**Part 6: Project Risk and Procurement Management**

**Team Members:**

* Rakesh Geddam
* Rhys Williams
* Sai Kumar Kunti

1A)

1. **Agile methodologies may not be ideal due to their emphasis on adaptability and responsiveness over extensive upfront planning. This can lead to a lack of thorough risk mitigation strategies and potentially increased cost and resource implications.**
2. **Additionally, Agile's focus on rapid development may overlook in-depth safety and hazard analysis, which are crucial for certain domains like the medical field.**
3. **Furthermore, the lack of formal risk management processes and the use of gamification as a monitoring tool are also points of criticism for agile, as they may lead to underestimation of risks and distractions from core development tasks.**
4. **Agile methodologies have their strengths but may face criticism in certain contexts or when misapplied. The key is to choose an approach that aligns with the specific needs and characteristics of the project or organization.**

2A)

**Risk Register for Health-Care App Project:**

This risk register provides a structured overview of potential risks, allowing the project team to prioritize and proactively address them. Regular reviews and updates to the risk register throughout the project help maintain its relevance and effectiveness.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ­­­ | Rank | Risk Description | Category | Root Cause | Triggers | Potential Responses | Risk Owner | Probability | Impact | Status |
| 1 | High | Technical Complexity | Technical | Inadequate expertise in a critical technology | Changes in project scope, new feature requirements | Conduct specialized training, hire external experts | Eric (ScrumMaster) | Moderate | High | Open |
| 2 | Medium | Data Security Breach | Security | Insufficient security measures | Unauthorized access attempts, data breaches in similar systems | Implement encryption, conduct regular security audits | Kendra (QA Manager) | Low | High | Open |
| 3 | Low | Regulatory Compliance | Regulatory | Lack of understanding of healthcare regulations | Changes in regulations, audits | Regularly update team on regulatory changes, consult with regulatory manager | Jack (Regulatory Manager) | Moderate | Medium | Open |
| 4 | Medium | User Acceptance | User Experience | Misalignment with user expectations | Negative feedback during testing phases | Continuous user feedback, regular usability testing | Brianna (Marketing Representative) | Moderate | Medium | Open |
| 5 | High | Budget Overrun | Financial | Poor cost estimation, unexpected expenses | Scope changes, unforeseen technical challenges | Regular budget reviews, prioritize features based on criticality | Barry (Accounting Staff) | High | High | Open |

**Explanation:**

* **Likelihood (1-5):** Represents the probability of the risk occurring, where 1 is least likely, and 5 is most likely.
* **Impact (1-5):** Represents the potential impact of the risk on the project, where 1 is least impactful, and 5 is most impactful.
* **Risk Score (L x I):** Calculated by multiplying the likelihood and impact scores. The higher the score, the higher the priority for mitigation.
* **Mitigation Strategy:** Describes the proposed actions to reduce the probability or impact of the risk.

3A)

Here's how problems might change and appear as the project goes on:

**Technical Problems:**

* **First Stage (Fitness Tracker Data Storage):** figuring out and building the system to store data for the fitness tracker.
* **Next Stage (Medication Tracker with Alarms):** less risk because we already know how to store data, but new problems might come up with the alarm and pillbox features.

**Connecting Things Up:**

* **First Stage (Fitness Tracker):** not much problem because it's a standalone piece, but things might get tricky when we connect it to other parts later.
* **Next Stage (Medication Tracker):** higher risk because we need to connect the new medication tracker with the fitness tracker without causing problems.
* **First Stage (Fitness Tracker):** this is important because it sets the tone for the whole app, so we need to make sure users like it. Their feedback will help us improve the next stages.
* **Next Stage (Medication Tracker):** users might have different expectations based on their experience with the fitness tracker, so we need to keep listening to their feedback.

**Changing the Plan:**

* **First Stage (Fitness Tracker):** we might need to adjust the plan if we want to add or change features.
* **Next Stage (Medication Tracker):** same as before, people might ask for new things or want to change existing ones, so we need to be flexible.

4A)

Outsourcing the health-care app project offers advantages in terms of specialized expertise, cost-effectiveness, and accelerated timelines. External vendors provide access to specific skills and resources, while their flexible cost structure helps manage budget constraints. Additionally, outsourcing can expedite project timelines by allowing concurrent work on different components.

In-house development provides greater control, collaboration, and alignment with organizational goals. The team's familiarity with company culture and goals leads to a more cohesive approach and better communication. Furthermore, in-house development allows for greater control over timelines and priorities, facilitating adaptability and quick adjustments. Additionally, it promotes internal expertise, creating a valuable asset for long-term sustainability.

Ultimately, the decision between outsourcing and in-house development depends on project complexity, budget, desired control, and speed. Carefully weighing these factors ensures a decision aligned with the organization's strategy and objectives.