VICTORIA UNIVERSITY BUSINESS SCHOOL

BCO7003: Analytics Project Management

ASSESSMENT 3

The Cage: Project Plan

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Project Plan

Project name: Data Analytics Enhancement at The Cage

Projected start date: 01/05/204

Projected end date: 30/12/2024

CEO: Sanjay Danani

Introduction

A well-known SME in Singapore's sports facility leasing industry, The Cage, understands how important it is to use data analytics (DA) to maintain its competitive edge and growth in the face of a changing business environment. The goal of this project plan, "Data Analytics Enhancement at The Cage," is to strategically incorporate advanced DA capabilities into The Cage's operations. Driven by the lessons learned from the case study, this plan aims to manage the challenges of DA adoption, covering everything from data discovery and collection to analysis, modeling, and governance, guaranteeing a comprehensive overhaul of The Cage's decision-making procedures and customer engagement tactics.

This document serves as a comprehensive blueprint outlining the project's scope, objectives, and the systematic approach to achieving them. Detailed project planning is crucial for the success of any project (Vargas, 2007). It includes a detailed overview of the business case that underpins the need for this DA project, followed by the project schedule, resources allocation, budgeting, risk management strategies, and communication and stakeholder management plans. Aimed at stakeholders across the spectrum, this plan elucidates the strategic imperatives, expected outcomes, and the roadmap for leveraging DA to drive operational excellence and customer satisfaction at The Cage, setting a new benchmark in the sports facility rental sector.

Project Scope

Aims and Objectives

Implementing a cutting-edge data analytics framework that gives the company the ability to make informed decisions based on data (Vargas, 2007) is the primary objective of The Cage's Data Analytics Enhancement project. The purpose of this project is:

1. Enhance customer experience through personalized offerings and improved service quality.
2. Optimize operational efficiency by analyzing and streamlining resource allocation and facility management processes.
3. Increase competitive advantage by leveraging data analytics for strategic planning and market differentiation.
4. Drive revenue growth by identifying new market opportunities and optimizing marketing strategies.

Major Deliverables and Quality Standards

Deliverable	Quality Standards	Assessment Method
DA System Implementation Plan	Comprehensive plan with clear timelines, resource allocation, and risk management strategies. (Vargas, 2007)	Review by project stakeholders for completeness and feasibility.
Customized Dashboards for Management	Accuracy of real-time data representation, user-friendly interface, and responsiveness.	User acceptance testing and feedback surveys.
Enhanced Customer Data Platform	Increased data capture rate by 30%, with robust data privacy and security measures.	Data completeness check and security audit (Venkataramanan and Shriram, 2017).
Operational Efficiency Report	Reports to show at least a 20% improvement in resource utilization efficiency.	Pre- and post-implementation performance analysis.
Market Analysis Tool	Tool to accurately identify market trends and customer preferences with at least 90% accuracy.	Validation against market data and trends.
Staff Training Program on DA Tools	At least 90% of targeted staff showing proficiency in new DA tools and systems.	Post-training assessment and practical application tests (Carr, 2014).
Customer Engagement Strategy Report	Strategy to increase customer engagement and satisfaction by at least 25%.	Customer feedback and engagement metrics pre- and post-implementation.

Assumptions

- The current IT infrastructure can support the integration of the new DA systems without significant upgrades.
- Staff will be available and willing to undergo necessary training for the adoption of new DA tools (Carr, 2014).
- Customer and operational data available are of high quality and sufficient for initial DA efforts.

Known Exclusions

- Development of entirely new IT infrastructure beyond the scope needed for DA system integration.
- Expansion of the project scope to include external partners' data systems integration within the DA framework.
- DA initiatives targeting areas outside of customer experience, operational efficiency, and market analysis.

Business Case

Business Need

Currently, The Cage has increasing competition and is combating evolving customer preferences. The company recognizes that leveraging data analytics to enhance decision-making processes and improving operational efficiency can help them in maintaining a competitive edge. Not only that, DA can often also assist in driving sustainable growth which is one of the leading goals of The Cage. They aim to achieve the following with the implementation of a comprehensive DA solution:

- Understand and gain insights on customer behaviour and preferences

- Optimize resource allocation and facility management
- Improve marketing strategies and increase customer engagement
- Enhance the overall business performance and profitability

Expected Benefits

Benefit	**Measure/Process for Assessment**
Improve decision-making	Rise in the number of decisions backed by data.
Enhanced customer experience	Rise in the customer satisfaction score through feedback surveys
Increased operational efficiency	Fall in operational costs and increased efficiency in resource utilisation
Competitive advantage	Increase in the market share and the customer retention rate
Revenue growth	Rise in revenue and profits generated from marketing and sales campaigns

Expected Dis-benefits

- **Initial Investment Cost:** Implementing a DA project usually requires a lot of initial investment as technologies and applications need to be set in place and integrated with the existing infrastructure.
- **Data Security Risks:** Integrating and relying on data analytics heavily brings in the added risk of being exposed to data breaches and privacy concerns. As a result, necessary security measures must be taken.
- **Integration Challenges:** Putting in place a whole new DA system and integrating it with the existing IT infrastructure could pose some serious challenges. All business processes maybe halted or delayed and this could lead to some major losses.
- **Employee Resistance:** Usually when such drastic changes are implemented in a company, the employees pose resistance toward adopting new technologies. This is due to the fact that such transitions not only change the workflow processes, they also involve learning new skills to operate the new systems.

Project Schedule

This project for the Cage will be implemented in 5 major phases over a period of 8 months.

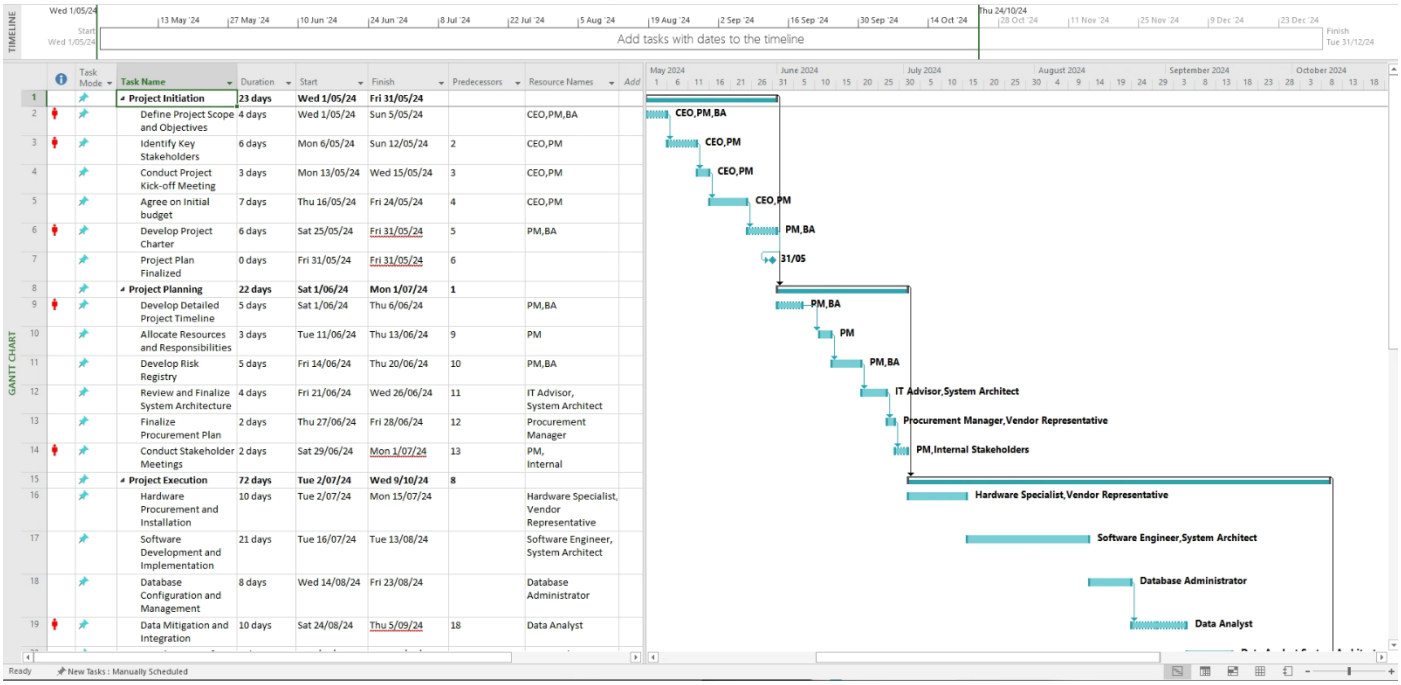
1. **Project Initiation:** This phase will be conducted over 1 month and during this time, the project scope, objectives, milestones, key performance indicators (KPIs), success criteria are clearly defined to ensure clarity and achieve the project goals (MacNeil 2024). Key stakeholders from both parties (client and vendor) will be identified and assigned relevant roles (UMass Boston n.d.). Furthermore, the project kick-off meeting is conducted, and an initial budget is also agreed during this stage.

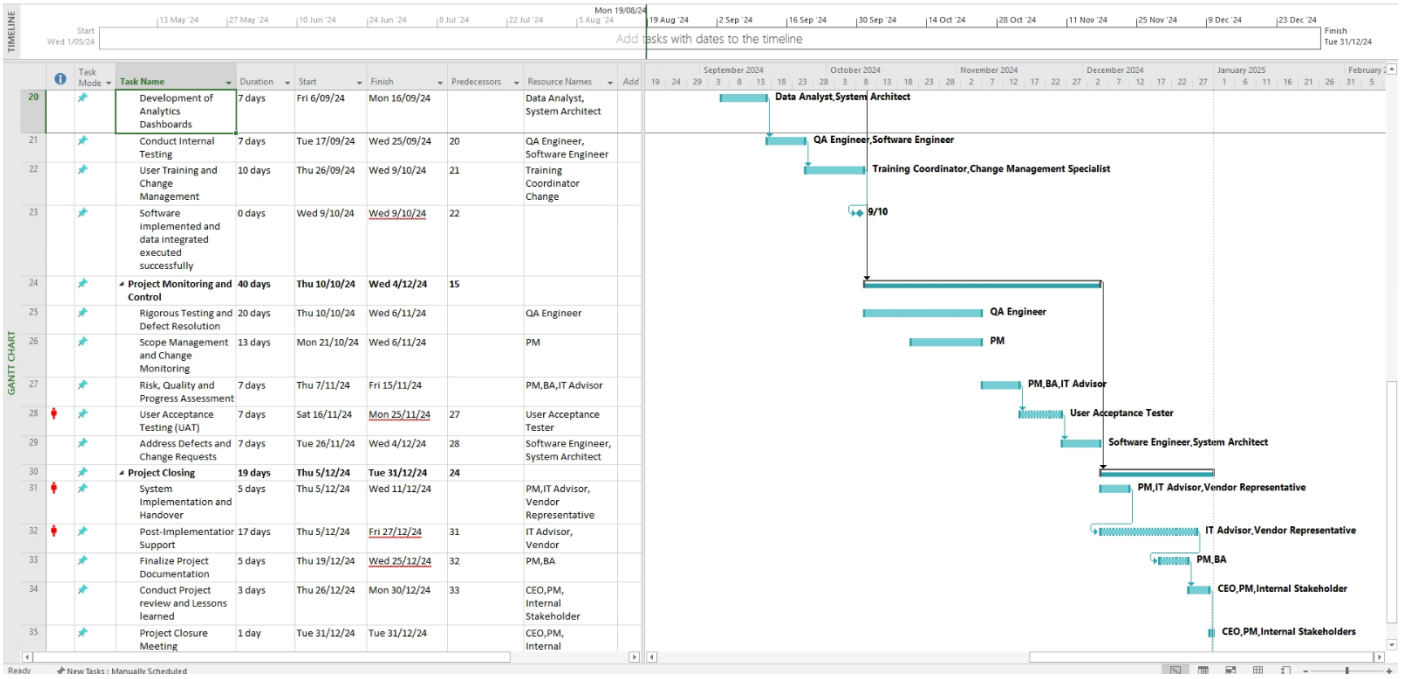
2. **Project Planning:** This phase will be conducted over 1 month and during this time, the detailed project timeline including all project tasks, durations, etc. is developed. The identified resources will be allocated responsibilities, and a risk registry is developed (Watt et al. 2014). The implementation methodology and strategy, the proposed system architecture is discussed and confirmed (Taxén & Olow 2013).

3. **Project Execution:** This phase will be executed over 3 months. The required hardware and software will be procured (Watt et al. 2014) by VU Information Systems Corporation and implemented, and several internal tests (Kissflow 2023) such as unit testing, integration testing will be conducted prior to UAT. The data migration phase is a key phase during project execution (Cprime n.d.); this involves mapping the data from the existing ERP system, cleansing and loading it to the new DA system (Cprime n.d.). Thereafter, the required data analytics and visualisation tools are also integrated, and the required dashboard views are set up with several internal tests conducted to ensure that the project aligns with the client requirements.

4. **Project Monitoring and Control:** This phase will be conducted over 2 months and rigorous testing, UAT testing, and any defects raised during these testing stages will be resolved. The team will also ensure that there is no scope creeping (Adobe Communications Team 2022) and monitor change requests in this phase (Eby 2022). In addition to this, the project is also assessed for risks, quality and progress to ensure that the project is progressing within the assigned budget and timeline (Eby 2022). User testing is also conducted in this stage to ensure that the staff of The Cage will be able to use the system efficiently.

5. **Project Closing:** This phase will be conducted over 1 month which involves implementation of the complete system, post implementation support is provided, all project documents to the relevant stakeholders are handed over and project reviews are conducted to understand learnings from this project (UMass Boston n.d.). A final client sign-off meeting is conducted, and project resources are released in this closing stage (Malsam 2022).





Resources

Human Resource	Role	Responsibility
Sanjay Danani	CEO	In charge of the overall decision-making and sponsoring the project. Provides vision and strategic direction.
Various dept. heads and staff	Internal Stakeholders	Provide input, feedback and support. Participate in testing and training activities and ensure the DA system is adopted successfully.
Project Manager	PM	Plan, organize, control, schedule and create a budget for the project
Business Analyst	BA	Ensure business objectives and deliverables are aligned. Collect and analyse business requirements and translate them into technical specifications
Anthony P.V.	IT Advisor	Provide technical guidance and expertise, while coordinating with the vendor and overseeing the progress of the project
Data Analyst	DA	Analyse data, develop models, create dashboards and provide insights to assist in the decision making
Software Engineer	Software Engineer	Design, develop and implement software solutions. Ensure the system functions smoothly.
Hardware Specialist	Hardware Specialist	Procure, configure and install all hardware components, ensuring they are compatible and reliable.
Database Administrator	Database Administrator	Manage all database systems, perform data mitigation, ensure data integrity and ensure optimal data storage
Quality Assurance	QA Engineer	Develop test plans, conduct testing and ensure proper software quality and reliability
UAT Coordinator	User Acceptance Tester	By conducting user acceptance tests, identify and report any defects and ensure that the new system meets user expectations

System Architect	System Architect	Design the system architecture, design the user interface and ensure that the system design aligns with the business goals
Procurement Manager	Procurement Manager	Source, negotiate and procure resources from the vendor and ensure timely delivery of all new systems
Change management specialist	Change Management	Develop strategies to communicate and facilitate the implementation of new systems. Ensure all stakeholders are on board.
Training Coordinator	Training Coordinator	Develop training modules and materials to facilitate employees in learning the new systems. Conduct regular workshops and training sessions
VU Information Systems	Vendor Representative	Collaborate with The Cage team, and deliver the necessary hardware and software resources as per requirements

Budget

An essential step in the project planning process is developing the project budget (Bridges, 2023). The budgetary framework for this project is encapsulated in detailed MS Project reports. These reports provide an itemized breakdown of all projected expenses, offering transparency and insight into the allocation of the $1.5 million budget. The reports cover a range of costs from procurement of technology solutions to personnel training and data security enhancements, each critical to the project's success.

Item	**Description**	**Justification**	**Cost(aud)**
1	DA Software Acquisition	High-performance analytics software to process and analyze large datasets.	$300,000
2	Hardware Upgrades	Necessary to handle increased data processing needs; includes servers and storage.	$250,000
3	Professional Services	External consultants to help with the implementation and customization of the DA tools.	$200,000
4	Training and Development	To ensure all staff are proficient in using the new DA tools.	$150,000
5	Project Management	Salary for project managers to oversee the project for 8 months.	$120,000
6	Data Integration Services	Services to integrate existing data systems with new DA software.	$100,000
7	Licensing Fees	Ongoing software licensing fees for the first year.	$80,000
8	Testing and Quality Assurance	To ensure the software runs smoothly and meets all business requirements.	$150,000
9	Contingency Fund	To cover unforeseen expenses during the project. (Bridges, 2023)	$150,000
Total			$1,500,000

Justifications for Major Costs:

DA Software Acquisition: This is the backbone of the project, providing the necessary tools to analyze and visualize data effectively. The cost is justified by the anticipated improvements in decision-making and operational efficiency.
Hardware Upgrades: Essential for supporting the new DA software, ensuring that data processing is efficient and reliable.
Professional Services: Given the specialized nature of DA implementations, expert guidance is crucial to tailor the system (Bridges, 2023) to The Cage's specific needs, thereby maximizing the value derived from the investment.

Project results can be greatly impacted by efficient budget management (Bridges, 2023). The budget has been meticulously designed to guarantee that every expense directly advances the data analytics project's successful execution, thereby augmenting The Cage's operational capacities and strategic decision-making procedure.

Risks

A risk register is a useful tool for project managers to identify, document, and manage potential risks that might affect the project's success. It serves as a central repository for risk descriptions, containing details about the possibility, impact, and intended mitigation strategies (Taylor, 2006). The likelihood of the project succeeding can be greatly raised by being aware of and taking proactive measures to manage these risks. Drawing from the case study and project plan requirements, the following risk register identifies the main risks associated with The Cage's Data Analytics Enhancement project:

ID	Description of Risk	Risk Impact (High/Medium/Low)	Likelihood of Risk (High/Medium/Low)	Strategies for Mitigation
R1	Insufficient data quality leading to inaccurate analytics	High	Medium	Implement rigorous data cleaning and validation processes.
R2	Resistance to change among staff	Medium	High	Conduct comprehensive change management and training programs. (Carr, 2014)
R3	Overreliance on new DA system without fully understanding its capabilities	Medium	Medium	Provide extensive training and maintain manual oversight during the initial phase.
R4	Integration challenges with existing IT infrastructure	High	Medium	Engage IT experts early in the project for feasibility studies and solution design. (Carr, 2014).
R5	Unexpected technical difficulties causing budget overruns	High	Medium	Establish a backup budget and check financial projections on a regular basis (Taylor, 2006).
R6	Data privacy and security breaches	High	Low	Implement state-of-the-art cybersecurity measures and conduct regular audits. (Venkataramanan and Shriram, 2017)
R7	Inadequate user engagement leading to low adoption	Medium	High	Involve end-users in the design process and gather regular feedback.

R8	Delay in project milestones due to vendor-related issues	Medium	Medium	Select vendors with proven track records and establish clear SLAs. (Taylor, 2006)

The register outlines risks associated with implementing a data analytics system in The Cage, outlines mitigation strategies, and requires regular review and update by stakeholders.

Communication Strategies

People Involved	Purpose	Method	Owner	Frequency
PM	General Information	E-mail/ meetings	PM	As needed
Software Engineer, IT Advisor	Software Update reports	E-mails/ Intranet	Software Engineer	Weekly
QA Engineer	Quality Assurance reports	Documentation/ Meetings	QA Engineer	Weekly
IT Advisor, PM	Risk Management reports	Documentation	IT Advisor	Once
Procurement Manager, VU Information Systems	Resources Procurement reports	Documentation	Procurement Manager	Once
Training Coordinator, Change Management Specialist	Training and Change Management reports	E-mails/ meetings	Change Management Specialist	Weekly (during training period)
CFO, PM, Internal Stakeholders	Financial reports	E-mail/ meetings	CFO	Monthly
PM	Progress Updates	E-mail/ meetings	PM	Weekly
PM	Performance Reviews	E-mail	PM	Weekly

A communication matrix provides an outline for all communication channels/strategies that take place during a project. Having a communication matrix in place before hand removes any cause for confusion or error and provides a framework to follow when communicating any information regarding the project. In this case, we have five columns: People Involved, Purpose, Method of communication, Owner and Frequency.

1. People Involved: This column identifies all the key individuals involved in each communication activity. This given an insight into which departments are involved in that activity.
2. Purpose: This defines why that communication activity is required and highlights the information being conveyed.
3. Method: This outlines how that information is supposed to be communicated, whether via emials or by holding meetings etc.
4. Owner: This column defines the person responsible for that communication activity. This column helps identify whom to contact in case of any questions or concerns regarding that communication activity.
5. Frequency: This column defines how often that report/activity needs to be held or submitted. This assures that all metrics are constantly monitored, and everyone is kept well informed thorughout the duration of this project.

Stakeholder Management

The following stakeholder management plan will be utilised to ensure that all stakeholders of this project are aligned with the project goals and clear communication is maintained with everyone.

Type of Stakeholder	Engagement Method	Frequency	Goal
Project Sponsor	• Meetings • Monthly Progress Reports by Project Manager	• Fortnightly • Monthly	To aid in key decision making, provide direction to the project and help mitigate any risks
Business Analysts	• Weekly stand ups/Meetings • Email	• Weekly	To liase with the project manager, technical team and the clients to ensure that business requirements are captured accurately and are documented (Haas K B 2005).
Project Manager	• Meetings • Email	• Weekly	To ensure that the project is progressing within the defined timeline and budget with the allocated resources (PMI n.d.).
Data Analysts	• Meetings • Email	• Weekly	To understand how the Cage data must be migrated, structured, analysed and to develop the required dashboards and reports in an effective manner (ProjectPro 2023).
VU Information Systems Corporation & Third party vendors	• Email	• When needed	To select hardware/software when needed, deliver goods on time, and to resolve any integration issues (Monday.com 2022).
IT Support Specialists/IT	• Technical Stand ups (Meetings) • End user training workshops	• Monthly • 3-4/week – when	To ensure the team is ready to provide support to the end

Support Team of The Cage		training sessions take place	users of the system in the post implementation stage and to monitor system performance (Farrelly 2023).
Quality Assurance Team/ Testers	• Defect Resolvement and Support Meetings	• Bi-weekly	To create test plans, test documentation, raise and resolve any identified defects and to ensure end-to-end testing is conducted thoroughly (Alona 2024).
Legal Department	• Review Meetings	• Once a month	To ensure that a PDPA form and other legal documentation is created accurately and to ensure that the project adheres to data protection laws (Wiles 2021).
Customers of Cage	• Emails • Surveys	• Monthly	To obtain feedback about the system and to further enhance it
Venue Managers of Cage	• End user training workshops conducted via virtual meeting tools / physical meetings. • Intranet/Company emails • Q&A sessions	• 3-4/week – when training sessions take place	To train the end users of the system for effective utilisation of the system.
Finance Team/Department	• Budget review meetings • Financial reports • Presentations	• Monthly	To allocate project budgets, ensure that the project progresses without exceeding any budget constraints and to create financial reports
Auditors	• Audit Meetings • Reports	• Every 4 months	To ensure that the project has adhered to all laws and regulations and identify risks

Summary

This project plan outlines the development of a Data Analytics (DA) project for The Cage, aimed at enhancing data collection methods, operational efficiencies, decision-making tools, and customer engagement over an 8-month period with a $1.5 million budget. The project will be executed in five key phases: initiation, planning, execution, monitoring and control, and closing. Key developments include creating custom forms for data collection from sports players and other users and developing dashboards for improved decision-making. Integration with existing systems is crucial to ensure seamless functionality across the organization.

The design prioritizes user-friendliness to accommodate sports players and management with limited tech expertise. This involves straightforward interfaces for bookings and data understanding. Comprehensive end-user training is essential to maximize efficiency and proper use of the system. Continuous data collection throughout these processes will allow The Cage management to tailor the system to user needs, stay competitive, and scale operations effectively.

References

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