COGNITIO

Assessment Platform Rebuild

Concept Document for 360 Solutions, LLC.

March 11, 2019

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Introduction

The general purpose of this project to create a modern version of the existing 360 Solutions Assessment Platform while introducing elements of a learning management system and increased capacity for analytics. However, this alone is not enough. The existing assessment platform lacks the capacity for real engagement on both the client and user levels due to an overly simplistic interface that has not aged well. Although functional, the assessment platform has not been reconceptualized since it was originally introduced over ten years ago. Since that launch, user expectations have greatly changed through much more mobile-friendly and engaging interfaces. Using the principles of modern design concepts and a complete retooling of the data and application layers of the assessment platform will provide the means to renew this application for the next ten years.

This document is written as a conceptual document rather than a traditional design document. What this means is it is written both for the end-user and developer to understand the big picture of the application to come. As necessary, some design elements and logic will be introduced but will be taken as a high-level overview in order to gain a feel for how the application will work rather than focusing on the minutiae of any given detail. The elements of the application will be more specifically defined in other technical documents for the developers to use in their creation efforts. When necessary, user acceptance testing documents will also be provided to ensure that what is created meets expectations.

General Concepts

Vocabulary

- Activity Assignment
    - Represents a requirement that a user to participate in course, test, survey, or assessment.
        - Each activity assignment may allow the user to provide commentary regarding the target course, test, survey, or assessment beyond what is provided for in those specific objects. A “final thoughts” comment, if desired.
- Assessment
    - A test designed to evaluate a single user’s responses to determine their knowledge of a topic, ability to process content, or evaluate their capacity in some way.

        - Assessments are not typically associated with a campaign as they are specifically focused on an individual, but may be a component as needed.

- Campaign
    - An initiative which targets a set of users with a single course or curriculum.
        - The users may be specified individually or by team, department, or company.
        - Those targeted will be sent an invitation which will include the information connecting the user to the course or curriculum. (New users will be allowed to register with the site.)
    - The information collected from the users and their responses will be aggregated for to provide analytics.
    - A campaign will use Open and Close dates which will limit access by the users.
        - The effect will be that a campaign can be created/prepared ahead of any responses and will limit participation to a specific time frame in order to ensure the results are not skewed by additional results after the analytics are compiled.
- Client
    - An organizational principle indicating a business relationship of a company which is provided services by another company.
- Company
    - An organizational principle embodying a single business or organization.
- Course
    - A series of materials with or without accompanying tests.
- Department
    - An organizational principle embodying a specific group of users within a company based on function.
- Material
    - Any video, text, article, audio, HTML, or other resource designed as a focal point.
    - A material may also be an explanation, instruction, or lead-in for a test.
- Module
    - See **Material**.
- Partnership
    - An organizational principle embodying a business relationship between companies (AKA peer-to-peer).
- Survey
    - A test focused on a specific topic in order to aggregate multiple users' responses for later analysis.
        - This may be configured to use third-party tools, like Survey Monkey.
- Task
    - A predetermined activity assignment for a user which is monitored and tracks completion.

    - Each task is provided the option of a due date to set timeliness expectations.
- Team
    - An organizational principle embodying a specific group of users within a company tasked with a specific purpose/goal.
- Test
    - A questionnaire relating to a material.
        - The material may simply preface a test as an explanation or instruction, but the material is still required as a gateway to the test.
- Users
    - Individuals which will be allowed to access the system.
    - Users will be comprised of respondents, applicants, executives, and administrators.
    - Each user represents an independent account in the system.
    - A user may be a member/employee/associate of multiple companies.

Design Principles

- EU user data compliance rules and notices.
- N-tier development (data, logic, presentation).
- Presentation layer must emphasize use of interchangeable layout templates.
    - The idea is to allow the application to be “redesigned” periodically without subjecting the data and logic layers to unnecessary updates to accommodate presentation layer changes.
- Login security will be managed through OAuth 2.0. The concept is to provide proprietary login facilities through the site or through federated authentication in order to allow the user to sign in via external accounts like Google, Facebook, or LinkedIn.
- Integration with third-party tools and services, like Survey Monkey, will be addressed on a case-by-case basis. The following are anticipated at this time:
    - Survey Monkey
    - LinkedIn
- There is an emphasis on useful analytics derived from testing results. These can take the shape of dashboard UI, in-depth reporting, and extrapolations of data. As those cases are identified, it is important to ensure that each one is properly scoped and documented. As is often the case, one good idea breeds another and this chain can definitely continue unabated if left unchecked.

User Stories

Concepts

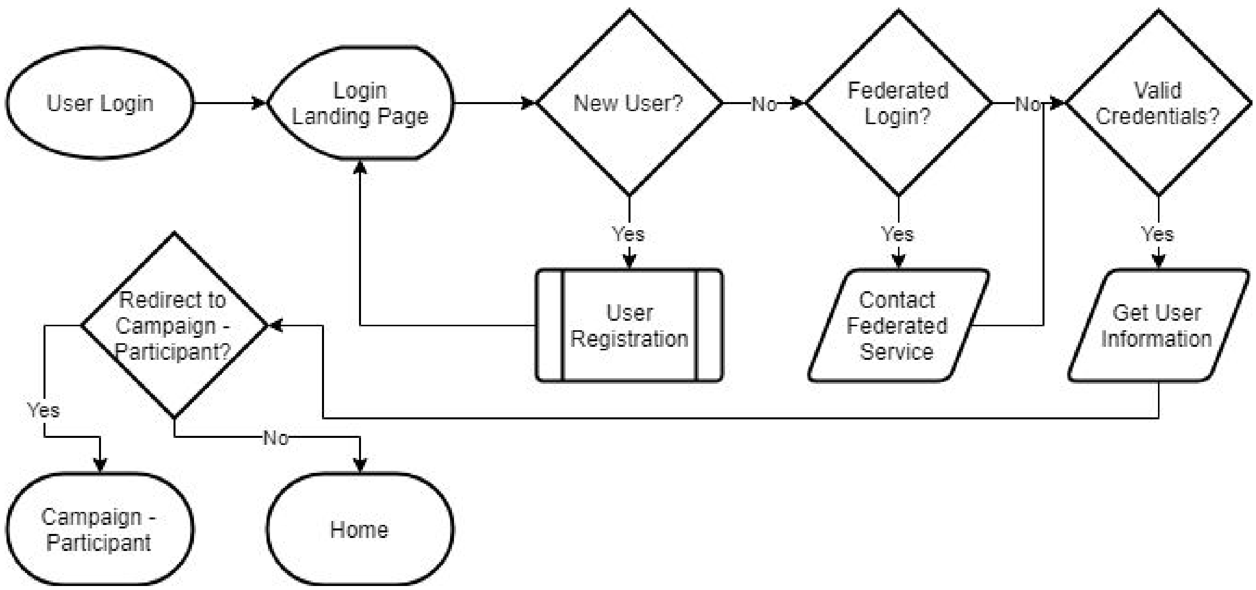
- Note: Not all scenarios will be described. For example, there is no need to describe the functionality of an editor in any great detail because it is focused primarily on inserting, updating, or deleting the information on the page presented.
- The following will be focusing on setting expectations of use and any specific contextual requirements. The Login and Registration stories provide a universal example of what to expect as all users can relate to these scenarios even if they are unaware of the mechanics involved.
- References to reports are intentionally limited as they are necessarily contextual. The collection of data will be performed both for specific elements, such as tests, in addition to aggregations at higher tiers.

Login

The login process will be a combined process in which the local application will use an OAuth 2.0 protocol for either internally credentialed users or federated for use with other services like Google, LinkedIn, and Facebook. Depending on the user's preference, they may either create a local account, or use one of these supported services when signing into the application. New users will be required to register with the site before they can interact with the tools and services the site provides. The **Registration** will cover this process.

Once a user has been properly registered and their credentials have been validated:

- If responding to an invitation, the user will be taken to the indicated **Campaign-Participant** page.
- Otherwise, the user will be taken to the **Home** page.



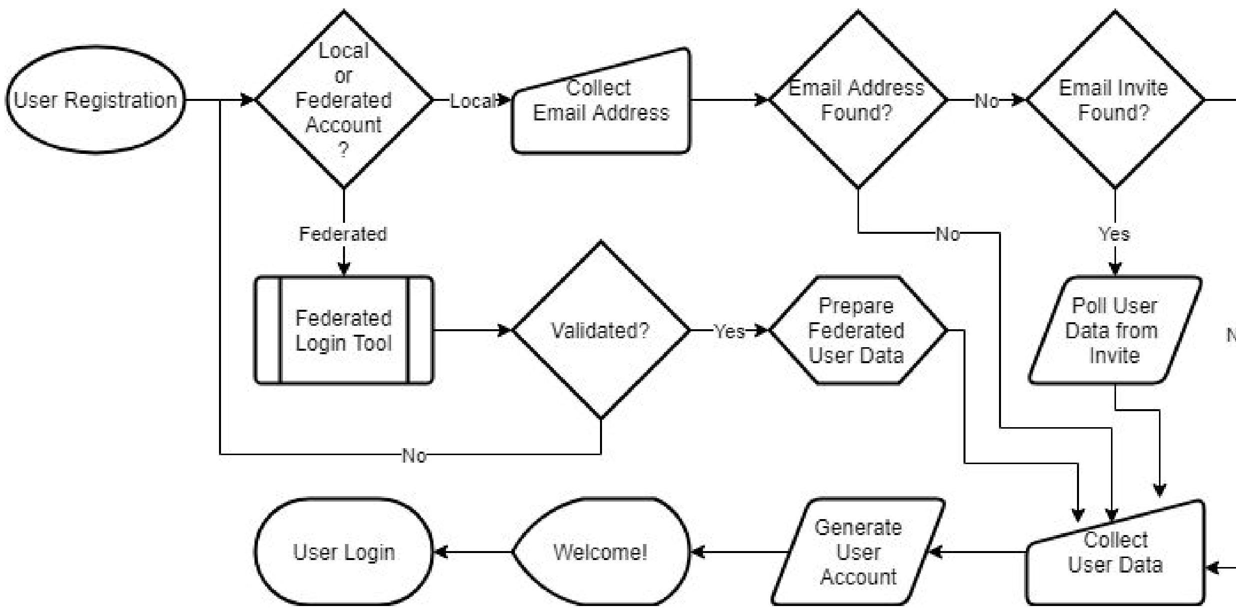
Registration

When registering a new user, there are two scenarios involved. Either the user has come to interact with the site independently or they have been invited. The only benefit of an invitation is that the user information will be partially stored with the invitation and will aid in the initial population of the user data and assignment to a campaign.

Failure to register will prevent their ability to participate in the site. A notice will be required to ensure the user is aware of this requirement, and the consequences of opting out.

Registration will only require a minimal set of information from the user: First Name, Last Name, Middle Name, Suffix, Email Address, and Phone Number. Some of this information may already be available with an invitation and will be populated accordingly.

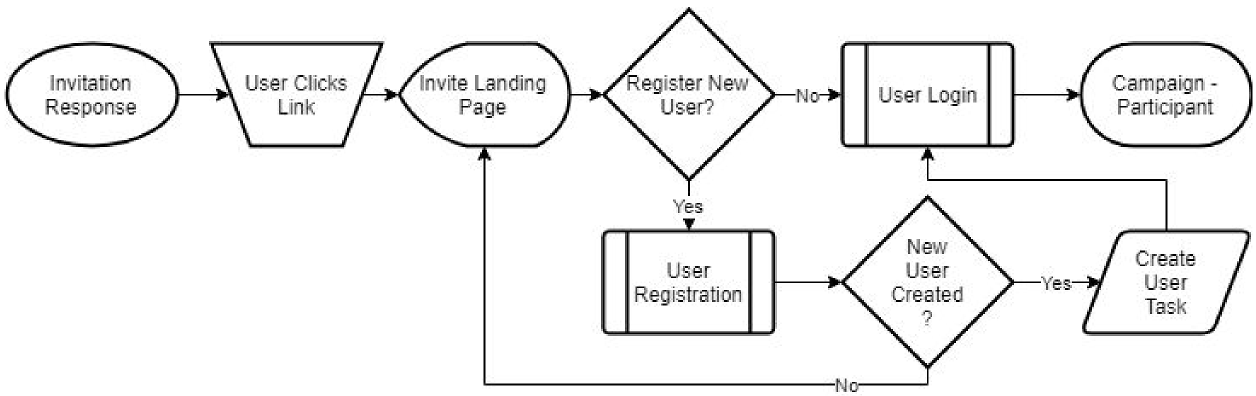
Once the registration information is collected and has been validated, the user will be returned to the **Login**.



Invitation Response

When a user is responding to an invitation, the login process is altered slightly to provide additional banners and content based on the campaign and company. This information is used to help establish the user's awareness that they are claiming the invitation and an explanation of the campaign (which will be reinforced on the **Campaign - Participant** story).

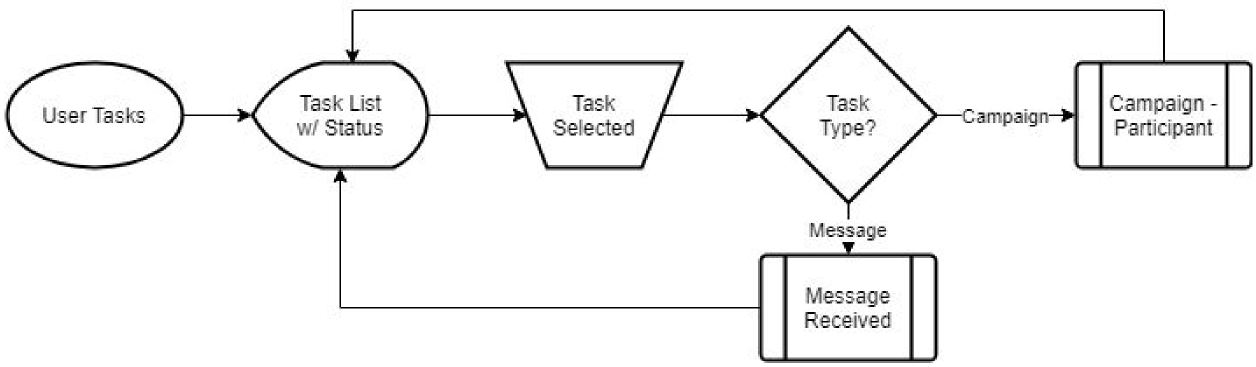
If the invitation was sent to an email address not already attached to a user, a task will be created after the User Registration step to track the user's progress in the campaign. Otherwise, the task will have been created when the Campaign invitations are sent.



Tasks

Users will have a set of tasks to complete. Each task will be identified with a status indicator targeting only the currently due tasks in view. The task list will be a set of pointers to specific types of action to be completed.

The current examples of these tasks are Message Received and Campaign - Participant. As the site continues to grow, other actions may be added as needed.

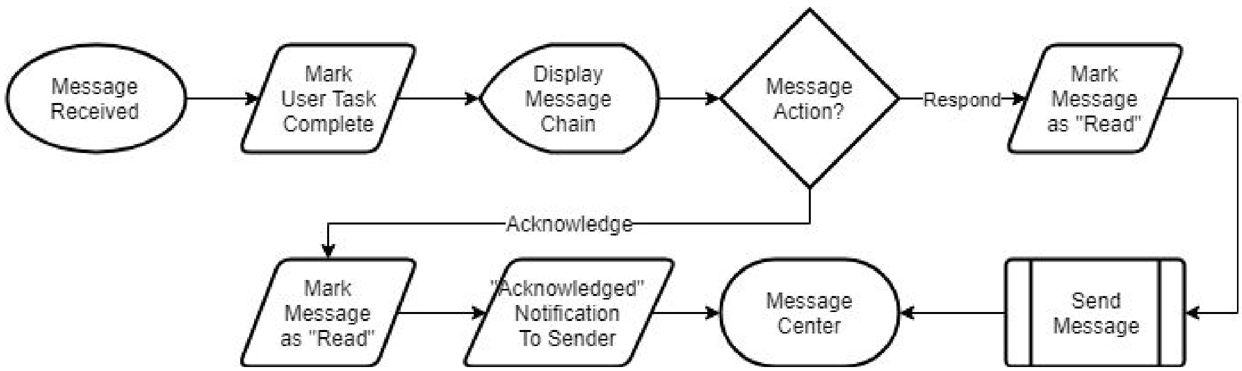


Message Received

Messaging in this context should be limited to simple Q&A scenarios. The Message Action can consist of either a response or an acknowledgement.

A response implies that the user chooses to send a message to reply to the message received.

An acknowledgement is a simple Yes/No automated message; the idea being that in many cases, a simple answer is all that is needed so there is no need to go through the rest of the process to send a response.

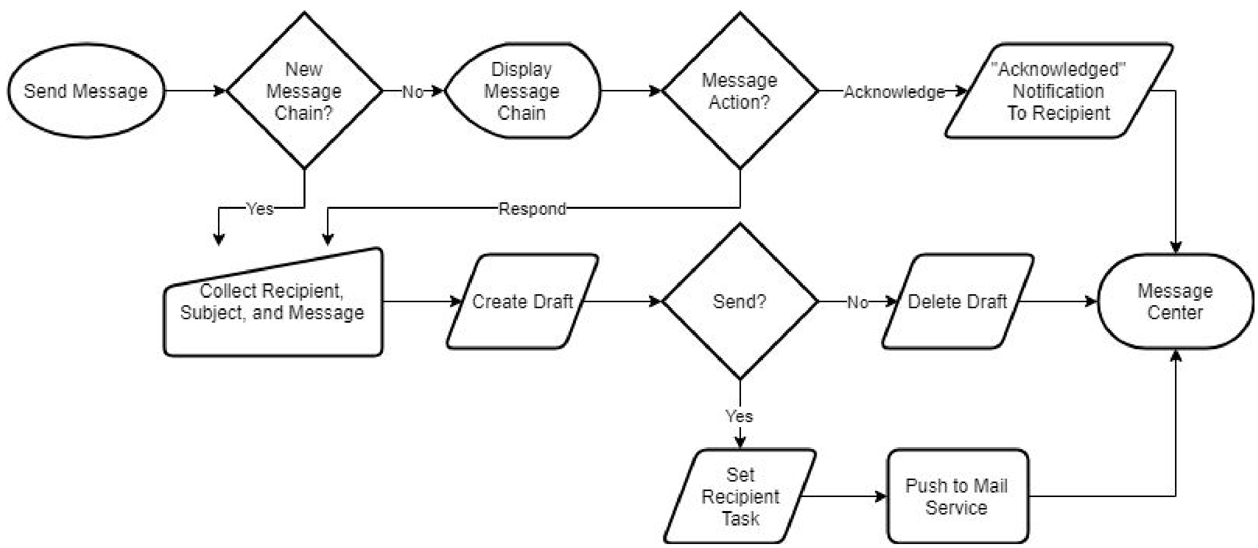


Send Message

Creating a new message is straight forward. However, the application will not allow for the preservation of drafts as the focus is on message brevity whether starting a new message or responding to a chain.

Sending a response to a message follows the standard user expectation with the exception of the acknowledgement shortcut. The user may choose to simply “acknowledge” the message with a simple Yes/No automated response.

Note: A provision is made for the use of a mail service in the diagram. This is not a requirement, just a placeholder if it is determined to be useful.

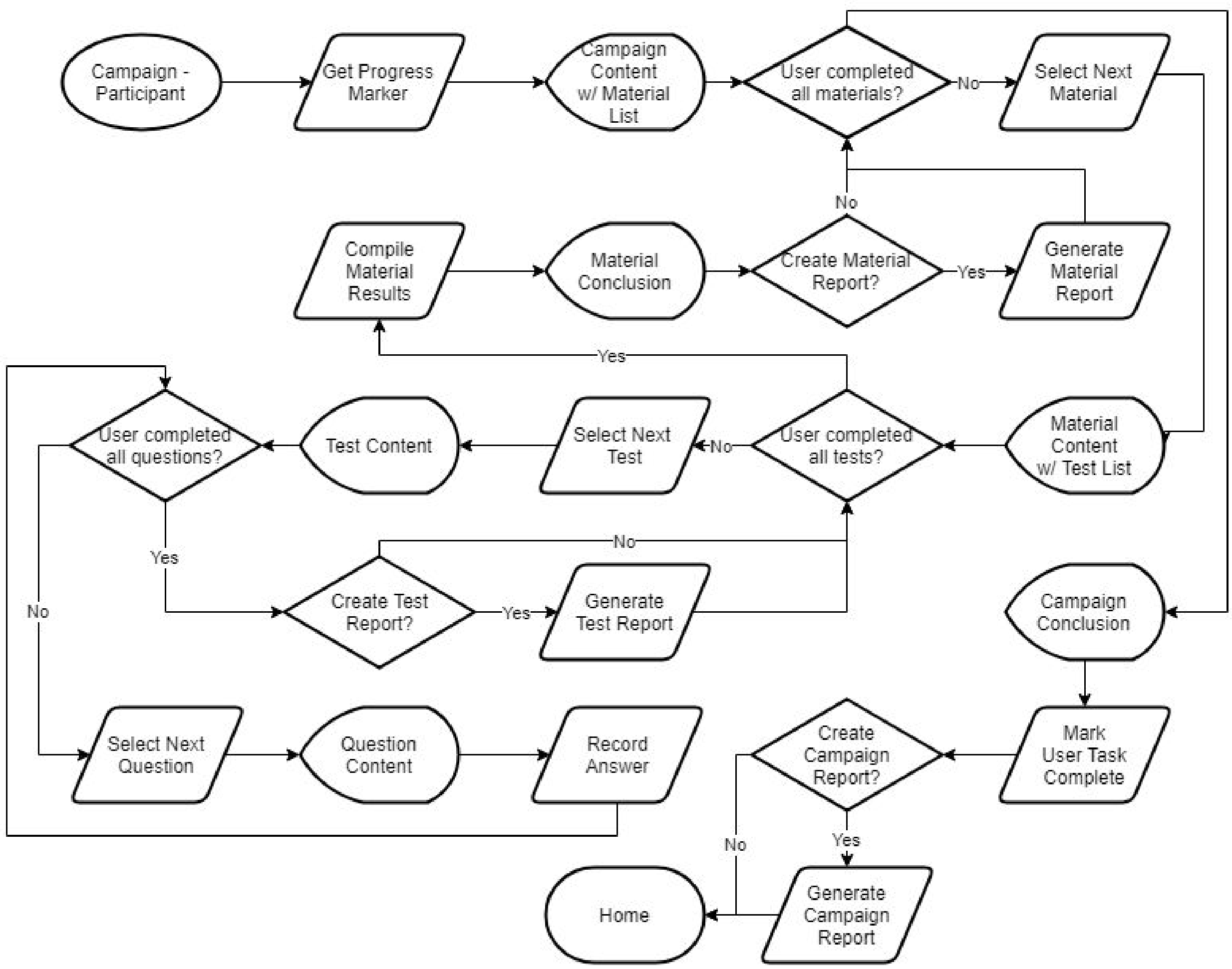


Campaign - Participant

A normal user will typically interact with the system during a campaign. The Client or Partner will generate a campaign and supply a selection of email addresses (which may or may not correspond to existing users) to send an invite to participate.

Depending on the need, some campaigns can incorporate one or more materials, any of which may have one or more tests to complete. As elements of the campaign are completed, a progress marker attached to the user task will be updated. This marker will be utilized to return the user to their last completed test/material if they did not finish during their previous session in addition to recording specific statistics on the user's experience/performance (for example, the time needed for the user to answer a question.) Once all elements of the campaign have been completed, the associated task will be marked, "complete".

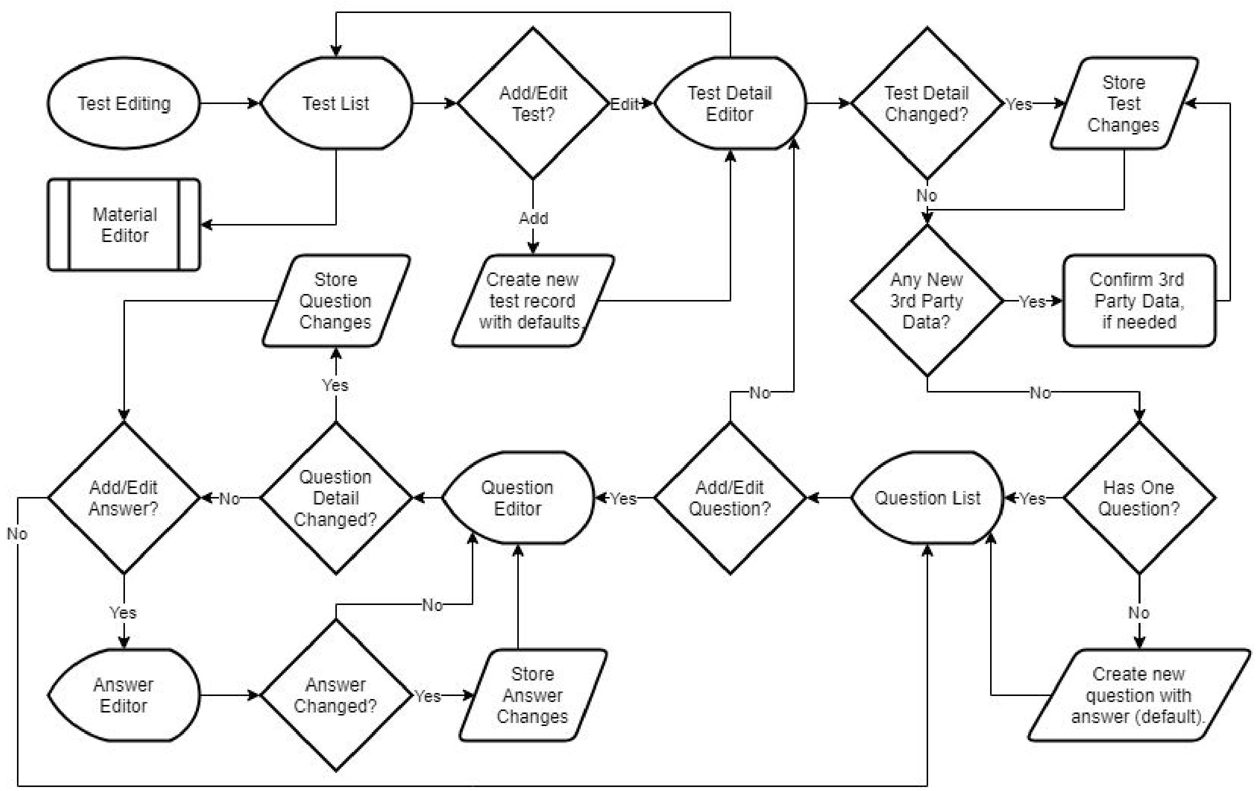
Some predefined tests/materials will generate reports as those elements are completed. These will be available immediately despite the user's completion status within the campaign.



Test Editing

The core premise of the system is to have the user respond to a test in some fashion. Tests can be comprised of pre-formed assessments (e.g. P60, IQ, Mathematics, etc.), surveys (e.g. Satisfaction, Evaluation, Polls, etc.), or true subject matter tests (e.g. Field-Specific Scenarios). No matter the form of the test, the basic user story is the same when creating them: identify a subject and create related questions each with a bank of acceptable answers.

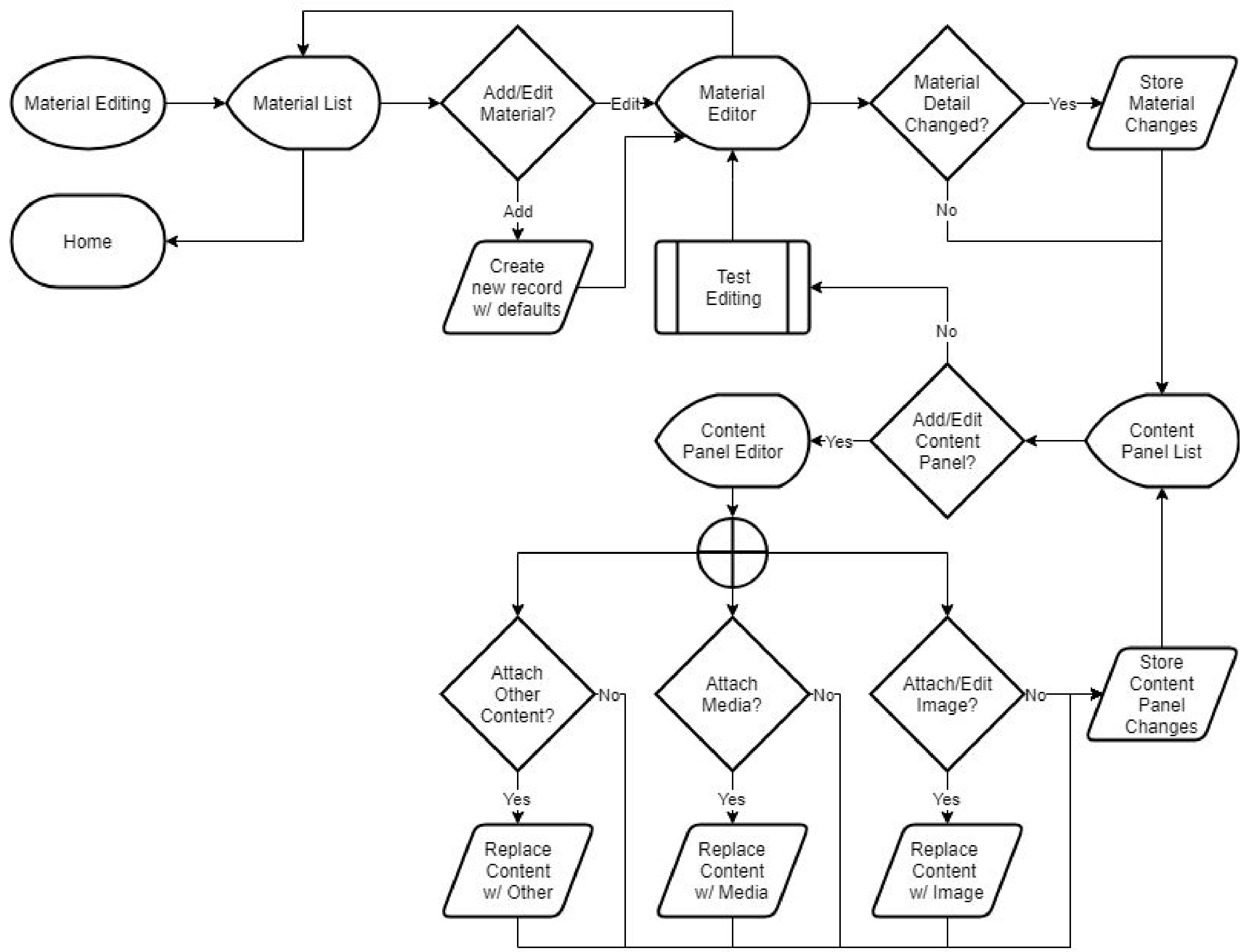
Depending on the way the test is set up, the use of third-party tools can be used to outsource the test functionality. For example: a survey test can be created that links to a Survey Monkey survey. So, when the user accesses this test during a campaign, they would be linked to the third-party tool to complete the prescribed activity, and then returned to the test to finish any remaining questions. The results of the third-party tool will be collected and stored with the results of the test.



Material Editing

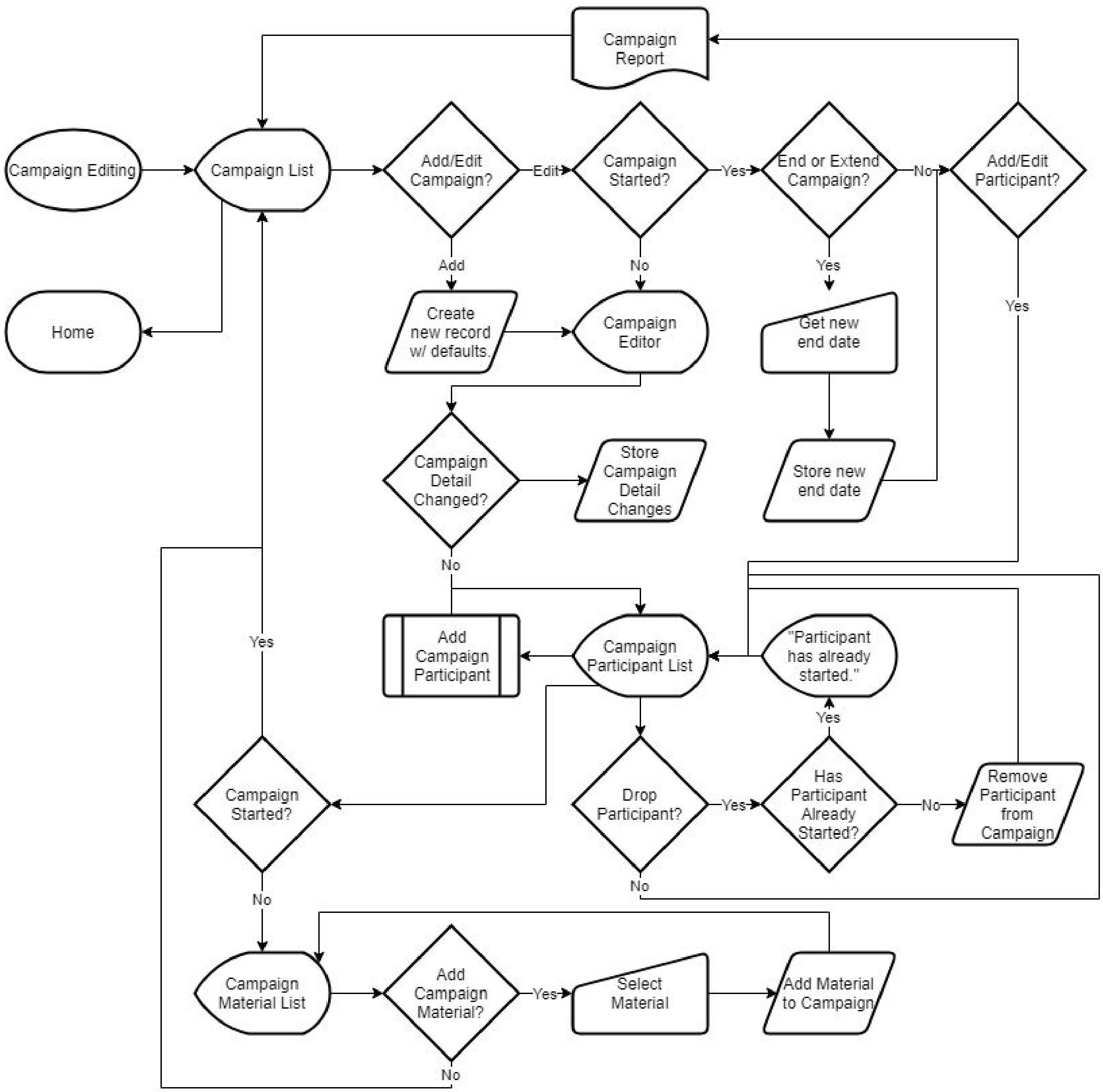
Materials are used to frame a test or a series of tests. These introduce the users to what will be covered and provide a means of logically grouping the tasks at hand. Each material may consist of a series of images, media, and other content as needed. The content will be organized so that the creator can easily identify the content in panels that will be available as a carousel when viewed by the target users.

Each material created can be attached to any number of campaigns as needed, but will be cloned to the campaign when the campaign starts. The purpose of this is to prevent any issues that would occur if the material were edited during the campaign.



Campaign Editing

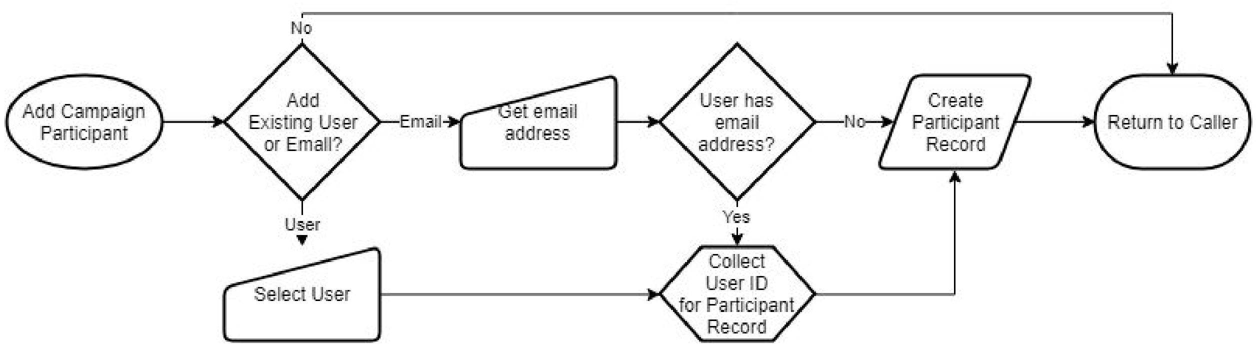
Campaigns represent the collective efforts of the platform: present a series of materials to a predefined set of participants to complete within a given timeframe. Setting up a campaign is fairly simple in that the creator will identify which materials and participants to target. However, editing campaigns will be restricted based on whether the campaign is in progress or not. When a campaign is in progress, there are only two avenues available: end/extend the campaign or add/edit participants. This will ensure that the campaign provides consistent results based on the materials available at the start.



Add Campaign Participant

As a campaign is developed, participants will be added either in groups or individually. Groups of participants can be added using a bank of email addresses or through a selection of department or teams within a company. However the participants are selected, each identified participant will be added to the campaign using the same logic to ensure that there is not any unexpected duplication.

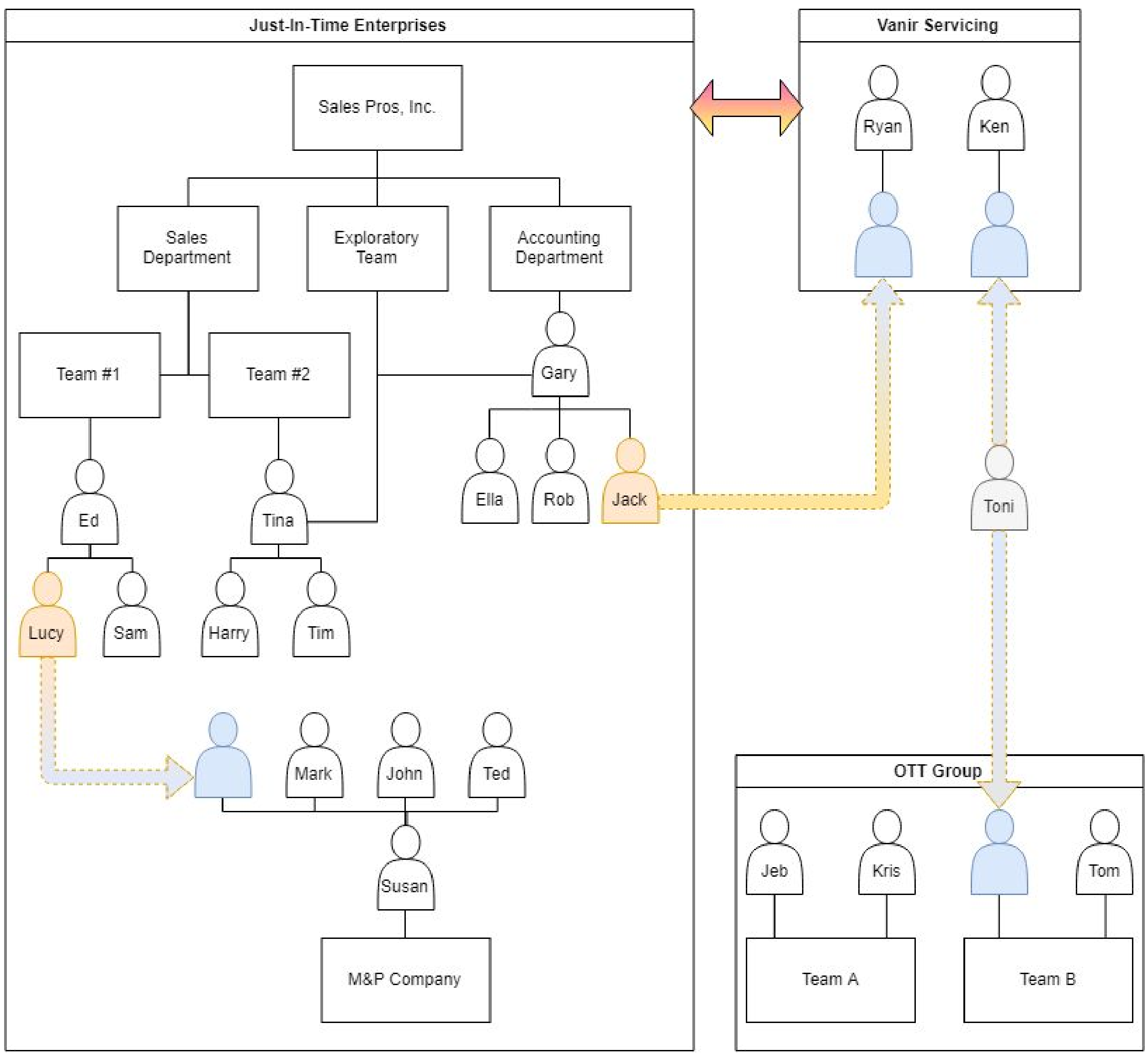
Email addresses will be treated as unique identifiers so that if an existing user is added to the campaign using their email address, their user information will still be identified without creating another user record.



Organizational Relationships

The organizational relationships have quite a bit to do with the way an individual's information is handled in the system. The basic premise is that users participate in teams, and can be organized under departments of a company. Some companies are comprised of client companies and participate in partnerships with yet other companies. Applicants may apply to more than one company, and employees may shift between companies.

In the example below, there are several scenarios that demonstrate these relationships.



Individual Users

Individuals all represent users with independent access to the system with accompanying campaign, task, and test data. Each individual user may be part of a team, department, or company, but is not required to do so. When the user logs into the system, their profile and tasks are gathered. The user may then access the tasks assigned to them by a given company or access other public materials.

Scenario #1 - Toni

Toni, in the example, has been invited to participate in a P60 assessment by two different companies, Vanir Servicing and OTT Group, as they are competing to hire her. Each company sends her an invite link to her email, but Toni responds to the OTT Group invite first. She creates an account with the system, and completes the P60 for OTT. OTT will consider the results to determine if she is a good fit to work with Tom on Team B.

Toni, still logged into the system, sees that she has a P60 task due for Vanir Servicing. This task was created for her when Vanir sent the invite and was linked to her user account when she created it for OTT. Toni can then complete the P60 for consideration to work with Ken, or she can log out and complete it another time. If she chooses to log out, she can either log back in and use her task list to complete the P60 or access to it directly from her email using the link OTT sent.

Once Toni completes the second P60, she can see that her task list is complete and can choose to browse through any public content. The two P60s she completed, however, are not publicly available to both companies. The companies may only access the P60 she completed explicitly for them, not the one for the other company. This isolation of reports is intentional since Vanir and OTT have no business relationship.

Scenario #2 - Lucy

Lucy currently works for Sales Pros, Inc. in Team #1 of the Sales Department, but is being considered for a new position under Susan at M&P. Having been an employee of Sales Pros for a number of years, Lucy has participated in several campaigns, surveys, assessments, and tests, most of which were provided by Just-In-Time Enterprises. Susan, at M&P, may have access to review some of Lucy's reports, if they were provided by Just-In-Time. This is possible due to the business relationship Just-In-Time has with Sales Pros and M&P as they are its clients. So, any reports that are produced by Just-In-Time for Lucy are immediately available to M&P once she is identified as an employee of M&P. Sales Pros will retain access to Lucy's historical reports, but will not have access to any new reports she generates.

Scenario #3 - Jack

Jack has accepted a position under Ryan at Vanir Servicing. When Jack makes this move, any reports that have been generated by his activity for Sales Pros, Inc. will not be available to Vanir as they do not have a parent-client company relationship with Sales Pros. Sales Pros will retain access to Jack's previously generated reports, but will not have access to any that are generated by him at Vanir.

Although Vanir and Just-In-Time Enterprises does have a partnership identified in the system, this partnership only allows them to share materials, surveys, assessments, and tests, not the reports generated by the users.

Departments and Teams

Any company can be subdivided into departments and teams. Departments carry the connotation of true business organization elements whereas teams are purpose-driven. Organizing individuals this way allows for easier participant selection as well as providing for granular reporting and data aggregation.

The only real difference between departments and teams is that individuals cannot occupy positions in multiple departments, but can occupy positions in multiple teams. For example, Sales Pros has two departments, Sales and Accounting. The Sales Department is split between two teams, #1 and #2, and Accounting only has individuals organized under it. However, Sales Pros has created an Exploratory Team with Gary from Accounting and Tina from Team #2 of Sales. This allows them to quickly identify Gary and Tina when creating specific campaigns.

Individual Companies

Just-In-Time Enterprises, Sales Pros, Inc., M&P Company, Vanir Servicing, and OTT Group all represent individual companies. Each retains its own set of employee users and can receive applications to fill positions, or transfer individuals as needed. These companies each retain their own bank of campaigns, materials, tests, and reports which can only be distributed through their business relationships.

The results of any tests are exclusively limited to the individual company unless aggregated by a parent company or shared by the parent with another client company.

Partner Companies

Partnerships can be established between companies, like Just-In-Time Enterprises and Vanir Servicing. This partnership allows these companies to share materials, assessments, surveys, and tests, but not individual reports or campaigns. So, if Vanir were to develop a Sales Satisfaction Survey, this could be shared with Just-In-Time Enterprises and the companies they represent. However, if M&P Company were to develop an Engineering Test, this could only be shared with Vanir if M&P provided it to Just-In-Time.

Parent-Client

A parent-client relationship between companies generally refers to a servicing relationship or oversight capacity, not necessarily on an ownership level. This relationship allows the parent company to provide its clients any assessments, surveys, and tests it develops as well as providing access to each company's users in order to direct campaigns on the client company's behalf. Parent companies may also provide administrative services for their clients within the system, including user management.

For example: Just-In-Time Enterprises has two companies it services as parent: Sales Pros, Inc. and M&P Company. In this manner, Just-In-Time can create campaigns for each of the companies to assess Consumer Confidence and assign individuals from each company to participate. The results are compiled for each company, but are not automatically shared between the two companies. However, Just-In-Time has access to the data collected which it can aggregate to produce an analysis.

Reports generated by individuals are retained by each company, but may be shared through the parent-client company relationship if an individual transfers to another client company of the parent company. *See the Lucy example above.*

Interface Layout

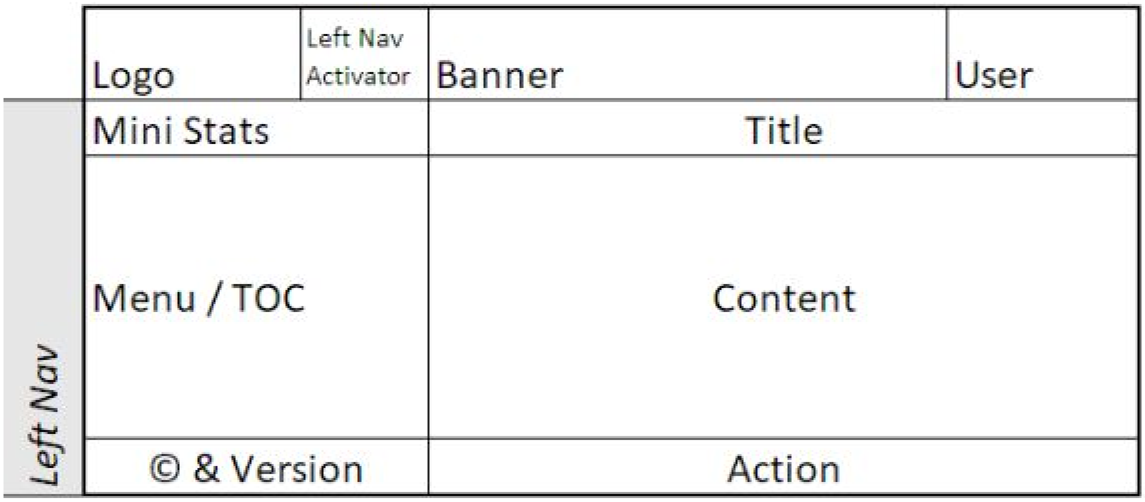
Concepts

- The interface will utilize an Angular front-end supported by Bootstrap to ensure that it maintains a device agnostic design.
- The use of Bootstrap will allow the site to arrange itself properly for both mobile and desktop viewing.
- Unless otherwise noted, each section will remain fixed in the location specified in the diagram.
- The arrangement of the sections may be determined by any template used.

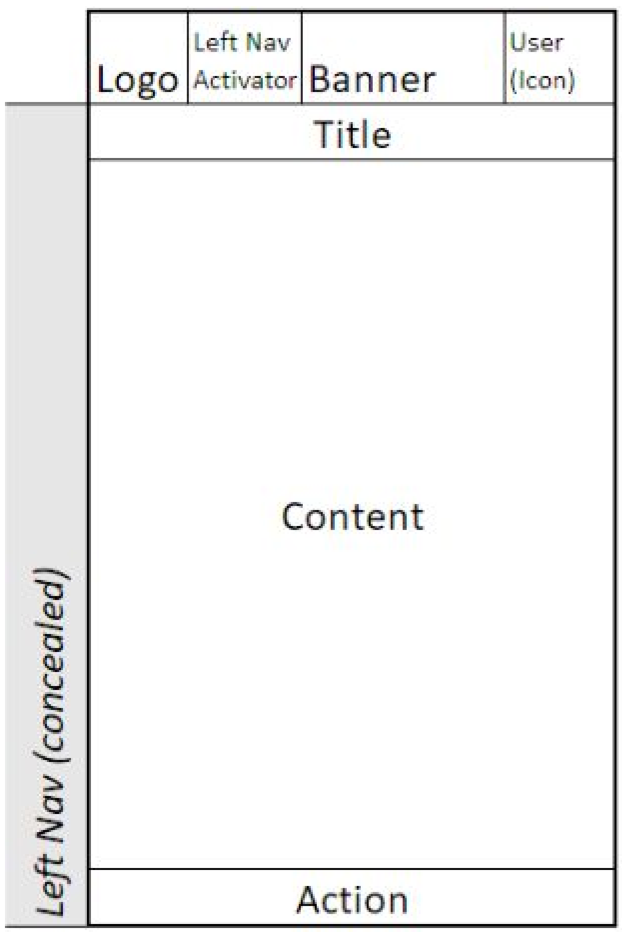
Sections

- **Logo** - The logo image for 360 Solutions. Clicking here will always return the user to the Home page.
- **Banner** - This area is reserved for the specified client account. It will display brief text, most likely the client's company name and limited contact information.
- **User Menu** - This menu will give the user access to settings, preferences, and quick links, like "Sign Out".
- **Left Nav** - The Left Nav bar will house the "heads-up" content of the site. It is comprised of other sections, but will serve as the user's primary navigation tool in the site. On mobile, the Left Nav may be concealed to allow room for the Content section.
    - **Mini Stats** - This section will provide some basic dashboarding, like task completion percentage and new messages.
    - **Menu / Table of Contents** - This section serves a dual purpose. Primarily, it will be the menu of activities available to the user. However, when the user is engaged in working with a campaign, it will display the elements of the campaign and the completion status of each element. This section is scrollable.
    - **Copyright / Version** - This section is reserved to display the site copyright and version information.
- **Title** - Displays a title for the content section. This section may also provide other navigation or action content as needed.
- **Content** - This is the principle section of the site and will be arranged to meet the needs of the user task at hand. This section is scrollable.
- **Action** - This section is reserved to house the action buttons for the content ("Save", "Next", etc.)

Desktop



Mobile



Database Layout

Concepts

- Each table will have the following:
    - "Added" fields, which are populated when a record is initially inserted into a table.
        - Added - datetime - default: GetDate()
        - AddedBy - nvarchar(255) - default: "{UserName}|{IPAddress}"
        - AddedByID - bigint - corresponds to User.UserID
    - "Updated" fields, which are populated when a record is initially inserted into a table and upon each update thereafter.
        - Updated - datetime - default: GetDate()
        - UpdatedBy - nvarchar(255) - default: "{UserName}|{IPAddress}"
        - UpdatedByID - bigint - corresponds to User.UserID
- Delete operations will be conducted in a manner that preserves the information outside of the active tables. Any delete will package the deleted row's data into an xml-formatted string (associating column names with the field values) which will be used to populate a new entry in Deletion table. In the event the row being deleted is the parent of a foreign key constraint, all impacted rows of any child tables will be packaged and placed in the Deletions table with the ParentDeletionID set to the parent row's DeletionID.
- Assume all non-key values are not nullable unless otherwise specified. If a default value is not provided, use the datatype's default value (int: zero, string: blank, etc.)
- Postal Addresses will be predefined as "address" in the table definitions and will have the following fields:
    - Street1 - nvarchar(255)
    - Street2 - nvarchar(255)
    - City - nvarchar(255)
    - State - nvarchar(255)
    - ZipCode - nvarchar(15)
    - County - nvarchar(255)
    - Province - nvarchar(255)
    - Country - nvarchar(255)
    - GeolocationCode - geography
        - The intent is to collect enough information to pin the address on a map.
- Phone Numbers will be predefined as "phonenumber" in the table definitions and will be stored as a string using the E.164 format (https://en.wikipedia.org/wiki/E.164). This format will provide for international numbers as well as routing.

Tables

- Answer
  - AnswerID - bigint - identity(1,1) - primary key
  - TestID - bigint - Test.TestID
  - QuestionID - bigint - Question.QuestionID
  - AnswerTypeID - bigint - xrAnswerType.AnswerTypeID
  - Code - nvarchar(25)
  - Title - nvarchar(max)
  - Weight - float - default:1
    - Weight only applies to non-text AnswerTypes.
  - PointValue - float - default: 1
  - FreeTextCharacterLimit - int - default: 1000
- AnswerValue
  - AnswerValueID - bigint - identity(1,1) - primary key
  - AnswerID - bigint - Answer.AnswerID
  - Code - nvarchar(25)
  - Title - nvarchar(max)
  - PointValue - float - default:1
- Campaign
  - CampaignID - bigint - identity(1,1) - primary key
  - OpenDate - datetime
  - CloseDate - datetime
  - InvitationContent - nvarchar(max)
  - InvitationMedia - TBD
    - This may take the form of a hyperlink, or refer to some other media content.
  - ExplanationContent - nvarchar(max)
  - ExplanationMedia - TBD
    - This may take the form of a hyperlink, or refer to some other media content.
- CampaignCompany
  - CampaignID - bigint - Campaign.CampaignID
  - CompanyID - bigint - Company.CompanyID
  - Primary Key(CampaignID, CompanyID)
- CampaignMaterial
  - CampaignMaterialID - bigint - identity(1,1) - primary key
  - Ordinal - int
  - CourseID - bigint - Course.CourseID - nullable
  - MaterialID - bigint - Material.MaterialID

- CampaignParticipant
  - CampaignParticipantID - bigint - identity(1,1) - primary key
  - CampaignID - bigint - Campaign.CampaignID
  - CompanyID - bigint - Company.CompanyID
  - UserID - bigint - User.UserID
- Client
  - ClientRelationshipID - bigint - identity(1,1) - primary key
  - CompanyID1 - bigint - Company.CompanyID
    - Parent, if Partner is false
  - CompanyID2 - bigint - Company.CompanyID
    - Child, if Partner is false
  - Partner - boolean - default: false
  - Initiated - datetime
  - Dissolved - datetime - nullable
- Company
  - CompanyID - bigint - identity(1,1) - primary key
  - CompanyName - nvarchar(255) - unique
  - CompanyPhoneNumber - phonenumber
  - Address - address
  - Website - nvarchar(255)
  - ContactName - nvarchar(255)
  - ContactPhoneNumber - phonenumber
  - ContactEmailAddress - nvarchar(255)
- Course
  - CourseID - bigint - identity(1,1) - primary key
  - CourseName - nvarchar(255)
  - CompanyID - bigint - Company.CompanyID
- CourseMaterial
  - CourseID - bigint - Course.CourseID
  - MaterialID - bigint - Material.MaterialID
  - Primary Key(CourseID, MaterialID)
- Deletion
  - DeletionID - bigint - identity(1,1) - primary key
  - TableName - nvarchar(255)
  - RowData - xml
  - ParentDeletionID - bigint - nullable
  - Deleted - datetime - default: GetDate()
  - DeletedBy - nvarchar(255) - default: "{UserName}|{IPAddress}"
  - DeletedByID - bigint - User.UserID
- Department
  - DepartmentID - bigint - identity(1,1) - primary key

- DepartmentName - nvarchar(255)
- CompanyID - bigint - Company.CompanyID

- Invitation
  - InvitationID - bigint - identity(1,1) - primary key
  - EmailAddress - nvarchar(255)
  - FirstName - nvarchar(255)
  - LastName - nvarchar(255)
  - Claimed - datetime - nullable
  - ClaimedBy - nvarchar(255) - default: “{UserName}|{IPAddress}”
  - ClaimedByID - User.UserID - nullable
  - CompanyID - bigint - Company.CompanyID - nullable
  - Invited - datetime
  - InvitedBy - nvarchar(255) - default: “{UserName}|{IPAddress}”
  - InvitedByID - bigint - User.UserID
  - CampaignID - bigint - Campaign.CampaignID - nullable
  - CourseID - bigint - Course.CourseID - nullable
  - MaterialID - bigint - Material.MaterialID - nullable
  - TestID - bigint - Test.TestID - nullable
  - TBD - Additional fields may be needed for tracking mail through services like SendGrid.
- Material
  - MaterialID - bigint - identity(1,1) - primary key
  - MaterialName - nvarchar(255)
  - CompanyID - bigint - Company.CompanyID
  - Intro - nvarchar(max)
  - Outtro - nvarchar(max)
- MaterialContent
  - MaterialContentID - bigint - identity(1,1) - primary key
  - MaterialID - bigint - Material.MaterialID
  - Title - nvarchar(255)
  - Description - nvarchar(max)
  - Image - varbinary(max) - nullable
  - Media - varbinary(max) - nullable
  - ApplicationType - nvarchar(50)
  - Content - nvarchar(max)
  - ContentURL - nvarchar(1000)
- Message
  - MessageID - bigint - identity(1,1) - primary key
  - FromUserID - bigint - User.UserID
  - ToUserID - bigint - User.UserID
  - Subject - nvarchar(255)

  - Message - nvarchar(max)
  - MessageChainID - bigint - nullable
- MessageChain
  - MessageChainID - bigint - identity(1,1) - primary key
- Question
  - QuestionID - bigint - identity(1,1) - primary key
  - TestID - bigint - Test.TestID
  - Code - nvarchar(25)
  - Title - nvarchar(max)
  - Weight - float - default:1
  - PointValue - float - default: 1
- Task
  - TaskID - bigint - identity(1,1) - primary key
  - UserID - bigint - User.UserID
  - CampaignID - bigint - Campaign.CampaignID - nullable
  - CourseID - bigint - Course.CourseID - nullable
  - MaterialID - bigint - Material.MaterialID - nullable
  - TestID - bigint - Test.TestID - nullable
  - DueDate - datetime
  - TBD
- Team
  - TeamID - bigint - identity(1,1) - primary key
  - TeamName - nvarchar(255)
  - CompanyID - bigint - identity(1,1)
- Test
  - TestID - bigint - identity(1,1) - primary key
  - CourseID - bigint - Course.CourseID - nullable
  - MaterialID - bigint - Material.MaterialID
  - TestName - nvarchar(255)
  - Intro - nvarchar(max)
  - Outtro - nvarchar(max)
- User
  - UserID - bigint - identity(1,1) - primary key
  - UserName - nvarchar(255) - unique
  - Email - nvarchar(255)
  - FirstName - nvarchar(255)
  - PreferredName - nvarchar(255)
    - This is the name a person uses, not necessarily their legal name.
  - MiddleName - nvarchar(255)
  - LastName - nvarchar(255)
  - Suffix - nvarchar(50)

  - Saluation - nvarchar(50)
    - Examples: Dr., Mr., Mrs., etc.
  - EducationCredentials - nvarchar(50)
    - Examples: M.S., Ph.D., etc.
  - GenderID - bigint - xrGender.GenderID - default: 1
  - DOB - datetime - nullable
  - HomeAddress - address
  - PhoneNumber - phonenumber
  - TBD - Account identifiers for token security, this will be based on the protocol method used.
- UserCompany
  - UserCompanyID - bigint - identity(1,1) - primary key
  - UserID - bigint - User.UserID
  - CompanyID - bigint - Company.CompanyID
  - Initiated - datetime
  - Dissolved - datetime - nullable
- UserDepartment
  - UserDepartmentID - bigint - identity(1,1) - primary key
  - UserID - bigint - User.UserID
  - CompanyID - bigint - Company.CompanyID
  - DepartmentID - bigint - Department.DepartmentID
  - Initiated - datetime
  - Dissolved - datetime - nullable
- UserMaterialLog
  - UserMaterialLog - bigint - identity(1,1) - primary key
  - UserID - bigint - User.UserID
  - MaterialID - bigint - Material.MaterialID
  - TBD - This will provide time index information on any audio or visual media the user reviews. The idea is both to provide a bookmark for the user and to identify completion.
- UserPermission
  - UserPermissionID - bigint - identity(1,1) - primary key
  - UserID - bigint - User.UserID
  - CompanyID - bigint - Company.CompanyID
  - TBD - The arrangement of permissions may vary based on the course of development.
- UserReport
  - UserReportID - bigint - identity(1,1) - primary key
  - UserID - bigint - User.UserID
  - CampaignID - bigint - Campaign.CampaignID - nullable
  - ReportFile - varbinary(max)

   - TBD - The concept is that each report generated for a user will be stored independently for retrieval rather than recalculated on the fly.
- UserSocialMediaProfile
   - SocMedProfileID - bigint - identity(1,1) - primary key
   - UserID - bigint - User.UserID
   - TBD - The concept is to allow the user to associate their social media accounts during the registration process, if they choose.
- UserTeam
   - UserTeamID - bigint - identity(1,1) - primary key
   - UserID - bigint - User.UserID
   - CompanyID - bigint - Company.CompanyID
   - TeamID - bigint - Team.TeamID
   - Initiated - datetime
   - Dissolved - datetime - nullable
- UserTest
   - UserTestID - bigint - identity(1,1) - primary key
   - CampaignID - bigint - Campaign.CampaignID - nullable
   - CourseID - bigint - Course.CourseID - nullable
   - MaterialID - bigint - Material.MaterialID - nullable
   - TestID - bigint - Test.TestID
   - TaskID - bigint - Task.TaskID
   - TBD - Allowances will be made to determine timeliness and completion, but will be determined when developed.
- UserTestQuestion
   - UserTestQuestionID - bigint - identity(1,1) - primary key
   - UserTestID - bigint - UserTest.UserTestID
   - TestID - bigint - Test.TestID
   - QuestionID - bigint - Question.QuestionID
   - TBD - Allowances will be made to determine timeliness and completion, but will be determined when developed.
- UserTestQuestionAnswer
   - UserTestQuestionAnswerID - bigint - identity(1,1) - primary key
   - UserTestID - bigint - UserTest.UserTestID
   - UserTestQuestionID - bigint - UserTestQuestion.UserTestQuestionID
   - TestID - bigint - Test.TestID
   - QuestionID - bigint - Question.QuestionID
   - AnswerID - bigint - Answer.AnswerID
   - Comment - nvarchar(max)
   - TBD - Allowances will be made to determine timeliness and completion, but will be determined when developed.
- xrAnswerType

- Fields
  - AnswerTypeID - bigint - identity(1,1) - primary key
  - Code - nvarchar(25) - nullable - unique
  - Title - nvarchar(255)
- Values

AnswerTypeID	Code	Title
1	T/F	true/false
2	1S	single-select list
3	MS	multi-select list
4	TXT	free text

- xrGender
  - Fields
    - GenderID - bigint - identity(1,1) - primary key
    - Code - nvarchar(25) - nullable - unique
    - Title - nvarchar(255)
  - Values

GenderID	Code	Title
1	U	Undisclosed
2	M	Male
3	F	Female

Content Interaction Map

Concepts

- Roles will be identified as a means of distinguishing features available to the user. Any items under an identified role is exclusively available to any user in that role.
- Keywords
    - *reference* - indicates movement to the indicated content.
    - *next* - indicates progression through a series of content.
    - Without any any of the specified keywords, it is assumed navigation will continue to the following item (if any) or will return to the parent item.
- If the content is titled as "... Conclusion", it will continue to the following item on the parent level.

Layout

- 01 Login
    - 01.01 Registration
    - 01.02 Federated Login
    - *reference* 02 Home
- 02 Home
    - *Administrator Role*
        - 02.01 Company Listing
            - 02.01.01 Company Editor
                - *reference* 02.06.04 Partner Listing
                - *reference* 02.06.06 Client Listing
                - *reference* 02.07 Material Listing
        - 02.02 User Listing
            - 02.02.01 User Editor
                - 02.02.01.01 User Company Listing
    - *User Role*
        - 02.03 Tasks
            - 02.03.01 Campaign - Participant
                - *if not complete:*
                    - 02.03.01 Material
                        - 02.03.01.01 Test
                            - 02.03.01.01.01 Question
                                - *next* 02.03.01.01.01 Question

                        - 02.03.01.01.02 Test Conclusion
                            - *next* 02.03.01.01 Test
                    - 02.03.01.02 Material Conclusion
                        - *next* 02.03.01 Material
                - 02.03.02 Campaign Conclusion
                    - 02.03.02.01 User Material Result
                        - 02.03.02.01.01 User Test Result
            - *if complete:*
                - *reference* 02.03.02 Campaign Conclusion
    - 02.04 User Stats
        - *reference* 02.03.01 Campaign - Participant
    - 02.05 User Engagement
        - *reference* 02.03.01 Campaign - Participant
- *Executive Role*
    - 02.06 Company Listing
        - 02.06.01 Company User Listing
            - 02.06.01.01 Company User Editor
                - 02.06.01.01.01 Company User Results
                    - 02.06.01.01.01.01 Company User Result
                        - *reference* 02.06.05.01.01 Campaign User Result
        - 02.06.02 Company Detail
            - 02.06.02.01 Organization Chart
                - *reference* 02.06.01.01 Company User Editor
            - *reference* 02.06.01 Company User Listing
        - 02.06.03 Company Stats
        - 02.06.04 Partner Listing
            - 02.06.04.01 Partner Editor
                - *reference* 02.07.01.03 Material Share
        - 02.06.05 Campaign Listing
            - 02.06.05.01 Campaign Stats
                - 02.06.05.01.01 Campaign User Result
                - 02.06.05.01.02 Campaign Manager
            - 02.06.05.02 Campaign Editor
                - 02.06.05.02.01 Campaign Invitation
        - 02.06.06 Client Listing
            - 02.06.06.01 Client Editor
                - *reference* 02.07.01.03 Material Share
- *Creator Role*
    - 02.07 Material Listing
        - 02.07.01 Material Editor

- 02.07.01.01 Test Listing
    - 02.07.01.01.01 Test Editor
        - 02.07.01.01.01.01 Question Listing
            - 02.07.01.01.01.01.01 Question Editor
- 02.07.01.02 Material Copy
- 02.07.01.03 Material Share