

Buster Collins

Year 3 Semester 1

Reflective Report



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## Introduction

Year 3 has interested me much greater than any of the previous years, as it seems more focused and driven by our interests, allowing us to learn about what we wish to specialise in and stay motivated, researching the things that interest us. It also allows us to put our creativity and imagination to good use, which lessens the impact of the much greater workload and makes it enjoyable and much more manageable than previous years.

## Project Objectives

This semester I had three objectives to complete as well as this reflective report: To write the introduction and Literature Review of my dissertation, to write a business plan along with a financial summary and expected profit/loss statement, as well as complete a freelance client project, as I could not secure a work placement, due to the uncertain times.



## Business Plan

My business idea is called Cupid's Cuddle. It is for a cuddly toy that lets you talk, feel the warmth of, and heartbeat from your long-distance partner, through an interactable and fun plushie animal, allowing you to cuddle with your partner from anywhere! The idea came from a post-lecture conversation with some friends about stupid business ideas that we began spit-balling after the lecture. I had made a small list of possible business ideas on the spot; some weren't even too bad.

think of 2-3 business ideas, or one big one.

\* Solar Cell.

\*\*\* 3D Bioprinting of Meat and other things? Don't know how to start at all.

\* Something Karate Related - Fitbit for contact sport, for conditioning

\*\* MotherBird

\* Build-A-Bear but for anything - Talking with the bear with a loved one on the other end, when they fall asleep you hear them sleep and he Teleporter

\* Omni-Glove - Microchippable wearable tech, could squeeze your hand or notify you when your phone or computer gets a notification.

\* All-in-one Kitchen. - Water attached to kettle.

\*\* Drinking Water - Gamification, a water bottle to connect to your phone.

\*\*\* Sleep security. A way of connecting loved ones for sleep, to help with insomnia. - A Cuddly bear.

\* Auto Doctors, accurate WebMD from home. Surefire way of diagnosing you.

I gave them star ratings based on relevance and usability. The online build-a-bear was initially a throw-away idea we joked about, that I continued writing down, but once I thought of the idea for sleep security connecting business idea, I thought I could merge the two to create something really good. After asking Steve Cross, our business lecturer, about the idea, he thought it was a strong and marketable idea, so I decided to run with it.

The idea for a sleep-security came from a personal place, where I often have trouble sleeping and suffer from restless nights more often than I feel comfortable with. I have found ways to help me drift off, which usually involve cuddly toys and background noise, of people talking. The best experience with falling asleep is when I am with a partner, who I can talk with and cuddle with before sleeping. With the rising over the summer, I could not meet up with my girlfriend and often found it hard to sleep as a result. We found it hard to stay connected and broke up as we found it too stressful, on

top of everything else going on, to stay in touch as often as we used to. So, I had this idea as a potential fix to any other couples experiencing that same problem as a result of the time being spent away.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Brainstorming Ideas	█											
Researching the idea		█	█									
Building upon the Idea			█	█	█	█						
Creating Showcase Video												
Creating Presentation											█	█
Presentation												
Business Plan Mock Write-up		█	█	█	█							
Business Plan Write-up						█	█	█	█	█	█	
Business Plan editing												
Review and Hand-in											█	█

### Client Project – West Meon Rifle Club and Range

After I was unable to find a work placement for this semester, I looked into finding some client projects to do for practice freelancing. I had no personal job opportunities, so I looked for some projects that were being given to second-year students. I found two that interested me, the job to remodel Winchester digitally in an app, similar to Love Winchester, and the pending extension designs for the West Meon Rifle Club and Range.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Finding Work	█											
Meeting with Client		█							█	█		
Measuring the existing site			█									
Conferring with other CAD			█	█								
Created a draft drawing				█	█	█		█	█	█	█	
Rendering and Displaying						█			█		█	
Creating Documentation									█	█	█	
Review and Hand-in											█	█

### Portfolio Website

I decided I wanted to change my website, keeping the same idea but make it look more concise and more responsive. I decided that to do this, I would have to limit the number of projects being shown on my website and so I asked if I would need to keep them for this semester and the answer was that I would need to, for this semester at least. So, I decided to postpone changing my website at all until next semester and as such added the three

new projects from this semester onto my portfolio website the same way I had all of the previous projects laid out, until receiving news that we could use WordPress to create our site. With this information, I emailed my main CAD lecturer, Debs Wilson, to find out if I could collaborate with some of my Developers friends, Lewis and Simon, to redesign and recreate my website. She agreed and seemed keen on the idea, so I asked them to create me a new website, which is being done now!

## Tasks & Milestones

### Dissertation

I set about for some early research, for my knowledge, and some background knowledge on a dissertation idea. On the aspects of bio-printing, I found very little, but I was able to find many articles on the reception of cultured meat. I deduced that bio-printing meat could be a way to overcome the flaws of cultured meat, allowing the idea to become more commonplace if public conception could be changed.

### Business Plan

Writing up the business plan was easy, after sending an early market survey out to relevant parties, I was able to perfect the idea, which gave me faith in the product and made it easy to write.

After asking around for some market research, I found other people who have similar issues and gave me some more uses of the idea, such as talking with family members and friends through the same medium.

After some further feedback from my lecturers and research, I decided I would change my funding model over to crowdfunding, allowing me to assess the market and get some publicity before the business starts. With this idea, I was able to write a more detailed business plan explaining finance in

much greater detail, and how I am going to protect my idea using trademarks and copywrites.

### Client Project – West Meon Rifle Club and Range

I opted to take on the task of the West Meon Rifle Club and to donate my previous CAD drawings of the landmarks around Winchester to the team taking on the Digital Winchester plan, but have not been asked to hand them over just yet, nor have I had any information on who would be wanting them.

For the Rifle Club, the job seemed simple, I had a perfectly laid plan on what needed doing and how I was going to do it, recreating the old, existing building within Revit to the exact specifications and then moving around the details of the buildings until we found a design the client was happy with. The plan stayed the same throughout, however, some additions to the plan began being required. The first being that the plan sent through from the client was not measured, and not convincingly scaled. This meant I would have to go to the site to take measurements and pictures. Luckily for me, the second-year students also taking the project had already arranged a meeting and were happy to give me a lift with them to the site, where I was also able to get a hand with the measuring. This also allowed us to have enough people to take all the pictures we needed, get all of the measurements, and attain all the information we required about the site and what the client expected from us, all in one meeting, once we put our heads together after the meeting. This was ideal and gave us more than enough information for us all to begin creating our designs to send to the client. I began right away, creating an initial draft of plans to send to the client. They were happy but had a few minor tweaks that we were able to go into an online meeting soon after and I was able to share my screen, allowing them to choose the changes exactly how they had imagined it all looking. I was pleased with this result, as it allowed me to easily create exactly what the

client was looking for, expending no extra effort than needed, without allowing me to get too attached to my initial designs. After the meeting, I was able to make the last few final adjustments to the range, as the client had planned and complete all of the final, complicated adjustments, now completely confident it would be as the client envisioned. I then created some informational renders of the final draft and sent over the floor plan, to make sure the plans were as intended by the client and once the changes had been signed off, I was able to send over the files and final plans to the client, giving them exactly what they wanted and concluding the project.

After completing the project, I was approached by two separate groups, also working on the same project as I was. One group knew nothing about where to start and had not contacted the client. As such, I was able to direct them towards the client and send them relevant information about the site. The other group has begun working with the same information and measurements as me, as we had worked together to attain it. They seemed to have prioritised the wrong aspects of the project, that would work well together with my own had we been working as a team, but unfortunately, we had decided beforehand to propose separate designs to the client, which I now see as a missed opportunity. Nevertheless, the workload of the other groups made me feel much better about my timekeeping and work ethic, which gave me the confidence boost needed to finish my other projects.

When it came time to upload the final work to the client, they wanted as many measurements as possible to be shown professionally. For this, I produced a Revit TitleBlock and included relevant measurements as needed. I also took this opportunity to ask for their stance on what we could upload to our portfolio. They gave us the all-clear so long as their names weren't disclosed, and the security measures of the buildings were not made public.

[Portfolio Website](#)

This semester, I was able to learn a small amount of PHP to echo out aspects of my website, cleaning it up, and making my new projects easier to add.

## Achievements

### Dissertation

I found my idea was good, as it found a nice gap in commonplace research. Many studies have been done on cultured meat and have laid out the weaknesses, but how good it could be if it becomes a reality. But no truly credible sources have started researching how bio-printing could be used to overcome the flaws of cultured meat, allowing me to make some good and helpful primary research on the topic.

### Business Plan

The feedback received gave me confidence, as it means the business idea could potentially take off if the idea was made correctly.

### Client Project – West Meon Rifle Club and Range

I was able to complete the project with so much time left, I was able to fix all tweaks the client wished to propose until they were finally happy with the results. This gave me the confidence that I would do well as a freelance worker as a contractor, that I can communicate well with a client, understand their needs respectably and produce the standard of work they are looking for!

I know also have a Revit TitleBlock to be used for future projects, which was an oversight on my part in the past.

# Challenges

## Dissertation

Found it very difficult to find any initial research on the topic, which shook my confidence at first, before I realised this was a benefit, allowing for more meaningful primary research.

## Business Plan

I began to lose faith once it became time to begin writing the finance summary. Because of the personalised nature of the product, I decided the product would have to be completely customizable, with only features that the client would want to be included, and to make the design of the product exactly how the client wanted. As such, it would be a very difficult task to have people do, meaning I would need to be paying multiple people to help me work on the product, and paying them well. My initial finance summary was horrendously in the negative, the business seemed like it would be a complete flop.

Cost per pair	50-100	Cost of Basic Features	£50.00	Cost of Medium Features	£70.00	Cost of all features	£100.00	Cost of 3-Year Warranty	£15.00						
Expense per pair	20-50	Expense of Basic Features	£20.00	Expense of Medium Features	£35.00	Expense of all features	£50.00								
	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21		
Income															
Pairs Sold	0.00	5.00	6.00	10.00	20.00	20.00	18.00	5.00	6.00	4.00	25.00	20.00	30.00		
Customers Paying	£0.00	£250.00	£300.00	£500.00	£1,000.00	£1,000.00	£500.00	£250.00	£300.00	£200.00	£1,250.00	£1,000.00	£1,500.00		
Insurance / Warranty	£0.00	£0.00	£0.00	£45.00	£90.00	£90.00	£45.00	£22.50	£27.00	£18.00	£112.50	£90.00	£135.00		
Loan															
Total	£0.00	£255.00	£306.00	£555.00	£1,110.00	£1,110.00	£555.00	£277.50	£333.00	£222.00	£1,387.50	£1,110.00	£1,665.00		
Expenses															
Manufacturing Parts															
Packaging	£0.00	£100.00													
Accounting Fees	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00		
Insurance	£0.00	£50.00	£50.00	£50.00	£50.00	£50.00	£50.00	£50.00	£50.00	£50.00	£50.00	£50.00	£50.00		
Staff	£50.00	£50.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00		
Website	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00		
Advertising	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00	£250.00		
Outsourcing	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00	£1,150.00		
Tax	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00	£100.00		
Shipping	£0.00	£50.00	£60.00	£100.00	£200.00	£200.00	£100.00	£50.00	£60.00	£40.00	£250.00	£200.00	£300.00		
Loan Repayment															
Total Expense	£1,750.00	£1,950.00	£1,910.00	£1,950.00	£2,050.00	£2,050.00	£1,950.00	£1,900.00	£1,910.00	£1,890.00	£2,100.00	£2,050.00	£2,150.00		
Profit	£-1,750.00	£-1,695.00	£-1,604.00	£-1,395.00	£-940.00	£-940.00	£-1,395.00	£-1,622.50	£-1,577.00	£-1,668.00	£-712.50	£-940.00	£-485.00		

However, soon after I was able to fix up the idea and find some holes in this business model, which allowed me, with a bit of funding, to start up a strong and eventually self-sustaining business model that I thought was realistic and hopeful.

Keeping under the word count was a huge problem for me, especially with the additives Steve explained we should be sure to include in one of his later

lectures. This pushed my word limit outside of the acceptable margins and made me have to go through and edit the work another time, to make sure I was able to include everything required. However, after this, I was confident I had everything that I would need to include in the document.

Another major setback was thinking about protecting my intellectual property. I immediately thought that the best idea for my product would be to patent it, but then panicked as I had already disclosed the idea to many people and even put out a public survey, as such I would not be able to get a patent. I thought about removing the evidence of doing anything before attaining a patent but thought that was dishonest and likely wouldn't work. Instead, I found that for my idea, I could protect my intellectual property the same way as the famous example of Crochetdermy, using trademarks for the relevant names on the products, having my idea protected by Copywrite, and attaining unlicensed design resins of every single one of my products that I would be sending out to my clients, while keeping the inner workings and method of creating the product a trade-secret, having workers sign a non-disclosure agreement before entering.

#### Client Project – West Meon Rifle Club and Range

There were few challenges with this project, except the initial hiccup with the plans. My confidence was only knocked slightly when the client asked for a few tweaks, but they were polite and honest about the adjustments and as such, I was able to tweak them quickly and easily.

I had a plan for the way the main door would work originally for the client but did not pitch it as the client already had somewhat of an idea for the slopes. As such, the slopes at the start were changed around many times before finally resting on my original idea for the slopes. It did not waste too much time, but it shows me I need to be more confident with my initial design and let the client change my idea to what they want, after seeing my original design. Within reason, obviously.

