# Release Plan

**Team Name:** EK Health, DataCare

**Team Members:** Lou, George, Octavio, Karthik, Robin, Kalpana, Marcos

**Tentative Project Title:** Voice-To-Text

**Description:** Create an automated framework in the field and in the office for healthcare professionals, who need security-enhanced voice-to-text apps to help with the transfer of patient information.

**High Level Goals:** Have a speech-to-text option which would be usable on different platforms.

**Team Roles:**

Octavio (OR) - Software Engineer, Scrum Master for Sprint 2

Kalpana (KC) - Software Engineer

Robin (RS) - Software Engineer, Liaison

Karthik (VT) - Software Engineer, Scrum Master for Sprint 1

George (GA) - Software Engineer

Marcos (MC) - Software Engineer, Scrum Master for Sprint 3

Lou (LG) - Software Engineer

**User Stories for Release:**

**Sprint 1 (Scrum Master: VT)**

Set-up Github - As software engineers, we need to setup a GitHub repository so that the team can efficiently progress.

- 3 Points - VT

Research APIs - As software engineers, we need to research all the possible APIs and choose at least three speech-to-text API's which meet the following characteristics:

- maximum recording length in minutes
- offline recording
- translation accuracy
- efficiency in terms of data usage and device performance

- 13 Points - GA, KC, RS, MC, LG, OR, VT

Research Android Speech Recognizer - As software engineers, we want to research this API, understand the limitations of it, and determine if it meets the criteria for our product.

- 13 Points - LG, RS, KC, GA

Research Pocketsphinx - As software engineers, we want to research this API, understand the limitations of it, and determine if it meets the criteria for our product.

- 13 Points - GA, LG, RS, KC

Research TLSphinx - As software engineers, we want to research this API, understand the limitations of it, and determine if it meets the criteria for our product.

- 13 Points - VT, OR, MC

Implement a voice-to-text prototype in Android - As software engineers, we want to build a working prototype of voice-to-text translation using our chosen API.

- 8 Points - LG, RS, KC, GA

Implement a voice-to-text prototype in iOS - As software engineers, we want to build a working prototype of voice-to-text translation using our chosen API.

- 8 Points - VT, OR, MC

Report status to product owner - As software engineers, we need to present the status of our prototype development to the product owner.

- 8 Points - LG, RS, KC, GA, VT, OR, MC

**Sprint 2 (Scrum master: OR)**

Network Status - As developers, we need to check when network is on or off.

Tasks:

- Figure out threads in Java
- Check network state
- Implement interrupt when network is lost
- Create an interface for the network listener
- Figure out how to alert user

- 8 points (KC, RS, MC)

Offline network - As developers, we need to understand the sphinx API for offline usage.

Tasks:

- Create an interface for the network listener
- Fix inaccuracy
- 8 Points (GA, OR, VT)

Training - As developers we need to find out how to train sphinx.

Tasks:

- Understand how the training app works
- Find relevant sample audio to feed the training app
- Physically train Sphinx
- 20 Points (Everyone)

Google Speech implementation - Implement Google Speech when network is available.

- 8 points (LG)

Android Studio environment - As developers, we need to understand Android Studio and its basic functionality.

- 5 points (Everyone)

Xcode (iOS) Environment - As developers, we need to implement OpenEars (an iOS version of PocketSphinx) in an iPhone application

Tasks:

- Learn Swift Basics
- Learn OpenEars Framework Tutorial
- Implement OpenEars in Swift (convert Objective-C to Swift)
- 13 points (VT, MC, LG)

User Interface - As a user, I need an option to start speech recognition so that my spoken words are transcribed into text after speaking into the microphone.

Tasks:

- A user needs a button to click on to START the speech recognition process.
- A user needs a button to click on to STOP the speech recognition process.

- The spoken words must be transcribed into text.
- The transcribed text must be editable by the user.
- 8 points (VT)

Hashing Dictionary of Words - As developers, we need to create a key-value pairs of words spoken so that there is a faster lookup of the same word if the user speaks that word.

- Learn how to use Swift Collections (Dictionary).
- 3 points (MC)

**Sprint 3**

As a developer, I need to load the most commonly used words by a nurse using DataCare's web service into the application system, so the offline speech recognition accuracy increases.

**Tasks:**

- Research how to load different word files. (2 ideal hours)
- Implement limited dictionary that is accurate but smaller. ( 2 ideal hours)
- (Android: RS, KC, OR, GA ) (iOS: MC, VT, LG)
- 5 Story Points

As a developer, I need to construct a mobile application, so that the nurses can interact with a system that mimics the DataCare's web service.

**Tasks:**

- Meet with the Datacare engineer and learn how to connect to DataCare's server. (4 ideal hours)
- Learn how fetch data from the server, update data from the server, and push data to the server. (8 ideal hours)
- Implement the fetch, update, and push on iOS and Android versions. (20 ideal hours on each platform)

- Learn how to set up authentication with the server securely.  Possibly look for resources on encrypting data on mobile phone if plausible. (5 ideal hours)
- (Android: RS, KC, OR, GA ) (iOS: MC, VT, LG)
- 13 Story Points

As a developer, I need to build a similar interface for Android and iOS, so that users feel comfortable switching their platforms and still feel they are using the same system.

**Tasks:**

- Create activities for each of login/cases/ViewCase/EditCase/AddNote. (10 ideal hours)
- Implement a tableview of “My Cases”. (10 ideal hours)
- Implement a detailed view for each case and connect it to the parent table view (20 ideal hours)
- Connect the offline voice recognition to the notes section.
- (Android: RS, KC, OR, GA ) (iOS: MC, VT, LG)
- 8 Story Points

As software engineers, we need to perform testing and ensure the project we build is functional.

Tasks:

- Test the offline voice recognition module. (3 ideal hours)
- Test the application interface and UI objects. (5 ideal hours)

As a user, I must be able to read and have access to a user manual, so that I can understand how to login, view cases, edit notes for a case, and create cases.

Tasks:

- Write an easy to read user manual. (3 ideal hours)
- Implement a view in the mobile applications if plausible for user manual (5 ideal hours)

**Product Backlog at the end of release 1 :**

Network Connectivity - As software engineers, we want to maintain data consistency between the client and the server in possibly volatile network conditions.