***a) What is the Data Storytelling (communication impact) you are attempting to deliver via this report/dashboard.***

I have put myself in the scenario where I work for a Swedish company that is trying to figure out if a venture into selling panda meat can be viable. The overall conclusion is that we need more data from a longer time period to see if the decrease in sales over the year are cyclical, or an indication of a downward trend. We can also look at what countries import meat from Sweden, and whether or not those countries keep within their budget.

***b) Explain how you have structured your report/dashboard in order to deliver that impact***

First, we take an overall look at global transactions. We look at how much the different countries import and export, both in quantity, and by money spent. Then on page two, we can see how the global meat trade varies over the year. With more information regarding previous years, this could be very valuable information. Is the downward turn during the summer and autumn a repeating trend, or a part of a more sustained downturn over years?

We then move on to look at some total numbers that show how much countries have traded, and if they have kept to their budgets, and if they have reached their income goals. This is to give us an idea of what countries are more likely to increase or decrease their imports in the future.

When we get to the pages called “Meat Exports” and “Meat Imports”, things start getting really interesting. We can look at transactions between specific country pairs, and see how well those transactions track with the overall, global values. For example, we can see that Germany is the 3rd biggest importer of panda meat from Sweden, but it imports more panda meat from Iceland. Can we take some of the Icelandic share of the market somehow? Or can we work to increase overall consumption of panda meat in Germany somehow?

Or, if we look at it the other way; We don’t export a lot to Bulgaria, maybe we can try to carve out a niche for ourselves there?

The page “Panda Meat” provides some deeper insight into the panda meat itself, compared to the other meat types. We can see that panda represents the most value of shipped meats, but it is not the most shipped in total mass. This means that the value per kg is higher, which is usually good, as it will generate more revenue for the same shipping cost. The trade discount is almost the same for the different meats as well, so it seems the only reason to not try to sell panda meat, is that maybe the market is saturated and competition fierce. Maybe we can use the low toxicity level as a marketing tool in our attempt to make it in the Bulgarian market?

The last four pages show in different ways how much meat flows in each direction between different countries.These mainly serve to quickly illustrate the bigger and smaller customers, and the biggest competition. They might not be very valuable for us right now, but they can be good pictures to show potential investors or stakeholders.

***c) Explain for each of your visualizations: a. Why you chose that way to visualise and communicate the information. b. How you planned for that visualisation to support and help deliver the dashboard’s overall impact.***

The page names will be used as titles in bold, if the page contains more than one image, each image will have its own title.

**Front Page 1**

Funnel Graph:

I chose this graph for the export volumes because it allows the user to quickly see how countries compare to each other. It also clearly shows that the smallest exporter (Japan) exported about 21,5% of the total volume exported by the largest exporter (China).

Pie Chart:

The pie chart also allows the user to see how much of the total a certain country represents. In this case; the volume of meats imported. The largest importer, Bulgaria, received almost 14% of global shipping, which is a lot. The pie chart in this case is less intuitive than the funnel chart, but can also provide more information. I chose it mainly to illustrate the difference between this and the funnel chart, but also because I needed to get more different visualizations in.

**Front Page 2**

Since the graphs show the volume traded per day, and the value traded by day, it made sense to make this graph a time series, or a line graph, that shows the trends over time.

**Exports/Imports**

Countries whose blue bar is taller than the yellow one have earned money from their trade. If the aim is to earn more money from exports than you pay for imports, this graph is an easy way to show who has been successful in this endeavor.

**Cumulative Imports**

Again, since this graph shows data over time, it makes sense to illustrate it as a line graph. For each country, we can see if (and when) they broke their budget.

There is also a card showing the budget set by the selected country.

**Revenue / Budgets**

Just as with the previous bar graphs, this allows us to see which countries have kept their budgets, and which countries have reached their expected revenue for the year. Most countries have earned a lot more than expected, and also spend a lot more than they planned. It seems only Iceland and Egypt have both kept within their budget and reached their expected revenue.

**Meat Exports / Meat Imports**

Line graph showing overall global trade:

This picture is here to provide a look into the global trend over the year, for all meats.This provides a good visual comparison to the larger graph below.

Line graph showing export value:

This graph shows the story over the year, based on the slicer settings. A trend line has been added, so that we can easily see if there are differences between the trends of certain meats, or between certain countries. It also shows how much these individual pieces of global trade compare to the total.

The reason I have two of these pages (one for imports, and one for exports), is because it makes it easier to check how much a country sends to other countries, and the turn around and see how much countries imports. This makes it so that a user can spot where there might be inconsistencies, or maybe opportunities. For example, Japan exports quite a big portion of its crocodile meat to Georgia, but only a small portion of Georgia’s imports of said meat comes from Japan. Surely, a Japanese exporter can take advantage of this?

**Panda Meat**

Table:

The purpose of the card is simply to show how little toxicity is in panda meat. Since the only information this picture needs to convey is a few numbers, a simple table will do the trick.

Bar graph (Discounts):

If we are worried about the trade discounts with regards to meat type, this graph is simply there to show us that the average trade discount when exporting from Sweden is almost exactly the same for all meats.

Bar graphs (Volume/Value):

one would expect that the meat that represents the most trading value, would also represent the most trading amount, but that is obviously not the case. The purpose of these bar graphs is simply to show that the bars for panda meat are not where we might expect, and it allows us to see that we can ship more value for the same shipping price, compared to other meats. It also shows that panda is the meat yielding the most revenue, meaning the competition is probably stiff.

Over all, the pictures on this page all aim to inspire the marketing team, and to show that a foray into panda exports is not completely dumb.

**Who Sent to Who / Flow of Panda Meat From Country**

These pages show a simple sankey diagram, showing how much of a country’s exports go to each other country, and vice versa. This is an easy way to show where the most money goes, and where the most potential lies. The first page aims to show trade between countries, while the other page shows the flow of panda meat, since that’s what we are interested in here at Bengans Kött och Exotiska Larver AB.

**Exports Flow Map / Imports Flow Map**

Lastly, these pretty maps illustrate where the meats are sent, and from where they come. They do not provide any detailed information that we do not already have, but they can be good to show investors or other important people that need not be kept up to date about all the details.

**d) Why you believe your technical analysis is correct and what steps you took to confirm your results.**

Some of the values in this dataset are hard to interpret without further information. For example, the “Volume” column obviously refers to the quantity of meat shipped, but the price is (according to the task) per kilogram, which is not a measure of volume. For simplicity, I assumed that “Volume” refers to kilograms.

Thai lead to a problem though; all countries had spent billions on their meats, but most of them only had a budget or expected revenue of about a million. The proportions were off. I know that it’s pretty common to note big sums of money in thousands, so I simply multiplied each value by 1000 to see if the graphs were more realistic, and they were. Therefore, I assumed all budget and revenue values are noted in thousands, and worked with that.

In the same vein, I assumed that “Trade Discount” is the percentage of the original price that was paid in the transaction. Eg. if the trade discount was 0.956, I assumed that the receiver paid 95.6% of the listed price.

When making new tables, I duplicated a table that contained most of the information I wanted, instead of creating an entirely new one. This is because if the table was created this way, I could access power query, which made editing easier. Making the tables for meats and countries was simply a matter of creating a new table like this, and then removing duplicates. This process would have allowed me to see if there were some inconsistent values, for example if a meat type had more than one price listed, or if a country had more than one budget. But everything was consistent and fine.

To make sure my measures showed the right thing, I created calculated columns to make sure that A) they did show the same result, and B) it made sense. Since all results seem fairly reasonable and consistent, I assume they are correct.

Sometimes I would do more of a manual calculation. Also, since I have basically split the dataset and its visualizations into one for exports and one for imports, it makes it easy to check if they show the same thing. If I can see that Iceland exported X amount of crocodile to Germany, then I should also see that Germany imported the same amount from Iceland. This way, I was able to see that I had somehow not included Germany in my exports table, and I was able to adjust that in time.

As a general rule throughout the process, I would first put everything I wanted to show in tables, cards, and/or on simple bar graphs. This was to help myself see if anything seemed off, or if everything looked as I would expect. This was especially useful when I had calculated the same thing in different ways (eg. a measure and a calculated column) to see that the calculations were correct.