

ZUYD UNIVERSITY OF APPLIED SCIENCE
UNIVERSIDAD DEL ROSARIO



Improving Data Literacy in HEINEKEN

Undergraduate Thesis of the International Business Program

María Antonia Pinto Hoyos

Maastricht, the Netherlands
2023

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Dedication

I dedicate this thesis to Luis Alfonso Hoyos and Juan Guillermo Hoyos, who have always inspired, supported, and encouraged me in my academic pursuits. They helped me become the person I am today by having enduring faith in my skills and being willing to share their wisdom and experiences.

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Sergio, I am forever grateful to have you by my side during this process.

Finally, thank you, Mom, this dedication serves as a small token of my appreciation for all that you have done for me.

Declaration of Originality and Autonomy

I declare under the gravity of the oath, that I have written the title document “Graduation Project”, in the grade option of International Marketing IB v2 and that, therefore, its content is original.

I declare that I have clearly and precisely indicated all direct and indirect sources of information and that this work has not been given to any other institution for qualification or publication purposes.

María Antonia Pinto Hoyos

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María Antonia Pinto Hoyos

Glossary

AMEE: Africa, Middle East, and Eastern Europe

CDOs: Chief Data Officers

D&A: Data and Analytics

GA: Global Analytics

MA: Maturity Assessment

OpCo: Operating Company. Internal name that is given to an institution that represents HEINEKEN in each country, and that HEINEKEN partially or completely owns. Its main function is to sell the different brands that HEINEKEN has worldwide.

Summary

The following document is an undergraduate thesis on Improving Data Literacy in HEINEKEN. The paper includes a literature review, current situation analysis, desired situation, strategic options, recommendations, and an implementation plan.

HEINEKEN is a global leader in the beer industry, with over 300 beer and cider brands across the world. Its Global Analytics Team is focused on data-driven decision-making, while its EverGreen strategy helps future-proof the business.

To achieve sustainable growth, HEINEKEN aims to become data-driven and prioritize sustainability, responsibility, talent, and digital interactions. The Global Analytics team aims to develop data analytics and literacy across departments, evaluate their effectiveness, and improve data-driven decisions by implementing new initiatives and measuring progress.

Global Analytics uses various communication channels and tools, including Speed Dates, Ambassadors calls, and SharePoint, to improve employees' data literacy and promote data-driven decision-making. KPIs are utilized to measure employee engagement and interest levels, and SharePoint offers a collaborative platform for employees to exchange information and best practices related to data analytics. HEINEKEN aims to improve its data literacy and decision-making levels and intends to identify the factors that influence decision-making and put improvements in place. HEINEKEN's Maturity Assessment Tool for Data Analytics helps measure the data analytics maturity of OpCos to identify areas for improvement and

opportunities for growth. It focuses on personnel, process, and technology, and is a part of the Analytics Guru training program to advance a data-driven culture.

Improving data-driven decision-making requires education and training in data literacy skills. HEINEKEN seeks to assess its data literacy level and customize a program to enhance its employees' skills and promote a data-driven culture. Effective communication is also crucial.

Abstract

This study aims to provide a thorough overview of HEINEKEN's current data analytics maturity and data literacy state and to investigate the most practical strategies to enhance these capabilities. The goal of the study is to provide a thorough understanding of the level of data analytics maturity and data literacy that exists today and to investigate the most practical means of enhancing these skills at HEINEKEN. Additionally, the research will examine how to increase the acceptability and application of these programs and evaluate the impact of educational tools and training in data literacy skills on enhancing data-driven decision-making. The study will also assess how well data challenge projects are doing at fostering data and literacy skills and make recommendations on how to make them even more effective. It is mentioned to conduct a mixed-methods study using employee questionnaires, data usage notes, and management and employee interviews to assess the current state of data literacy and data-driven decision-making among HEINEKEN personnel. Additionally, utilizing information from usage and engagement metrics, a comparison of various internal communication channels and technologies will be done. Finally, suggestions for additional projects to advance HEINEKEN's data analytics skills will be given.

Keywords: Data literacy, data-driven decision-making, internal communication, data analytics, educational resources, training, metrics, research, effectiveness, culture, resources, incentives, rewards.

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Chapter 1

Company's Description

HEINEKEN is a global beer company that was founded in Amsterdam, Netherlands in 1864. The company has a long history of innovation and sustainability, mainly known for its iconic green bottles with the red star as the logo, which has become one of the largest beer producers in the world, with a presence in over 190 countries and over 85,000 employees. HEINEKEN 's portfolio includes more than 300 international and local beers and cider brands, which include: Heineken, Amstel, Desperados, Birra Moretti, and Sol, among others (Heineken N.V., 2023).

The company is a global leader in the beer industry, with a strong identity, a commitment to sustainability and social responsibility, and a focus on innovation, quality, and marketing, to become the Best-Connected brewer. HEINEKEN's commitment to constantly innovating and adapting has allowed it to stay ahead of the curve and create new products that meet changing consumer and customer preferences (Heineken N.V., 2023).

The Company has the ambition to deliver superior and balanced growth to inspire a better world, thus, passion, courage, care, and environment are the values that EverGreen strategy empowers within the company. EverGreen strategy is a way of future-proofing its business, adapting to external dynamics, and emerging strong from the Covid-19 crisis (Heineken N.V., 2023).

HEINEKEN, as one of the largest beer companies in the world, has several competitors in the global beer market. Some of its main competitors are: Anheuser-Busch InBev with well-known brands such as Corona and Stella Artois; Carlsberg as a significant competitor in Europe and Asia; Molson Coors with their brands Miller Lite, Blue Moon, and Coors Light; Diageo produces a range of alcoholic beverages that include brands such as Guinness and Smithwicks; and Asahi Group that has a strong presence in the European and Australian markets (GlobalData Plc, 2023).

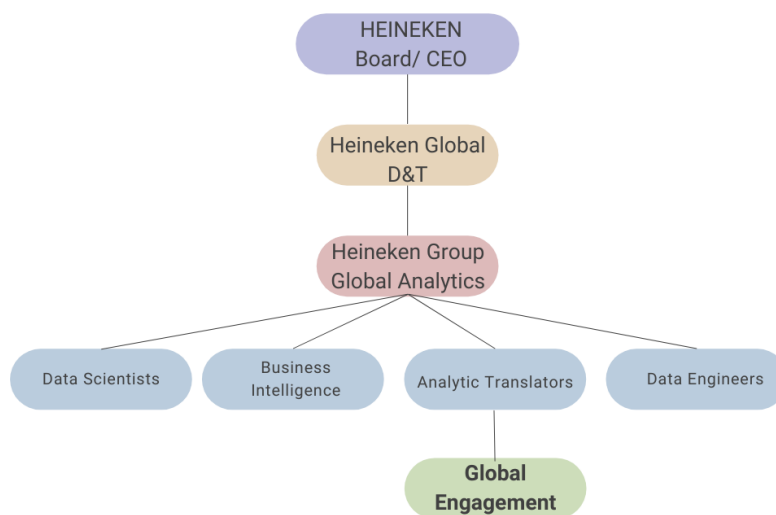
The exciting journey that HEINEKEN is on to become a data-driven organization and utilize data to its fullest potential through advanced analytics and Business Intelligence is being driven forward by the Global Analytics team. This department constantly explores innovative approaches to tackle business challenges utilizing various tools and methodologies, keeping creativity and innovation as its core. Global Analytics has a diversified group of Data Scientists, Data Engineers, Analytics product managers, and BI professionals (Global Analytics HEINEKEN, 2023).

The Global Analytics team is the Advanced Analytics and Business Intelligence orchestrator. Advance Analytics studies data or information using complex modeling techniques and tools to find deeper insights, make predictions, or generate recommendations. It is also focused on Data Science, predictive and prescriptive analysis. With the use of technologies, tools, and procedures for gathering, integrating, analyzing, and presenting business information, BI aims to assist businesses in making better decisions (Global Analytics HEINEKEN, 2023).

As the Analytics Centre of Excellence, the mission of Global Analytics is to lead HEINEKEN to become a data-driven Company and the best-Connected Brewery, by delivering scalable solutions and building capable solutions to provide business insights and decision intelligence. This is why the Global Analytics 2025 Ambitions were established, aimed to generate €500M in value by 2025 and every year thereafter by providing data-driven insights that will drive revenue growth and lead to cost savings (Global Analytics HEINEKEN, 2023).

Figure 1

Structure Organizational chart of HEINEKEN



Source: Self-made

Problem statement/definition

HEINEKEN has set an ambitious goal to transform into a data-driven organization by leveraging internal and external data to support daily operations and decision-making processes. The Global Analytics team is tasked with aiding in the development of Advanced Analytics capabilities across all departments, functions, and operations. To achieve these goals, there is a need to develop strategies to improve data analytics maturity and data literacy across the organization, including the OpCos, as well as evaluate the effectiveness of these initiatives.

Therefore, HEINEKEN seeks to identify the current state of data analytics maturity and data literacy within the company and develop a roadmap to improve these capabilities. Additionally, evaluate the impact of the Global Analytics 2025 Ambitions on HEINEKEN's data analytics capabilities and provide recommendations for future initiatives to further improve HEINEKEN's data-driven decision-making process.

The Global Analytics team aims to bridge the gap between the current situation and the desired situation by implementing various initiatives such as developing a maturity model for data analytics, measuring data literacy across the organization, and creating possible data challenges to promote data and literacy skills.

Company objective

- HEINEKEN aims to deliver superior and balanced growth with a greater focus on meeting the needs of consumers and customers.
- The company will prioritize sustainability and responsibility and make them front and center. HEINEKEN will address climate change, and water scarcity, and work towards creating a fair, equal, and healthy society.

- HEINEKEN aims to become the best-connected and most relevant brewer for customers and consumers living in the digital age. The company will build seamless digital interactions across the entire value chain.
- The company recognizes that its success is dependent on having the best talent, being highly motivated to deliver results, and being guided by a strong sense of purpose. HEINEKEN will focus on unlocking the full potential of its people

The Global Analytics team has its objectives as well, aligned with those of HEINEKEN, which allows the team to have north in terms of what they want to achieve within the company. These objectives are:

- Define the maturity levels of data analytics in the HEINEKEN OpCos and identify which OpCos should be at a high, medium, or low maturity level by 2025. Thus, develop a roadmap to help OpCos improve its data analytics maturity level and achieve the desired level.
- Develop a way to measure data literacy across HEINEKEN and identify the current level of data literacy across the organization.
- Transform HEINEKEN into a data-driven organization where daily operations and decisions are backed by a data model built from internal and external data. It encourages data-driven business models and aids in the development of Advanced Analytics capabilities across all departments, functions, and operations.
- Evaluate the impact of the Global Analytics 2025 ambition on HEINEKEN's data analytics capabilities and the organization's ability to make data-driven decisions. Assess the progress made towards achieving the goals set out in the ambition and identify areas for improvement. All this is to provide recommendations for future initiatives to further improve HEINEKEN's data analytics capabilities.

Research objective

To investigate the current state of data analytics maturity and data literacy of a delimited group of employees within HEINEKEN¹, including the OpCos, and suggest a roadmap to improve these capabilities. The study will examine the impact of internal communication on data-driven decision-making and actions and identify effective communication channels and tools to promote data literacy. Furthermore, the research will assess the effect of educational resources and training in data literacy skills on improving data-driven decision-making and explore ways to enhance the acceptance and implementation of these programs. The study will also evaluate the effectiveness of data challenge initiatives in promoting data and literacy skills and suggest ways to improve their effectiveness. The research will use a mixed-method approach, including surveys, interviews, and data analysis, to answer the research questions and achieve the mentioned research objectives.

Research questions

1. What is the current level of data literacy and data-driven decision-making among the selected group of employees at HEINEKEN, and how can these capabilities be improved?
2. How can HEINEKEN measure the impact of internal communication on data-driven decision-making and actions, and what metrics can be used to track this over time?
3. What are the most effective internal communication channels and tools for promoting data literacy and data-driven decision-making among employees at HEINEKEN, and how can these be improved?

¹ Delimited group of employees specified in the Limitations.

4. What effect do educational resources and training in data literacy skills have on improving data-driven decision-making at HEINEKEN, and how may the acceptance and implementation of these programs be made better?
5. How can HEINEKEN develop a roadmap to improve its data analytics capabilities, including the maturity model for data analytics and the data literacy training initiatives?
6. How effective are the data challenge initiatives in promoting data and literacy skills in HEINEKEN, and what can be done to improve their effectiveness further?

Methodology

Table 1

Methodology table for research questions

Research question	Methodology	Desk or field research	Description	Sources
What is the current level of data literacy and data-driven decision-making among the selected group of employees at HEINEKEN, and how can these capabilities be improved?	Qualitative and quantitative	Desk & field	A mixed-methods study that measures the current level of data literacy and data-driven decision-making among employees at HEINEKEN	Employee surveys, data usage records, and interviews with managers and employees. Industry reports on data literacy and analytics adoption, case studies of organizations with successful data-driven cultures
How can HEINEKEN measure the impact of internal communication on data-driven decision-making	Quantitative	Desk	Metrics such as the number and impact of data-driven decisions made	Data records, employee surveys and feedback, and management reports. Case studies of organizations

and actions, and what metrics can be used to track this over time?

What are the most effective internal communication channels and tools for promoting data literacy and data-driven decision-making among employees at HEINEKEN, and how can these be improved?

Quantitative

Desk

A comparative analysis of different internal communication channels and tools, using data from usage and engagement metrics

with successful data-driven cultures, industry reports on data analytics and decision-making

Usage data for different channels and tools, employee surveys and feedback, and interviews with managers and employees. Case studies of organizations with successful internal communication strategies

What effect do educational resources and training in data literacy skills have on improving data-driven decision-making at HEINEKEN, and how may the acceptance and implementation of these be made better?

Qualitative and quantitative

Desk

Literature review of best practices in data literacy training with employee surveys, interviews, and observations to evaluate the impact of educational resources and training on improving data-driven decision-making

Employee surveys and feedback, training program records. Literature on data literacy training and case studies of organizations with successful training programs

How can HEINEKEN develop a roadmap to improve its data analytics capabilities, including the maturity model for data analytics and the data

Qualitative and quantitative

Desk

Review of HEINEKEN's current data analytics capabilities with interviews and surveys of managers and employees

Data records, manager reports, employee surveys, and feedback. Literature on data analytics maturity and data literacy

literacy training initiatives? How effective are the data challenge initiatives in promoting data and literacy skills in HEINEKEN, and what can be done to improve their effectiveness further?	Qualitative and quantitative	Desk & field	Data analysis of the effectiveness of data challenge initiatives with interviews and surveys to evaluate the impact of these initiatives on promoting data and literacy skills in HEINEKEN	Data records, employee surveys and feedback, and management reports. Literature on data challenge initiatives
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Source: Self-made

Limitations

The potential bias in the data gathered from focus groups and online surveys, as well as the possibility of employees' limited involvement, are the limitations of this thesis. In addition, circumstances outside the control of the Global Analytics team may affect how effective the initiatives are.

The number of HEINEKEN employees, also taking into account those who work in OpCos worldwide, is very large. This study can only be done in a limited group, which will be within the area of D&T, the Nigerian Opco, and the Brazilian Opco. Additionally, due to the confidentiality of the MA results, some numbers can not be included in the research.

The Maturity Assessment, conducted by the Global Analytics department, is currently being applied to the different OpCos. The due process and permissions required to conduct surveys and interviews can only be taken into account in the current situation of the OpCos. Only the surveys and interviews to analyze the data literature level and maturity level that is

already being used and created by the Global Analytics team can be applied, not the own ones.

Chapter 2

Literature Review

Introduction.

HEINEKEN seeks to become a data-driven organization using internal and external data to support routine business activities and decision-making processes. The mission of the Global Analytics team is to support the growth of advanced analytics skills across all operations, functions, and departments. To accomplish these objectives, it is necessary to create plans to increase data analytics maturity and data literacy throughout the company, including the OpCos, and assess access to these initiatives. The research objective is to provide a comprehensive understanding of the current state of data analytics maturity and data literacy and to explore the most effective ways to improve these capabilities at HEINEKEN.

2.1 Data literacy.

Data literacy is the capacity to comprehend data sources and analytical techniques, read, write, and express data in context, utilize data critically and ethically, and use data to improve results. It enables people to ask and respond to significant issues in the real world and gives non-specialists the information they need to make data-based decisions. Due to the development of automation, robotics, and artificial intelligence, data literacy is becoming more and more crucial in the modern world. According to the people behind the Data Literacy Project, it is essential to have trust in one's data skills to stay relevant (Passionned

Group, n.d.). Training and education are the antidotes to data illiteracy, as they provide individuals and companies with the tools to understand and use data more effectively. The Global Analytics team at HEINEKEN seeks to assess data literacy across the company and determine where it is right now.

2.2 Education and training.

Data-driven decision-making can be improved if educational materials and training in data literacy skills are made available. Organizations can benefit from data literacy training by learning how to analyze and apply data, which can improve performance and decision-making. Employees with a data literacy education are better able to comprehend and interpret data, which leads to better decision-making and better results. Additionally, firms that offer data literacy programs can improve organizational performance by fostering a culture of data-driven decision-making. Employees must have access to tools and platforms that allow them to access and evaluate data, as well as relevant and interesting information, for these programs to be successful.

According to Gartner's Data and Analytics Roadmap, "To achieve the ambitious goals of D&A strategies and address the existing skill gaps, CDOs should roll out data literacy training programs." (Panetta, 2021). This suggests that the effect of internal communication on data-driven decision-making and actions can be evaluated via data literacy training. HEINEKEN can measure the effectiveness of its internal communication and make sure that its data literacy programs are successful by keeping track of metrics like the number of employees who have completed data literacy training, employee engagement in data literacy initiatives, and the number of data-driven decisions and actions taken.

Numerous research and scenarios have shown the effectiveness of educational resources and training in data literacy abilities in enhancing data-driven decision-making. Research on public authorities in the European Union found that the workforce's ability to make data-driven decisions increased when it had higher data literacy skills (Bonikowska et al., 2019). The research encourages organizations to consider the current data literacy levels of their workforce and customize the training program accordingly to improve the adoption and implementation of these initiatives. As Wolff et al. (2015) mentioned (Panetta, 2021), “tailoring the data literacy programme to the knowledge and skills of the target audience can increase the acceptance of the programme”. This underlines how essential it is to comprehend the current state of data literacy before developing a training program to ensure the program is suited to the requirements of the intended audience.

2.3 Communication channels.

Effective communication is essential to promote data literacy and data-driven decision-making. The Open Data Institute (ODI) recently surveyed government employees across the world, focusing on skills employees say they want to learn and found that the most effective internal communication channels and tools for promoting data literacy and data-driven decision-making among employees are face-to-face training sessions and online learning tools (Panetta, 2021). To improve these communication channels and tools, HEINEKEN could consider offering blended learning options that combine face-to-face training with online materials, which could help to create a more interactive and engaging learning experience. Additionally, providing employees with access to data literacy resources and support from experienced data experts could help to ensure that employees are equipped with the knowledge and skills they need to effectively use data for decision-making.

HEINEKEN needs to identify the most effective internal communication channels and tools for promoting data literacy and data-driven decision-making among employees.

According to a study by the OECD, internal communication channels and tools play an essential role in promoting data literacy and data-driven decision-making among employees.

The study found that "effective internal communication channels and tools, including ones that are tailored to the needs of individual employees, can help promote data literacy and data-driven decision-making in an organization" (OECD 2017). The study also noted that to promote data literacy effectively, organizations should focus on developing communication strategies that are tailored to the needs of individual employees and that these strategies should be regularly evaluated and updated to ensure they remain effective. Additionally, the study suggests that providing incentives and rewards for employees who demonstrate successful data literacy skills can help to further encourage data literacy and data-driven decision-making (Bonikowska et al., 2019).

The Defining analytics maturity indicators: A survey approach research study highlighted the importance of data literacy and data-driven decision-making in the workplace. It showed that the most effective internal communication channels and tools for promoting data literacy and data-driven decision-making among employees are a combination of online resources and in-person instruction. Online resources, such as online tutorials, webinars, and training videos, can provide employees with the necessary skills and knowledge to use data effectively. In-person instruction, such as seminars and workshops, can provide employees with the opportunity to practice using data and receive feedback from experts. Additionally, the research study found that fostering a culture of data-driven decision-making is key to promoting data literacy and data-driven decision-making at an organizational level (Lismont

et al., 2017, 114-124). Organizations need to create an environment where data is understood and respected, and where employees feel comfortable and empowered to use data to make decisions.

To determine the effectiveness of the communication strategies, HEINEKEN needs to measure the effect of internal communication on data-driven decision-making. The frequency of data-driven decision-making, the proportion of decisions that are based on data, and the number of employees who have access to data and utilize it to make decisions are all metrics that may be used to monitor the effectiveness of internal communication in this process. HEINEKEN can measure the impact of internal communication on data-driven decision-making and actions by tracking metrics such as the number of data-driven decisions made, the accuracy of those decisions, and the efficiency of data-driven processes. According to a study by Datenschule, "The survey questions asked whether big data was used or produced in the organization, what specific purpose they were used for, and who within the organization was using them." This research study found that tracking the use of big data can help to measure the impact of internal communication on data-driven decision-making and actions (Bonikowska et al., 2019). By tracking these metrics over time, HEINEKEN can measure the effectiveness of its internal communication and identify areas for improvement.

HEINEKEN, like many companies, recognizes the importance of data analytics in making informed business decisions that can drive growth and increase stakeholder trust. However, developing a roadmap to improve data analytics capabilities can be challenging. HEINEKEN can develop a roadmap to improve its data analytics capabilities by following the example of KPMG. KPMG has developed an integrated approach to increasing data literacy and embedding a truly data-driven culture within organizations. This includes

webinars, workshops, roadshows, and online training, all aimed at increasing skills and awareness organization-wide regarding the smart use of customer and marketplace data. KPMG data specialists also helped a large European retailer looking to become a market leader in its use and application of data, which included designing an internal communications strategy on data analytics and members of the bank's board (KPMG, 2023). HEINEKEN can follow a similar approach to increase its data literacy and embed a truly data-driven culture.

HEINEKEN can develop a roadmap to improve its capabilities by introducing a maturity model for data analytics and mandatory data literacy training initiatives. According to the Data Literacy Project, “training and education are the antidote to data illiteracy.” (Passionned Group, n.d.). This means that providing mandatory data literacy training initiatives can help employees become more proficient in working with data. Additionally, the company can introduce a maturity model for data analytics to measure the progress of its data analytics capabilities and track the success of its data literacy initiatives. Through this assessment, HEINEKEN can determine the level of their data literacy, and identify areas for improvement. By developing a roadmap that combines these two initiatives, HEINEKEN can ensure that their employees have the necessary skills to work with data and that their data analytics capabilities are progressing in the right direction.

The importance of data analytics maturity and data literacy within an organization, the need for a roadmap to enhance data analytics capabilities, the success of data challenge initiatives, and the effect of the Global Analytics 2025 Ambition on HEINEKEN's data analytics capabilities are all highlighted in this literature review. The mixed-methodologies approach can be utilized to address the study objectives and offer insights on how educational

materials and training in data literacy skills might improve data-driven decision-making at HEINEKEN. This approach includes both qualitative and quantitative research methods.

Chapter 3

Current situation

3.1 Level of data literacy

The Maturity Assessment (MA) is a tool created by the Global Analytics team at HEINEKEN, intending to measure the level of data analytics maturity of the OpCos. The assessment is conducted throughout the OpCo, but the team has the freedom to choose who will carry out the evaluation. The primary goal of the MA is to identify the current level of data analytics maturity and the potential for further growth and improvement.

To better understand HEINEKEN's skills and level of Data and Analytics (D&A) Maturity, the MA was developed and is currently being applied. It serves as a tool for identifying the company's data and analytics operations' advantages and areas needing improvement. The MA is a good place to start when customizing the training programs offered by HEINEKEN's Global Analytics Guru Academy². The Maturity Assessment was developed to give HEINEKEN a thorough understanding of their data and analytics capabilities, to highlight areas for improvement, and to stimulate discussions and actions aimed at furthering and improving their D&A skills.

The MA focuses on 3 areas: (1) People: data & analytics skills, data-driven culture, and leadership support, (2) Process: operating model, governance, value, and continuous improvement, and (3) Technology: platforms, data quality, and data sources. It is a 20 questions survey, made of both multiple choice and open answers. The questions are not

² Analytics Guru Academy is further explained in 3.4 Training programs.

technical, thus, everyone is in the capacity to complete the questionnaire. The MA measures five pillars: Business Process, Data Quality, Data Sources, Strategy, and Tooling & Analytics. A level is received for each pillar, from 1 to 5.

Based on the results of the Maturity Assessment, it is given a Maturity level, described in Figure 3 below.

Figure 2

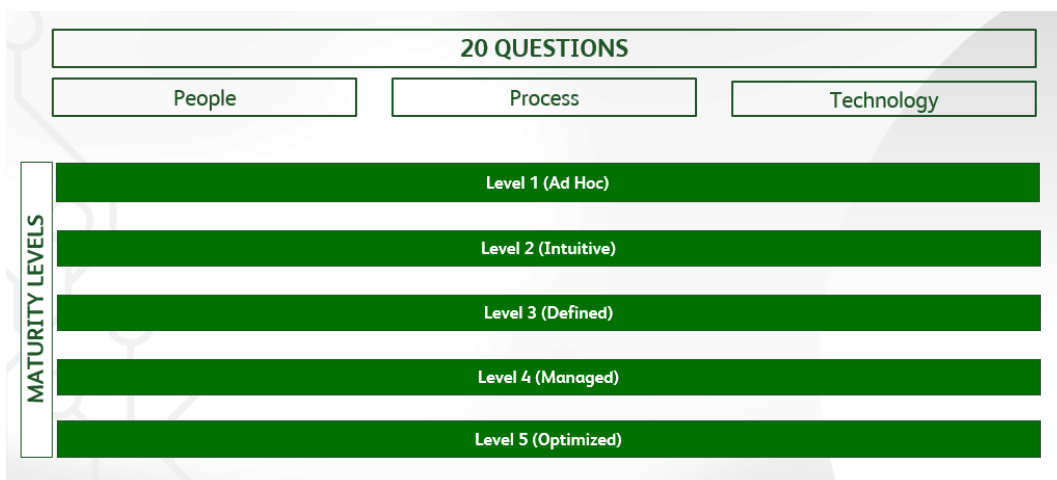
Maturity Assessment process mapping



Source: HEINEKEN Kick off Maturity Assessment 2.0

Figure 3

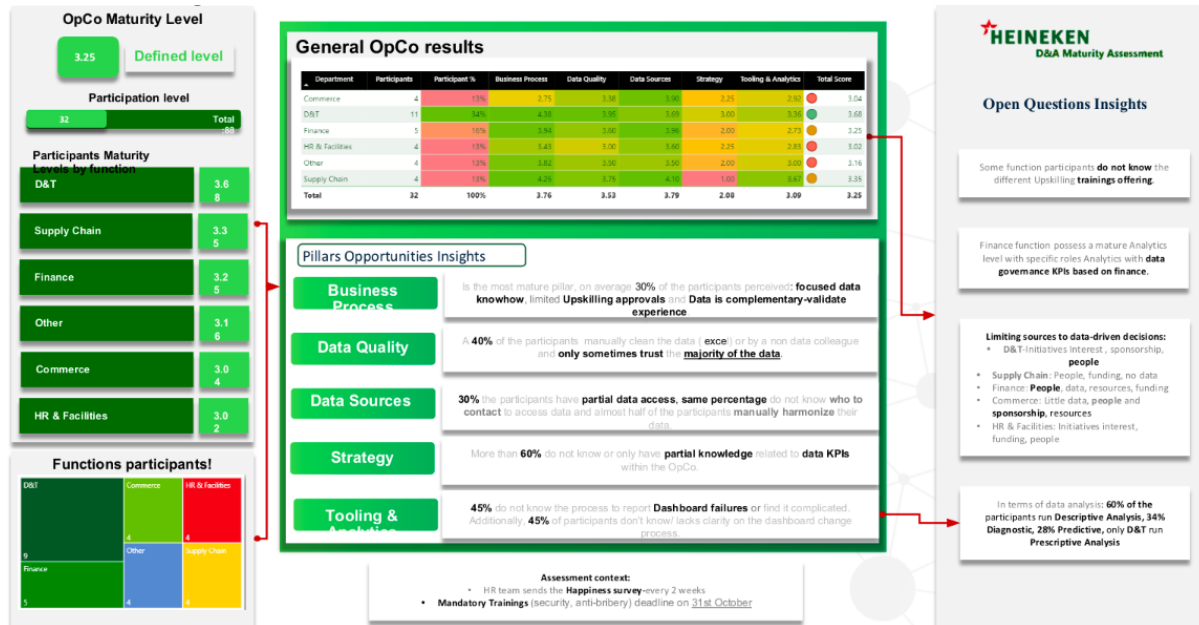
Maturity levels



Source: HEINEKEN Kick off Maturity Assessment 2.0

Figure 4

Maturity Assessment results example



Source: HEINEKEN Kick off Maturity Assessment 2.0

3.2 Nigeria's Data Literacy level.

Nigeria is one of the largest and most important OpCos in the AMEE region. In this analysis, we will examine the results of the Action Plan 2022-2023 Maturity Assessment, which was conducted with the participation of 253 people (the entire OpCo) from various functions, including commerce, finance, HR & Facilities, D&T, Supply Chain, and Legal.

In terms of the Business Process pillar, there is a healthy level among the questions, with more than 25% being met, which is led by Data-driven decision-making (64%) and OpCo leadership support (41%). However, the main opportunity for this pillar resides in

Approval for upskilling's 38% on Maturity level 1, followed by Analytical Awareness (63% > 4).

The Data Quality pillar had the most diversified Maturity Level among the departments, where the main area of opportunity is Dashboard creation with 47% on Maturity level 1, followed by the Data Quality Process with a corresponding 25%.

In the Data Sources pillar, there is a strong Data Knowledge and ease of Data Access (92% and 89%) for 5 on the Maturity level, followed by Data Sourcing at 50%, Data Access at 43%, and Harmonizing Data with 32% on the same Maturity Level and the highest diversity of Maturity Levels.

In the Strategy pillar, there is a generalized Maturity level of (2-5) except for D&T and Commerce barely above 3 and Level below 2.

The Tooling & Analytics pillar has low levels of analysis failure process (75%), followed by the Analysis Maintenance Process (38%) with a score of 1 and correspondingly Analytical Model Complexity of 25% (HEINEKEN, 2022).

3.3 Brazil's Data Literacy Level.

Brazil is one of the largest and most important OpCos in the Americas region. In this analysis, we will examine the results of the Action Plan 2022-2023 Maturity Assessment, which had a participation level of 32 out of 88 people from various functions, including commerce, finance, HR & Facilities, D&T, Supply Chain, and other non-specified.

The Business Process pillar is the most mature pillar, with an average of 30% of participants perceiving focused data know-how, limited Upskilling approvals, and data being complementary to validate the experience.

In the Data Quality pillar, 40% of participants manually clean the data, often using Excel or relying on non-data colleagues. Additionally, only sometimes do they trust the majority of the data, indicating room for improvement in data cleaning processes and data trustworthiness.

Within the Data Sources pillar, 30% of participants have partial data access, and the same percentage does not know who to contact to access data. Furthermore, almost half of the participants manually harmonize their data, suggesting a need for streamlining data access and harmonization processes.

In the Strategy pillar, over 60% of participants either do not know or only have partial knowledge related to data Key Performance Indicators (KPIs) within the OpCo. This highlights the need for improved understanding and clarity regarding data-related goals and metrics.

Within the Tooling & Analytics pillar, 45% of participants do not know the process to report Dashboard failures or find it complicated. Additionally, 45% of participants lack clarity or knowledge about the dashboard change process. These findings indicate the necessity of providing clear guidelines and support for reporting and managing dashboard issues (HEINEKEN, 2022).

3.4 Training Programs.

Currently, HEINEKEN provides its employees with a foundation in data analytics and how it is applied in the workplace through the Analytics Guru training program. The program aims to teach employees the principles of data analytics and provide them with an understanding of how analytics are used internally at the organization. Using Analytics Guru, employees can acquire the knowledge and abilities needed to transform data into valuable insights. Additionally, the program aims to strengthen a data-driven mindset and advance a data-driven culture within the company. Employees who participate in the program will understand the value of data and analytics across various HEINEKEN business areas.

The D&T Academy is a learning platform that offers IT experts and non-technical employees instructional materials to advance their skills and expertise in the digital and technology domains. Its goal is to equip people with various learning tools that will enable them to reach their IT knowledge and skills to keep up with the newest trends and technology. The D&T Academy is a component of HEINEKEN Digital & Technology DIGIFIT, which also comprises the following five digital pillars: digital productivity, digital trends, essential technologies, HEINEKEN's activities, and digital mentality. All employees at HEINEKEN must have these foundational digital skills to succeed in the digital world. Employees can use DIGIFIT to gain the expertise they need to flourish in their positions and keep up with the quick changes in the digital scene (HEINEKEN, 2023).

3.5 Internal Communication Channels.

The Global Analytics engagement team at HEINEKEN uses WorkPlace as one of its primary communication channels to share current AI and analytic topics. The team posts daily informative texts, videos, and images that talk about products and projects within the team that implement data analytics. These posts aim to educate employees about data analytics and how it can be used to drive business growth.

The team also conducts monthly Speed Dates and Ambassadors calls. These events have guest speakers from the company who talk about products and projects developed with data analytics, from both technical and business perspectives. These events aim to provide employees with a deeper understanding of data analytics and how it can be used to improve their work.

The effectiveness of these communication channels and tools is measured using key performance indicators (KPIs). The number of attendees (views) at the Speed Dates and Ambassadors calls, interaction, followers, and posts in WorkPlace, are all utilized to measure employee interest and engagement levels.

SharePoint is another tool and communication channel that Global Analytics employs to encourage data literacy and data-driven decision-making among its workers. SharePoint is a web-based platform for collaboration that gives staff members access to data from the Global Analytics team. This covers details about the team's data analytics-related projects, products, and services. Resources for employees include case studies, best practices, and training materials linked to data analytics. One of the key benefits of adopting SharePoint is that it enables the Global Analytics team to give all employees access to resources and information in one place. This guarantees that all workers have access to the same

information regardless of location or department. Additionally, SharePoint offers a collaborative setting where staff members can exchange information and best practices related to data analytics. Employees can learn from one another's experiences and incorporate best practices into their work, promoting a culture of continual learning and progress.

The effectiveness of SharePoint as a communication channel and tool is also measured using KPIs. The number of views, downloads, and comments on the platform are some of these KPIs. The Global Analytics team can evaluate employee engagement and interest levels by analyzing these KPIs and changing their communication approach as necessary. SharePoint guarantees that all employees have access to the same information by offering a central area for data analytics-related information and tools. Additionally, the collaborative setting promotes a culture of ongoing learning and development.

Conclusion

The Maturity Assessment tool helps identify strengths and areas for improvement in data analytics operations. Nigeria's data literacy level shows strengths in data-driven decision-making but opportunities in upskilling and analytical awareness. Brazil's level highlights the need for improved data cleaning, access, and understanding of data-related goals. Training programs like Analytics Guru and D&T Academy contribute to fostering a data-driven culture. Internal communication channels such as WorkPlace and SharePoint facilitate knowledge sharing. Overall, these findings emphasize the importance of assessing and enhancing data analytics capabilities to drive data-driven decision-making within HEINEKEN.

Chapter 4

Desired situation

HEINEKEN seeks to transform into a more data-driven organization with the knowledge and tools to base decisions on data insights. This requires an intense effort to raise staff data literacy and data-driven decision-making levels from where they currently are. To do this, HEINEKEN intends to define the factors that influence decision-making and data literacy today and put improvements in place.

The Global Analytics team also aims to measure and track over time the effect of internal communication on data-driven decision-making. As a result, the business will be better able to identify the internal communication channels and resources that work best to encourage data literacy and data-driven decision-making among employees.

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Chapter 5

Strategic Options and Choice of one leading solution

It has been noted HEINEKEN's initiatives to raise data literacy levels throughout the company by utilizing the Maturity Assessment (MA) tool, training courses, and internal communication channels. The People, Process, and Technology maturity levels of data analytics are evaluated using the MA tool, which also identifies areas for development. The goal of HEINEKEN's Analytics Guru training program is to give staff members a foundation in data analytics and promote a culture driven by data. WorkPlace and SharePoint are utilized as internal communication tools to convey relevant AI and analytics issues, give staff members access to resources for data analytics, and encourage teamwork.

To this end, HEINEKEN aims to improve data literacy and decision-making based on data insights to become a more data-driven organization. The Global Analytics team intends to assess and monitor the impact of internal communication over time on data-driven decision-making and to pinpoint the most efficient routes and tools for doing so.

The Global Analytics team's goals are in line with those of HEINEKEN as a whole, which include becoming a data-driven organization by utilizing both internal and external data to support ongoing operations and decision-making procedures. The team's objectives include defining the data analytics maturity levels within the HEINEKEN OpCos, creating a roadmap to increase data analytics maturity, assessing data literacy across HEINEKEN, converting HEINEKEN into a data-driven organization, and assessing the effects of the Global Analytics 2025 ambition on HEINEKEN's data analytics capabilities.

After comparing the current situation with what the HEINEKEN Global Analytics team would like it to be, it became evident that providing educational resources and data literacy training would be the best way to improve data-driven decision-making. Data literacy training can benefit organizations by teaching them how to apply and evaluate data, enhancing performance and decision-making. Employees who have received training in data literacy are better able to understand and interpret data, improving decision-making and yielding better outcomes. Additionally, businesses that offer data literacy programs can enhance organizational performance by promoting a culture of data-driven decision-making.

5.1 Level of data literacy and Capabilities.

To determine the existing state of data literacy and data-driven decision-making among employees at HEINEKEN and how to enhance these capacities. In the beginning, GA will work with the Data Literacy Project (QlikTech International AB, 2023), a renowned innovator in data literacy instruction. Through this relationship, the GA team will be able to better the data literacy within the company by utilizing the resources and experience of the Data Literacy Project. To give employees essential instruction and knowledge, Global Analytics will also install Qlik's Data Literacy Solutions, which include online courses and learning resources.

Additionally, the Maturity Assessment (MA) tool developed by the Global Analytics team can be utilized. The MA evaluates the maturity of data analytics in terms of People, Processes, and Technology. The employees' data literacy level and the organization's present use of data-driven decision-making can be assessed by distributing the MA survey to the chosen set of workers. Customized training programs, such as the Analytics Guru training program, can be used to strengthen these competencies by giving staff members a foundation

in data analytics and improving their comprehension of how analytics are used inside the organization. A data-driven attitude and culture can be promoted throughout the organization with the use of training programs.

5.2 Metrics for internal communication tracking.

To measure the impact of internal communication on data-driven decision-making and actions, HEINEKEN can implement the initiative of implementing a mandatory initial questionnaire and basic training on data literacy competencies. By implementing this initiative, HEINEKEN can assess employees' data literacy levels, provide targeted training, and track the impact of internal communication efforts on data-driven decision-making. This will help improve overall data literacy within the organization and facilitate more informed and effective decision-making processes.

By monitoring indicators like the quantity of data-driven decisions taken, the precision of those judgments, and the effectiveness of data-driven processes, GA can assess the influence of internal communication on data-driven decision-making and actions. Additionally, by monitoring metrics like the number of staff members who have finished data literacy training, employee engagement in data literacy initiatives, and the quantity of data-driven decisions and actions taken, HEINEKEN can assess the success of its internal communication and ensure that its data literacy programs are effective.

Key performance indicators (KPIs) connected to communication channels and tools utilized by the Global Analytics team can be used to quantify the effect of internal communication on data-driven decision-making and actions. To measure employee engagement and interest levels, WorkPlace and SharePoint, for instance, track the number of

views, interactions, followers, posts, and comments. Tracking participation (views) and interaction at occasions like Speed Dates and Ambassadors calls can provide shed light on the success of communication efforts. These variables can be tracked over time to spot patterns and alter the communication strategy as necessary.

5.3 Internal Communication Channels and Tools.

Qlik's capabilities and working with the Data Literacy Project to identify the internal communication channels and tools that GA should be use to promote data literacy and data-driven decision-making. In order to successfully communicate data insights to employees, Qlik's communication tools, such as data storytelling and interactive dashboards, will be used. These elements give information a more interesting and visually appealing presentation, which makes it simpler for staff members to comprehend and evaluate the data.

This online tools and in-person training blend to create the most effective internal communication channels and tools for HEINEKEN employees to promote data literacy and data-driven decision-making. Online training materials, webinars, and tutorials can give staff members the know-how and abilities they need to use data efficiently. Data literacy and data-driven decision-making are also effectively promoted by in-person training events and online learning resources. Additionally, by encouraging a culture of data-driven decision-making, companies that offer data literacy programs can improve organizational performance. HEINEKEN might think about providing blended learning options, which mix in-person instruction with online resources, to enhance these communication channels and tools. This could assist to produce a more dynamic and interesting learning environment.

5.4 Roadmap.

To improve its data analytics capabilities, the Global Analytics team can develop a roadmap to improve HEINEKEN's data analytics capabilities, including the maturity model for data analytics and data literacy training initiatives. It is a roadmap that outlines a clear path to improving data analytics capabilities and data literacy across the organization. This will enable HEINEKEN to leverage data effectively, make informed decisions, and enhance its competitive advantage in the marketplace. The roadmap should consist of both a 1-Year Projection Roadmap and a 3-Year Projection Roadmap.

Conclusion

The Global Analytics team aims to improve data-driven decision-making by implementing data literacy training programs, utilizing internal communication channels like Workplace and SharePoint, and monitoring the impact of these efforts over time. By partnering with the Data Literacy Project and implementing Qlik's Data Literacy Solutions, HEINEKEN can provide employees with essential knowledge and resources to improve data literacy. The Maturity Assessment (MA) tool helps assess the current state of data analytics maturity and identify areas for development. Metrics for tracking internal communication efforts can measure the impact on data-driven decision-making, and key performance indicators (KPIs) can be used to evaluate the success of communication channels and tools. A roadmap is proposed to guide the improvement of data analytics capabilities and data literacy across the organization. By implementing these initiatives, HEINEKEN can foster a culture of data-driven decision-making and gain a competitive advantage in the market.

Chapter 6

Recommendations

6.1 Level of data literacy and capabilities.

As mentioned before, to determine the present level of data literacy among employees, data literacy evaluations utilizing Qlik's assessment tools will be carried out. A tailored training program will be created, focusing on particular areas that need improvement, based on the evaluation results. The analytics tools of Qlik will be used to track progress, and staff will receive ongoing help and direction as they develop their data literacy skills. This all-encompassing strategy will promote data literacy progress and HEINEKEN's adoption of a culture of data-driven decision-making.

All workers at HEINEKEN, especially those who work with data and analytics, should be required to complete the initial examination regarding data and analytics. The results of this survey will be used to assess the staff members' current degree of data literacy and familiarity with data-driven decision-making processes. Furthermore, it is essential to conduct focus groups and interviews to gather qualitative insights on the challenges and opportunities surrounding data literacy within the organization.

The Data Literacy Project conducted by Qlik program can fill in the gaps and improves data literacy skills based on the findings. A variety of literacy-related topics, including verbal communication, numerical analysis, visual interpretation, and effective use of information and communication technology, should be included in this curriculum.

Employees will acquire the knowledge and confidence needed to work with data efficiently by receiving the basic training that is required for these competencies with this partnership.

Additionally, to determine the current level of data literacy and data-driven decision-making among the selected group of employees at HEINEKEN, the MA tool developed by the Global Analytics team can be utilized. The MA evaluates the maturity of data analytics in terms of People, Processes, and Technology. The employees' data literacy level and the organization's present use of data-driven decision-making can be assessed by distributing the MA survey to the chosen set of workers. Customized training programs, such as the Analytics Guru training program, can strengthen these competencies by giving staff members a foundation in data analytics and improving their comprehension of how analytics are used inside the organization. A data-driven attitude and culture can be promoted throughout the organization with the use of training programs.

6.2 Metric for internal communication tracking.

To measure the impact of internal communication on data-driven decision-making, HEINEKEN should establish clear metrics and evaluation methods. Monitoring the implementation and application of frameworks and procedures for data-driven decision-making across many departments and functions is one strategy. This can be achieved by keeping an eye on how frequently procedures like the use of tools and techniques for data analysis are used in routine operations.

The effectiveness of the data literacy programs provided by Qlik and the Data Literacy Project will first be reviewed by the GA. Surveys, evaluations, and performance indicators will be used in this assessment to evaluate the improvements in data-driven

decision-making brought about by the training programs. To motivate others and show the value of data literacy, the business will highlight and share success stories of employees who have successfully used their data literacy abilities to make sound decisions. The instructional materials and training programs will be continuously improved based on user input, new trends, and increasing data literacy best practices. Additionally, leadership support will be actively encouraged to guarantee that data literacy initiatives are adopted and put into action.

Global Analytics should develop precise metrics and evaluation techniques for evaluating the effectiveness of internal communication on data-driven decision-making. Monitoring the implementation and application of frameworks and procedures for data-driven decision-making across many departments and functions is one strategy. This can be achieved by keeping an eye on how frequently procedures like the use of tools and techniques for data analysis are used in routine operations.

Additionally, HEINEKEN has to monitor how data-driven choices affect KPIs and financial results. The organization can evaluate the value and efficacy of internal communication in promoting data-driven activities by comparing KPIs before and after the implementation of data-driven decision-making initiatives.

Global Analytics should take into account several approaches to improve the adoption and implementation of these programs. First, ensure the training material is pertinent and applicable by relating it to actual situations and organizational-specific business difficulties. Secondly, by giving access to online resources and communities, follow-up workshops, mentoring programs, and other forms of support and reinforcement. Third, encouraging a

culture that appreciates data literacy and encourages ongoing learning by praising and rewarding staff members who excel at making data-driven decisions.

6.3 Internal Communication Channels and Tools.

To identify the most effective internal communication channels and tools, Global Analytics should conduct a comprehensive assessment of existing communication platforms and their impact on promoting data literacy and data-driven decision-making. Analyzing engagement indicators like the number of views, downloads, comments, and interactions on communication channels like WorkPlace and SharePoint may be part of this evaluation.

Based on the assessment, the company should conduct surveys or hold focus groups to learn more about employee preferences and experiences with various communication methods. This input will offer insightful information about the methods and resources that work best to advance data literacy and data-driven decision-making.

To further improve the effectiveness of these communication channels, Global Analytics should focus on enhancing content relevance and quality. This can be accomplished by providing consistent, educational content that informs staff members about the importance of data and analytics, highlights noteworthy data-driven initiatives, and offers real-world examples of how data can be leveraged to fuel business expansion. A further way to increase interest and encourage active participation in talks about data is by including interactive features like quizzes, case studies, and discussion forums.

In addition, Qlik and the Data Literacy Project will integrate its data literacy content into already established internal communication channels including newsletters, websites,

and collaboration platforms. This will guarantee that data literacy resources are readily available to all organization-wide workers. To further improve communication, the Data Literacy Project and Qlik will arrange workshops and webinars on data literacy. These events will give employees practical training and allow them to ask questions and receive advice. Finally, to ensure that the communication tools and channels effectively encourage data literacy and data-driven decision-making, regular employee input will be gathered.

6.4 Roadmap.

A systematic process is required to create a roadmap for enhancing HEINEKEN's data analytics capabilities. First, Global Analytics has to evaluate its present data analytics maturity levels across all of its divisions and operations. A data analytics maturity model, which assesses elements including data governance, data infrastructure, analytical prowess, and company culture, may be used in this evaluation.

To strengthen data analytics capabilities, HEINEKEN can identify the areas that need improvement and define specific goals and milestones based on the evaluation results. The roadmap should include concrete recommendations for filling in the gaps that have been identified, including investing resources in data infrastructure, setting up data governance frameworks, educating staff members in data literacy, and promoting a data-driven culture.

The roadmap should also include regular progress assessments and evaluations to monitor the success of initiatives that have been put into action. Data analytics maturity, data literacy levels, and the effects of data-driven decision-making should all have KPIs that are

developed and constantly tracked. This enables continuing modifications and enhancements to the roadmap based on the changing needs and objectives of the company.

For the Global Analytics team to successfully plan and implement its data analytics projects and assure long-term success, having both a 1-Year Projection Roadmap and a 3-Year Projection Roadmap is essential. These roadmaps act as strategic frameworks by outlining the steps, checkpoints, and goals that must be met within predetermined time constraints.

The 1-Year Projection Roadmap gives GA a short-term focus and enables it to prioritize and carry out tasks that can be finished in a relatively short amount of time. It enables the business to take care of urgent requirements, move forward quickly, and show noticeable results. HEINEKEN can evaluate its progress, assess the success of its activities, and make necessary adjustments to ensure ongoing improvement by setting attainable goals and milestones for the upcoming year.

The 3-Year Projection Roadmap, on the other hand, has a longer-term viewpoint and offers a more expansive vision for Global Analytics' data analytics capabilities. It enables the business to match its strategic objectives with its data analytics goals, providing it with a clear path for development over a longer period of time. The 3-Year Projection Roadmap gives GA the ability to budget effectively, plan for larger-scale initiatives, and create a path for long-term success.

Implementation Plan

The implementation plan involves various stakeholders within HEINEKEN, including employees at all levels, cross-functional teams, department representatives, and data analytics experts. Key individuals responsible for driving the plan's execution include HR professionals, data analysts, trainers, and project managers.

The improvement of HEINEKEN's data analytics, data-driven decision-making, and data literacy capacities is the main goal of the implementation plan. It entails tasks like performing assessments, providing training, creating a roadmap, putting a maturity model into practice, increasing data governance, fostering data literacy, assessing data challenge projects, and keeping track of development.

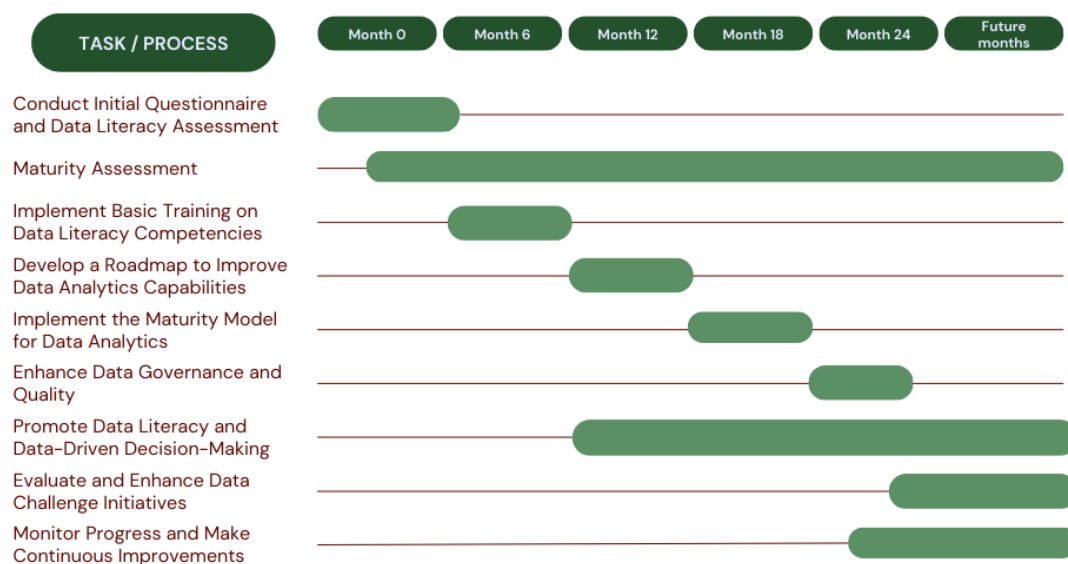
The plan is designed to be implemented over a period of time, with specific timelines for each objective and action. Short-term initiatives, such as the initial questionnaire and basic training, are targeted to be completed within the first six months. Medium-term objectives, including roadmap development and maturity model implementation, are planned for completion within 6 months to 2 years. Long-term goals, such as data governance enhancement, data literacy promotion, and continuous improvement, extend beyond the 2-year mark.

The plan will be carried out using a variety of approaches and strategies. A data-driven culture must be fostered, data governance practices must be implemented, assessments and surveys must be conducted to collect pertinent data, training programs must be designed and delivered to improve data literacy, and cross-functional teams must be

formed to develop the roadmap and maturity model, and progress must be regularly reviewed and updated. To achieve good results, implementation will require collaboration, coordination, and communication among stakeholders. To ensure efficient planning, execution, and monitoring of the plan's operations, project management principles will be used.

Figure 5

Gantt chart Plan of Action



Source: Self-made

Costs and Resources Allocation

To determine the financial impact of the implementation plan, it's important to consider the costs associated with Qlik Sense® Business and the Data Literacy Project.

Additionally, for the unforeseen costs, it is recommended to add a margin of 10-15% , that can be attributed to extra training hours or extra subscriptions on the resources platforms.

Data Literacy Project.

Course Duration: 81 minutes (Overview of Data Literacy: 69 min, Data Foundations: 106 min, Data-informed decision-making: 68 min, Analytical Techniques: 148 min, Advanced Analytics: 25 min). Resource Cost: The Data Literacy Project offers free resources. The certification exam available has a cost of USD 250.00 per participant (Data Literacy Project, 2023).

- Nigeria's OpCo: The one-time cost for the certification exam for 253 participants at \$250 per participant is estimated at €52,384.
- Brazil's OpCo: The one-time cost for the certification exam for 88 participants at \$250 per participant is estimated at €18,557.
- Global Analytics team: The one-time cost for the certification exam for approximately 130 participants at \$250 per participant is estimated at €27,522.

Qlik Sense® Business.

Cost: \$30 per month, per user (Qlik, 2023).

- Nigeria's OpCo: The monthly cost for 253 users at \$30 per user is estimated at €6,758.
- Brazil's OpCo: The monthly cost for 88 users at \$30 per user is estimated at €2,384.
- Global Analytics team: The monthly cost for approximately 130 users at \$30 per user is estimated at €3,162.

Communication and Awareness Costs.

The cost of communication and awareness efforts for promoting data literacy and data-driven decision-making is considering the salary of a HEINEKEN Company Communications Specialist, which amounts to €3,000 per month, a portion of this cost can be allocated to content creation related to data literacy and data-driven decision-making. This

involves the creation of informative and engaging materials such as articles, blog posts, newsletters, and internal communications.

Total costs.

Table 2

Costs total amount

	Item	Cost
Data Literacy Project	Nigeria's OpCo	€ 52.384,00
	Brazil's OpCo	€ 18.557,00
	Global Analytics	€ 27.522,00
Qlik Sense Business	Nigeria's OpCo	€ 6.758,00
	Brazil's OpCo	€ 2.384,00
	Global Analytics	€ 3.162,00
Communication & Awareness	Communication Specialist	€ 3.000,000
	Total before unforeseen costs	€ 113.767,00
Unforeseen Costs	15%	€ 17.065,05
	TOTAL COSTS	€ 130.832,05

Source: Self-made

Benefits

The proposed solutions, such as conducting maturity assessments and creating roadmaps, are directly helpful in establishing the data analytics maturity levels in HEINEKEN OpCos. The Global Analytics team may guide and help OpCos enhance its data analytics capabilities by evaluating the present situation and determining the required maturity levels. This guarantees that OpCos are operating at the right levels and can successfully use data analytics for improved business decisions.

The solutions addressing data literacy, such as conducting assessments and implementing training programs, help in measuring data literacy across HEINEKEN. The Global Analytics team can assess the organization's current level of data literacy. The team can develop training activities and resources to improve data literacy across all departments, functions, and operations by identifying the existing capabilities and skill gaps. Employees are more equipped to make data-driven decisions as a result of improved data literacy, which also helps the business transition to a data-driven entity.

The solutions promoting data-driven business models and cultures are consistent with the objective of HEINEKEN becoming a data-driven organization. The Global Analytics team promotes the use of data models created from both internal and external data so that daily operations and decisions can be supported by data-driven insights. This supports the development of advanced analytics capabilities across the business, improves operational efficiency, and makes it easier to make informed decision-making. HEINEKEN is ultimately able to use data as a strategic asset to promote growth and competitiveness.

The solutions related to evaluating the impact of the Global Analytics 2025 ambition and identifying areas for improvement contribute to assessing HEINEKEN's data analytics capabilities and its ability to make data-driven decisions. Through ongoing evaluation and progress assessment, the Global Analytics team can offer insightful information on the organization's journey toward reaching the specified objectives. This helps guide upcoming projects and suggestions to improve HEINEKEN's data analytics capabilities and guarantee ongoing development and alignment with the vision.

Conclusions

Taking into account the study embodied above, several conclusions can be drawn about the work and its findings. Firstly, it is clear that data analytics is essential for promoting competitive advantage, enabling well-informed decision-making, and improving operational efficiency. Organizations like HEINEKEN can gain useful insights that help guide strategic business decisions by leveraging the power of data analytics.

Additionally, placing emphasis on data literacy and upskilling has become increasingly important in ensuring employees have the skillsets required to work with data efficiently. Employees must be provided with the knowledge and abilities to evaluate, understand, and use data in order to produce positive results. Projects like the Data Literacy Project and mandated training programs are crucial in this regard.

Furthermore, it is crucial for companies like Heineken to build a maturity model and plan for data analytics skills. Organizations can chart a clear course for developing their data analytics capabilities over time by evaluating their present level of data analytics maturity

and identifying areas for growth. This strategic roadmap provides direction for projects' implementation and makes it easier to monitor advancement toward targeted objectives.

Moreover, using analytics, enabling data visualization, and promoting a data-driven culture can all be accomplished through the integration of tools and technologies like Qlik Sense® Business. These technologies give users the ability to link and combine various data sources, gain a deeper understanding, and promote data-driven decision-making throughout the enterprise.

In addition, it is important to carefully assess the financial implications of putting these ideas and efforts into practice. The prospective rewards outweigh the expenses, in spite of the costs of software licensing, training initiatives, and communication efforts. Improved decision-making, increased output, competitive advantage, cost savings, and staff growth and retention are a few of these advantages. To appropriately determine the financial ramifications of these activities, a detailed cost vs. benefits analysis is essential.

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