Assignment 1 Case Study CSE5003 Michael Le 21689299

1. **Provide a short explanation to the IOC management team on why a new project design is required. In your answer, consider the critical factors in designing this project and assess the suitability of each significant project management methodology covered in this subject (traditional, iterative, incremental, and lean). Which methodology would you recommend applying and why? (10 marks).**

A new IT project design should be implemented for the IOC management team because we must consider the main issues and complexity of the scope. What types of “platforms," "risks," “uniqueness," “changes," and “uncertainty” are involved during development? To help athletes and team officials find the best accommodation, understand their preferences and support to reduce customer complaints, and meet realistic expectations of all clients and stakeholders to deliver a high-standard platform during the Olympic games.

In addition, to find an appropriate project management approach, we must analyze each methodology individually for suitability and flaws under Traditional, iterative, incremental, and Lean Management.

The traditional project management approach is complex for this case because it requires a more extensive scope, leading to over-budgeting the cost. We must ensure that all access to players and team officials needed under the law restrictions for each country has been met, including dietary restrictions and medical requirements if an accident or injury occurs during a live event. This could further delay the event under their initial fixed scheduling, maintenance, and further documentation, which would not be suitable for the overall case study.

Lean Project Management approach is given time, delays can be managed under correct supervision, and coordination with the platform must be re-examined only if the development can be improved to avoid further delays. This can lead managers to be concerned about the architecture and proposal of this new information to the stakeholders if agreed upon. This approach for this case study can lead to scoop creep, which would further delay without budget and time constraints. This can mislead the Project Managers from the finance team, who must share their power and control with the players or team officials if they commit to their last-minute decision on their accommodation. That will impact the player's and team officials' experience during the Olympic games if either the Project Manager or the Stakeholders are not informed about these changes on the platform. This approach is not suitable for this study.

Iterative and Incremental Management is required depending on the feedback from players, team officials, and stakeholders for each cycle. This enables developers to ensure corrections enhance life performance and overall quality, which requires more multitasking on both the front and back end of development. Technology costs become expensive if the implementation of the platform is well executed. This approach for this case study can reduce risk management, for the platform is accessible and easy to follow in any country or language they can quickly adapt to. This will depend on the intensive hours needed to ensure the stability of platform usage. We wanted to meet the expectations to deliver the best optimal experience for all members and officials and meet their accommodation and preferences. Overall, the best methodology appropriate for this case study is Iterative and Incremental Management because this can be achieved through feedback, and learning can easily measure success until the quality of the platform has been exceeded.

1. **Evaluate the time-quality-cost triangle for this project and explore how adjusting one arm of the triangle (time, quality, or cost) would impact the other arms and the overall project. Outline how you would manage impacts to any of the arms of the time-quality-cost triangle (10 marks).**

To manage the impacts on any of the arms of the time-quality-cost triangle, we first analyze the arms individually for time, quality, and cost. We aim to explore any impact that follows according to the project objectives regarding planning, prioritizing the number of tasks, monitoring progress, communication, flexibility, and improvement.

Having the time arm fixed requires several daily meetings and consultations with stakeholders, team officials, and accommodation staff to gather much information months before the game’s Opening Ceremony. Also, it must be noted that the average duration of the games every four years occurs in an intensive 16 days in the July or August period, excluding the opening and closing ceremonies. Continuous monitoring and maintenance are needed for the entire duration of the games 24/7 to detect any issues or updates during the inference of the games. We must allocate the number of tasks for the developers during development by ranking the order of importance. This is done by breaking down the number of redundancies on jobs that can be dealt with later or eliminated during the initial stages of development. Make up for the lost time with realistic deadlines for each allocated task. Tools like "Gantt Graphs and time-tracking software" may be needed to ensure the event manager can "visualize project timelines" without additional adjustments.

For the cost arm to be fixed, we want the finance teams to be aware that the International Olympic Committee (IOC), on average every four years, estimated at least 4.6 billion dollars (AUD). Furthermore, considering the platform costs, if we wanted to be bare, an estimated cost to start a platform will be at least $5,000 (AUD) to include most of the features to enable notifications, integration, and performance to assist users. Assuming we are dealing with at least 30,000 users, including all athletes, team officials, stakeholders, and accommodation staff. According to the calculations from a Quora user named Venkatramanan Ramasubramanian, we must account for “the cumulative time spent in the application” for each user 30,000 multiplied by 30 minutes per user 900,000 minutes spent on the app. In addition, we are increasing the “refresh rate for banner ads” for "1 minute" in total 900,000 ad impressions.

Furthermore, we compute the average eCPM of roughly "$0.50 for 1000 impressions”, measuring advertisements pay for an ad space per user of 1000 ad impressions. Lastly, we must compute the total revenue for the games we multiply by 16 days, which gives us an estimate of the fixed amount of $7200 (AUD) in return, give or take, if well executed. This leads to a profit of $2200 (AUD), give or take, allowing for reduced costs for the finance teams to manage for the entire duration of the games.

Quality is the only arm to be adjusted and accounted for, measuring the project's success level and complexity. For example, if a technical issue with the platform requires life improvements, adding enchantments to fully optimize its performance and secure all information private from other users. Ensuring no limitations on how long the user should use the platform, regardless of time and location. Decrease the number of advertisements that will randomly occur to reduce retention time. This will be problematic since applying these improvements will increase time, and the cost takes, at most, three months. To ensure full accessibility to book their allocations and communication features. Assuming all the arms are joined in place that meets all budget, time, and quality requirements are met according to the event manager and finance team standards during the Olympic games.

1. **It would help if you justified to the International Olympic Academy (IOA) management team that hiring a project manager is crucial for the project's success. To do this, outline the benefits of having one, the critical skills they could bring to the project, and how they might need to adapt their style to the recommended project management approach. Ensure your response relates to the aspects of the case study (10 marks).**

**Discuss the benefits of having a project manager, the critical skills they bring to the table, and how they might need to adapt their style to the recommended project management approach to have a successful project:**

Hiring a project manager enables them to understand the hierarchy of the project scope, who is also responsible for ensuring the project starts and finishes within the fixed schedule. To raise "any concerns, queries or updates," the platform is accessible for all athletes, including team officials and staff members during the Olympic Games development. The benefit of having one is to have a team of experienced software developers specializing in app development to create “a competent team” to ensure the development of a user-friendly platform to book and manage their accommodation preferences. In addition, they are allocating rooms based on the user’s preference, including dietary restrictions, medical requirements, and accessibility considerations. It can quickly provide real-time updates and notifications to athletes and team officials to address issues or concerns.

Furthermore, critical skills for this case study are ‘Leadership,' ‘Communication,' ‘Prioritization,' and ‘Adaptability.' Similarly, Technical skills are 'Scheduling,' 'Resource allocation,' 'Risk Management,' and 'Budgeting.' Agile Project Management is a suitable project management approach that allows project managers to adapt their technical and soft skills quickly. Where project managers must adapt and share their power and experience through consultations with team officials, athletes, accommodation staff, and risk managers. This is to ensure that the level of success is easily measured and checked so that the platform can perform as expected to ‘go live’ and comply with relevant laws for each country. Requires implementation changes during development, testing, deployment, and maintenance phases. To inform the project manager to adapt to these changes, maturity is established to allow for improved team morale in their given roles. To please the stakeholders, prioritize work and output to reduce overtime costs. This is enough to explain why the International Olympic Academy has a project manager crucial for the project's success during the games.

1. **Many projects today bring together a combination of elements from the three core methodologies. If you were to design this project using a combination of methods, which aspects would you choose, and why? How would you approach addressing the challenges of the project? (20 marks)**

If I were able to design this project, the aspects I would focus on all three methodologies. Traditional, if the project has been planned extensively upfront with a detailed project plan to reduce the number of changes during any project phase. Lean is more flexible, reduces the project's cost, and optimizes for better revenue to achieve no over costs for the platform to succeed depending on the project's complexity. Lastly, iterative and incremental can be achieved by breaking the project scope into different segments. Delivering them incrementally to allow for feedback and adjustments throughout the project lifecycle requires an intensive work ethic and further monitoring to reduce issues with the platform. For instance, Uber, as an inspiration, has "to deal with the demands and complaints of both drivers and riders and to comply with the regulations and laws of different countries and cities." For this project, we wanted to understand the feedback from athletes, team officials, and staff, who have their ideas centralized around communication, room preferences, dietary restrictions, medical requirements, and accessibility, including training tutorials to save a lot of time and cost for staff members to commute in person, saving value for transportation and reducing delays.

Furthermore, other aspects during management for the platform to work is to maintain “consistent code quality” to have the team of developers responsible for ‘enhancing the readability and consistency of the app’s code." To guarantee “compatibility” for all platforms exclusively to all members and staff to meet the specs of the "app's dimensions, size resolution and pixels." In addition, we must have “security” for authentication purposes, to correct the person’s identity, confirmed the user’s privacy and personal information. Avoiding law regulations in each country representing the games would depend on the user's responsibility for using the platform regardless of their time and location. Meeting all the requirements for the event managers' and finance team’s needs will help overcome any aspects of the project to succeed during the games.

**References:**

* Rajasekaran, R. (2024). Lecture 1: Introduction to PM [PDF] 14-22,25-32,37-39. La Trobe University. <https://lms.latrobe.edu.au/course/view.php?id=147971&section=1>
* Rajasekaran, R. (2024). Project Management: Lecture 2 [PDF] 3-19, 29. La Trobe University. <https://lms.latrobe.edu.au/course/view.php?id=147971&section=2>
* Rajasekaran, R. (2024). CSE5PM: Lecture 3 [PDF]. La Trobe University 3-18. <https://lms.latrobe.edu.au/course/view.php?id=147971&section=3>
* Hive Team. (2023, November 28). Understanding the project management triangle. Hive. <https://hive.com/blog/balancing-quality-time-cost-understanding-project-management-triangle/>
* How much does it cost to make an app for business in 2024? (2024, April 7). Software Development Company - Addevice. <https://www.addevice.io/blog/how-much-does-it-cost-to-build-a-mobile-app>
* Manno and McBride, M. J. (2021, December 21). The economics of hosting the Olympic Games. Council on Foreign Relations. <https://www.cfr.org/backgrounder/economics-hosting-olympic-games>
* MindInventory. (2022, November 1). Biggest challenges in mobile app development in 2023. LinkedIn. <https://www.linkedin.com/pulse/biggest-challenges-mobile-app-development-2023-mindinventory-1f/>
* Singer, Leonnova, and Brown. (2023, March 20). What are the benefits and challenges of adopting a platform business model in a competitive market? LinkedIn. <https://www.linkedin.com/advice/0/what-benefits-challenges-adopting-platform-business>
* Venkatramanan Ramasubramanian. (2015). What is the average revenue per user for apps with millions of users? Is there a general range or standard number that applies to all apps? Quora. <https://www.quora.com/What-is-the-average-revenue-per-user-for-apps-with-millions-of-users-Is-there-a-general-range-or-standard-number-that-applies-to-all-apps>