

Title: BuFfBoX

Vision: To build a NAS system enabling easy, cost effective file sharing for University of Colorado students.

Who: Camilla Lambrocco, Adrian Wong, Andrew Berumen, Conor Walsh, John Anderson

List of requirements: Link to Google sheet:

<https://docs.google.com/a/colorado.edu/spreadsheets/d/1cYSddUZGU80wfpTm51AO3zB0zQ8IEOU2UKysiRE1pl4/edit#gid=0>

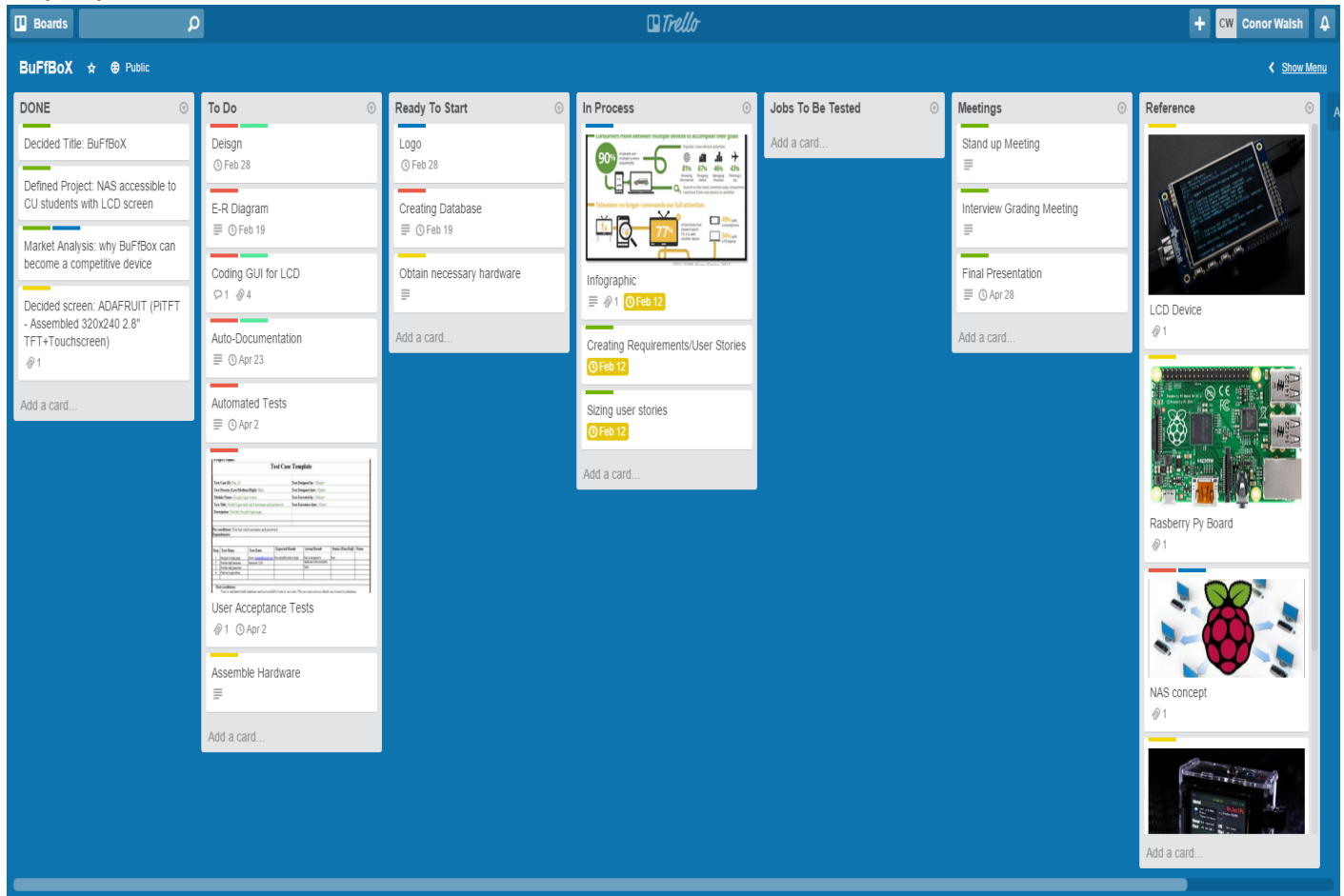
	Business			
BR.01	there shall be a web interface through which the users can access the BuFfBoX (Website)	High		8
BR.02	there shall be a LOGO identifying the brand and the product in each page of the web-site (Website)	High		1
BR.03	there should be a log-in access that asks for user ID and password (Website)	High		2
BR.04	access should be restricted to CU student. (Website)	High		2
BR.05	there shall be an interface to be able to interact with the device (Device)	High		5
BR.06	the board should be protected by a solid case to guarantee protection. (Device)	Low		3
BR.07	the screening case must be of a material that has a fusion temperature point above the one reachable by the Raspberry Pi board.	High	?	
	User			
UR.01	the device shall have a small touchscreen LCD screen of 2.8" that allows an intuitive access to the settings of the NAS. (Device)	High		5
UR.02	the board shall be attached to a power supply that allows the user to access the screen whenever.	High		1
UR.03	the board shall have a portable power supply that uses a 5V battery with an autonomy of at least 1 day.	Nice to Have		2
UR.04	the website shall provide dropdown list buttons and a menu driven interface that responds to the input within 1 second.	Moderate		
UR.05	be present with the possibility to access directly to memory storage and in two steps to status information.	Low		8
	Functional			
FR.01	Students must be able to successfully login and manage the personal data stored	High		8
FR.02	The login of the students should happen through CU-email and a new created password	High		2
FR.03	Students should be able to communicate with customer service efficiently** (email, chat service, ticket, etc)	Nice to Have		1
FR.04	Students should be able to interact with other users i.e. commenting on shared files, messaging between users, etc.	Nice to Have		3
FR.05	Students should see a success message (or receive a confirmation email) after uploading a file.	High		5
FR.06	Students should be notified if someone has sent them a message or commented on something relating to them.	Moderate		3
FR.07	Students should have access to a "Forget Password" option on the website.	Moderate		3
	Non-Functional			
NFR.01	the operative system of the Rasberry Pi device shall be able to manage the access of multiple users at the same time without crashing for overflow of data.	High		13
NFR.02	the interactive GUI created for the LCD interface shall be smooth and accept touch screen inputs.	High		8
NFR.03	The website should allow for Single Sign-on so users don't have to input their passwords/username each time.	Low		5
NFR.04	the device must be compact and small to allow manageability. The apparatus shall be able travel in small spaces like a purse or a backpack	Low		1
NFR.05	the web interface shall be utilizable by the most used operating systems (ie Windows and Mac);	High		2
NFR.06	the login access of each user shall be password protected using an alphanumeric security key degree of scalability. The type of RAID configuration shall be picked by the end user depending on his/her needs.	High		5
NFR.07		Low		8

Methodology: Agile

Project Tracking software: Trello

Link to project tracking software: <https://trello.com/b/fZ5zwvtp/buffbox>

Project plan:



Extra Credit:

Market Analysis

BuFfBoX

2/12/15

Target Market

According to the Parthenon Group, a “strategic advisor of choice for CEOs and business leaders worldwide,” there are six main segments to the college student population. If you wish to look more closely into the Parthenon Group’s Study please follow this link:

http://www.parthenon.com/GetFile.aspx?u=%2fLists%2fThoughtLeadership%2fAttachments%2f85%2fThe%2520Differentiated%2520University_WP_web_final.pdf

Below is a quick review of each of these segments and if BuFfBoX will be targeting these groups.

Below is a quick summary. I highlighted the segments I thought we could target with our product:

- Aspiring Academics (24%) – “Traditional Student”
 - 18 – 24 years old
 - Pursuing an academic career
 - Usually fairly affluent
 - BuFfBoX Target Segment?
 - Yes – traditional students have an increasing need for data reliability, data sharing, and data storage. The BuFfBoX will meet all three needs.
- Coming of Age (11%) – “Growing up”
 - 18 – 24 years old
 - Usually have resources to academically “dabble”
 - BuFfBoX Target Segment?
 - Yes – although less focused on academics, any college student has both social and academic data needs. From sharing movies to storing and sharing music, most college students will need BuFfBox’s ability to collaborate.
- Career Starter (18%) – “Jobs, Jobs, Jobs”
 - 18 – 24 years old
 - College as tool to pursue career
 - BuFfBoX Target Segment?

- Yes – when building a portfolio or resume college those students focused on jobs after graduation will want a reliable storage system for all their college work. The BuFfBoX will provide these students with this ability.
- Career Accelerator (21%) – “Continuing Education”
 - Usually 24+ years old
 - Use nontraditional delivery methods like online classes
 - BuFfBoX Target Segment?
 - Yes – due to the nontraditional delivery methods often used by these students, especially online classes, these students will need a place to easily store all their school data. BuFfBoX is the perfect device for these students.
- Industry Switchers (18%) – “ “
 - 24+ years old
 - less affluent
 - using college as opportunity to switch paths
 - BuFfBoX Target Segment?
 - No – will probably be priced out
- Academic Wanderer (8%) – “At risk”
 - 24+ years old
 - least affluent of groups
 - least likely to graduate
 - most likely to be dissatisfied by college experience
 - BuFfBoX Target Segment?

- No – will probably be priced out

Competitors

At first I split competitors into two categories, software competitors and hardware competitors. However, after a little research I don't think BuFfBoX will be competing with software providers, like Dropbox. We will not be able to compete with them in monetary or convenience terms. Additionally, you have to trust Dropbox with your data. What differentiates us from providers like Dropbox is the ability to have protected data. Therefore, we only have hardware competitors.

Below are summaries of the three devices that will probably be our chief competitors. This is chiefly due to price and quality. Among the top rated NAS devices only three were within what we believe will be our price range. Once we found our proper price range we only wanted to examine the best in the business as competitors so as to understand the level of quality we wish to achieve.

1. Seagate Central (<http://www.pcmag.com/article2/0,2817,2424411,00.asp>)

\$219.99 (MSRP)

Pro	Con
Easy Setup	Runs hot
Fast Read/Write speed	Only 4TB
Integration with Facebook and other media devices	Performance lag

2. WD My Cloud Mirror (<http://www.pcmag.com/article2/0,2817,2459697,00.asp>)

\$399.99 (MSRP) – Probably at the very high end of our competitors in terms of price

Pros	Cons
I/O performance	512MB default RAM

User-friendly interface	No folder management in UI
Personal Cloud Service	No printer support for USB
RAID 0 and 1	
Scalable	

3. Transporter (<http://www.pcmag.com/article2/0,2817,2417258,00.asp>)

\$199 (MSRP)

Pros	Cons
Retain full control of data	Need to know other users' email
Affordable	Not very fast W/R
Easy to sync and back up	No built-in wireless
Can access remote NAS over web	
Mac, Windows, iOS, Android support	
Cross platform	

BuFfBoX Competitive Advantages

Price – a product that is no more expensive than our competitors

Convenience – a product that will fulfill our customer's needs more efficiently than our competitors.

Scalability – a product to meet whatever needs our customers must have.

Reliability and Security – Because this is not cloud storage our customers will have more control of and protection around their data.

Infographic:

