PROJECT PLAN

prepared by:

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for:

Suki

(Healthcare Analytics Software Integration Platform)

1. Introduction

This plan provides an outline of the various activities required to facilitate successful completion and timely delivery for a healthcare analytics platform.

This platform will democratize patient health data by creating a "mint.com" integrated software platform for the healthcare community. The application will collect patient data, information from electronic medical records, connected health devices, genomics, and user behavior for a data rich research environment.

The information and insights generated will be used to identify health interventions and drugs best suited for individual patients and personalized medicine. Information generated will also help healthcare organizations improve outcomes and lower health care costs. Patient users of the application will also reach insights into their own health data that may drive better behaviors and lower demands on the U.S. health care system.

This plan is a living document and shall be updated (as required) to support periodic in-process reviews (frequency to be determined by project manager, but no less than every 3 months).

2. Project Plan Summary

Objectives.

This project is to develop a data integration platform for the healthcare domain similar to what mint.com has produced for the online banking domain. We plan to develop an analytics platform that brings together electronic health record (EHR) data, patient fitness data, patient genetic data, food data, and other environmental information for a highly data rich environment. The goal is to provide users with game changing insights into their health as well as create incentives for patient accountability and improved preventative health measures coordinated with both insurance providers and the pharmaceutical industry.

In addition to documenting project tasks, this project plan will identify key application programming interfaces (APIs), required software development kits (SDKs), and deliverables to satisfy the project objectives.

This project consists of three main requirements:

- Identify the required APIs and specification requirements
- Make data visible in integrated environment with required relationships
- Develop application user interface with role based security for PII requirements and/or HIPAA regulations

The APIs in our first requirement are a high-risk area. If we have open APIs, fairly easy. If not, we will have to develop APIs and mechanisms to load data and ensure timely updates to the data. The Affordable Care Act (ACA) does mandate that patient data be owned by the patients, but method and manner of access will have to be solidified with source applications.

The second requirement will be our data modeling, data structure, and database implementation. Key considerations here are extraction of data from structured data sets for insights and storage.

Our third requirement is developing a user-friendly interface for analytics and data visualizations.

Objectives

The following are the key objectives specific to the Suki application:

- Integrate genomic, behavioral, and environmental data into one platform for analysis to achieve improved health outcomes and lower health costs
- Allow users to see insights into their health data
- Reduce demands on the health system
- Reduce insurance costs and create incentives for positive patient behaviors
- Improve pharmaceutical outcomes by better matching prescriptions to patient health profiles

Project Tasks.

Task 1 – Map the following APIs to database

Initial prototype. For first iteration, we will look at the following applications and software development kits for APIs:

1) Cerner API. https://code.cerner.com/millennium
2) EPIC API. https://open.epic.com/Interface/FHIR
3) Samsunk SDK for Health data. http://developer.samsung.com/health
4) FitBit API. https://dev.fitbit.com/
5) FamilyTree23 for genomic data: https://api.23andme.com/overview/

Task 2 – Develop Data Structures and Database Model

1. Create data structures and populate database from APIs in Task 1.
2. Evaluate hosting solutions and finalize database architecture and environment based on performance, scalability, and user network bandwidth requirements

Task 3 – Design and Develop User Interface

After the completion of Task 1 and Task 2, create user interface that includes the following:

1) Analytics dashboard visualizations
2) User specified analytics
3) Ability of user to aggregate family data and analytics
4) Role based access for PII, PHI, and HIPAA requirements

Task 4 – Testing

After completion of Task 3,

1) Test functionality and data quality metrics
2) Test security access for roles and PII, PHI, and HIPAA requirements
3) Penetration testing for application layer
4) Penetration testing for database layer

Project Team.

Data Modelers (2) – 6 months

Database Developers (2) – 6 months

Application Designers (3) – 6 months

Operations Research Analyst (1) – 6 months

3. Schedule of Milestones

Here are our major tasks and milestones:

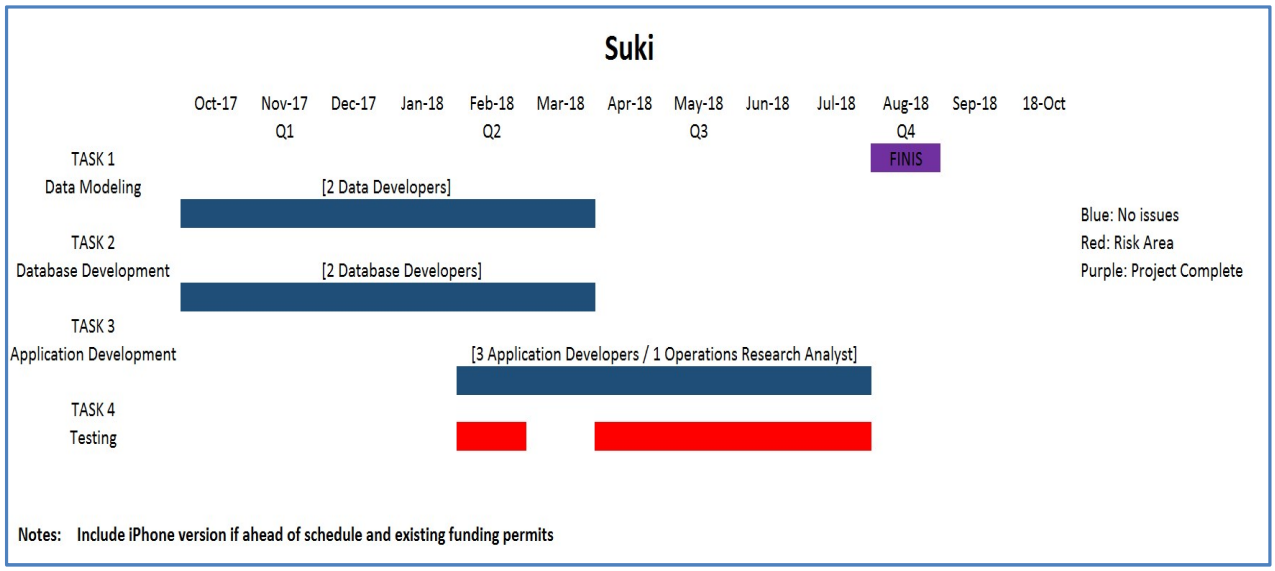

Figure 1: Project Plan

5. Funding Obligation & Execution Plan

We need (2) Data Modelers at approximately $120,000 per year for (6) months.

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We need (3) Application Developers at approximately $120,000 per year for (6) months.

We need (1) Operations Research Analyst at approximately $120,000 per year for (6) months.

We will stagger application development and our staffing requirements between database and user interface but for March - April 2018, we will have our highest staffing levels with (8) personnel working concurrently.

In Q3, we will also pay $30,000 for application hosting costs depending on final database architecture and required hosting environment.

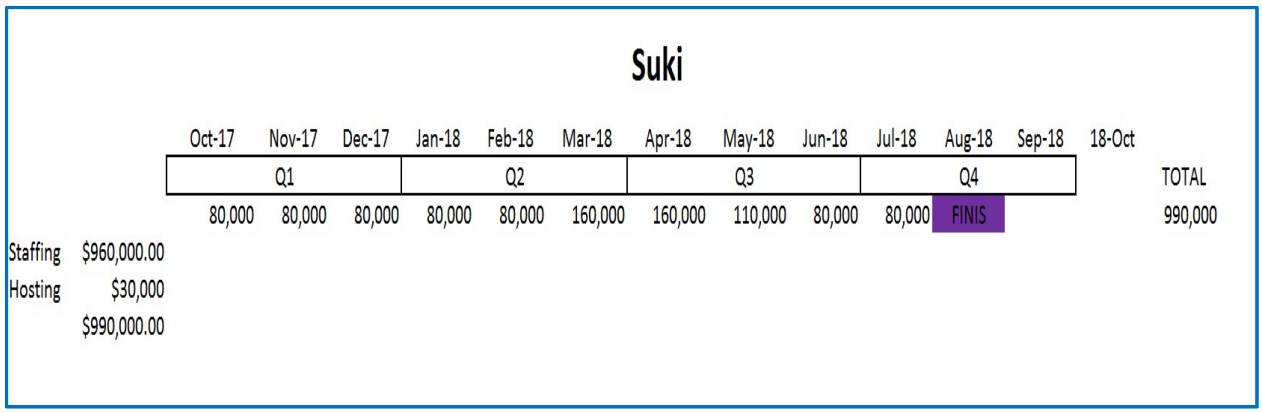

Figure 2: Budget and Spend Plan

6. Deliverables

1) Functional Suki application with documented code.
2) Results of API testing, data quality metrics, functional workflow testing, and security penetration testing for database and application layers.

7. Project Risk

Risk relatively low. APIs currently exist for all of the applications identified. May require additional funds and service agreements with EHR vendors for use of data via APIs.

8. Next Steps

1) Apple iPhone version

2) Additional feature: Allow user to take a picture of meal or food item and have calories and nutritional value populated to database vice having user manually enter information.

3) Sustainment requirements: 1 database administrator (part-time/$30K), 1 application administrator (part-time/$30K), plus hosting services (approx. $30K/year). Estimated total for sustainment: $90K/year

9. Project Information

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