypothesis that indeed data is captured form various data sources by using the queries that are linked to Analysis for Office reports.

The second user that replied gives a more nuanced story. He says that "[…] the source is loaded into Spotfire rather than opened in BO itself." (Appendices 6, email 2), indicating that in fact queries made for Analysis for Office are used in different tools as well. He also says that there are also "[…] standard reports that just have to be refreshed to show the correct data already. In this scenario we only set the prompt and use the report directly as an output." (Appendices 6, email 2)

This means that, although there are indications that indeed data is collected from data sources and further used in non-BI tools, the indication of 0 navigational clicks does not specifically means this is always the case. Since however it is not possible to distinguish the downloads from the links to Spotfire or the direct output reports, making this investigation to get factual data less interesting to pursue.

1.3   Excel use

Initially the aim was to investigate the use of Excel and compare this to the use of BI tools in general. Review of the possibilities of logging software usage concluded however that, although technically it is possible to capture the usage of a tool and perform an analysis on the results, practically this wasn't achievable within the scope of this project.

The first reason why this was not possible is due to way the data gathering is performed. To lower the threshold for users to share information about their use of BI tools, I opted to keep the survey anonymous, with the option at the end of the survey for people to leave their name voluntarily. Since however you need a name or some form of identification of a user to be able to log his or her actions, the only option was to capture the user actions of an entire department, which would result in an enormous amount of data that could not be analyzed within the current scope of the project.

Furthermore the tool that is used for logging user actions had a license fee linked to every installation of the tool. If the respondents to the survey were known, some selected users could be monitored. Monitoring an entire department would however mean an exponentially increasing license fee which again wasn't possible within the scope of this project.

Finally the quality of the captured data wasn't guaranteed, which, in combination with the previous two objections, resulted in the cancellation of the idea in favor of the gathering of information through a survey and by analyzing data from servers and user logs.