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Formative
Assessment 1:
Project
Management
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Question 1:

Project Title:

Harmony Care Mobile Application Development

Project Purpose:

To develop a mobile application that helps patients with chronic illnesses to keep track of their health statistics, talk with healthcare providers and receive health information that is personalized to the patient.

Project Objectives:

To design and develop an easy-to-use application for both iOS and Android phones.

Integrate functions to track health statistics, messaging healthcare professionals and providers along with receiving health advice tailored to the client.

Ensuring validity with healthcare rules and regulations.

To conduct testing to get feedback and relook the design of the application.

Application must be launched in twelve months.

Project Scope:

Mobile application development with the following requested features:

Profile management and user registration

Tracking of health statistics

A communication module

App must be integrated into wearables (if possible)

Recommendations for personal health

Data analysis for health reporters

Key Stakeholders:

Harmony Health

Providers of Healthcare

The patients

The development team of Bright Code

User interface or UX designers

Testing and quality assurance team

Tech support team

Compliance officer to make sure regulations are met

Project Requirements:

All functional requirements and non functional requirements to be listed

Follow the healthcare guidelines where data privacy and security is concerned.

Budget:

Budget Estimate: \$500 000

Budget includes employee costs, tech stack, quality assurance and testing along with marketing.

Timeline:

Project needs to be completed in 12 months

Key milestones:

Design phase completion: Third month

Application development phase: Starting from fourth month and lasting till the ninth month

QA, testing and feedback integration: Month ten till eleven

Launch date: Month 12

Risks:

Regular changes could impact the overall compliance of the project.

Adoption rates by users might vary.

Integration with technical systems may lead to technical difficulties.

Question 2:

Stakeholder Misalignment - Various stakeholders might have clashing responsibilities or expectations when it comes to project outcomes, which might delay approvals and overall decision-making.

Budget Constraints - If the budget of Harmony Health is not final or there are arguments on key expenditures, it might lead to further delays in project initiation.

Resource Availability - insufficient availability of skilled resources from Bright Code Solutions or Harmony Health might prevent the project from starting.

Regulatory Uncertainties – Clarification or changes with regards to the regulations from healthcare might lead to complications in overall project scope and requirements, which requires necessary changes before the project can start.

Technology Choices - Conflicts on which tech stack to use could further hinder the start of the project as development teams need to come to an agreement.

Question 3:

Inadaptability to changes – Once the requirements are fixed, changes are difficult and expensive to implement. In healthcare, rules and regulations needs can change without notice, which makes this inflexibility or inadaptability a great setback.

Delayed feedback - Waterfall is dependent on a long feedback loop, which might lead to users facing problems only at the testing phase. This might also lead to redesigns and further delays.

High risk of requirement misunderstanding - In a highly complex field like healthcare, misunderstanding or confusion during the phase of gathering requirements could lead to a final product that does not meet what the user needs.

Limited user involvement - Waterfall projects usually involve users mainly during the requirements phase and towards the end during the testing period, which reduces the invaluable iterative aspect which is mandatory to meet the user's needs.

Integration challenges - With a more direct approach, integrating the program with other systems may not be tested until later in the applications lifecycle, which risks important rework.

Testing bottlenecks - The testing phase could lead to a bottleneck if problems appear late due to disregarded requirements, which could also push back timelines greatly.

Misalignment with agile practices - The waterfall methodology might lead to a misalignment with faultless delivery methods which Agile embraces, therefore limiting adaption.

Documentation overhead - Waterfall needs a significant amount of documentation, which could overall hinder the speed of the project for teams which prefer the iterative aspects and conciseness of communication.

Question 4.1:

Common Constraints with Off-the-Shelf Software

Limited customization - Off-the-shelf methods sometimes do not meet important criteria and might need compromises in functionality, which results in an unoptimized user experience.

Integration issues - Existing software might not easily embed or integrate well with current systems used by Harmony Health, which causes further additional expenditure and time delays to create solutions or workarounds.

Hidden costs - License fees, subscription costs, yearly updates and possible service fees could increase, which makes it more costly over time than firstly considered.

Vendor dependence - Depending on third-party vendors could compromise the ability to be flexible in updates or changes, as companies will be bound by the vendor's release schedules and regulations.

User adoption – Some staff and patients may be hesitant or resistant to change or find off-the-shelf methods challenging to use, which also leads to a reduced engagement and overall slower functionality.

Question 4.2:

Project sponsor - Provides overall vision, funding and support for the project who is also responsible for gaining resources and removing any hinderance.

Product owner - Shows or represents the shareholder's interests who also prioritizes requirements and functionalities based on business value.

Healthcare providers – Provides information on user requirements, already existing processes and how the app should work to improve patient care.

Patients - The users of the application who give feedback and information on how to make sure that the solution meets their needs and requirements.

Developers - Responsible for building the application and ensuring that it meets both functional and non-functional criteria.

UI/UX designers – Team that focusses on the application's usability and design, they also conduct user research to create a friendly user experience.

Quality assurance team – This team ensures that the application is tested significantly for bugs or usability issues before final release.

Regulatory compliance officer – This person will ensure that the application abides with healthcare rules and regulations.

Question 4.3:

Internal Roles:

Developers

Project Managers

Product Owners

Design/UX Teams

Quality Assurance Teams

External Roles:

Clients (e.g., Harmony Health)

Third-party Vendors/Suppliers

Regulatory Bodies

Consultants (if needed)

Question 5:

Incremental budgeting - This method means to use the previous year's budget as a foundation and make slight adjustments. It is important that it allows for the adaptive management of funds founded on actual needs and performance.

Drawbacks - This may allow it to overlook impactful shifts in project scope or innovative criteria since it will typically assume that the already existing budget is adequate.

Zero based budgeting – Every single budget cycle needs to start from a ‘zero base’, which needs reasoning for all expenditure — this is to make sure that funding matches tightly with present project goals and stakeholder needs.

Drawbacks - This could result in tedious and time-consuming hinderances where every expense needs to be reasoned and implemented which could also probably slow down the budgeting process.

Activity-Based Budgeting (ABB) - Focuses on identifying the costs of activities necessary to produce a software product and budgeting according to the resources needed for those activities.

Drawbacks - It requires a very detailed analytical approach of all activities, which may further complicate the budgeting process.

Reasoning for Selected Approach:

For Harmony Health’s mobile application, a mix of incremental budgeting and zero based budgeting might possibly be efficient. Incremental budgeting also allows for flexibility as the behaviour of healthcare technology could allow for shifts in funding needs founded on criteria requirements or patient necessities. Similarly, the zero based budgeting aspect also ensures that all funding is reasonable and in lined with project objectives, which promotes an overall better resource allocation.

Conclusion:

Taking in the vibrant behaviour of healthcare rules and regulations along with the need for stakeholder engagement, a clear understanding of budgeting practices allows Harmony Health to manage its finances more effectively while also promoting operational efficiency in its application development process.