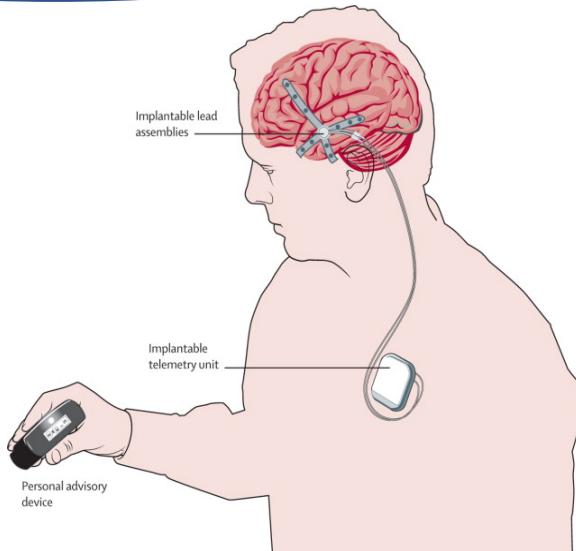


# IUPUI B505 Informatics Project Management

## PROJECT SUMMARY ASSIGNMENT –GROUP 2

### EPITECH – DEVELOPING EPILEPSY CARE WITH IMPLANTABLE DEVICE

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#### Project overview :

- Developing an implantable device for epilepsy care with real-time seizure detection.
- Utilizing machine learning algorithms and advanced sensors to capture brain activity signals.
- Providing automated alerts to caregivers and medical teams during seizure incidents.
- Integrating location tracking functionality to expedite assistance.
- Implementing secure data transmission protocols to ensure security and privacy.
- Creating long-lasting rechargeable batteries for continuous implantation.
- Offering patients the ability to view brain activity data and control alert settings.



### **Project Initiation:**

- Conduct extensive literature review on epilepsy, seizure detection technologies, and existing solutions.
- Gather comprehensive requirements from key stakeholders (epilepsy patients, caregivers, healthcare providers, neurologists).
- Define clear project scope, objectives, and goals aligned with addressing the challenges faced by epilepsy patients.
- Develop a detailed project proposal outlining the proposed solution, approach, and expected benefits.
- Create a stakeholder register identifying all relevant stakeholders and their roles/responsibilities.
- Prepare a project charter to formally authorize the project, define governance structure, and establish alignment with organizational priorities.
- Obtain approvals for the project proposal, scope statement, stakeholder register, and project charter from sponsors and key stakeholders.
- Identify and engage the project sponsor, typically a senior executive or decision-maker with authority, influence, and vested interest in improving epilepsy care.
- Establish selection criteria for the project sponsor, considering factors such as authority level, ability to secure resources, and strategic alignment with organizational objectives.



## **Project monitor and control:**

- Develop detailed project schedule, budget, and risk register.
- Prepare regular progress reports tracking achievements and issues.
- Monitor adherence to schedule, budget, quality, and performance metrics.
- Conduct risk review meetings and implement mitigation strategies.
- Leverage project management tools for tracking, reporting, and collaboration.
- Implement corrective actions for variances beyond acceptable limits.
- Maintain open communication with stakeholders for feedback and alignment.

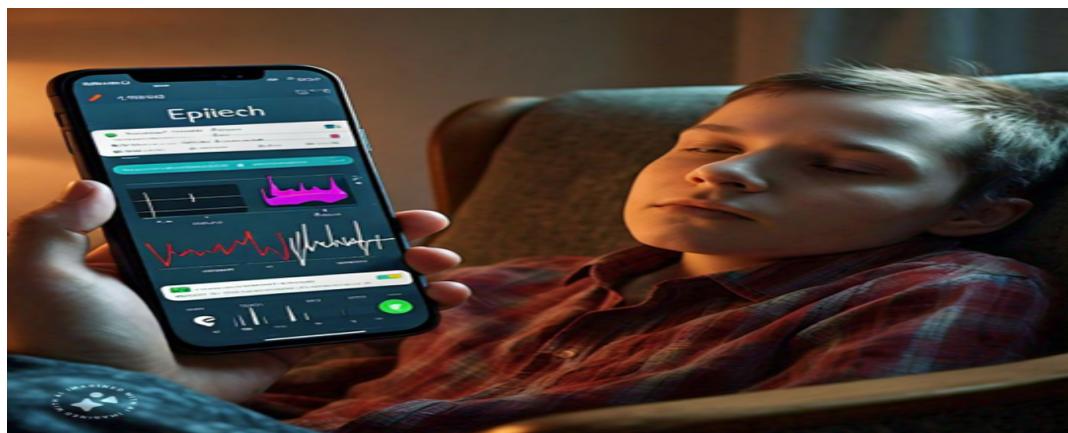
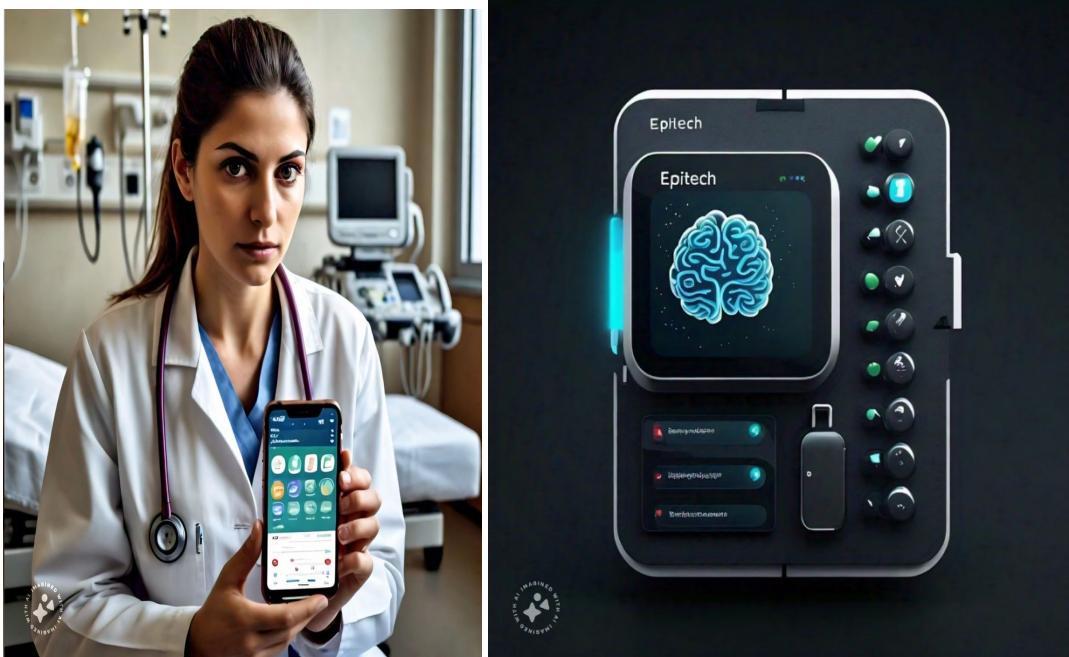
## **Project planning:**

- Develop a comprehensive Work Breakdown Structure (WBS) to define project scope and deliverables.
- Create a detailed project schedule with tasks, milestones, dependencies, and critical path.
- Prepare a resource management plan for allocating human resources, equipment, and materials.
- Design a communication plan outlining protocols for information sharing and stakeholder engagement.
- Utilize project management software and scheduling tools for collaborative planning and resource allocation.
- Involve key stakeholders (healthcare providers, researchers, regulatory bodies) in the planning process.
- Dedicate approximately 20% of the project timeline to the planning phase for thorough preparation.



### **Project execution:**

- Develop the implantable hardware prototype with compact biocompatible casing and components.
- Integrate advanced sensors for capturing and digitizing brain activity signals.
- Build machine learning software for autonomous seizure detection and prediction.
- Implement caregiver notification system with Bluetooth connectivity for instant alerts.
- Enhance location tracking functionality during seizure incidents for emergency assistance.
- Conduct clinical feasibility assessment and stakeholder evaluation through rigorous testing.
- Prepare comprehensive technical documentation detailing research, design, and development processes.



## **Project closing:**

- Conduct a comprehensive review of the project's progress, achievements, and challenges faced.
- Evaluate the effectiveness of the project management processes and team dynamics.
- Identify areas for improvement and develop strategies to refine project management approach.
- Document valuable lessons learned throughout the project lifecycle.
- Highlight key learnings and insights gained in areas like medical device development, regulatory compliance, and stakeholder management.
- Perform rigorous testing and evaluation of project deliverables to ensure high-quality standards.
- Address any remaining issues or defects identified during the testing phase.
- Actively seek feedback from key stakeholders (patients, healthcare providers, regulatory bodies) on their satisfaction and areas for improvement.
- Reflect on the team's collaboration and communication effectiveness.
- Prepare for knowledge transfer and future projects by documenting best practices.
- Obtain formal approvals and signoffs from sponsors and stakeholders for project closure.
- Celebrate the team's achievements and recognize their hard work and dedication.