



INTEGRATED EXPERIENTIAL LEARNING

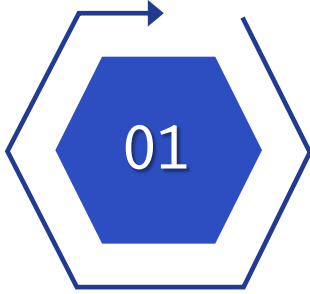
MID-TERM PRESENTATION

A Mid-Term Presentation on XN- Project.

- Integrated Experiential Learning.
(ALY6080)
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- Date of submission :
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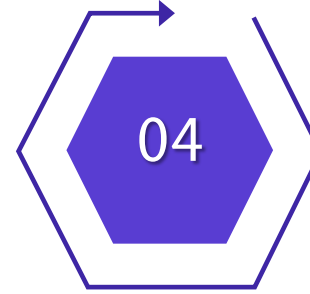


AGENDA



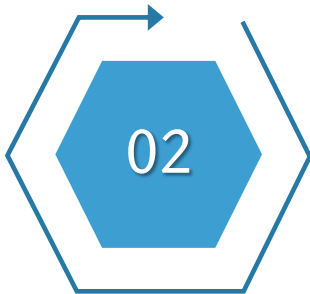
EXECUTIVE SUMMARY

- Company Description
- Market Analysis
- Project Objective



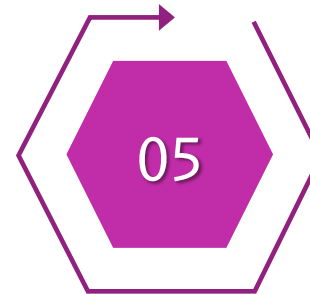
CLEAR AND CONCISE FLOW

- Analysis and synthesis of data



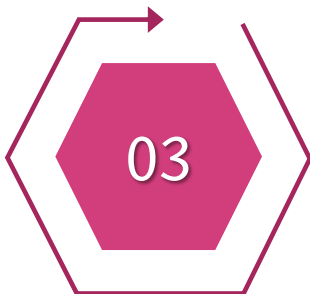
BUSINESS PROBLEMS

- Business questions.



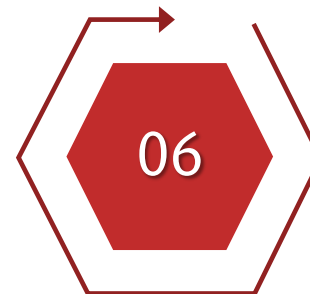
RECOMMENDATIONS AND FINDINGS

- Future Research
- Other Relevant information



ANALYTICS / VISUALS

- Products of Tableau.
- Advantages of Tableau.
- Required skills.



BIBLIOGRAPHY

EXECUTIVE SUMMARY

Company Description

Danfoss is a worldwide corporation with headquarters in **Denmark**.

Company **develops cutting-edge solutions** for customers to make decarbonization possible in a wise, economical way and guarantee **carbon neutrality** in their business practices.

By 2030, they want to have carbon-neutral activities across the world.

Market Analysis

A year of **2021** was **Transformational**, record year for Danfoss.

With record results for both **top- and bottom-line growth, significant cash flow, and a sound balance sheet**, Danfoss is moving forward quickly.

Financial performance highlights, **+29% Sales Growth, +34% EBITA Increase and +23% R&D Increase.**

Project Objective

The Danfoss corporation expects from the dataset **sales forecasting models** that are as precise as feasible and that can assist the company in **predicting future sales.**

BUSINESS PROBLEMS

Lack of Data Documentation

Relationship between EMEA, VDMA, PMI and other data variables.

Choosing perfect Forecasting Model

Which of the dataset's forecasting methods—Sales Forecasting, Demand Forecasting, or Time-Series Forecasting—is the most accurate?



Dealing with Missing values

It is difficult to choose data manipulation strategies like replacing the data values with mean/median/mode.

Accuracy

What are the data's claimed accuracy or error rates?

ANALYTICS / VISUALS

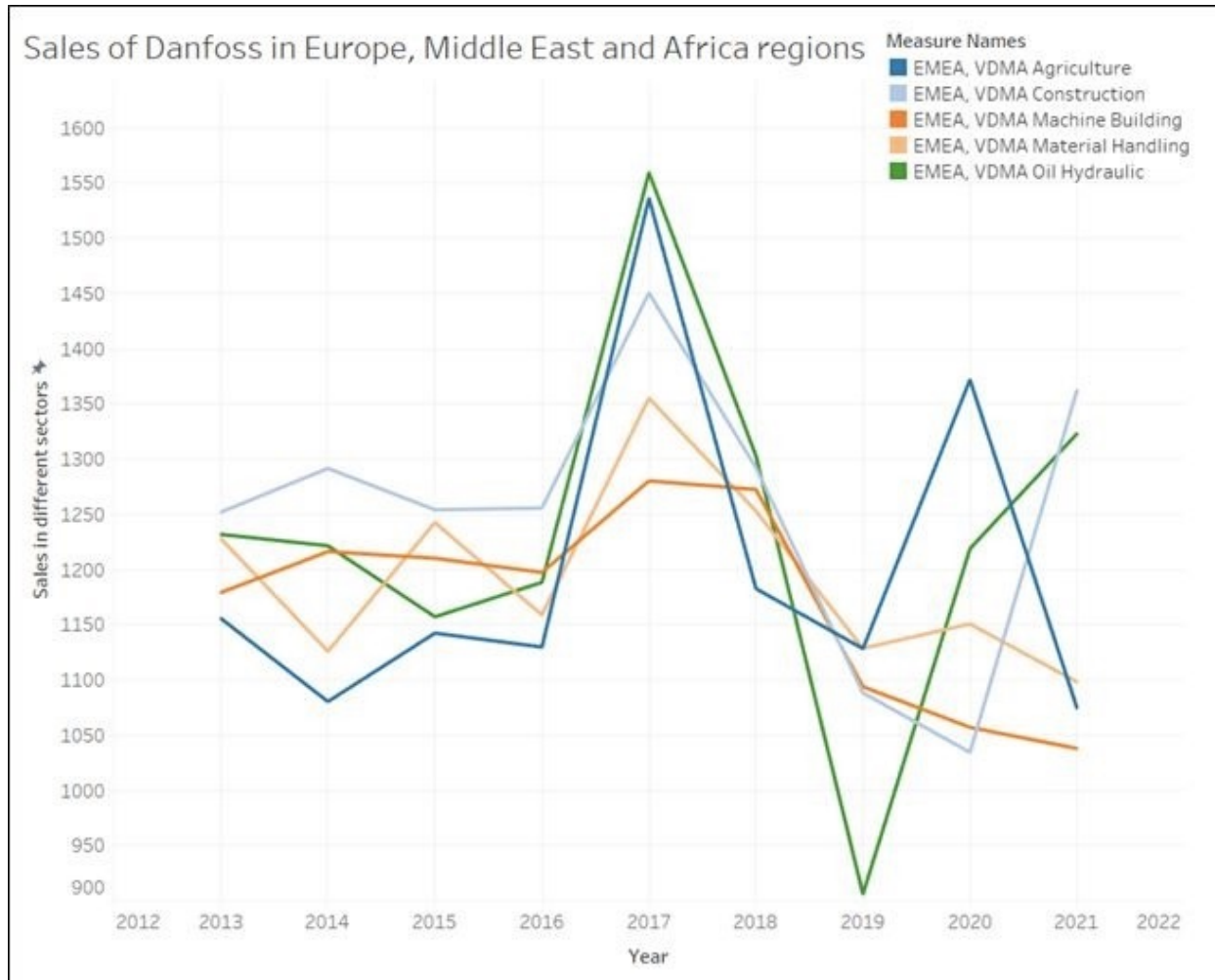


Fig.1

The graph represents the sales distribution of Danfoss in the regions of Europe, the Middle East, and Africa regions in the sectors of Agriculture, Construction, Machine Building, Material Handling, and Oil Hydraulic.

We can see there is a sharp decrease in the sales of oil hydraulic in the year 2017, it gained a profitable increase in the year 2020.

We can also see that the maximum sales were recorded for oil hydraulics in the year 2017 whereas the lowest sales were recorded for the same in the year 2019.

The sectors of machine building and material handling showed a gradual increase and decrease in sales over the decade.



Fig.2

The graph above shows that VDMA Oil Hydraulic has the largest sales in 2019, with more than 1550, while there is a decline in sales in 2019, with approximately 900.

Additionally, the graph shows that in 2021, VDMA Machine Building and Material Handling had dips of 1100 and 1050 respectively.

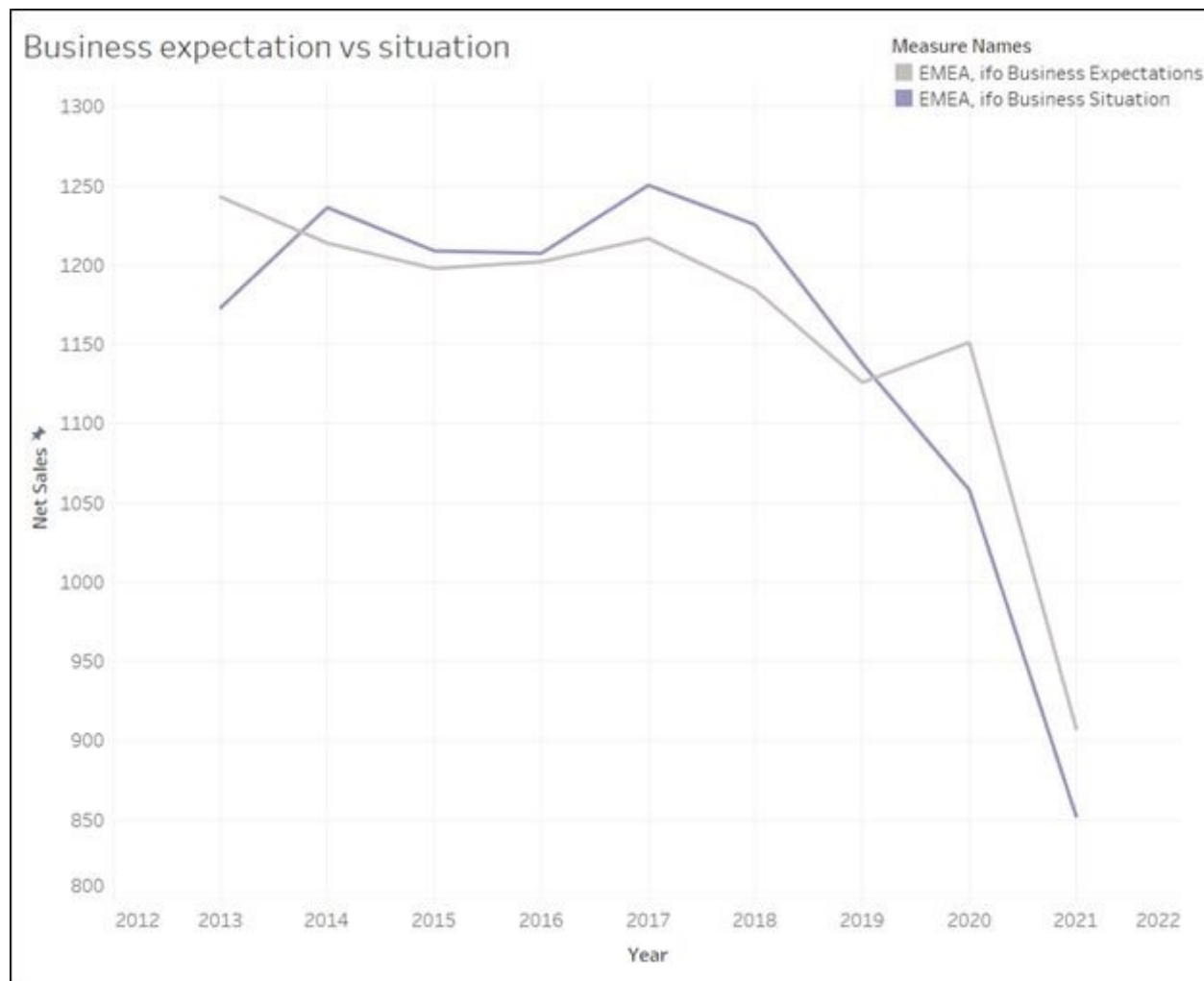


Fig.3

This graph represents the comparison between the business expectations vs the actual sales of Danfoss over the years 2012 to 2022. As we can see, from 2013 to 2019 the actual sales were more than expectations whereas, from 2019, the expectations always exceeded the actual sales. But in any case, the difference between expected and actual sales was quite visible.

Business vs customer confidence indicator

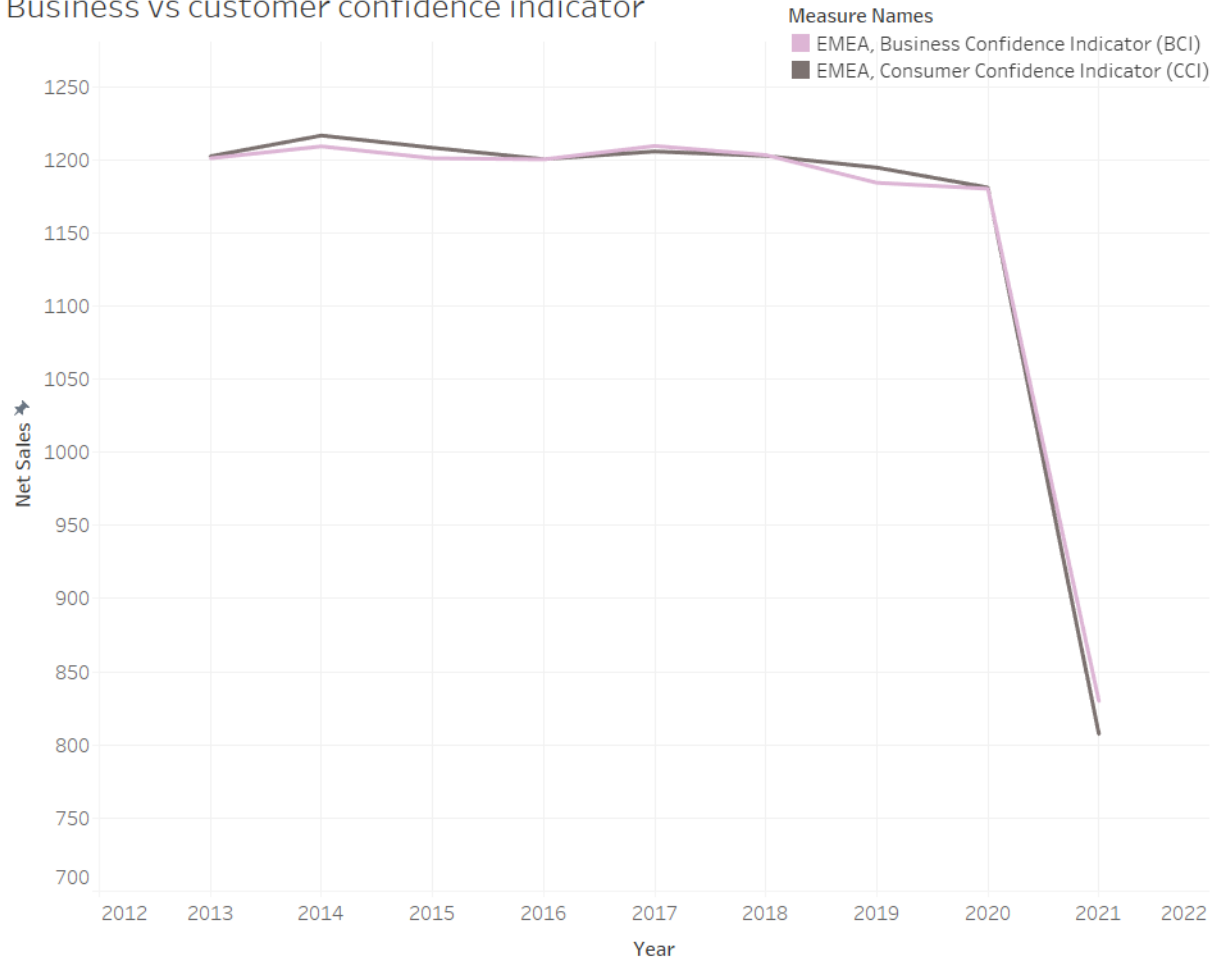


Fig.4

The above graph shows the comparison between the business confidence indicator and the consumer confidence indicator.

We can see that the business and consumer economic situations have a strong relationship as their lines move closely with each other.

ANALYSIS AND SYNTHESIS OF THE DATA

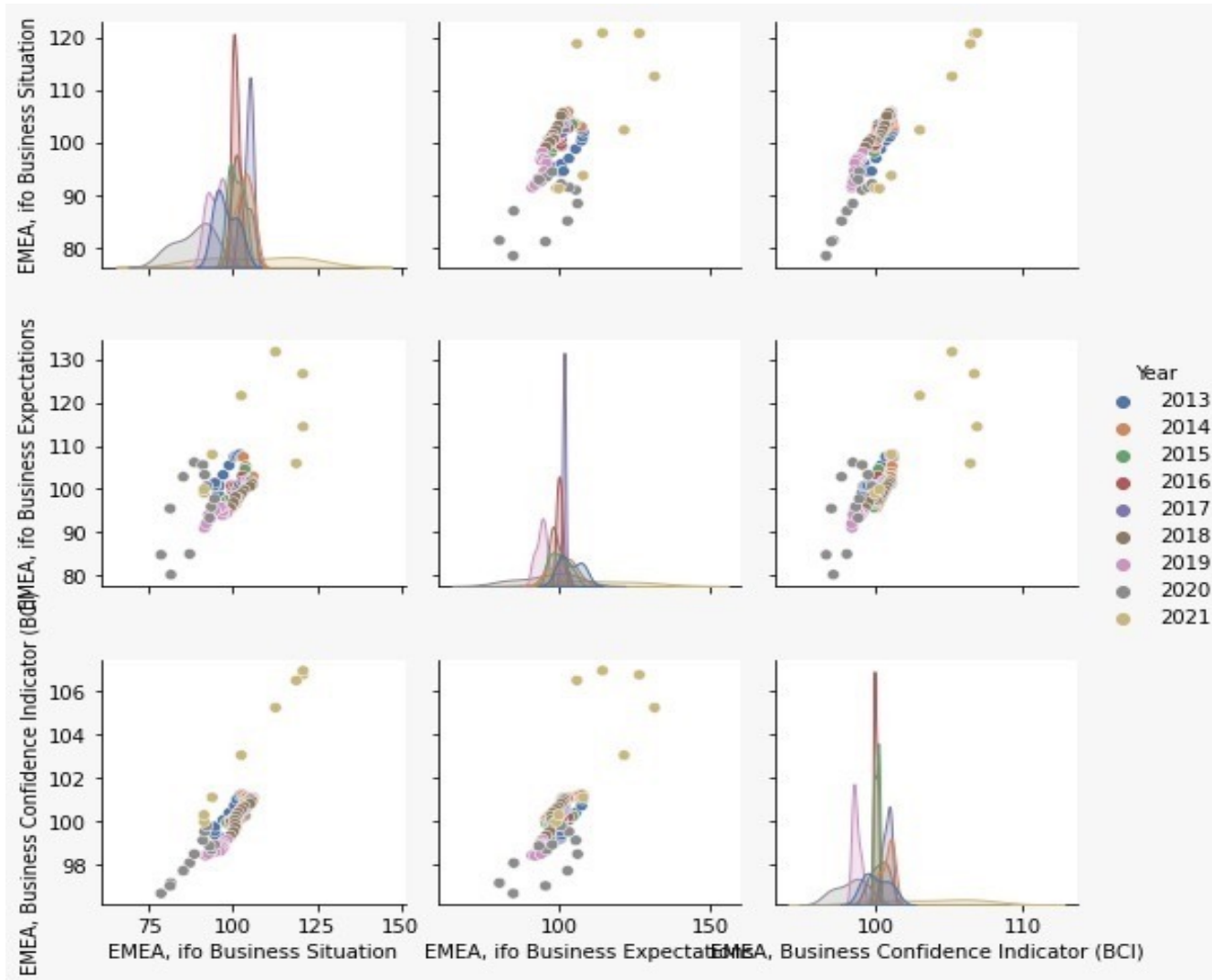
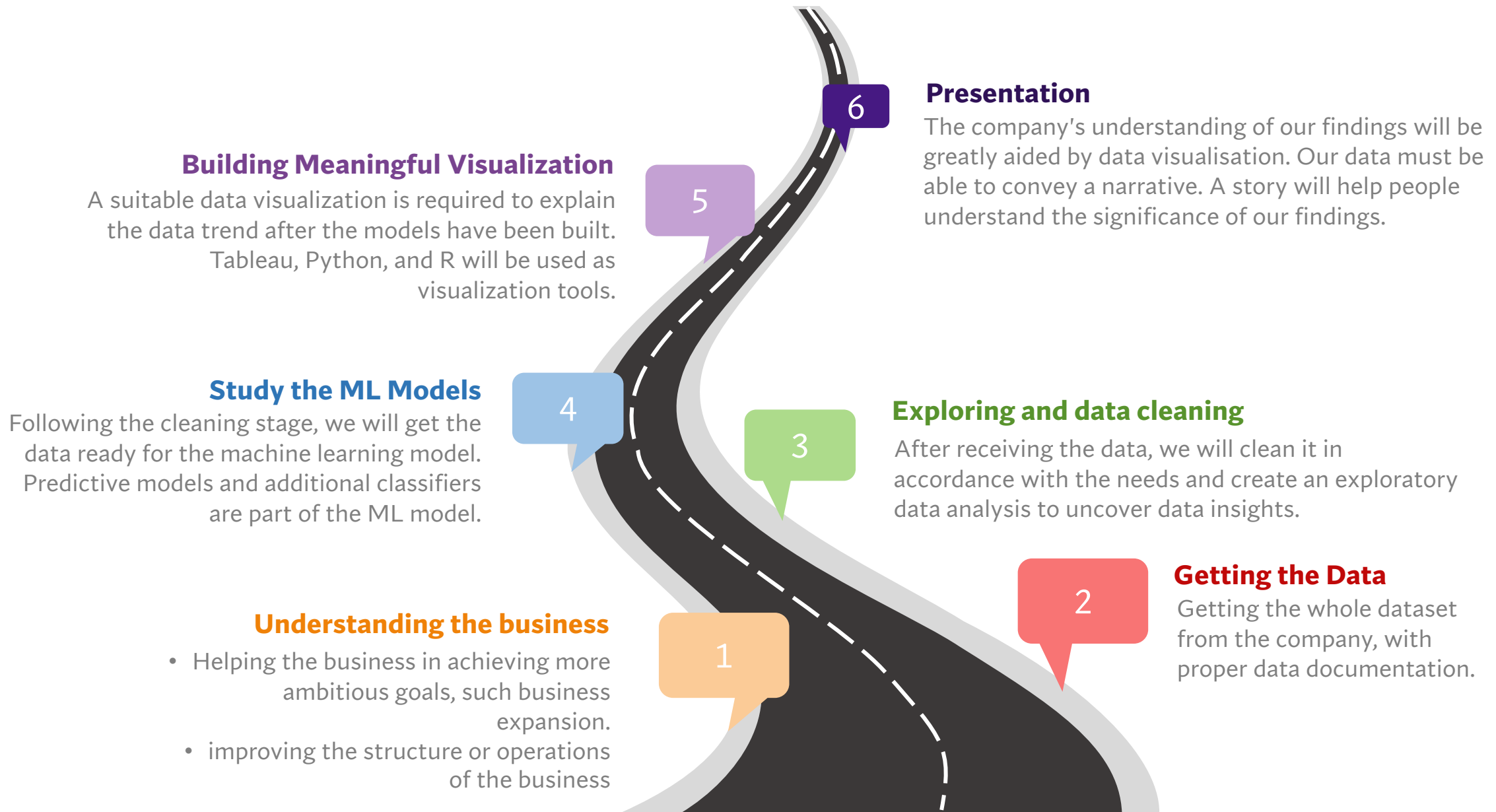


Fig.5

- From the visualisation, it is clear that, these three business columns reveal some intriguing statistics. Over the years, the scatter plots show the sales points on the visual, and we can see that EMEA Business Situation and Business Expectation depended between 90% and 110% from the academic year of 2013 to 2019 but that the years 2020 and 2021 have distance points in terms of all applied variables
- The academic year 2021's data points almost produced another cluster. The Danfoss EMEA Business Situation, EMEA Business Expectation, and EMEA Business Confidence Indicator (BCI) are therefore floating around the same pane up to 2020 but marginally rose and produced higher statistics in 2021, according to this visual.
- In the academic year of 2020, all business expectations and discussions were reduced to less than 90%, which dramatically increased the following year. This significant difference is fairly noticeable.

CLEAR CONCISE FLOW



RECOMMENDATIONS AND FINDINGS

A crucial aspect of Danfoss is sales forecasting. There are several outside factors that have an impact on the transaction. The external data from the environment of the company includes all factors that are external to the business.

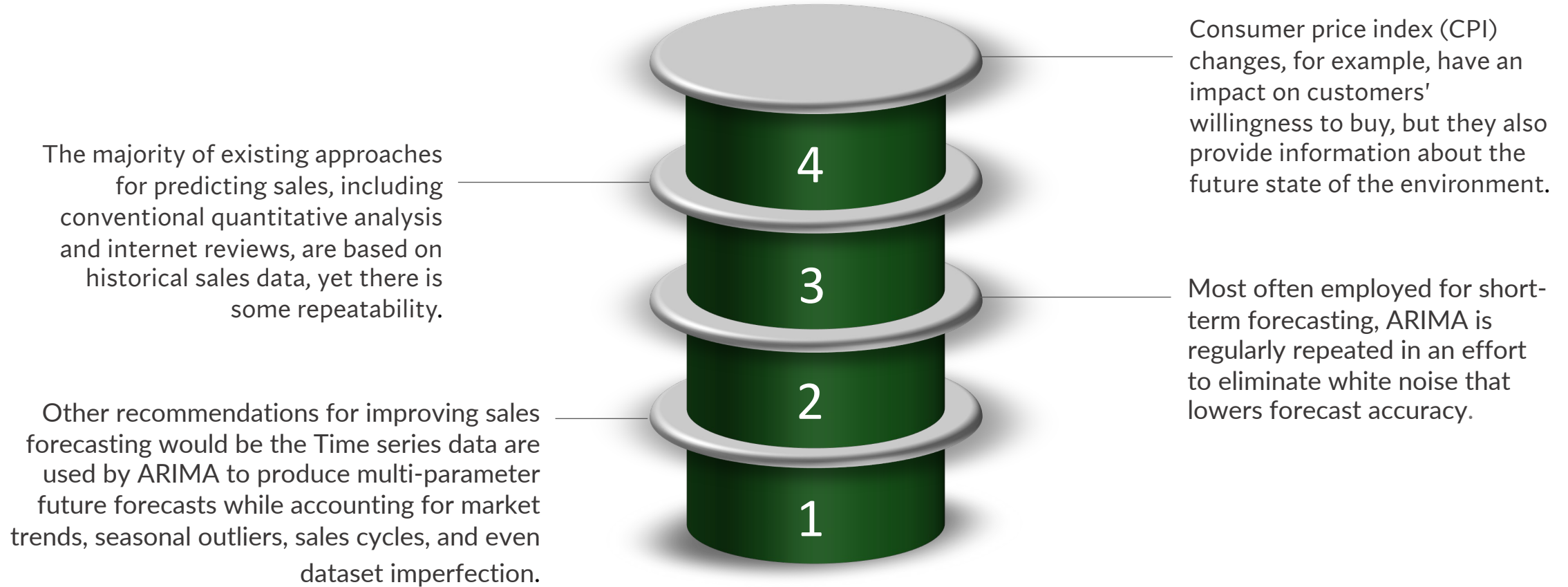
The dataset can be categorised as structured, unstructured, BIG data, market research data, etc. after an analysis of its attributes. The problems that each classification type is meant to address vary.

We can also consider following recommendations for getting a better accuracy of sales:

- Historical data for each product
- Product inventory before and after COVID-19
- Economic changes, staff availabilities, and other internal issues

In contrast to structured data, which makes it simple for machine learning algorithms to be incorporated, BIG data, for instance, focuses more on complexed datasets that are relatively large in scale. Business owners are most likely to use structured data to gain a basic understanding and insight into their industry.

FUTURE RESEARCH



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