# Memo

**To:** Christopher Elliott

**From:** Ryan Somers, Pierre Badra, Sebastian Burke, Joshua Magnan, Sabrina Tochkov

**Date**: November 7th, 2024

**Subject**: HIA3 Technical Memo & Unknown

Hi, Christopher,  
Here is a breakdown of our discussion for K40 A03 Part C – Tech Memo.

**Known knowns:**

We know that we will need to create two separate API authentication/authorization endpoints, one using REST and another using SOAP for the legacy apps. We need to make sure these endpoints are flexible and have a spec that allows for custom configuration. We are also responsible for making sure that the app works without Clara (by implementing some sort of “update” feature which imports a CSV file following a certain template/standard).

Another thing that we figured out (which used to be an unknown last week) is how to handle duplicate roles considering our client wants an independent sub-space of users/roles for each app. Instead of storing all roles in one table in a common pool, each role must be associated to an app. Only the Student and Teacher roles will be common to all apps using the College’s AD for the App Admins who would like to use them.

After speaking with the client at our last meeting and discussing it at length, we’ve managed to refactor and break down our project into 4 main Epics/Categories which have helped us gain a clearer perspective of what needs to be done.

1. API (including SOAP/REST authentication and authorization, and Identity Provider Config)
2. Account & App Management (CRUD)
3. Role & User Management (CRUD)
4. Reporting and Logging (activity dashboard, logs of new data and login attempts, etc.)

**Known unknowns:**

An unknown that we are hoping will be resolved before starting work in Authentication is how to use the college’s Entra ID Active Directory for the API’s authentication endpoints (SOAP & REST). We now know that we will be using Entra ID but knowing where to find information on it and use it is something we have yet to investigate and consult the PM about.

Another unknown, although this is a lower priority and will be left to be done in K50, settling on the proper format for the reports and logs is something that is still blurry in our minds. However, after asking the client for details on what he expects, he mentioned that he wants the following information:

- a lot of authentication failures? more than 5 attempted log ins - what time, user id  
- overall activity dashboard  
- which app is the busiest - most requests  
- email summary reports  
- pushes of users/roles to HIA (what’s been added, updated, removed)  
- positive vs negative activity - are there certain apps getting a lot of rejections

Understanding how to configure Identity Providers like Microsoft is also a lower priority to be left to the following semester, and research will be required here. Our PM suggested looking into Azure AD Forests as well.

For all the unknowns mentioned above, we’ve made sure to create user stories to set aside time for investigation.

**Unknown knowns:**

It’s hard to say what falls into this category, but it’s safe to say that almost everything does. We will never truly know everything thoroughly, but we will do our best and put in the effort needed to deliver something functional, robust and stylish.

**Next Steps:**

We are gaining confidence in our understanding of the project. The next step is to create our database schema and have it reviewed and approved by the PM before hitting the ground running in Sprint 1.