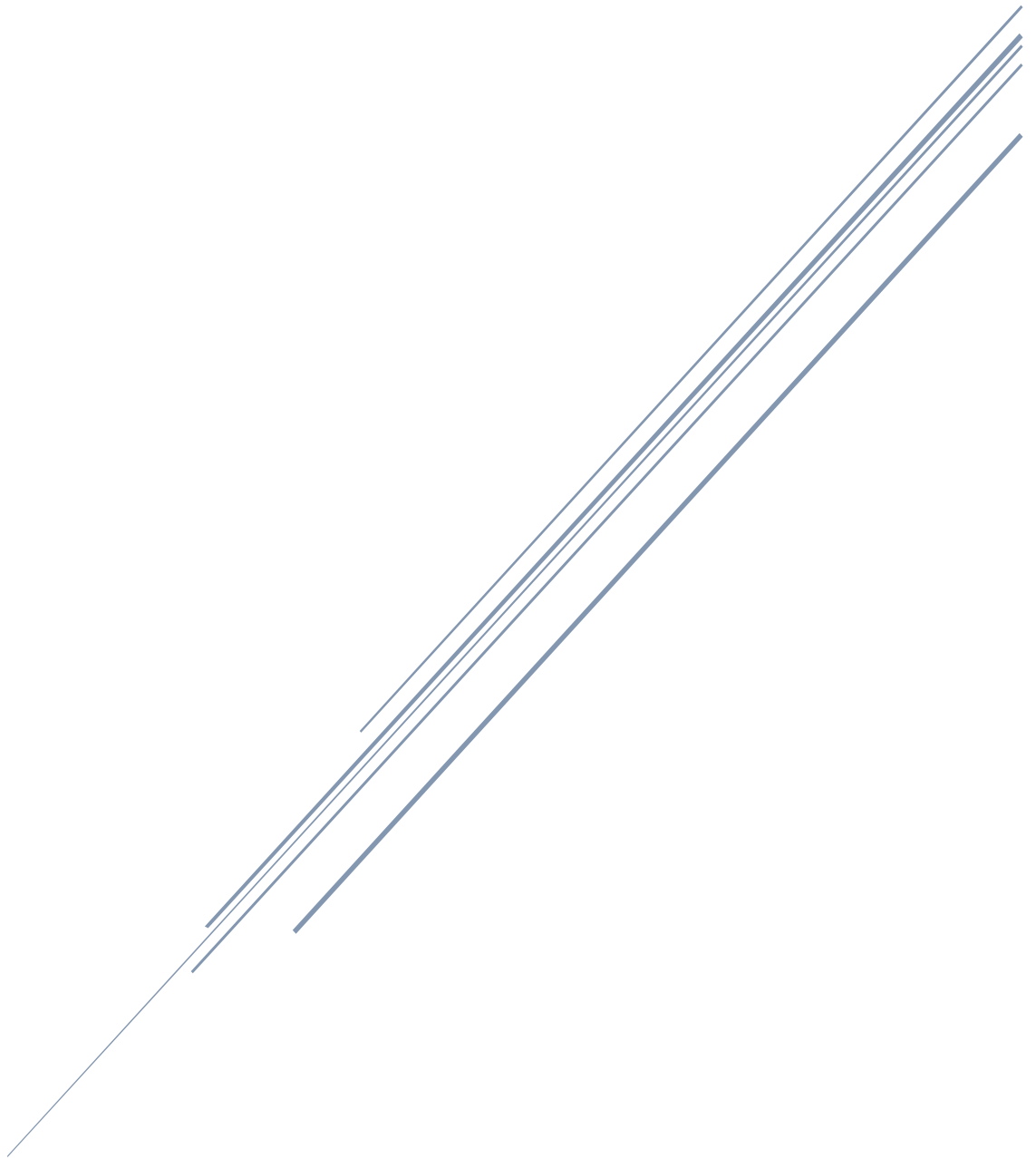


# INTERFACE ASSIGNMENT

Force X Velocity (FXV)



IN705 – Southern Institute of Technology  
Shawn Chen & Callum Good

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## Description

Force X Velocity (FXV) is a sports management application targeted at athletes and sports organizations. Athletes can have their event results on a leader board to compare/compete with other athletes. This allows them to use the platform to show off their stats to potential recruiters. The other side of the application is that organizations can use the system to manage their teams and athletes and will be especially useful for drafts and events. In summary, the aim is to provide a place athlete to store and show off their stats, organizations to manage their teams and athletes and as a platform to run events.

## Competing market

Currently, there are no applications that completely fill the role that FXV aims to fill. However, a large part of the picture for FXV is its networking capabilities for athletes and there are apps currently available that does this . Usshh is an app that can be downloaded to Android or iOS and is aimed at getting athletes in touch with recruiters. CaptainU is a website with a similar purpose, except it also has recruitment events. Usshh has a well-made user profile system but doesn't contain any of the other features FXV offers, and it's restricted to use on mobile devices. CaptainU is slightly closer to what FXV aims to be, but it's a US based brand and it's heavily marketed towards American high school and college athletes. FXV aims to service athletes and organizations across the world.

## An explanation of your design decisions and how they affect a user's interaction with the application.

### Adjustments:

#### Main Navigation

#### Icons on navigation bar:

The icons are a type of GUI element used to represent the function on each button, and the icons previously designed in current system are **representational icons** with **glyphic style** which is simple and easy to recognize. However, there are some problems in current design regarding to the usage of icons, that some icons do not really indicate users what they can do, what will happen after being clicked, or does not represent the function of button. So, there are some new icons in the same **glyphic style** applied in the new design for this application.

#### Leaderboards button on main navigation bar:



The old icon used for leaderboards button does not **clearly represent** to users that the button is meant to be leaderboard. It will cause users to be confused with the page design and make it **difficult to navigate**.



The new design for the Leaderboards page will indicate to users that they can see the information about scores and ranks, which Leaderboards page aims for.

Tests button on main navigation bar:



The old icon used normally represents common exercise which is not quite suitable for the purpose of fitness tests.



The new icon is strongly related with fitness or gym, which could indicate users to obtain information regarding to the fitness tests.

Combine button on main navigation bar:



The icon used for current system is more likely to be suitable in terms of tasks, or missions, which is not appropriate for the purpose that the icon needs to indicate users the function that to lead user to the combined fitness tests page.

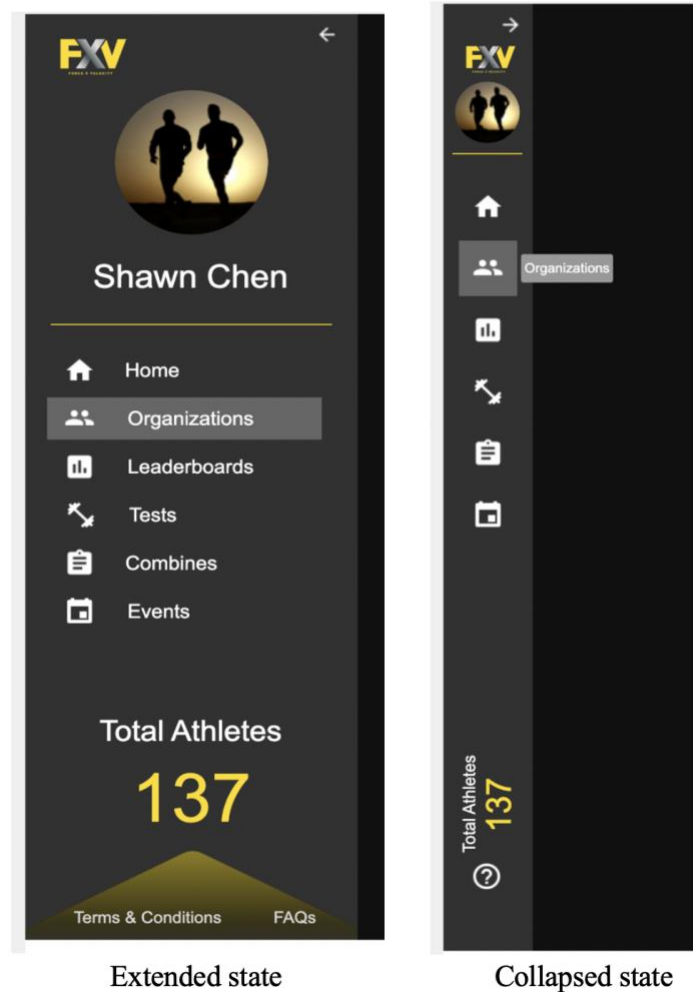


This icon is normally used to indicate assessments for students, as the same concept of “Combine” which is combined multiple fitness tests, like a set of assignment for athletes.

Main navigation bar:

The new design does not change the main navigation bar, as it was well designed to deliver a great user experience and indicate users with possibility of accessibility of each element on main navigation bar.

The navigation bar has 2 status switched by a little arrow on top: Extended status & Collapsed status.



As seen through the screenshot of the navigation bar under the different statuses, the main navigation bar under the extended status is wider with full content for the function on each navigation button and will be highlighted when mouse over it to give users better feedback and indicate users the **possibility of accessibility** to a relevant page. The main navigation bar under the collapsed status is thinner to provide more space for the main content area. Because the width of navigation area is limited, the content/function for each button was removed and replaced by using a notification block to indicate users the **possibility of accessibility** to a relevant page, when the mouse is over it. This could also increase the **user experience** as users do not need to remember what function for each button as the icons could be helpful, and if user still does not understand, the notification block will be helpful as well.

In addition, both navigation design will be always fixed on left side of page, which provides convenience to users that they could switch pages easily no matter which position of the page, the user is currently at.

## Organization information page

There are 3 sections on the organization information page divided by section titles with large font size to help to build a better **visual hierarchy**, the sections include organization details, teams, and organization members. This page is designed to provide organization manager, team manager or administrator with appropriate information. All those 3 sections have problems regarding to **"a good UI design"**.

First section: Organization basic detail

Problems:

The **purpose of the page** is to provide users with sufficient information to better understand the organization, there is only organization image, organization name, short description, location and manager name provided.

Solutions:

The new design contains more organization information than initially provided, including the numbers of overall members and overall teams, this information could be important for organization manager, and could show the scale of this organization, to make them more competitive.

Second section: Teams

Problems:

In the current system, if the user clicks any team, there will be a pop-up panel which is used to display further information of a specific team. This design could easily confuse user that the **primary action** of this clickable tag is supposed to direct user to team page rather than a pop-up panel appeared. Also, there is no indication for the purpose of to deliver **perception** to users or to make users feel **directly manipulating** with the system, as the user might not even know each of team tag can be clicked without an indication.

Solutions:

The new design of this section, the pop-up panel is gone and that necessary information originally on the pop-up panel is assigned on each team tag.

A new HTML style used to highlight particular team tag when mouse is over it, in order to providing a better user experience that users always receive the feedback, also to indicate users the possibility of **accessibility** on each tag that tags are clickable and could lead users to a relevant page.

In additional, the **focus** of this section is not just to see the list of teams, also to find the specific one for more further information. As the result, a search box is made in this section for the purpose of searching a team or teams via a team name rather than scrolling till the team been found, this could increase the **user experience** as well.

On top of those changes, all team tags are varied from horizontal direction to vertical direction, which could be much cleaner than having 3 team tags on each row.

Third section: All members

Problems:

The current design is to display all user details on this section, which is not the **purpose** of this section on the organization information page. The idea of this section is to enable administrator, organization manager, and team manager to see athletes and managers under their control. Apart from this, the **focus** of this area should be more related to the structure of organization and team and useful data of fitness, instead of their basic detail like, address, city, email, mobile, etc. Also, there is no indication to deliver **perception** to users or to make users feel like they are **directly manipulating** the system.

Solutions:

The new design has removed useless information for this section to provide only useful information which target users expected, including members' image, name, gender, age, position/role and team, and a search box applied in this section for better user experience. Then, same as the solution for user indication on the second section that a new html style applied to highlight particular member tag when mouse is over it, in order to providing a better user experience that users always receive the feedback, also to indicate users the possibility of **accessibility** on each tag that tags are clickable and could lead users to a relevant page.

The **coloured icon** used for gender could be more helpful and efficient for user to obtain information as the coloured icon for gender is easily recognized nowadays, rather than read through normal content which is widely used for everywhere and our target users might be visual fatigued by always reading contents.

In addition, the **coloured age content** could be useful to represent different age group, which is important for the roles such as coach and team manager, as they need to understand the age group for the purpose of athlete training.

Examples of **colours** used for age group could be:

- Green represents younger athletes as green usually indicates growth and hope (colour-wheel-pro.com, n.d.).
- Red represents the best age group for athlete, as red usually means the energy, strength, and power (colour-wheel-pro.com, n.d.).

Organization Team information page

There are 2 sections on the organization team information page divided by section titles with large font size to help to build a better **visual hierarchy**, the sections include organization team details, and team members. This page is designed to provide organization

manager, team manager or administrator with appropriate information. Both 2 sections have problems with “the good UI design”.

First section: Organization team basic detail

Problems:

Same problems as found on the current organization information page that there is not sufficient information supported for users to better understand the team which is not the purpose of the page, as there are only with only team image, team name, short description, location and manager name provided.

Solutions:

The same solution applied as what has been done for the new design on organization information that adding an element to display the numbers of overall members, which could be useful for understanding the scale of the team.

Second section: All members

Problems:

As same as on the team’s section on organization information page that there will be a pop-up panel to display further athlete information which could be combined on the athlete tag.

Solutions:

The new design has removed the pop up panel and assigned some necessary information on each of athlete tag on the team information page in order to avoid the wrong primary action of each member tag, which is supposed to lead user to athlete profile page directly as the new design on the organization information page.

A search box also applied in this section to a better user experience as mentioned on the organization information page, and a highlighted html style will be used for member tag when mouse is over it to indicate users the tags are clickable as same as the adjustment on organization information page.

Then, the coloured elements have been used for this section to deliver some valuable information, including:

- The use of the coloured gender icon applied for easier recognizing gender instead of reading through content.
- The coloured age content to represent different age group.
- A dark colour used for the position title which aims to highlight the value of the position as the position is one of the focus on each of athlete tag displayed on all members tag.

On top of those changes, all members tag displayed has changed from horizontal direction to vertical direction which could be much cleaner than put 3 member tags on each row.

3. User profile page



## Problems:

Form the original design of this application, the profile page is used for the promotional purpose of athletes with fitness statistics. However, the current UI design shows that there is not enough information provided to promote athlete with only basic information of athlete themselves. also, the "combine score" is not clear that no one knows what tests included and how is performance of the athlete based on score represented.

## Solutions:

In the new design, there are a lot of useful information has added on the profile page that could be helpful to promote athletes themselves, including:

- Athlete image
- Extra basic information (like nationality and current location)
- The biology statistics which could be useful for coach to predict the performance of the athlete (like height, weight, standing reach, wingspan, handspan, and dominant hand)
- The detailed score section with combine name, an icon representing the action which could display a full list of tests belonging to the combine after mouse is over the icon, the athlete best score, rank, and what is the top score in this combined test
- A re-designed organization and teams' section as they are always related instead of putting them separately as originally designed, and the organization name will be used as the header of teams within the same organization which could help to build a great visual hierarchy.

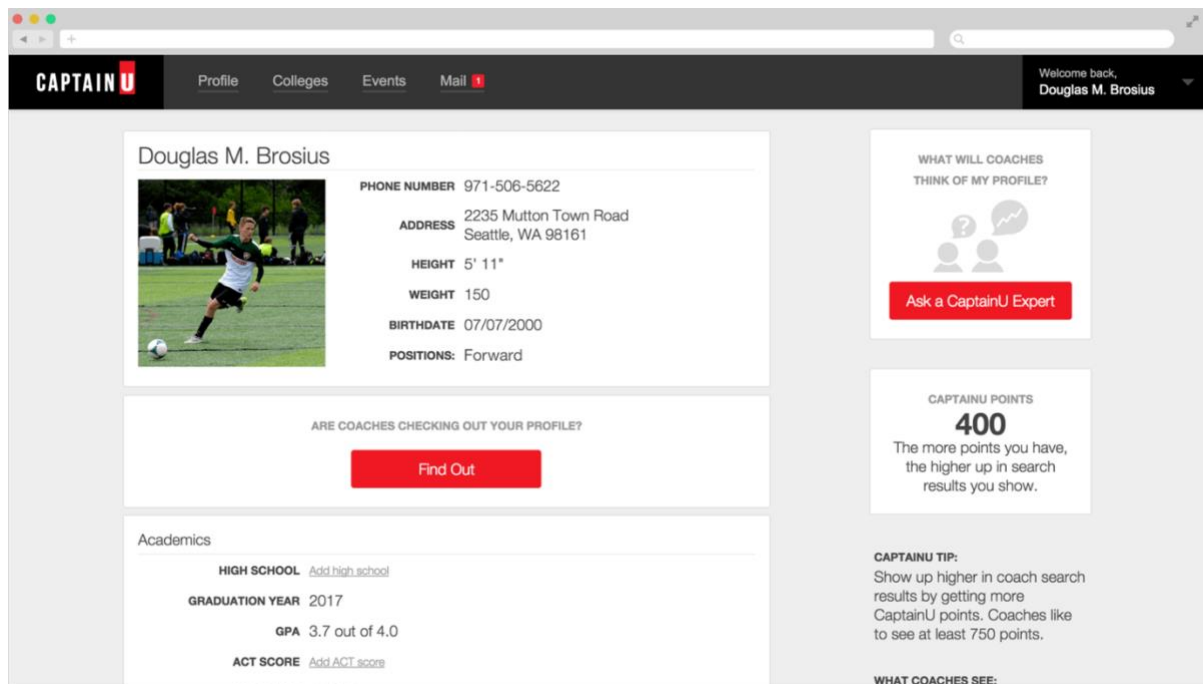
For the biology part, the opposite position of the header and value in the new design could help to make those important biological value more prominent.

On the other hand, the coloured gender icon and coloured age content also applied on this page as well, (the advantages of using those elements has been explain on above).

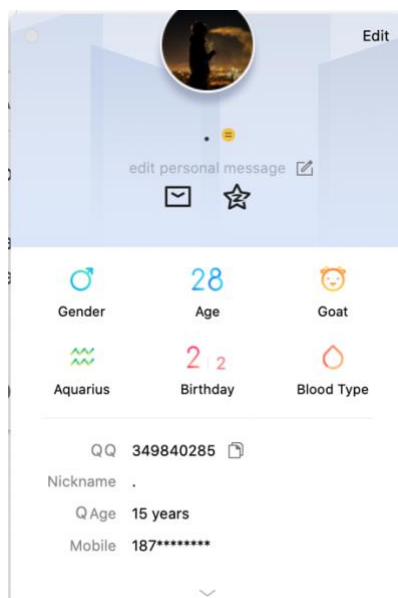
The FXV yellow used to highlight the value of combined tests also indicate users that those combined testing and calculation system are owned by FXV which shows the uniqueness and compatibility.

In addition, the edit button has been moved below the athlete image as most application designed, which most users would be more familiar with.

## Supporting data that informed your design decisions



The information on profile page was inspired by a web application called CaptainU, especially the biology part, which is actually really important for athletes to promote themselves and teams to hire athletes, because all those important biological statistics could be useful to predict if the athlete is appropriate for this team position or not.



The coloured gender icon and coloured age were inspired by a Chinese messaging app called QQ, and the opposite way of using header and value does help to extract the key information from the entire page.

## Target Users

The main target users for FXV can be split into two categories: Athletes and Organizations. Athletes may or may not belong to an organization and organizations will have managers and will have to manage one or many teams. Athletes need to be able to store their data in a profile and they also need to be able to view their results on leader boards. Organizations will need to manage teams and athletes within their organization as well as viewing data on the athletes.

## Stakeholders

### Primary stakeholders

#### Organizations

The organization stakeholder encompasses users within an organization that would use FXV for management purposes.

#### Context of use:

Organizations will be able to use FXV for their daily management needs. Such as to manage their athletes and teams, scout new athletes and run events. The system will mostly rely on interaction from organizations, so it will require frequent use from management. Tasks such as adding athletes to teams and comparing individual stats between athletes will be a daily thing for management. The goal of the system for management is to streamline things making managing various teams and athletes easy, any learning curve to the system should feel worth getting past as it will ultimately provide a better user experience. Much of the information on this site will be public so professionalism must be maintained especially from users representing an organization, this can add pressure to these users. Monitoring analysis based on performance

#### Cognitive ability:

Staff in a management position are typically more experienced and have likely used some form of management software before. It is likely these users will have at least a basic understanding on how to use the system.

### Secondary Stakeholders

#### Athletes

Athletes are secondary stakeholders because they only make inputs and receive outputs, they are however a large part of the userbase.

#### Context of use:

The motivation for athletes to use FXV is to use it to advertise themselves. Athletes who display their stats and keep them updated are more likely to find opportunities with sports organizations. Because this kind of system is a new concept, the likelihood of athletes having used a similar system is low. However, the idea is the same as the generic social media platform so most users should be familiar with the concept of the site. The system

use should be relaxed, but because athletes will be working with organizations a level of professionalism will need to be maintained, which can add pressure to users. Beyond creating their profiles and maintaining them with up to date information, athletes aren't constantly required to be manipulating the system. In terms of the social environment, most of what the athlete does on the system will be public and individual. The physical environment of the user depends on what they're doing, for example the initial set up of the profile could be done from home, where they take the time and focus on filling out their information completely. Or, they might need to update something on the fly at an event which will need to be quick and easily. Users will always need an internet connection while using the site, because information needs to be updated in real time. FXV will need to be used during events, so a mobile option will need to be available as well as a desktop option.

#### Cognitive Ability:

Since athletes (especially those who compete professionally) tend to be around the young adult age, it is fair to assume that most athlete users will fall into the intermediate to expert level of user category when it comes to computer literacy. FXV has a very heavy emphasis on sports and will use terminology specific to the sports industry which should not confuse the average athlete.

#### Facilitator

##### Administration

Administration will oversee site maintenance and events that athletes will attend.

#### Context of use:

Administrators will be able to view site statistics such as how many users have signed up, how many are logged in, usage rates, etc. This will allow them to collect relevant information on the site's performance. The system will need daily monitoring from admins, which should allow them to learn the complexities of the system. Admin users will need to be experts in the system to perform their role correctly. The task nature of an admin's responsibilities can range from low to high pressure, tasks like monitoring statistics will be easy and low pressure but overseeing events or dealing with issues in the system could put high pressure on the admins. Admins will need to be interacting with the system frequently and will need to manipulate it often and will likely need a team to collaboratively work on it.

#### Cognitive ability:

Administration in most fields requires experience and knowledge in whatever system the admin is working in, so it is safe to assume an admin of FXV would have good knowledge of the system. However, if they have not had a background in athletics, they may struggle to understand parts of the system or what it's doing.

## Indirect stakeholder

### Event audience

Events will be open for public viewing. The venues will have large screens being updated in real time with the athletes/team's stats.

#### Context of use:

Screens at FXV events will show data from the site being updated in real time. Audience members will be able to view results and compare athlete scores at throughout events. First time attendees might need time to understand the information being displayed and how it relates to the event they're viewing but this should be a small learning curve. The audience will be attending events to see the athletes perform and will only be using the system in the background, making for a very low-pressure task nature. Events will be social and can be outdoors or indoors, so the environment will be noisy.

#### Cognitive ability:

Audience members who are not familiar with athletics may have trouble understanding some jargon and what some of the data relates to.

#### Physical ability:

The event screens will be only visually display information so audience members with visual impairments may struggle using them.

## An overview of how the interaction between a user and the application takes place.

As it is a management web application, it is designed as the menu based and contains 2 main areas: navigation bar and main content area (which is used to display relevant information based on user's **execution** of navigation bar).

The main reason of separating these 2 areas is because of different functions for different areas, and the user's focus to different areas depends on their **goals** and **intentions**.

#### Navigation bar:

This area is designed to list all top-level pages to enable users to navigate through the entire system. In order to provide enough space for main content area to display information, this bar can be switched between 2 status by clicking the arrow icon on top corner of the navigation bar.

#### Navigation status:

**Extended navigation bar** – This is designed as a full version of the navigation bar and usually displayed when user just enters the home page.

**Collapsed navigation bar** – This is designed to be compressed version of the extended navigation bar. It will be displayed when either user manually switched the navigation status, user clicking on anywhere on main content area, or few seconds after the home page loaded with no further execution on navigation bar.

Both navigation status contains 3 sections:

- Top section:

This section consists of an FXV logo, a user profile image, and user's name, and the profile image is clickable and used to redirect user to the profile page as same as most applications do.

- Page links section:

Each page link on this section is designed to act as a button directing user to different page, but the view of page links is different based on the different navigation status:

- Extended status: as this is the full version of navigation bar, so, this section is composed of an icon representing the action and the page name to help users to **specify and perceive the possibility of action consequence** based on the icon and content.
- Collapsed status: as it is the compressed version of navigation bar, in order to give enough space to the main content area. So, the page names have removed from each page link with only icon remained, and the toast notifications are used to display page name when icon is hovered. This could also help users to **specify and perceive the possibility of action consequence** based on the icon and notification.

Apart of those interactions, a highlight html style applied on each page link for both navigation status when mouse hovered. This could acknowledge users that the elements are clickable and help users to identify where are they currently at the page.

- Additional information section:

This section has **no direct interaction** with users for any further action, but there is an **indirect interaction** between users and this section, to receive some useful information, like the number of overall system users for an administrator, the number of overall organization members for an organization manager, the number of overall team members for a team manager etc.

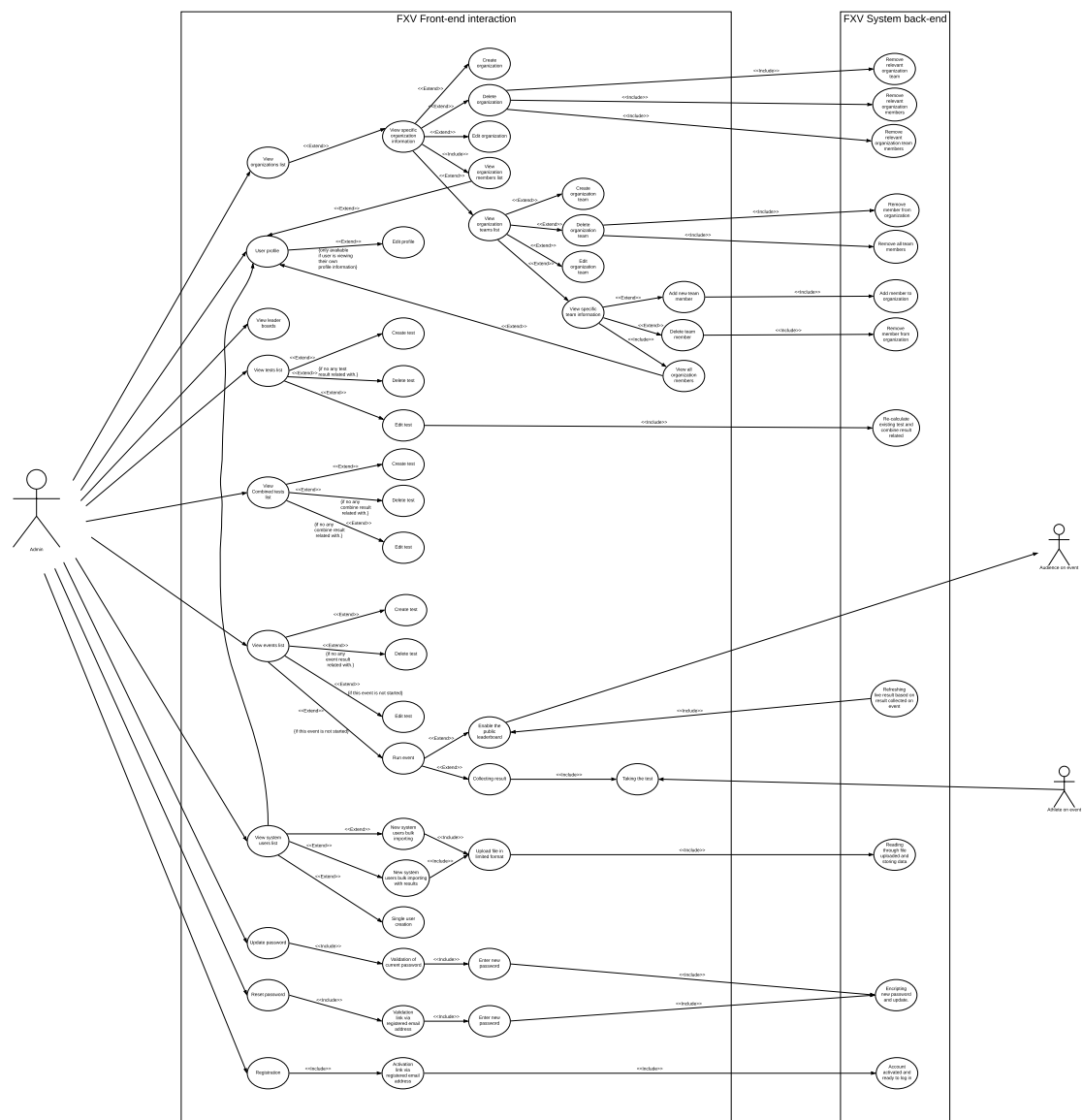
Main content area:

The application is designed in SPA (Single Page Application) mode which could allow users to interact with system with fast and responsive feedback. And the main content area is mainly used to receive further information based on user's execution on navigation bar. And there are many different types of interaction used in this area:

- Page title – In order to help user to **evaluate the actual outcomes based on their perception of expected outcomes**, there is a page title on top of the main content area with a large text size.

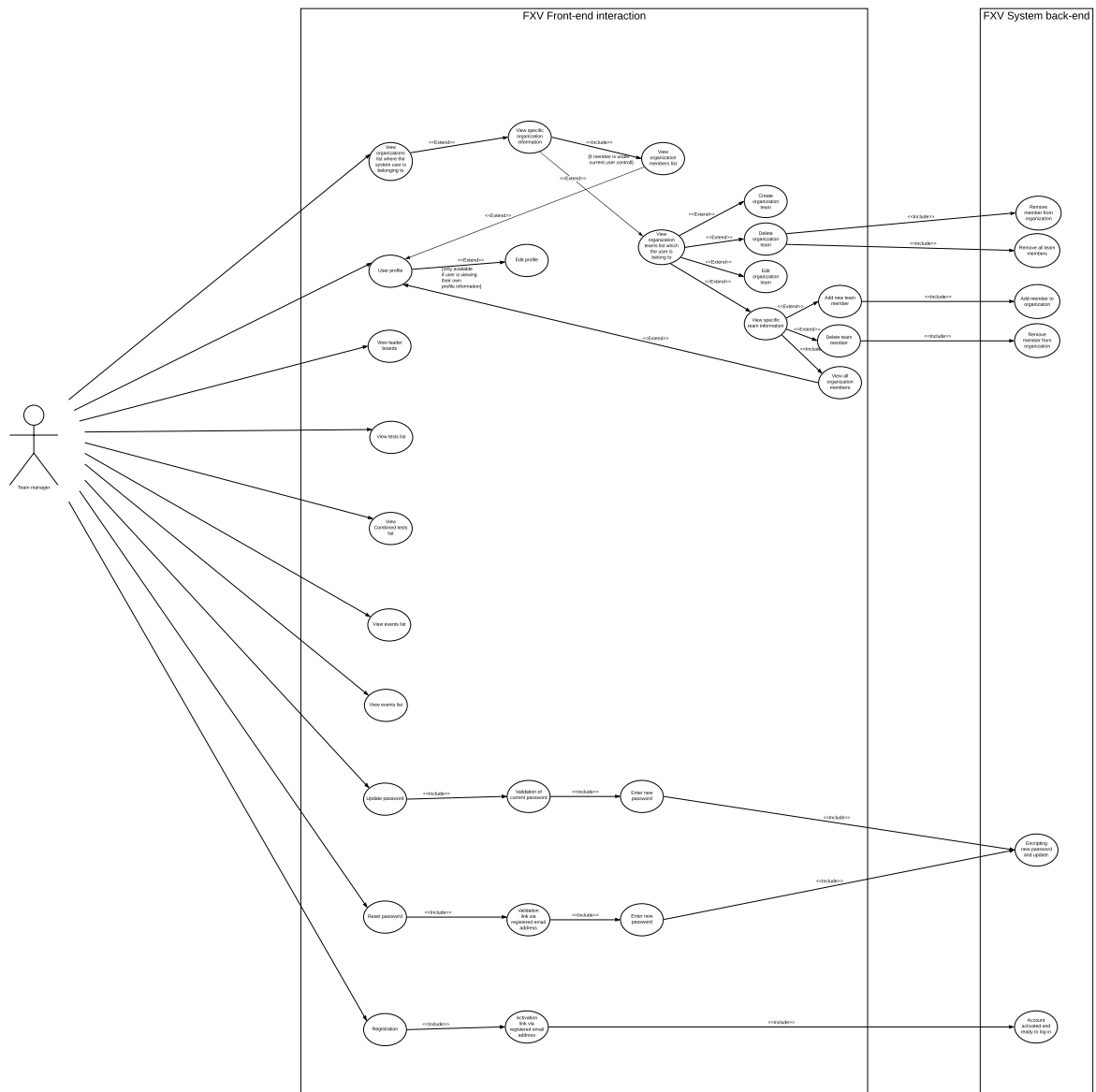
- Content – In order to deliver information efficiently, most of information are text content with different colors and colored icons. The purpose of using different colors and colored icons within the content area, is to highlight the valuable or important information for target users, rather than always using same color for all content. This **indirect interaction design** could help users to be easier to focus on only useful or important information.  
 Apart of this, users normally could **evaluate the expected outcomes** based on the highlighted content on the page, this is an **indirect interaction** design as well.
- Icon buttons & text buttons – due to the consideration of helping users to **perceive the action consequence** of buttons, there are 2 types of buttons are used in this application:
  - Icon buttons – They are used for the functions which can be represented by a simple icon, like garbage icons help users to **perceive the action result** is to delete current item as garbage icon easily represents delete action.
  - Text buttons – used for the function cannot be easily described by a simple icon, like the buttons for bulk user import and bulk test result import, which require a short content to describe the function for each button. The content on the button could help users to distinguish and **perceive** the differences between the **consequence** of executing those text buttons.
- Search box – Users could directly **interact** with the search box by typing any content to find their expected information.

## Use case diagrams



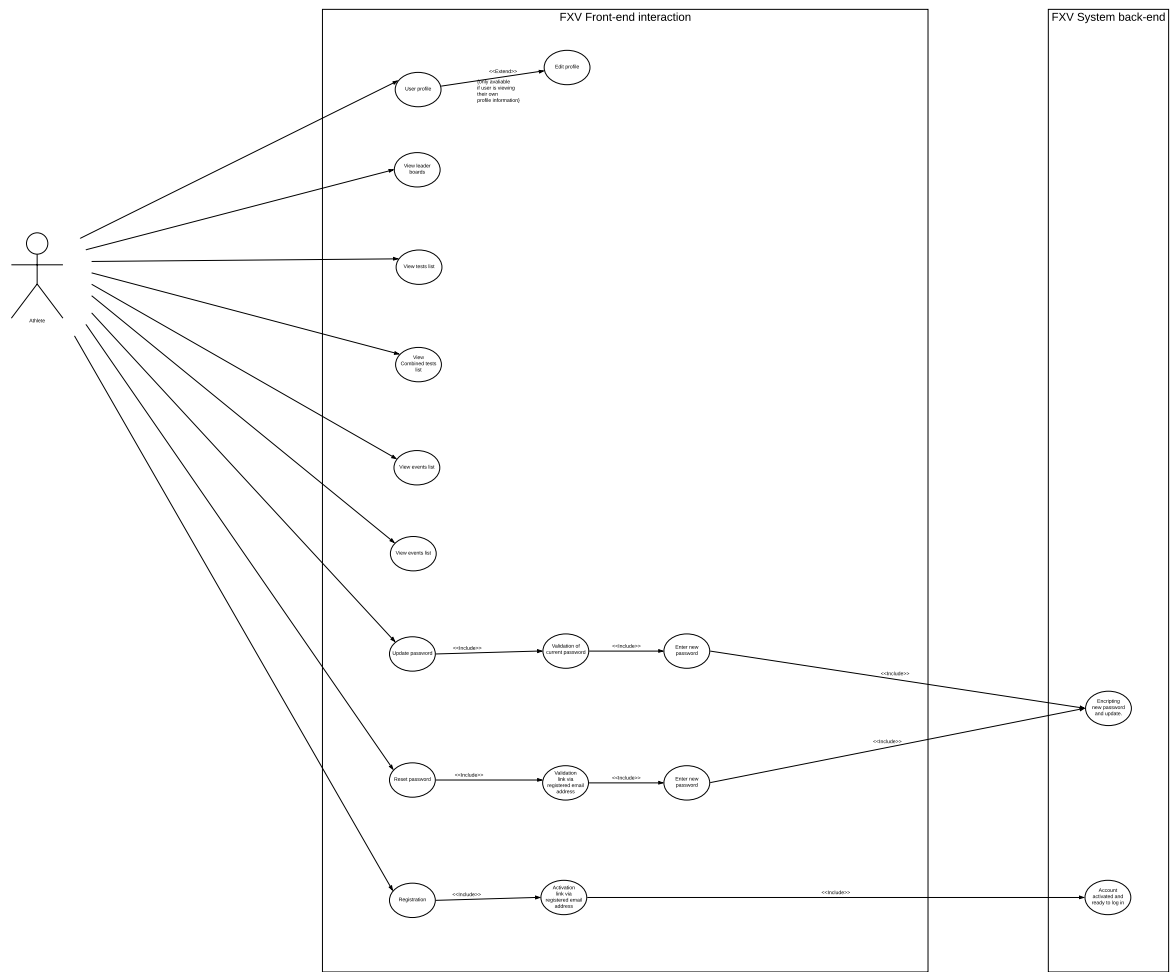
### Use case diagram for administrators





Use case diagram for Team Managers.

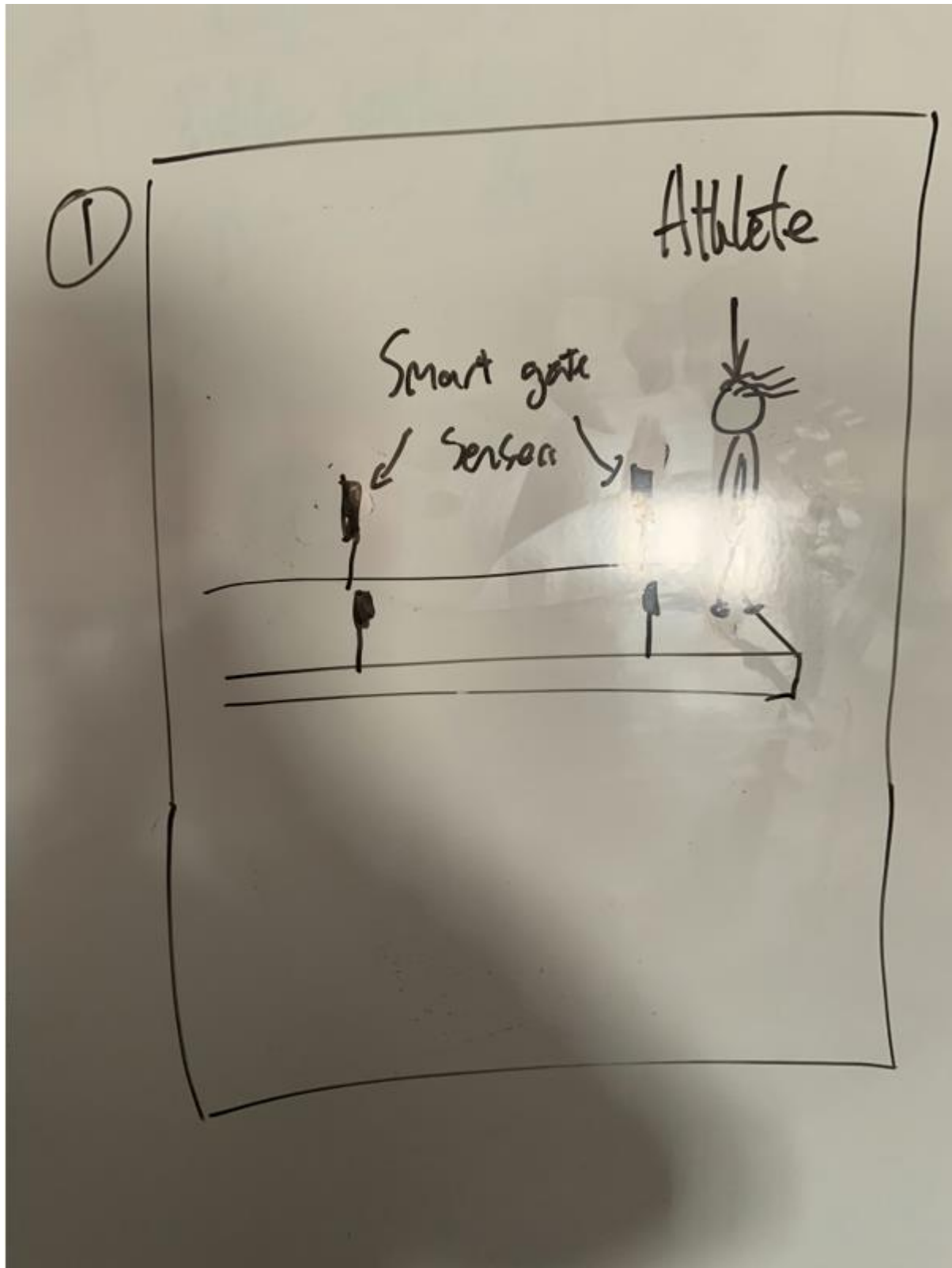




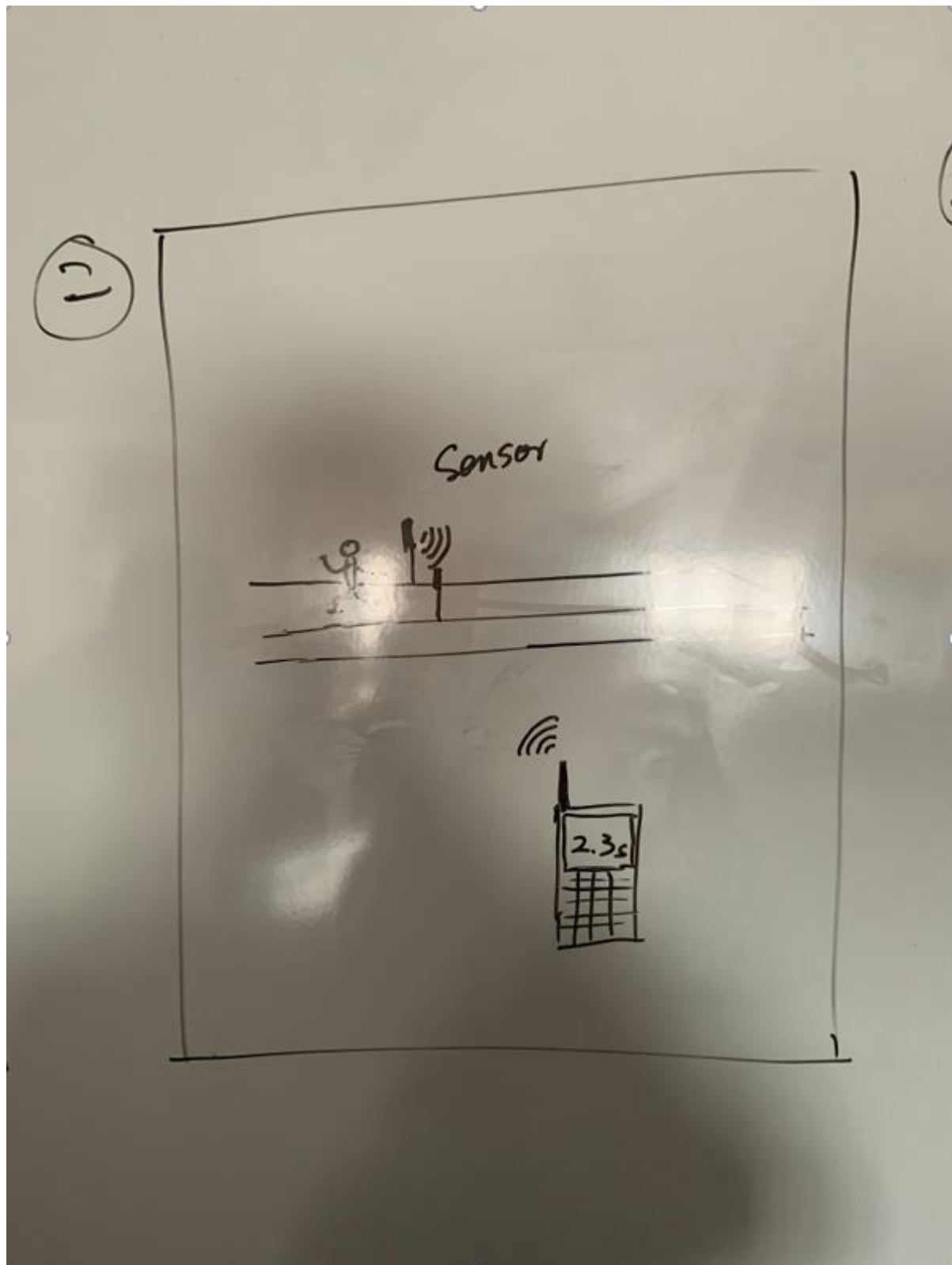
Use case diagram for Athletes.

## Storyboarding

This is a storyboard of the system being using to collect the sprint speed of an athlete and the process of how the data is entered into the system.



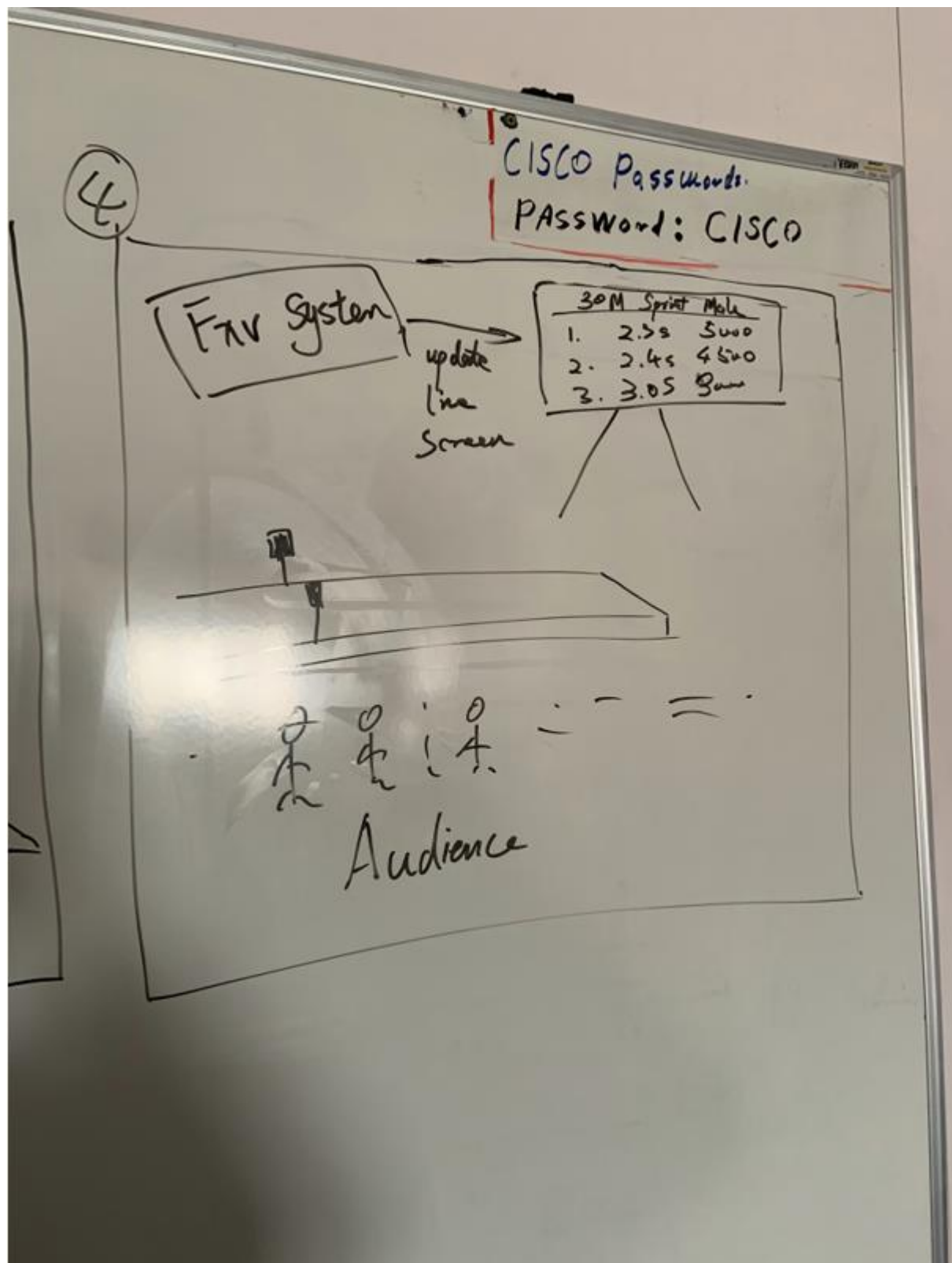
Initial set up. The smart gate sensors detect when the athlete has passed through them.



The sensors have detected the athlete passing through them.

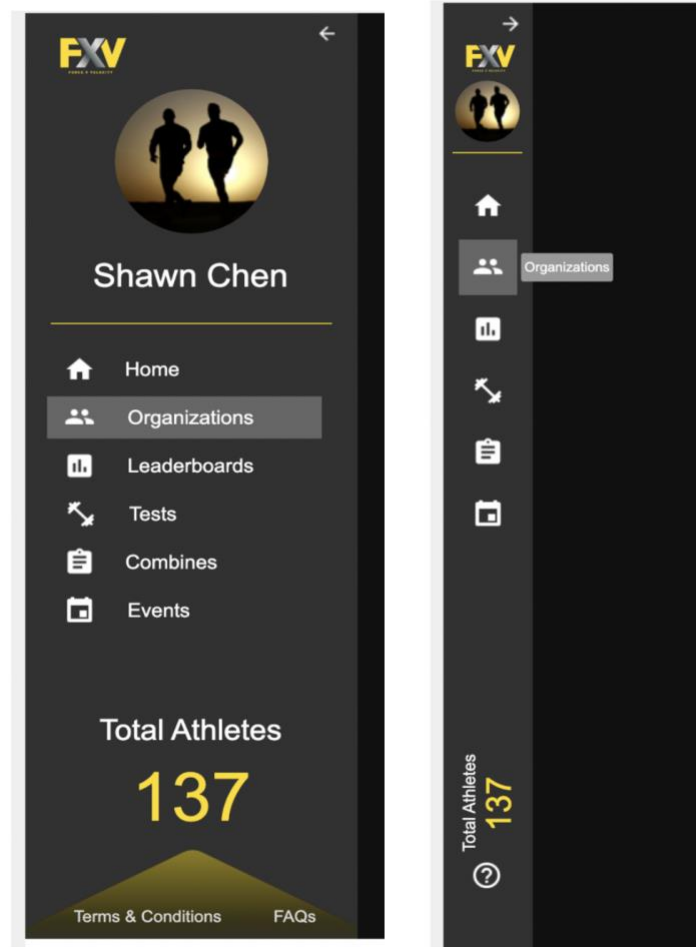


The result is recorded and entered into the system via a device running the system on site.



The data is displayed on the event screens.

## Prototype images



Extended state

Collapsed state

Main navigation bar





→



Home

People

Analytics

Share

Calendar

Task

Total Athletes

137


Harbour Hockey U18 Boys

Auckland

Manager Name

Members: 23

Short Discription of team. Charactor limiation will be applied in this field.



All Members

Team Name

New Member +





Steve Buckley

♂ 40

Auckland

Position: Manager






Jack Ryan

♂ 35

Auckland

Position: Coach





Nick Sparg

♂ 16

Auckland

Position: Athlete



No More

Organization team information page

24

FXV

Home

Profile

Stats

Settings

Logout

Total Athletes  
137

Shawn Chen

Athlete's short Bio content for self-promotion purpose will display in this area, with the character limit .

Gender

28

Age

Nationality

Chinese

Location

Invercargill, New Zealand

Email

2017003399@student.sit.ac.nz

Top Achievement

User's Achievement will display in this area

Biology

178cm

Height

92kg

Weight

235cm

Standing Reach

182cm

Wingspan

21cm

Handspan

Right

Dominant Hand

Scores

5322

Best

42

Rank

8332

Top Score

Organizations & Teams

North Harbour Hockey

FXV

FORCE X VELOCITY

Harbour Hockey U18 Boys

FXV

FORCE X VELOCITY

Harbour Hockey U15 Boys

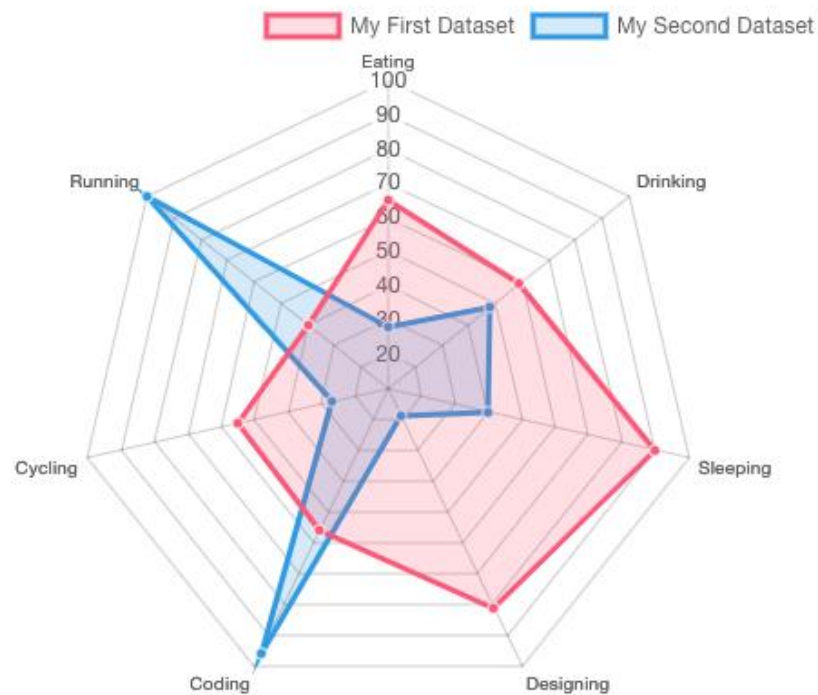
Edit Profile

This button is only available when user viewing their own profile.

User profile page

## Brainstorming and experimentation

During the re-design stage of profile page, there was an idea inspired from the design in a video game called “FIFA 18”, that to build an athlete overall ability diagram as a radar chart to show the ability and preference of an athlete, in terms of speed, agility, jump, capacity, etc...



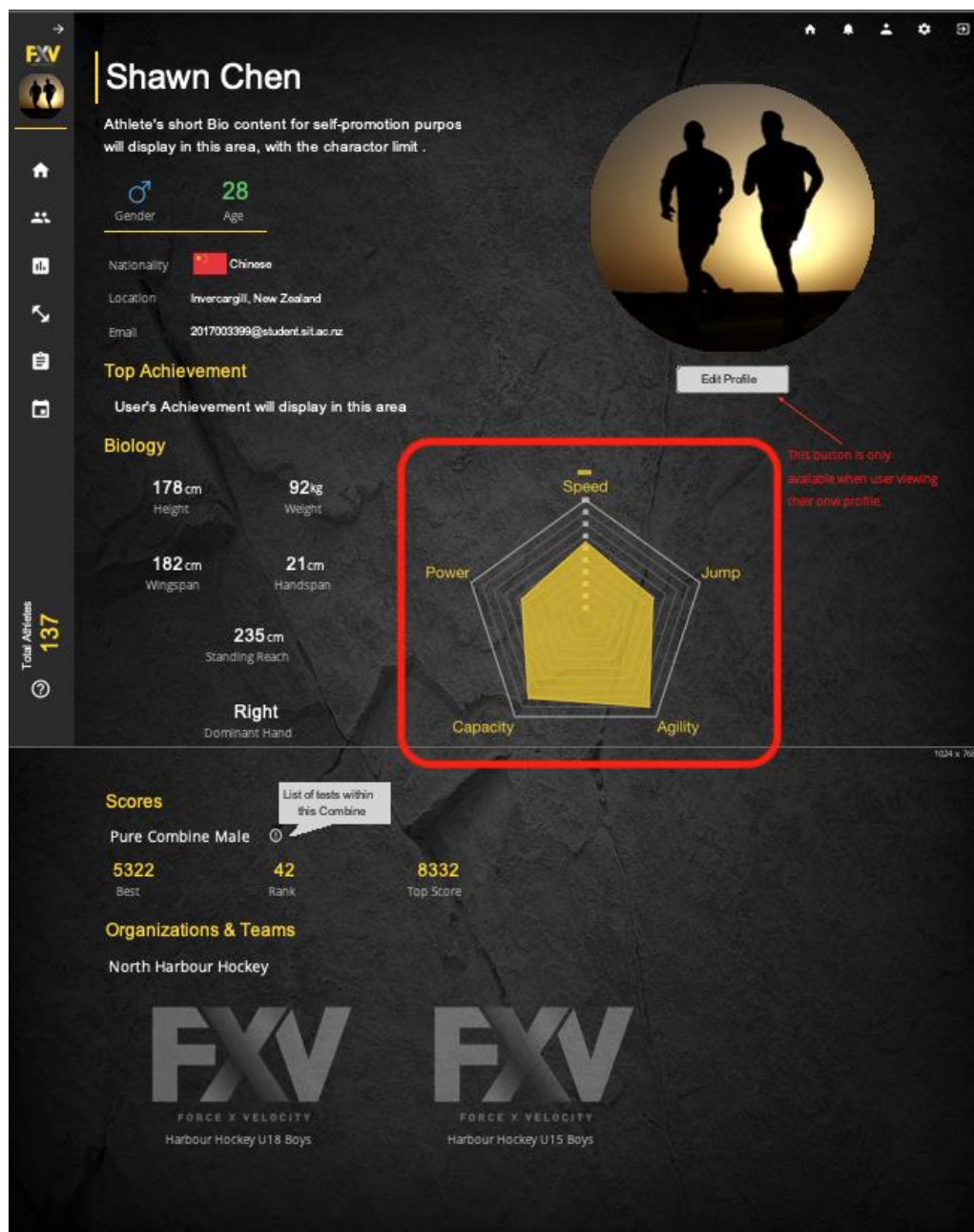
The example of Radar chart could be used in new design



Example of the ability chart in Video game called FIFA 18

Reference: <https://images.app.goo.gl/h6UjE6YQFEYs2abm7>

The purpose of this element is to show the specialization of FXV system as it is a fitness management system and to provide a fast, easy and direct way to understand current athlete's ability, especially, for the group of people like coaches and team managers.



The athlete overall ability diagram was designed

However, this element was removed from the re-design of the profile page due to the shortage of research regarding to what the system users exactly expect, for example, what group of data has the top priority that need to be displayed on the diagram, and the way to analyse and calculate the data based on the collected test results. But the athlete overall ability diagram could be possible in the future as the entire system still under the development stage.



## An overview of the information required for the application.

In general, the FXV fitness management system consists of 3 types of information including user-based information, testing result information, and pre-set information.

- User-based information

The terms of user-based means the information will require application end-users to provide relevant information, like user details, team details and organization details.

- User details are usually created by system end-users themselves during registration stage or profile editing, but system administrator also can create users with some details via bulk file import in a specific format.
- Team information is mainly provided by a team manager or an organization manager, like team name, location, manager name, team members, team image, etc. Also, system administrators can create or update.
- Organization information is provided by an organization manager or an administrator, regarding to the organization name, location, organization image, organization members, etc...

- Testing result information

The Testing result is mainly collected by administrator during athlete taking a test, combined test in an event. And, it can be collected by a bulk file import function which is only available for system administrator.

- Pre-set information

This type of information only created by system administrators, and it will be created before the other types of users to use it. The information includes test details, combine details, and event details.

- Test details – the details help to describe a test, and some of standard for test score calculation
- Combine details – the details help to describe a combined test and define the score calculation formula across a combination of tests.
- Event details – the details describe an event, including the Combine used for an event, date & time event started, location, etc...

## References

colour-wheel-pro.com. (n.d.). *Color Meaning*. Retrieved from Color Wheel Pro:  
<http://www.color-wheel-pro.com/color-meaning.html>