WARWICK BUSINESS SCHOOL
THE UNIVERSITY OF WARWICK

# Masters Programmes: Assignment Cover Sheet

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| **Student Number:** | **5558022** |
| **Module Code:** | **IB9PL0** |
| **Module Title:** | **Understanding Business for Analysts** |
| **Submission Deadline:** | **31 January 2024** |
| **Date Submitted:** | **31 January 2024** |
| **Word Count:** | **2810 excluding Table and Figures** |
| **Number of Pages:** | **17** |
| **Question Attempted:** *(question number/title, or description of assignment)* | **4** |
| **Have you used Artificial Intelligence (AI) in any part of this assignment?** | **No** |

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- Where a generative Artificial Intelligence such as ChatGPT has been used I confirm I have abided by both the University guidance and specific requirements as set out in the Student Handbook and the Assessment brief. I have clearly acknowledged the use of any generative Artificial Intelligence in my submission, my reasoning for using it and which generative AI (or AIs) I have used. Except where indicated the work is otherwise entirely my own.
- I understand that should this piece of work raise concerns requiring investigation in relation to any of points above, it is possible that other work I have submitted for assessment will be checked, even if marks (provisional or confirmed) have been published.
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**Upon electronic submission of your assessment you will be required to agree to the statements above**

# Contents

# 1. Introduction

Puma SE is a multinational sportswear and footwear company founded in 1948 in Herzogenaurach, Germany. Puma initially focused on producing football shoes, and its first major success came in 1954. Puma uses data analysis to optimize its operations, such as inventory management, distribution, pricing, and promotion, to increase its efficiency and profitability. Puma leverages modern and scalable technologies, such as cloud-based platforms and machine learning, to enable faster and more flexible data analysis. The company uses analytics in various departments.

This report evaluates Puma's analytics maturity using the DELTA+ framework, highlighting its performance across seven factors: Data, Enterprise, Leadership, Targets, Analysts, Technology, and Analytical Techniques. Puma showcases foundational strengths in analytics but faces challenges in areas like unified data warehousing and advanced technological infrastructure. A key focus of the report is a proposed analytics project targeting customer retention through predictive analysis. This project, which aligns with Puma's CRM strategy, aims to use advanced analytics techniques like clustering and regression to improve marketing efficacy, highlighting the potential for Puma to enhance its analytics capabilities and ascend within the DELTA+ framework.

# 2. DELTA+ Framework Analysis

The DELTA+ framework by Davenport, T.H. et al. (2010) and Król and Zdonek (2020) is a model for assessing and improving the analytics capability of an organization. It consists of seven elements: Data, Enterprise, Leadership, Targets, Analysts, Technology, and Analytical Techniques. Each element can be rated on a scale of 1 to 5, corresponding to the five stages of analytics maturity: Analytically Impaired, Localized Analytics, Analytical Aspirations, Analytical Companies, and Analytical Competitors.

## 2.1 Data

Puma has a local data repository and uses various sources of data, such as consumer feedback, social media, and market research, to inform its product development and marketing strategies. The company has used its tool to monitor social and environmental performance data from its owned and operated facilities and those of its principal suppliers. For its operations, Puma uses data analytics to optimize assortment and pricing decisions,

resulting in increased sales and better market intelligence. The firm also uses analytics to review past trends in recruitment, understand the key source of talent inflow and design its talent acquisition strategy accordingly.

However, Puma lacks a unified data warehouse, relying instead on systems like SAP, Salesforce, and Google Analytics. Consequently, I assess Puma's Data competency at a level 3.

## 2.2 Enterprise

Puma is progressively integrating analytics across its departments, a process that remains in its infancy. The company prioritizes the evolution of its ERP systems and the refinement of product development processes. To this end, Puma has engaged with external partners and consultants on specific analytical initiatives.

In late 2019, Puma partnered with IBM to implement a database solution, utilizing IBM's test scenarios to evaluate the performance under increasing user load. Currently, the company is migrating its data warehouse from a Legacy ERP system to SAP S/4 HANA. Puma applies analytics across multiple domains, including marketing, product design, human resources, supply chain, and sustainability efforts.

However, Puma's approach to analytics is not unified across the enterprise; there is no overarching vision, strategy, or governance. With various analytics units operating independently, there's a lack of cohesion in their efforts. Therefore, I have classified Puma at a level 4 concerning the 'Enterprise' aspect.

## 2.3 Leadership

Puma embraces a culture that values innovation and the willingness to test new ideas. The leadership acknowledges the critical role of analytics in shaping the company's direction. With an eye on the future, Puma has set ambitious targets for 2024: to boost sales by 35%, enhance its EBIT margin by 10%, and cut its carbon emissions by 35%. To reach these milestones, the leadership is committed to data-driven decision-making, underpinned by the vigilant tracking of vital performance metrics.

Rasmus Soerensen, Puma's E-commerce Manager for Europe, has highlighted the strategic move to centralize marketing cloud technology, enhancing the relevance and personalization of digital campaigns while streamlining marketing operations.

Despite this, the drive for analytical transformation is hindered by a limited number of senior executives who fully endorse analytics. This shortfall leads me to assign a level 4 rating to Puma's leadership in analytics.

## 2.4 Target

Puma recognizes the significant impact of analytics in areas like e-commerce, marketing, and sustainability, setting strategic aims to enhance customer loyalty, promote sustainability, and streamline operations.

To address supply chain vulnerabilities, Puma has implemented ELEVATE intelligence (EiQ), a robust suite designed to evaluate risks associated with geography, commodities, and other factors, and to conduct risk assessments for its suppliers and manufacturing locations. Nonetheless, there is a need for greater clarity and cohesion regarding the strategic objectives and measurements for its analytics.

Currently, Puma's analytics strategy is more reactive, concentrating on operational efficiency. There's an opportunity for Puma to use technology to improve customer value, reduce churn, and boost brand awareness, with the implementation of metrics and KPIs to evaluate the effectiveness of these measures. This positions Puma at level 3 in its analytical targeting efforts.

## 2.5 Analysts

Puma leverages analytics to scrutinize historical recruitment patterns, pinpoint the primary sources of talent, and accordingly tailor its talent acquisition approach. Although the company employs a competent team of analysts for its range of analytical projects and applications, their number falls short of the growing analytical demands of the various

business divisions. In 2022, Puma placed a heightened focus on 'People Analytics,' aiming to integrate data analysis into strategic decision-making more thoroughly.

The company has highlighted certain job openings, such as 'Manager, Data Architecture,' on its website, indicating an initiative to bolster its analytics capabilities. However, Puma lacks a centralized or cohesive team of analysts and often depends on external consultants for some of its analytical projects. For these reasons, I have assigned a level 3 rating for the Analyst factor.

## 2.6 Technology

Puma has been modernizing its data management through collaborations, notably choosing Salesforce for cloud services, which integrates various company functions, leading to cost savings and faster market presence. Additionally, Puma is enhancing its distribution centres, ERP systems, and IT infrastructure to boost efficiency and adaptability. Since 2017, it has utilized 'Workday' for HR management for many of its HR processes, facilitating access to necessary processes and tools.

However, Puma do not have a state-of-the-art technology infrastructure and its technological infrastructure lacks the capability for advanced analytics like cloud computing, big data, and AI, and relies on older systems that restrict its expandability. Moreover, it falls short in ensuring data security and privacy, meriting a level 3 rating in technology.

## 2.7 Analytics Techniques

Puma employs a variety of analytical methods, including descriptive, diagnostic, predictive, and prescriptive analytics, to tackle diverse business challenges, though further innovation in methodologies and models is needed. The HR department utilizes user-friendly dashboards for data-driven managerial insights. Puma has implemented AI in partnership with 'Selligent Marketing Cloud' for automated, location and language-specific omnichannel advertising.

However, the company does not extensively use advanced techniques like clustering, classification, regression, predictive modelling, natural language processing, or optimization for customer segmentation and personalization. Most of its advanced analytics techniques

are still in the planning or development phases, warranting a level 3 rating in the 'Analytics Techniques' factor.

| Success factor | Rating |
|---|---|
| Data | 3 |
| Enterprise | 4 |
| Leadership | 4 |
| Target | 3 |
| Analysts | 3 |
| Technology | 3 |
| Analytics Techniques | 3 |
| Average | 3.3 |

Table 1. DELTA+ framework score for Puma

Overall, Puma is an analytical company is 3 meaning it is an Analytical Aspiration stage. The firm has a promising analytics foundation but faces challenges in achieving peak maturity. The company should bolster its analytics strategy and culture, exploring innovative applications, including partnerships in AI and machine learning. Benchmarking against industry standards and learning from other analytical leaders will further enhance Puma's analytical prowess.

## 3. Project Recommendation

Puma faces challenges in customer acquisition and retention, deriving revenue from both wholesale and retail segments through online and physical stores. The company can use analytics to bolster customer loyalty and retention, focusing on customer satisfaction, engagement, churn rates, and targeting potential buyers.

A prospective analytics project for Puma involves a marketing campaign targeting churn using predictive analysis. The churn customers can be targeted by sending them promotional offers based on their preferences which will improve customer retention and brand loyalty. This project, incorporating techniques like clustering, regression, and predictive analytics, could significantly elevate Puma's position within the DELTA+ framework. It would identify potential customers in both retail and wholesale segments.

To execute this project, Puma should utilize appropriate technology, including cloud platforms and data visualization tools like PowerBI or Tableau. These tools will help present analytical findings to shareholders, aiding strategic decisions about promotional offers and targeting profitable customer segments. Additionally, Puma can engage in market analysis and due diligence to adopt best practices in demand forecasting analytics used by other companies.

For the project, the company can follow the CRoss Industry Standard Process for Data Mining (CRISP-DM) methodology described in the Figure 1 to move up the DELTA Plus framework.

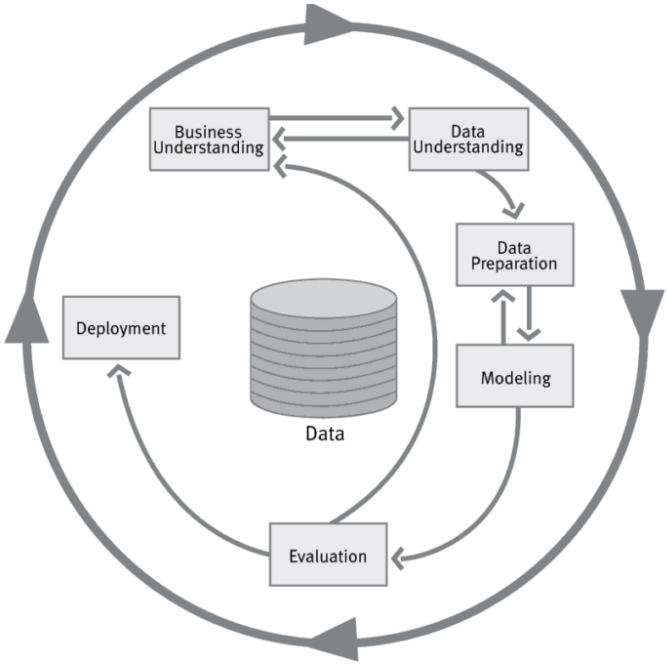


Figure 1. CRISP-DM Framework

This project also allows Puma to benchmark its analytical capabilities against competitors like Nike and Adidas. To ascend in the DELTA+ framework, Puma must enhance its data management, analytical capacities, and leadership support. This initiative also aligns with Puma's CRM strategy, focusing on attracting high-quality customers who resonate with the brand, through targeted campaigns, personalized experiences, and exclusive promotions, thereby fostering customer loyalty.

# 4. Project Implementation

## 4.1 Theme 1 - Stakeholder Management

Identifying stakeholders helps in understanding the diverse needs and requirements of different individuals or groups involved. Here, I have identified potential key stakeholders which will be a part of Puma’s predictive analytics marketing campaign project.

I am assessing their power & interest and emphasizing the importance of communication. Here's a breakdown of the analysis along with a Power/Interest grid:

**1. Stakeholder Identification:**

1.1 Internal Stakeholders: Senior Management (e.g., CEO, CMO), Project Manager, Marketing Team, IT Department, Quality Assurance Team, Software team, Legal team

1.2 External Stakeholders: Customers (current and potential), Partners (e.g., marketing agencies, data providers), Competitors, Subject experts

**2. Stakeholder Analysis:**

Stakeholder analysis and communication strategy are critical for the successful planning and execution of the predictive analytics marketing campaign, ensuring all parties are effectively engaged and informed throughout the project lifecycle. We can use Power/Interest Grid (Maylor 2022:94) for the project. This visualization categorizes stakeholders based on their power (ability to influence the project) and interest (level of concern about the project's outcomes).

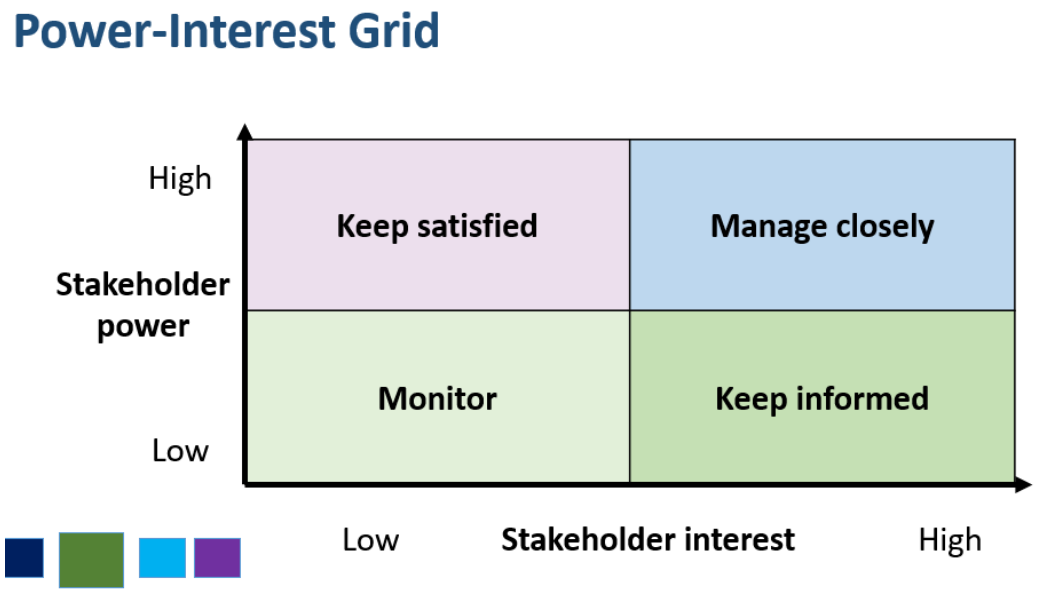


Figure 2. Power-interest grid tool for stakeholder analysis

The grid described in Figure 2 is a strategic tool for guiding stakeholder engagement, ensuring that communication and involvement are tailored to the needs and influence of each group, thereby enhancing the effectiveness of the project management process. The grid has 4 quadrants: Keep Satisfied, Manage closely, Monitor, Keep Informed.

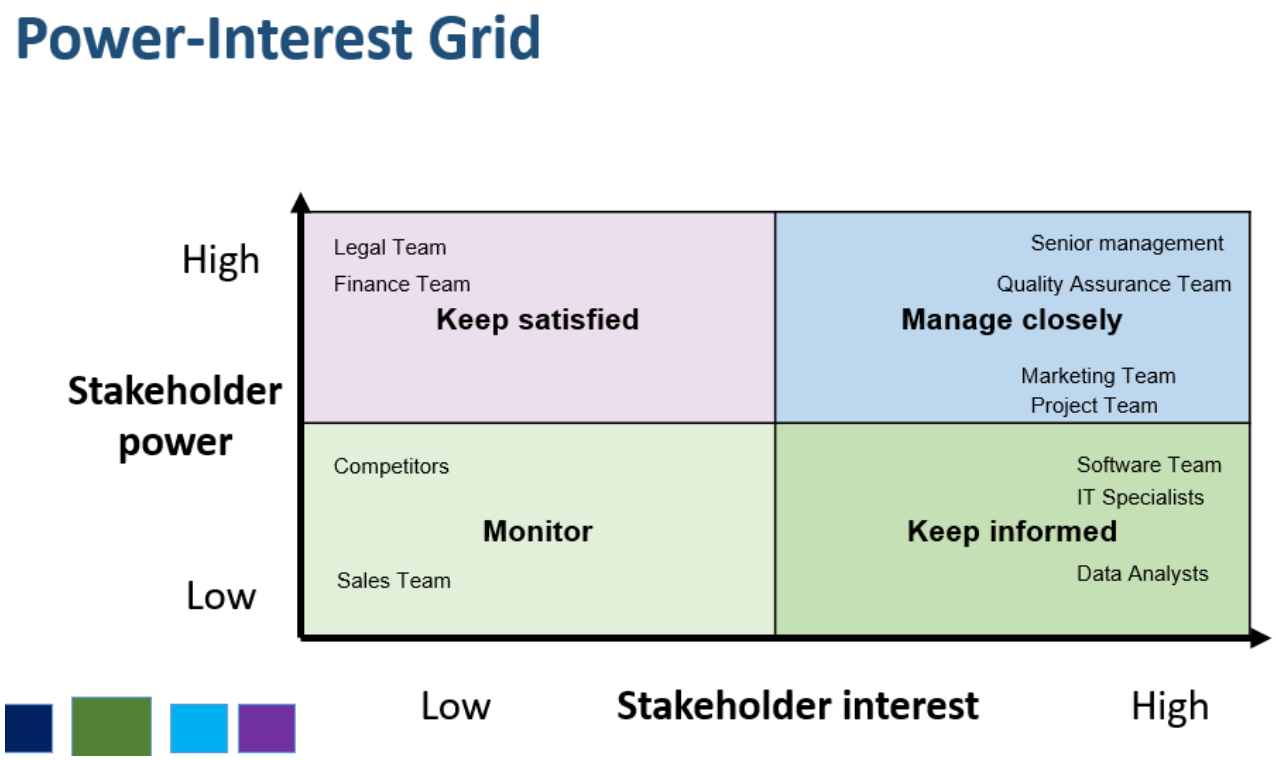


Figure 3. Power-interest grid for Puma's Predictive marketing campaign project

The power-interest grid in figure 3 is described below:

**2.1. High Power, High Interest (Manage Closely):** These are key stakeholders like Senior Management, Project Team, Marketing Team and Quality assurance team who have significant influence over the project and a high level of interest in its success. They are the key decision-makers and fund allocators. They should be closely managed and regularly involved in the project's progress.

**2.2. High Power, Low Interest (Keep Satisfied):** Stakeholders such as the legal Team, Finance Team fall into this category. They have the power to impact the project but may have lower interest levels. Keeping them satisfied and informed is essential.

**2.3. Low Power, High Interest (Keep Informed):** Groups like the Software Team, IT Specialists, and Data analysts are highly interested in the project's outcome but possess lower power. They should be kept informed, and their feedback should be actively sought.

**2.4. Low Power, Low Interest (Monitor):** Stakeholders such as Sales Team, Competitors who have minimal interest and power, should be monitored but require less active engagement.

**3. Stakeholders Communication Strategy**: Effective communication with the stakeholders, i.e. External and Internal, ensures alignment of goals and expectations. It helps in identifying and mitigating risks early. It facilitates stakeholder engagement and buy-in and enables feedback loops for continuous improvement.

## 4.2 Theme 2 – Project Network using Activity-On-Node (AON) diagram

An Activity-On-Node (AON) diagram visually represents the logical flow of activities, with nodes representing tasks and arrows denoting dependencies. It provides a structured overview of the steps involved in a project, aiding in project planning and management. The project plan can be described with an Activity-On-Node (AON) diagram as follows.

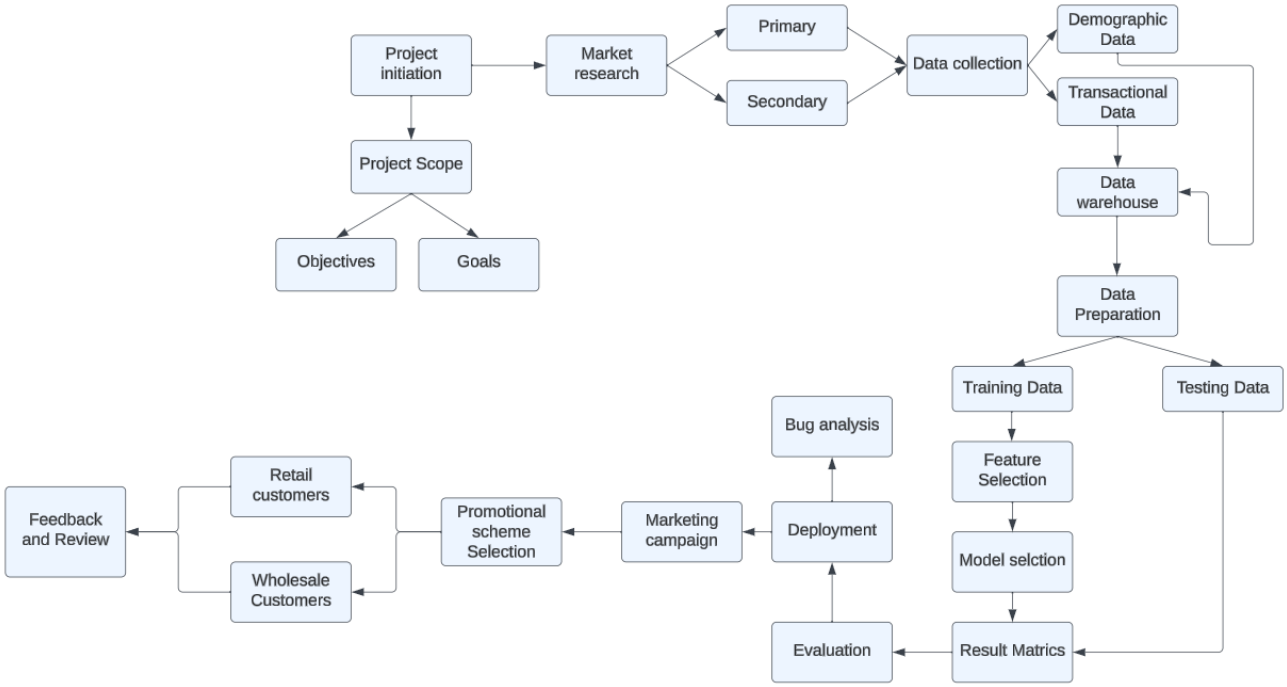


Figure 4. AON diagram for the project Puma's Predictive marketing campaign project

The AON chart in Figure 4 is described as follows:

**1. Project Initiation:** The project's goal is to reduce the churn rate, increase customer lifetime. and key performance indicators (KPIs) could be metrics such as retention rate, repeat purchase rate, net promoter score, etc.

**2. Market Research:** This step will include performing a marketing competitive research i.e., Primary, and secondary, to identify the market trends, competitors' strategies.

**3. Data Collection:** Customer data is sourced from various sources, such as CRM systems, social media platforms, loyalty programs, and customer feedback surveys using web

scraping tools, APIs, or third-party services. This encompasses both demographic and transactional data.

**4. Data warehouse:** Storing the data in the company warehouses. Since Puma uses Salesforce cloud the data can be stored in the cloud.

**5. Data preparation:** During the core analytics phase, data is quality-checked for integrity and project relevance. Preprocessing involves cleaning and preparing the data for modeling, dividing it into training and testing sets. The training set is used for feature selection and identifying patterns, while the testing set evaluates the model's predictability.

**6. Model selection:** The model will be selected based on the precise prediction of the churn cases so that they can be targeted for promotional offers using the campaign. Here company can use clustering, classification, or other techniques to segment the customers based on their demographics, behaviors, preferences, and needs. It can create personas that represent the typical characteristics and goals of each segment.

**7. Result Matrices:** The churn customer will be identified, and behavior of potential churn customers will be studied here.

**8. Evaluation:** The model’s performance will be evaluated based on the compatibility of the machines and the deployment planning will be done at this stage.

**9. Deployment:** the model will be deployed in the system and product; the marketing team will be notified about the target customers.

**10. Marketing Campaign Development:** Creating a targeted marketing campaign strategy based on the analysis.

**11. Promotional Scheme selection:** The marketing campaign will be executed, and the promotional scheme will be sent to the customers, retail, and wholesale, through different media channels e.g., Emails, social media.

**12. Feedback:** The campaign's performance will be tracked, and feedback will be collected for future.

**13. Project Review:** The campaign's outcomes will be reviews and areas for improvement will be identified here.

The AON approach here offers clear project visualization, enhances task sequencing, and facilitates efficient resource allocation, crucial for strategic analytics implementation.

## 4.3 Theme 3: Scheduling project resources using RACI Matrix

A RACI chart, also known as the responsibility chart, is a matrix of all the activities or decision-making authorities undertaken in an organization set against all the people or roles. The acronym stands for responsibility, accountability, consult and inform (Morgan, 2008). The various components of the RACI matrix are:

**1. Responsible (R):** Person who performs an activity or does the work.

**2. Accountable (A):** Person who is accountable and has Yes/No/Veto and gets into trouble if anything goes wrong.

**3. Consulted (C):** Person that needs to be consulted before the action/decision.

**4. Informed (I):** Person that needs to be informed after the action/decision.

| Task/Role | Senior Management | Project Manager | Marketing manager | IT Specialist | Data analysts | Quality Assurance | Software Team | Legal manager | Subject Experts |
|---|---|---|---|---|---|---|---|---|---|
| Set objectives & goals | R | A | I | I | I | I | I | I | - |
| Market research | I | A | R | I | I | - | - | - | C |
| Data Collection | I | A/R | I | C | R | I | I | - | - |
| Data exploration | I | A/R | I | C | R | - | I | - | - |
| Project Implementation | I | A | C | R | R | C | R | - | - |
| Process Feedback | I | A | I | R | I | I | I | - | - |
| Write report | I | A | I | I | R | I | I | - | - |
| System Maintenance | I | A | I | R | I | I | I | - | - |
| Marketing Campaign implementation | C | A/C | R | - | - | I | - | - | - |
| Selection of promotional schemes | C | A/C | R | - | - | - | - | - | - |
| Review & project feedback | I | A | I | I | I | R | I | I | - |

Table 2. RACI Matrix for Puma's Predictive marketing campaign project

Table 2 describes a RACI matrix chart for the Puma predictive Marketing Campaign Project targeting churn using predictive analysis. This matrix visually represents the roles and their respective responsibilities (Responsible, Accountable, Consulted, Informed) for each project activity:

Project tasks are listed along the x-axis, including stages like Data Collection, feedback, and Marketing Campaign Implementation. Project Roles, such as Project Manager, Data Analyst, and Marketing Team, are shown on the y-axis. Each cell in the matrix is marked with 'R' (Responsible), 'A' (Accountable), 'C' (Consulted), or 'I' (Informed) to indicate the level of involvement of each role in each project activity. This matrix is crucial for ensuring clarity in responsibilities and effective communication and coordination among different team members throughout the project.

Legal teams and subject matter experts are consulted early in the project for policy establishment and data breach prevention, and later during market research, engaging analysts like Gartner and Omdia for market analysis.

The RACI matrix for Puma's project clarifies team roles, enhances accountability, streamlines communication, and ensures efficient decision-making by defining responsibilities across different project stages.

## 5. Conclusion

Puma, positioned at an 'Analytical Aspiration' stage, exhibits potential in analytics yet faces challenges in achieving full maturity. The company could enhance its analytics strategy, culture, and capabilities by adopting advanced techniques and embracing AI and machine learning partnerships. Puma's proposed predictive analytics project aims to improve customer retention through a targeted marketing campaign, which could elevate its standing in the DELTA+ framework. Successful implementation requires effective stakeholder management, clear project planning using AON and RACI frameworks, and benchmarking against industry leaders to foster customer loyalty and elevate its analytics stature.

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