BITNESS

New Media Team Project 2015

Meet the Team

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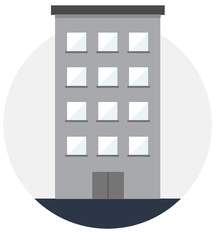
Corporate gyms help keep employees both **happy** and **healthy**, but they struggle to get employees to **take advantage** of the benefit.

Problem Domain



COMPANY ISSUES

Unmotivated Employees

Employees don't take advantage of on-campus gym facilities

Expensive Health Plans

Health plans for unhealthy employees can be expensive

Lack of Culture

Team morale and loyalty weakens without strong company culture and togetherness

Drops in Productivity

Efficiency and work performance suffer when employees are overstressed

WHERE WE CAN HELP

Create Group Comraderie

Get Employees into the Gym

Promote a Healthy Lifestyle

Increase Happiness in the Workplace

Fear of Exercising

Some people are uncomfortable and intimidated in a gym setting

Stress Overload

Employees are overworked from intense workloads

Time Management

There is no time for physical activity due to busy schedules and prior engagements

Lack of Motivation

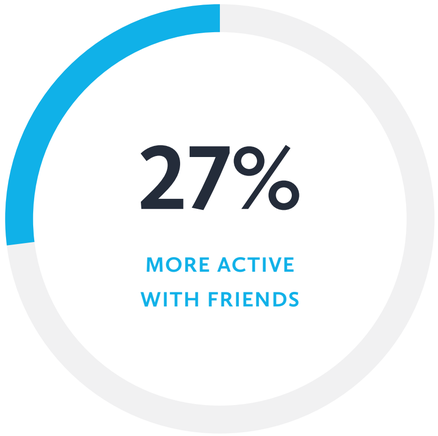
It is hard to keep up a healthy fitness routine when you are unable to reach your fitness goals

EMPLOYEE ISSUES

Corporate Wellness Programs

Companies with worksite wellness programs see an 8% increase in employee productivity

45% of employees agree that a wellness program would encourage them to stay with the company



Employees who use peer to peer fitness devices with friends are 27% more active

The Solution

Create an **immersive group exercise** experience that will drive more people to use the gym and promote a **healthy, positive,** and **energetic** workforce while building **team morale** within the company.

Core Features

PARTICIPATION

Join & Create Teams
Create internal teams, set up workouts, and improve interpersonal relationships

Group Goals
Work together as a team by setting exercise goals to achieve together

EXERCISE

Workout Selection
Choose which workout routine your group wants to exercise to

Real-Time Data Sync
Easily sync your data from wearables and your current exercise machines

HEALTH

Personal Dashboard
Interact with workout summaries and team stats to track progress

Achievement Unlock
Set both individual and team goals and unlock achievements

HAPPINESS

Social Engagement
Share progress to develop a supportive, healthy in-office community

Visualizations
Get motivated with real-time data visualizers and group statistic boards

How It Works

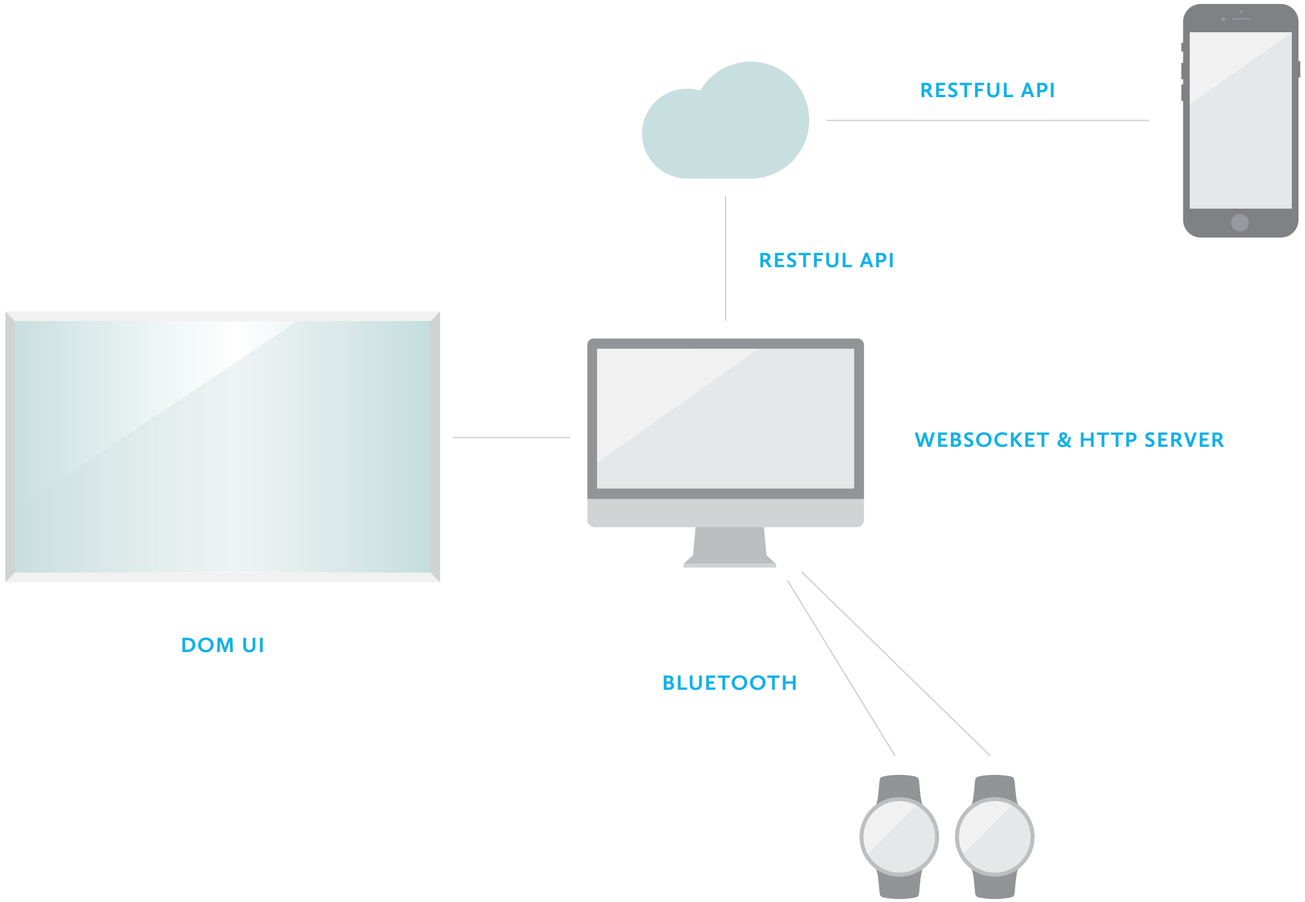
The Technology

Our software is comprised of four main components. The first of which is the computer which is connected to the mirror UI. This computer will run a local server which will listen and connect to all of our Bitness wearables over bluetooth. It will also run a web server (locally) and serve the all of the contents of the DOM to client. This server will essentially act as a way of converting all of the data from bluetooth to a format which is easily usable by our client and then sending it using websockets.

The mirror client will be running a web browser which will connect to localhost (the previously mentioned server) to obtain all of the UI data along with the device data sent over websockets. Since this is all running on the same machine we don't anticipate any latency.

After the exercise our local web server will aggregate all of the device data and send it to server in the cloud where it will persist that data to a database. This cloud web server will also keep track of users, and other community based data which we will want our customers to be able to access out of the gym.

Lastly, we will have a mobile app which will access the persisted data from our cloud based server and will act as a UI to keep our customers in touch with the Bitness ecosystem when they are not in the gym.



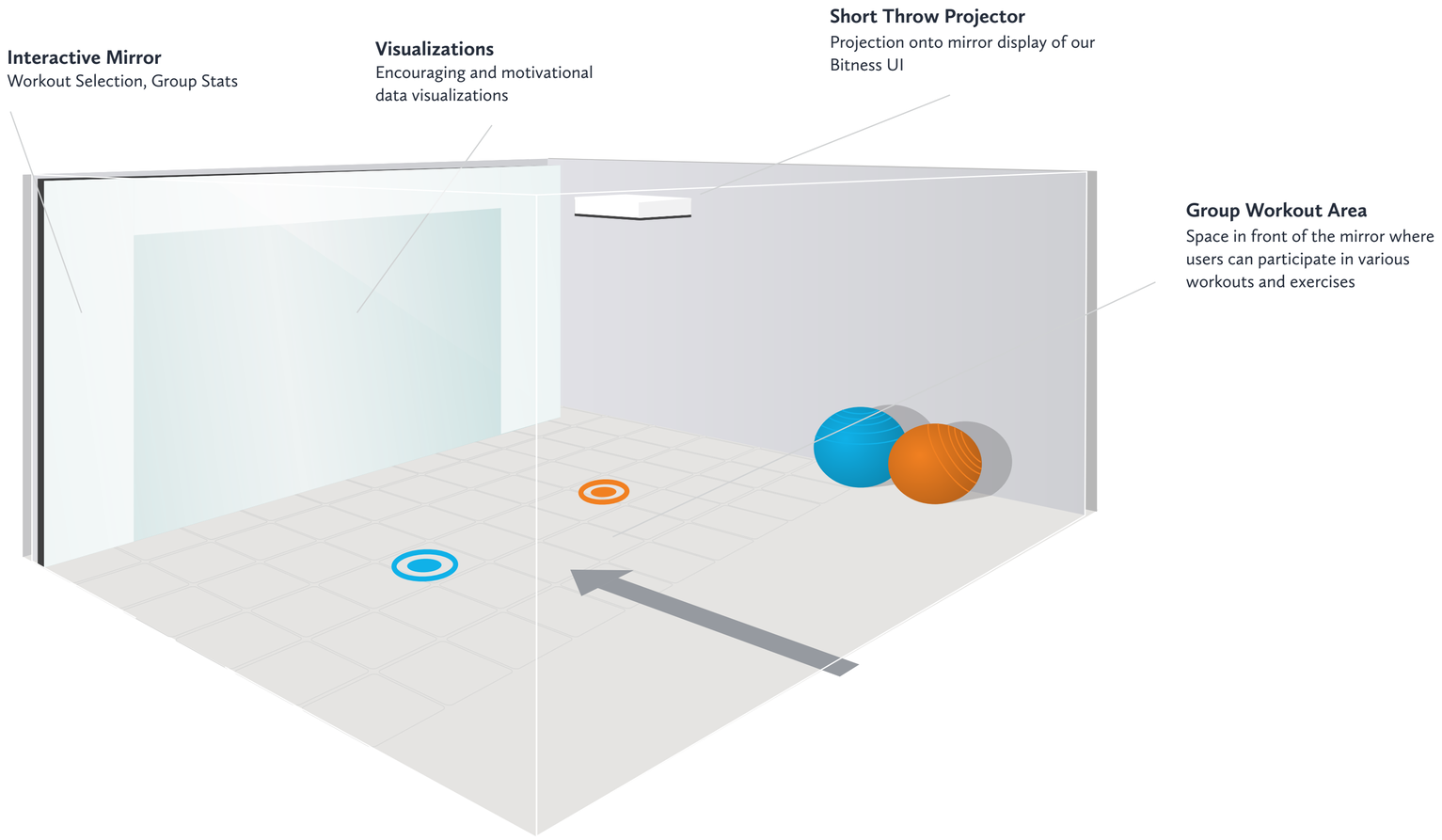
Corporate Setting

The Setup

Our ‘interactive mirror’ is comprised of one large, clear acrylic sheet with a combination of one-way mirror film and projection film. The sheet will be split into 3 sections. One section in the middle that will be covered with the one-way mirror film, and two on the sides that will have projection film on them. It will include one overhead projector.

The side panels will be used primarily to display the real-time data stats during a workout, both individual stats as well as group and company-wide data. Using combination of the Kinect and a display behind the mirror, we will create a control panel for the system that uses hand gestures to perform actions.

Behind the acrylic sheet we will leverage additional displays to show other content like exercise counters and other visuals. Because of the one way mirror film we are using, when content is displayed on those sources it will shine through the mirror and be visible to the users. Then when we display nothing on those displays, all you will see is the mirror film giving the illusion that there is no display at all.



Journey Map

Company Experience

Inquiry

- \+ Assigned Research Project for new Gym facility at Intuit Campus (hopeful, excited)
- \+ Goes online and searches for innovative gym facilities
- − Overwhelmed with options
- \+ Finds articles detailing new fitness technology
- − Struggles to find a program that will attract people who don't typically go to the gym

Comparison

- − Starts building list of popular gym equipment as well as newer tech focused tools.
- \+ Looks into new fitness trends like Crossfit and Turbo Kick
- − Overwhelmed with cost of new equipment and worries about exceeding the budget
- − Comparing benefits and of the different programs is a very daunting task
- − Finds that many existing programs do not attract to the new gym goer
- \+ Looks into emerging fitness technology that help push users to workout

Purchase

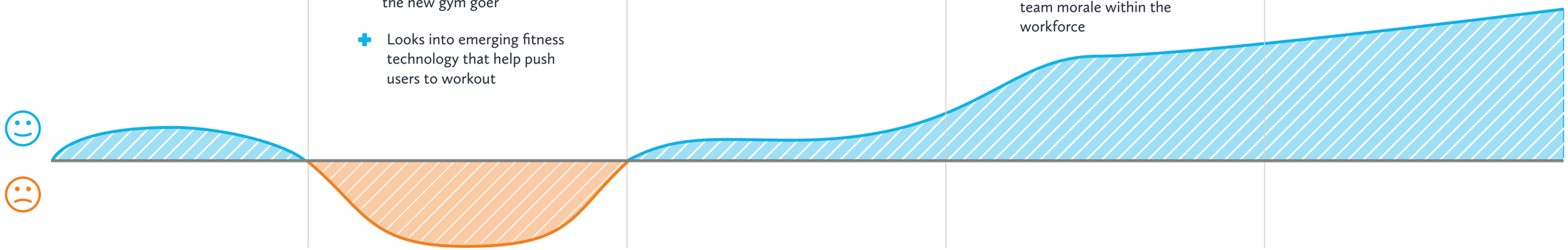
- \+ Finds Bitness which combines training programs with innovative gym equipment
- \+ Contacts Bitness facility and receives quote for mirror installation
- − Worries about initial cost of installation and training on how to use
- \+ Sees that inital cost is reasonable and yearly payments after is conveniant

Installation/Use

- − Installation takes some time and requires the gym to close
- − Gym directors are required to take classes on the sofware
- \+ Classes begin and employees start to enroll
- \+ Word of these new classes spread across the campus and enrollment increases
- \+ Bitness begins attracting new people to the gym
- \+ The program will help promote team morale within the workforce

Renewal

- \+ Team based workout communities are created
- \+ General productivity and inter-team communication increases
- \+ Renew subcription to the software for another year
- \+ Receive new features and upadates as they are released



For **Imagine RIT**, a school-wide innovation and creativity festival, we adapted the Bitness concept to create a family-friendly interactive exercise exhibit called **Space Race**.

Space Race: Introduction

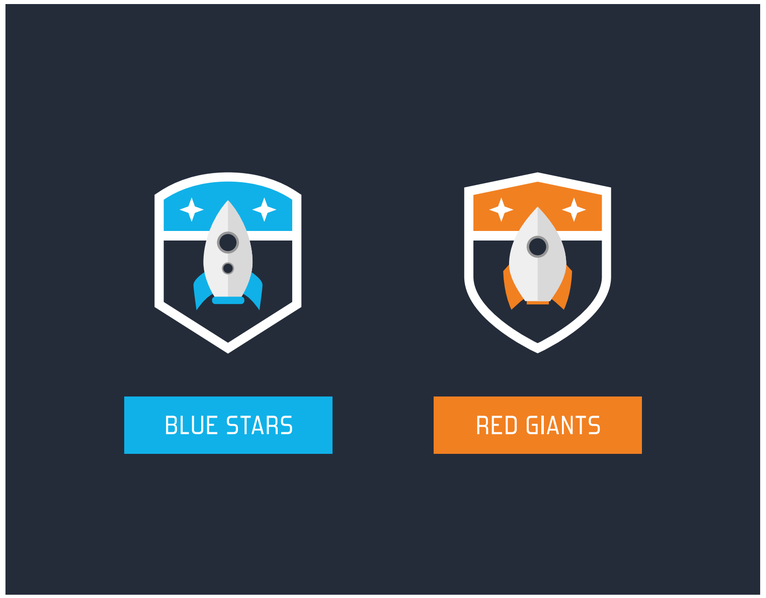
The Experience

Space Race is a prototype of the Bitness ecosystem that is geared for a family-friendly environment like the Imagine RIT festival. The target audience was adapted for this specific scenario, but the core principles are still present (getting a community more engaged and motivated to work out and practice a healthier, happier lifestyle).

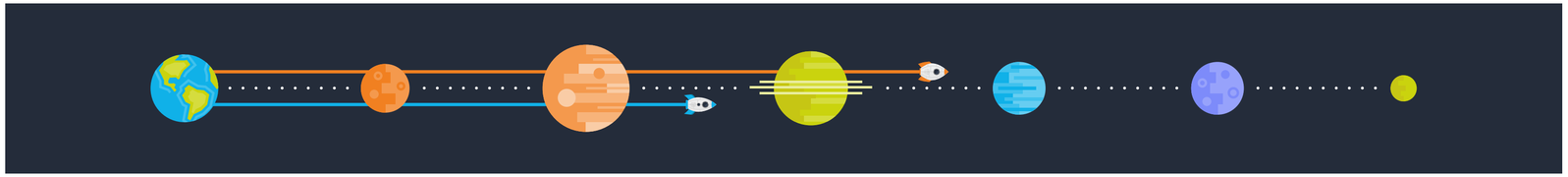
Space Race is a two-player game where people race to fill their fuel tanks and launch their rockets by doing jumping jacks. Throughout the day, the two teams (the Blue Stars and the Red Giants) total distance into space is being tracked in real time. A visual at the top of the screen shows their progress in a timeline with planets as visual milestones.

SPACE RACE LOGO

TEAM BADGES



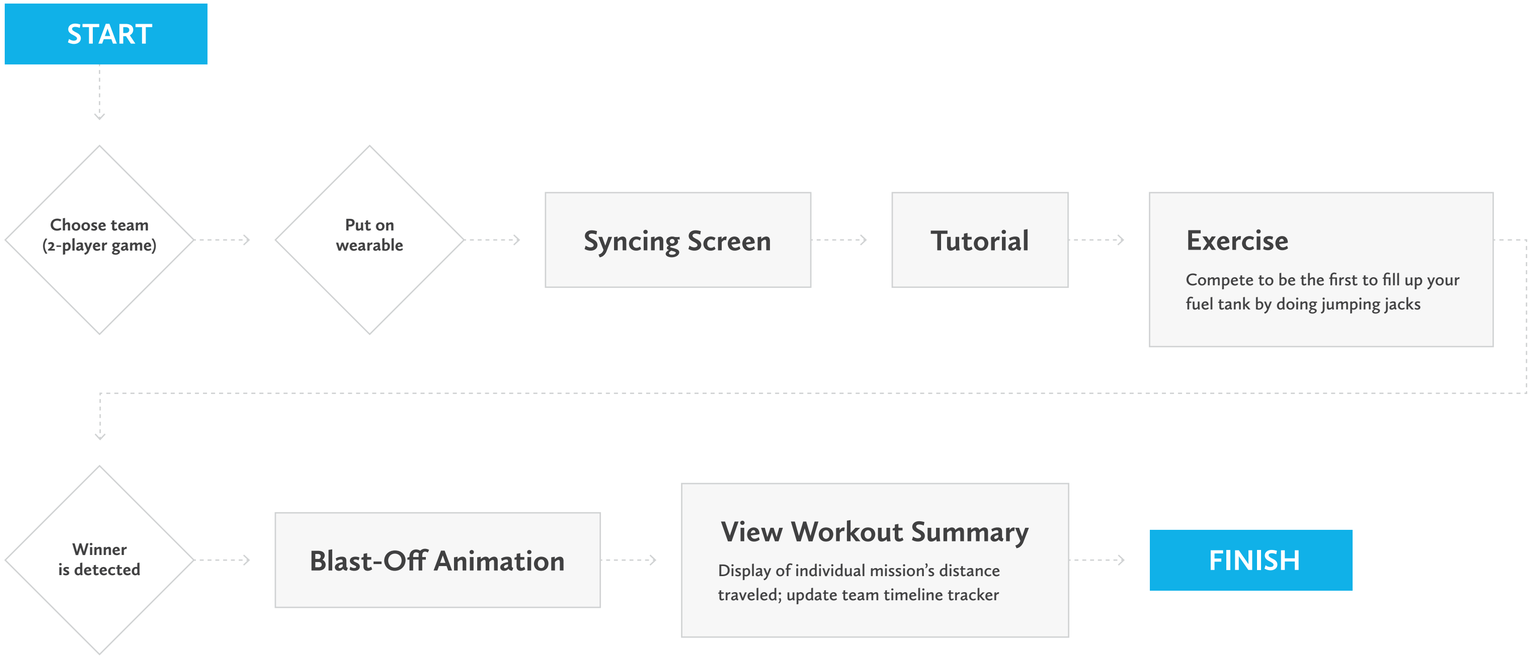
TIMELINE TRACKER



Space Race: Workflow

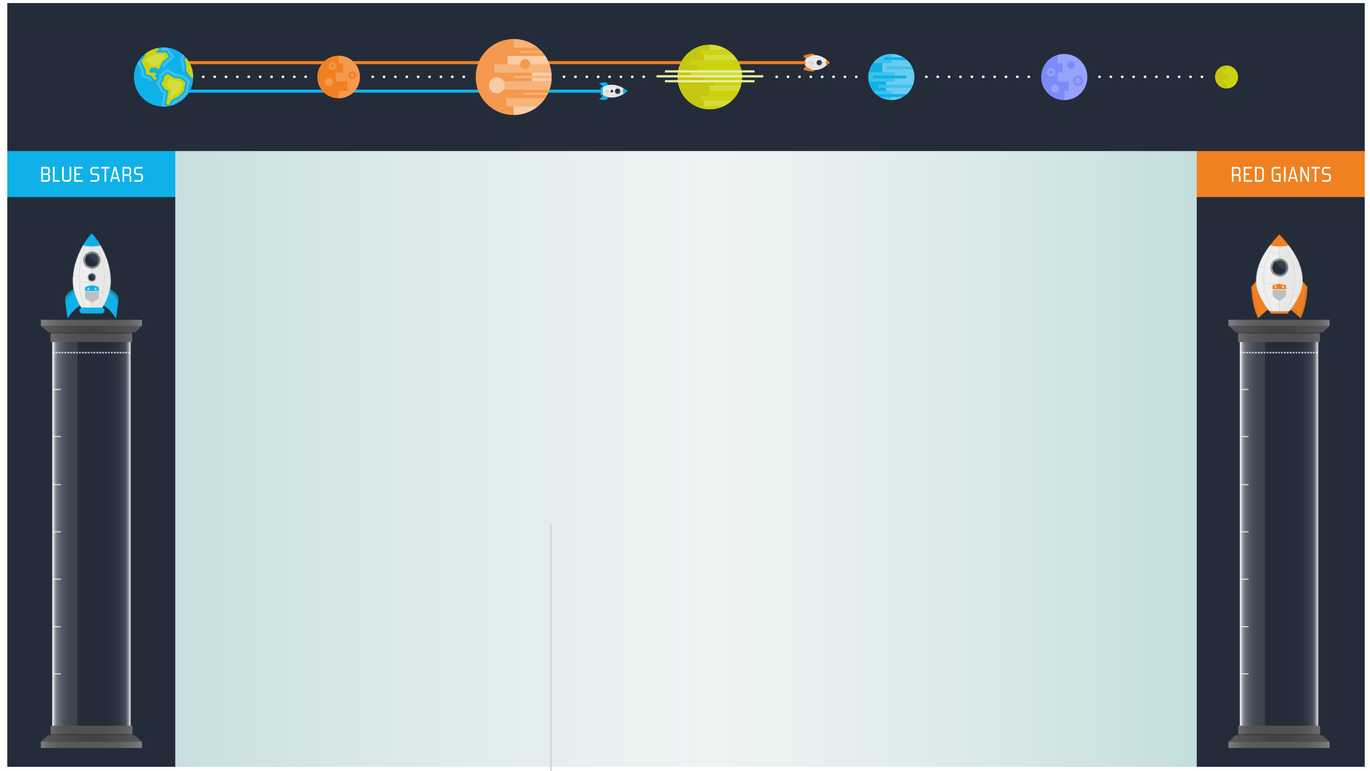
How it Works

The players stand in their respective team's spot infront of the screen and sync in with their Bitness wearables. A tutorial animation then plays, walking the players through how the game works. After the countdown, the players begin their jumping jacks exercise. A Kinect is registering their movement, and with every jumping jack the players watch their fuel tank on the side of the screen fill up with more fuel. Once someone fills their tank, an animation plays of both rockets launching into space. Whoever won sees their tank fly farther and longer. Then totals are calculated and their distance is shown, as well as how much they contributed to their team's total.



Space Race: Core Region Breakdown

Timeline Panel
Real-time updates of total team distances traveled throughout the day



Side Panel 1
Displays all information for team Blue Stars (sync screen, fuel tank animations, mission and team results)

Side Panel 2
Displays all information for team Red Stars (sync screen, fuel tank animations, mission and team results)

Mirror/Video Screen
Before the exercise starts, this space is utilized to show the onboarding tutorial

Space Race: The Exercise

In addition to our Space Race concept, we needed to **rethink our approach** to building the interactive Bitness exhibit due to limited time, budget, and resources.

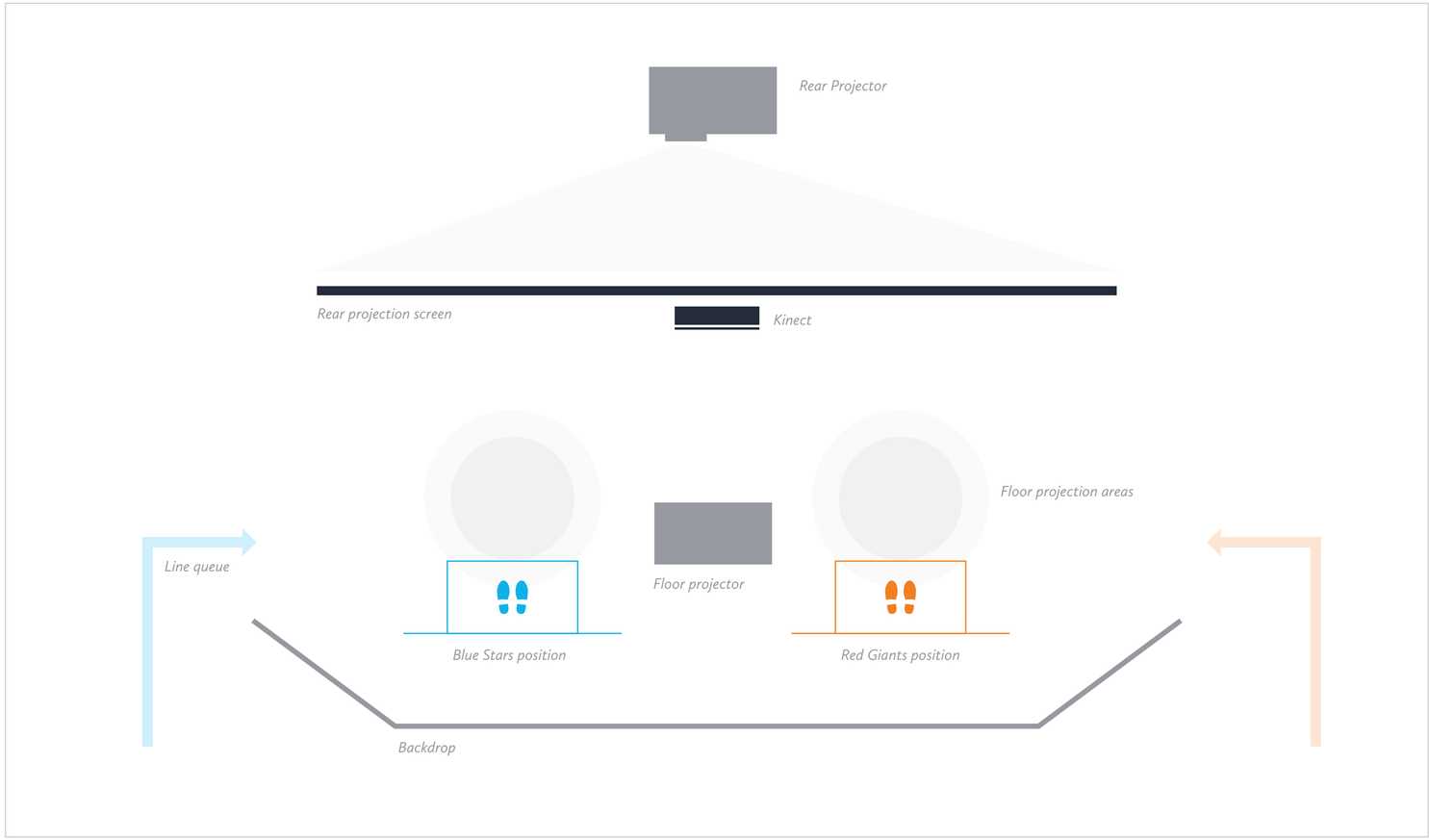
Space Race: Exhibit Setup

Building the Environment

In addition to the new approach, it was clear almost immediately that we were not going to be able to be fully funded. Since our original plan for building a mirror structure was out of our scope (the lumber and one-way mirror costs alone were over $600), we came up with an alternative. The setup would essentially be the same, except the mirror effect would be done by using a Kinect 2.0 to project the players images to the screen, as well as the side panel graphics.

This diagram displays our final setup for Imagine RIT, where we were able to use a rear projection screen in lieu of an actual mirror. Since we did not have time, money, or resources to build a working wearable to use in our project, we set up a Kinect to track the jumping jacks movement in real-time. In addition to building a fully functioning interactive game, we were able to project team badge animations from the ceiling onto the floor that were programed to shadow players' movement as they exercised.

OVERHEAD EXHIBIT LAYOUT



Conclusion

With Bitness, we aim to inspire and educate gym goers and foster a **strong health-conscious community** within the corporation through social engagement.