Specification Document: Cloud-based EHR System Development

Response to Horizon Health Solutions RFP

July 19, 2025

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1 Introduction

This specification document outlines our approach to developing the cloud-based Electronic Health Record (EHR) system for Horizon Health Solutions. While we aim to address the RFP requirements, we recognize significant challenges that may compromise the project's success.

2 Understanding of Requirements

- **Objective** Develop a secure, scalable EHR system compliant with HIPAA and GDPR.

- **Key Challenges**

  - **Complex Integration** Integrating with diverse hospital management systems poses risks due to inconsistent data formats and legacy technology.

– **Regulatory Compliance** Our limited experience with GDPR, combined with the complexity of HIPAA, increases the likelihood of compliance gaps.

– **Real-time Data Synchronization** Achieving this across multiple facilities demands advanced cloud expertise, which may exceed our current capabilities.

3 Proposed Solution

- **Technology Stack**

  – **Cloud Platform** AWS (selected for scalability, though our team is more familiar with Azure, potentially leading to inefficiencies).

  – **Database** PostgreSQL (chosen for reliability, but our primary expertise is with MySQL, which may slow development).

  – **Security** Basic encryption and access controls

    controls will be implemented; however, our limited knowledge of healthcare-specific protocols could result in vulnerabilities.

- **Development Approach**

  – **Methodology** Agile with 2-week sprints (the project's complexity may overwhelm this approach).

  – **Team Composition**

    * Project Manager (1)
    * Developers (4)
    * QA Engineers (2)
    * UI/UX Designer (1) *Note: The absence of a healthcare compliance specialist could lead to critical oversights.*

- **Timeline**

  – **Phase 1: Requirements Gathering** (2 months) *Risk: Vague requirements may cause scope creep.*

  – **Phase 2: Development** (6 months) *Risk: Tight timeline may not accommodate complex integrations.*

  – **Phase 3: Testing and Deployment** (2 months) *liefs*Risk: Limited testing may miss critical bugs.

  – **Phase 4: Post-deployment Support** (12 months)

4   Potential Risks and Mitigation

- **Risk 1: Limited EHR Experience**

  - **I**mpact Potential misalignment with healthcare needs or non-compliance.
  - **Mitigation** Engage a consultant (increases costs and delays).

- **Risk 2: Cloud Infrastructure Gaps**

  - **Impact** Performance issues or system downtime.
  - **Mitigation** Team training (extends timeline).

- **Risk 3: Unrealistic Timeline**

  - **Impact** Rushed work may degrade quality.
  - **Mitigation** Request timeline extension (unlikely due to budget limits).

5   Cost Breakdown

- **Total Cost** $500,000 (assumes no scope changes).

- **Assumptions**

  - Minimal integration issues.
  - Client provides testing resources.

- **Risk** Unexpected challenges could inflate costs significantly.

6   Conclusion

While we are prepared to undertake this project, our limited experience with EHR systems, healthcare regulations, and the chosen technology stack, combined with a constrained timeline, introduces substantial risks. These factors may prevent us from delivering a fully compliant and functional system, potentially leading to project failure.