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**1. Executive summary**

This report provides background on all the members of XVI, the tools they have used, and their project, The SocialCare Chat. Along with this, XVI, reflect on their time together working as a team throughout the second phase of their group assignment.

Group XVI teamed up just over a month ago and previously participated in a range of tests in order to determine compatibility; you will also find a brief introduction on each member of the group.

Further on, XVI dive deeper into the plans for their project, scope, testing, risks and other important components regarding their project, The Social Care Chat. The aim is to allow the elderly or those with a disability, to video call and interact with their loved ones with ease.

Finally, in the group reflection, the team goes through what they learned, what they found surprising throughout the process, how technology allows for effective online collaboration, and individual activity. This was done to determine what went well, what did not, and what we could do better next time.

**2. Introduction**

XVI collaborated through the use of technology to plan, allocate and discuss different components of the tasks at hand. The group decided to allocate various topics to different members to then have other team members review and provide feedback. This enabled the team to be on the same page and have a thorough understanding of what we wanted to achieve together. In doing all of this, XVI, were able to commence with detailed planning of The Social Care Chat project with the new learnings and understanding of mobile app development; enabling them to leverage off technology to achieve results more efficiently and effectively.

**3. Meet the team at XVI**

****I am Connor, ID s3866963, and I am a part of XVI. I was born 25 years ago in Ryde NSW and raised all over Australia by a single mother and technology. Currently living in Merriwa NSW with my fiancée and our giant sook of a furbaby Turbo. My passions include gaming, modding anything and everything to do with my PC, playing my guitar when I remember it exists, binge-watching whatever series has caught my attention for the week and travelling to find yummy new vegan foods and exciting new vaporizer juice flavours. I have had a very strong interest in IT for as long as I can remember, but the main things that have motivated me into studying it have been modding my gaming consoles, from the PS1 all the way through to the Switch, coding both mine and all my friends’ MySpace themes back in the day and just generally getting a PC, the openness and freedom of the PC platform just completely opened my mind after being on consoles for so long.

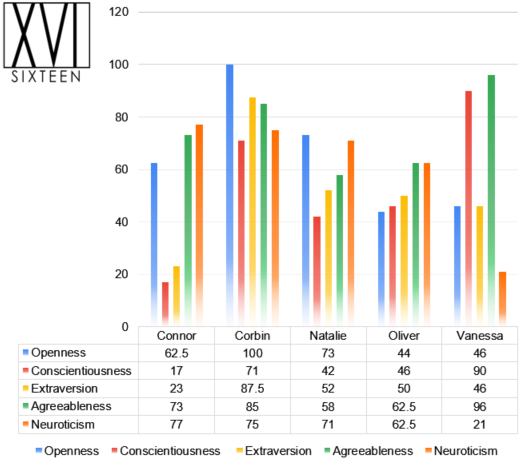
****I am Corbin, ID s3855159, and I am a part of XVI. Hailing from Melbourne City and originally from Country Victoria, I now live on the sunny Mornington Peninsula. My day job is in hospitality and tourism management but I am always pursuing a new side-hustle. I am an enormous music lover and spend most of my free time singing and playing guitar, reading a good book or involving myself in social or philosophical discussions. I have been a gamer for my whole life, and I do not really remember a time when I haven’t owned some sort of gaming console. My interest in IT was spurred when I took a short course in Python. Tech had always interested me but learning a small amount of code showed me that it was something I could learn and not as out-of-reach as it appeared. I am particularly interested in artificial intelligence and the future of computing.

****I am Natalie, ID s3505918, and I am a part of XVI. I am 24, Italian-Australian and I was born and bred in the northern suburbs of Melbourne. I enjoy modding my PC, playing video games, learning new skills, languages and watching RuPaul’s Drag Race. Since I can remember, I have always been in love with technology, from pulling apart electronics to hacking my game consoles and everything else in between. One of my big passions is making things and I consider myself a part of the maker community. I have taught myself to solder, 3D design and print and I enjoy woodworking. Recently, I designed and manufactured my own PCBs for a project in which I was modding a DS console to run inside an original Gameboy case. In the future, I would love to combine my love of design, making things and technology together as a career.

I am Oliver, ID s3861675, and I am a part of XVI. I am 16 and was born in Australia. I enjoy playing video games, watching shows, going out with friends and using software such as Unity to explore cool ideas. I have always enjoyed using technology whether it was creating my own retro arcades with raspberry pies or making small fun games in Unity to mess around in with friends. I have never made a game with a serious intent to either sell it or release it but I have made multiple to share with friends and play together for the next week seeing who can get the highest score. IT leaves almost no limits to creativity and that is why I like it so much, I would love to get a job as a game developer in a company, but it has also been my goal to work either by myself or in a small team just having fun whether it is by YouTube or making Indie Titles.



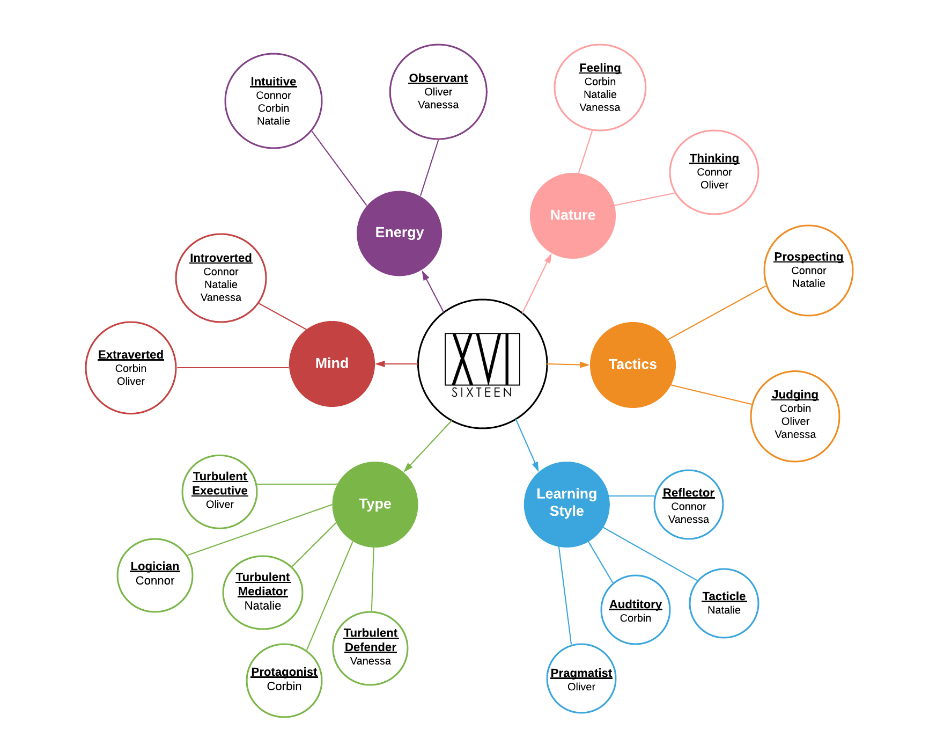
I am Vanessa, ID s3864452, and I am a part of XVI. I am 28, born and raised in Australia in a cute little country town that goes by the name of Orange! I grew up dancing to rock ‘n’ roll music and singing Shania Twain, I am still quite the country girl to this day but living in the suburbs of Sydney with my boyfriend, Chris, and furbaby, Layla. Snowboarding is my passion, I enjoy being outdoors but seriously love being a homebody as well. Throughout my time working in the tech space, I have been involved in various projects that have allowed me to be a part of the changes in our product and ultimately improve the experience for the end-user. I have become very passionate about technology which is why I am looking to develop my skills and knowledge in order to pursue a career in Software Engineering.



The members of XVI participated in three tests each to determine the strengths, weaknesses and compatibility of the group. The tests performed included The Myers-Briggs Personality Test, The Big Five Personality Test, and The Learning Style Quiz.

From the chart above, you can view the results of each individual from their Big 5 Personality Test and from the chart below, you are looking at a combined result of The Myers-Briggs Personality Test and The Learning Style Quiz. It is evident from these tests that the members of the group are a combination of all personality traits. The group’s personality type is different across the board with no same individual, as well as their learning styles with the exception of Connor and Vanessa both being reflectors.

The traits from each member complement one another and allow the group to leverage of the skills and strengths of other individuals in the team. Working with a variety of personality types also allowed us to learn from each other, as the team continues to collaborate, the dynamic of the team will likely change.

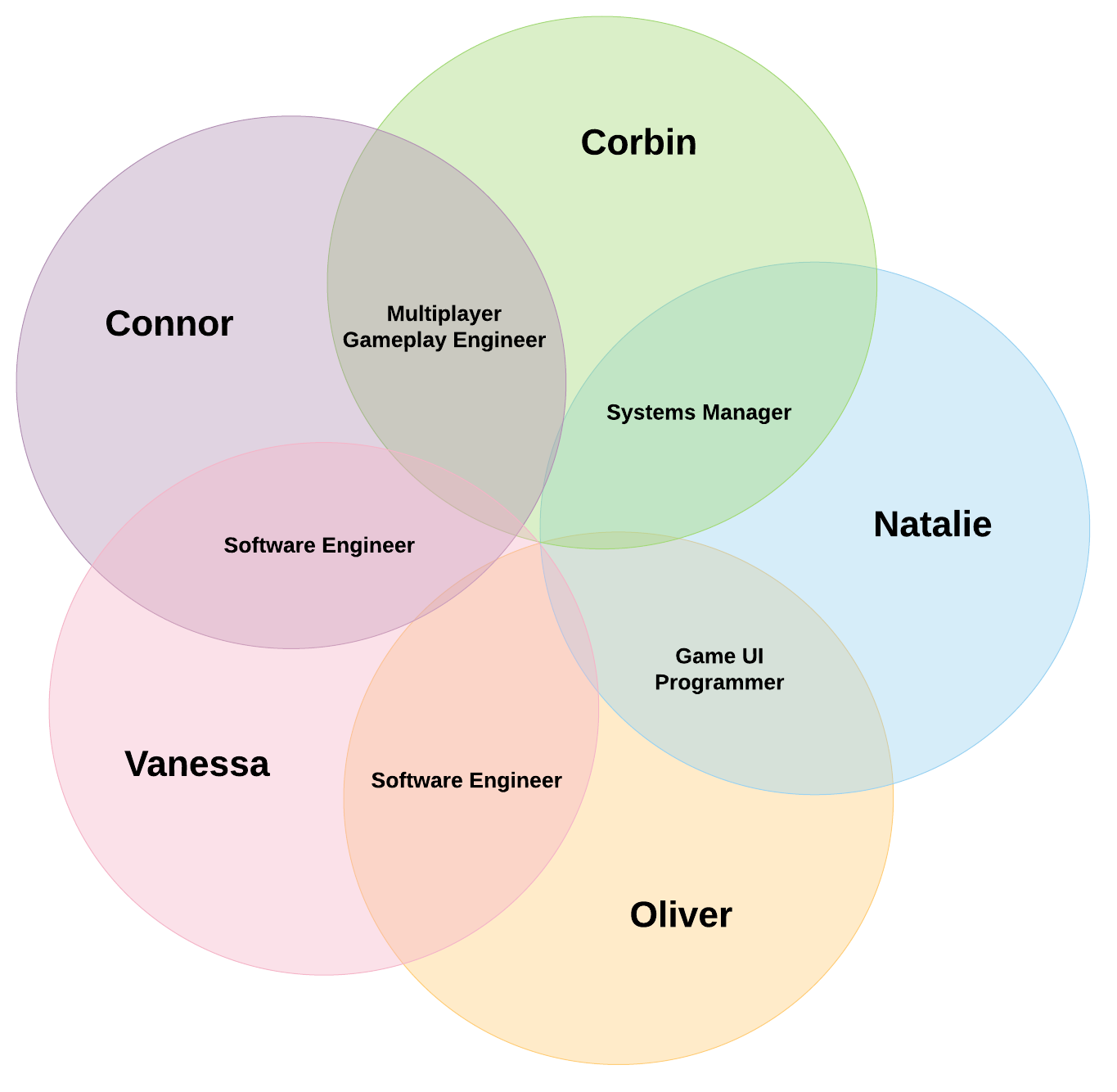
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**CHANGE TO CAREER PLANS!!! - Ollie**

Ideal jobs for the members of XVI contain many similarities. Corbin aims to pursue a career as a System Manager, Connor and Natalie are prospecting careers in game development, and Oliver and Vanessa both seek to be Software Engineers.

The common thread between these jobs is engineering… Corbin’s job as a System Manager would see him presiding over a group of System Engineers. System Engineers oversee a wide range of tasks, and are usually involved in a project from start to finish. They focus on keeping a project running by monitoring software, hardware and security systems to ensure they are up to date and running smoothly. Software Engineers however, prioritise the development of software such as games, network control systems, operating systems and more to facilitate the needs of the project.

One of the jobs that stands somewhat alone compared to the rest is Game UI Programmer as it incorporates design alongside code, but does not hold the same emphasis on the running of the core game like Connor’s choice of Multiplayer Game Engineer.  Game UI Programmers are more involved in the front end development of the game, focusing on the end-user experience by creating a design that is intuitive and easy to navigate. Gameplay Engineers control the back end of the game, making sure it runs the way it was intended. These two jobs would work rather closely with each other to reach final objectives.

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**4. Tools**

Website: <https://teamxvi.tk/index.html>

GitHub: <https://github.com/nataliecursio/XVI_A3.git>

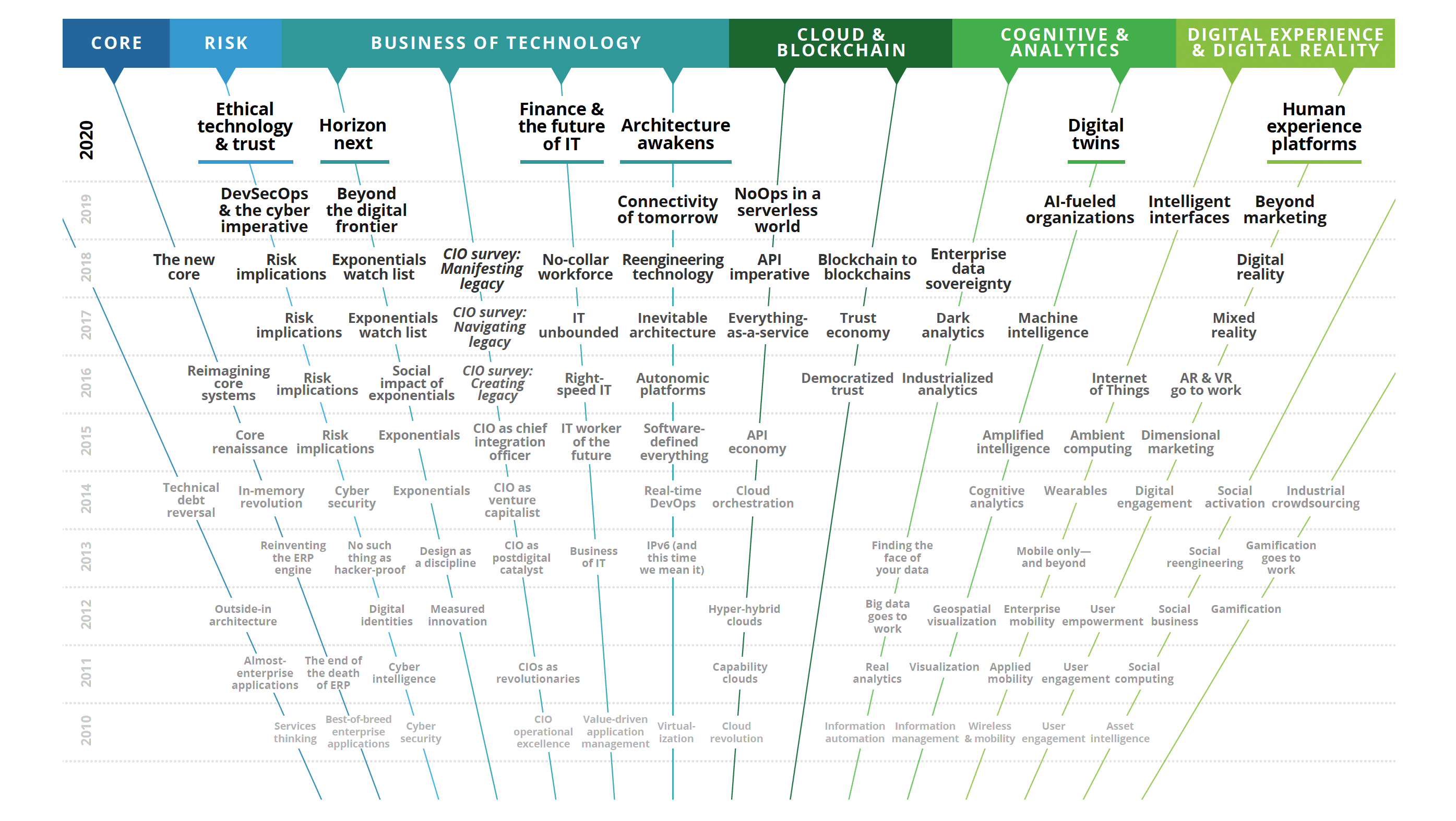
As a group, we have used a variety of tools in order to complete the tasks required. We have collaborated daily via Discord chat and caught up frequently via Discord voice chat. In doing so, this has enabled the team to continue engaging throughout the course of the assignments but also keep on track with full transparency of progress.

We continued to use Google Sheets to keep track of tasks and who they are assigned to, expected completion date and actual completion date. We continued to use GitHub and commit our work to the repository using Microsoft Word. A couple of the members of the team used GitBash to push to the repository.

Visual Studio Code was to create our website by using .html and .css. Adobe Photoshop and Illustrator to create our logo, Adobe XD to create our app demo, ~~Lucidchart and Microsoft Excel were used to create our graphs~~ as well as using FreeNom.com to reserve the website’s free .tk domain name and for DNS management.

We used Canva and Google Docs for our storyboard… and used “ XX ” for our video presentation.

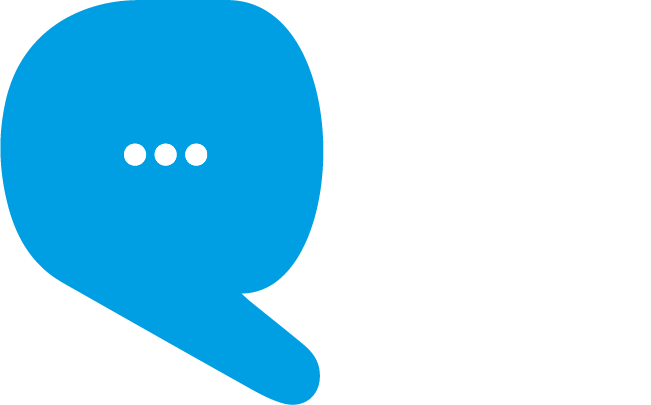
11 years of research of Tech Trends prepared by **Delloitte.**

*“Deloitte’s 11th annual Tech Trends report provides insights and inspiration you will need for the digital journey ahead. Several of this year’s trends are responses to persistent IT challenges. Others represent technology-specific dimensions of larger enterprise opportunities. All are poised to drive significant change and transform business in unpredictable ways.”*

**5. XVI Project: The SocialCare Chat**

\*\* add logo \*\*

\*\*\* add some text here \*\*\*



**5.1. Overview**

Connor

* Aims
* Motivation
* Landscape

**5.2. Detailed Description**

Aims – Natalie

Plans & Progress – Vanessa : Almost finished, just under review

Roles – Vanessa : Almost finished, just under review

Scopes & Limits - Corbin

Through diligent research and heavy discussion by the team, we have been able to lay out the exact process required to publish a fully operational, ready to launch web app. Although achieving this is beyond the time allowed to us in this assignment, we have made a clear decision on what is executable with the time given.

At team XVI, in-regards-to SocialCare, we have made the choice to produce a product pitch and a presentation describing the future invocation of our app. This presentation will involve a concise explanation of the features we plan to add to the final, launchable version, our philosophy that led us to make this decision, what a future version of the app may look like and how we believe there is a requirement, especially right now, for our product in the current market.

Although we do not intend to achieve a full deployable web app, we have a clear idea of what is required including how to write it, which programs, plug-ins and languages to use, how we eventually host it on an online IaaS and what a possible timeline-to-launch would look like. We have covered front-end, GUI development, back-end, server-side hosting and development and extensive testing procedures.

We have also spoken about where we intend to take SocialCare from here in terms of testing and how we would focus our tests to maximize reviewable data, eventual marketing, which groups of people we would aim to involve in both of these processes and, one day, how it would look amongst the other leading apps in the market.

There are obvious legal and social implications of an app like SocialCare. The main concerns are marketing ourselves to people in aged-care facilities, the likely connection to the healthcare industry, ensuring the people connected are suitable to maintain a high standard of dignity and professionalism on our app (no NSFW) and that it is in fact a platform to generate real and lasting benefit towards a cause that truly needs it, now more than ever.

Given the right amount of time, we are confident that we could achieve a web app that is indistinguishable from any other of the market leading products. We believe in our ability to execute it to a high standard, we believe in XVI and, most of all, we believe in SocialCare.

Tools & Technologies – Corbin : Almost finished

Testing - Vanessa

We will run our web and mobile applications through a range of key tests to ensure the application is functionally correct, easy to use, responsive, compatible and most importantly, security testing.

All testing phases are imperative and we need to ensure they all come back with a positive result in order to proceed. Some tests may indicate bugs, however, such tests may allow us to proceed and continue with the following test, while debugging the issues that have arisen in previous tests. This will ensure that time is being utilised effectively and the team continues to work efficiently throughout the process.

We will know that we are succeeding as we proceed through the tests rapidly and continue to debug and overcome hurdles as they arise.

The most important testing phases is certainly the design and layout as we need to ensure that it’s exactly how we intend on it to be and look to overcome such hurdles that we are highly likely to face; we will align testing to coincide with development.

Upon the completion of all testing phases, we will proceed to do crowd testing which will involve a select number of people to use the application to provide insight and unnoticed issues. We will commence with the family and friends of XVI. After which we look to undergo paid crowd testing with individuals that hold a range of skillsets.

We may also consider doing crowd testing as we proceed to update our application in future as we look to solve a need for those with disabilities.

Below you will find a detailed list of tests we will run and why they are important.

**Web application**

1. **Functionality Testing** ensures the web application is functionally correct. This will check the database connection, links to the web pages, cookies, and any forms used to submit and/or gain information from the user.
2. **Usability Testing** is a combination of functionality with the overall user experience.
3. **Interface Testing** checks whether or not all interactions between the servers are running smoothly. It will also determine whether interruptions by the server or by the user are handled properly.
4. **Compatibility Testing** is to ensure it suits all kinds of screen displays on a range of device types.
5. **Performance Testing** checks the performance of the app under a heavy load as well as testing under a range of internet speeds throughout standard and peak periods.
6. **Security Testing** tests the applications security in order to identify weak points to improvement them as much possible.
7. **Crowd Testing** is done through a select number of people to execute tests that will unravel many unnoticed defects.

**Mobile application**

1. **Installation testing:** Tests need to conduct installation testing to ensure that the user can smoothly install or uninstall the application, this also includes application updates. Ensuring the app does not crash throughout any of these processes.
2. **Target Device and OS testing:** Testing a range of mobile devices and operating systems.
3. **UI and UX testing:** It is important to test the UI and UX, as it is essential to review the look and feel of the application. This testing has to be done from the users’ perspective to ensure that the application is intuitive, easy to use, and has industry-accepted interfaces.
4. **Functionality Testing:** Tests the functional behavior of the application to ensure that the application is working according to the specified requirements. This checks the interactions of the end-user to ensure the app is actually functioning as designed and able to multitask.
5. **Interrupt testing:** Ensuring that users can be interrupted with calls, SMS, MMS, messages, notifications, network outage, device power cycle notification etc. when using the application.
6. **Data network testing:** To provide useful functionalities, mobile apps rely on network connectivity. This ensures the app continues to perform at optimal state with varying network speeds and handle network transitions.
7. **Hardware keys testing:** Checking the hardware and sensors used within the application are working efficiently. For example; gyroscope sensors, proximity sensors, location sensors, touchless sensors, ambient light sensors etc. and hardware features such as camera, storage, microphone, display etc.
8. **Performance Testing:** This involves the testing of load conditions, network coverage support, and identification of application and infrastructure bottlenecks, response time, memory leaks, and application performance when only intermittent phases of connectivity are required. This ensures the application continues to perform optimally.
9. **Load testing:** To test the application performance in light of sudden traffic surges, and ensure that high loads and stress on the application does not cause it to crash.
10. **Security testing:** Involves gathering all the information regarding the application and identifying threats and vulnerability for the application using static and dynamic analysis of mobile source code.
11. **Crowd testing:** is done through a select number of people to execute tests that will unravel many unnoticed defects.

Timeframe – Corbin

Risks - Corbin

There have been many challenges that we at XVI have faced in the pursuit of producing a fully fledged web app. In the beginning we saw the monolithic effort of creating SocialCare as something we could achieve in a mere few weeks, even as an early representation of itself, but we quickly realized that was wrong.

When we understood the size of the venture before us, we devoted our efforts to producing early version artefacts that would one day make up SocialCare. This presented its own set of challenges in trawling through the enormous library of information on web app development software and the many possible paths we could have taken with development, hosting, and platform compatibility.

Our main concerns were:

* **Finding the correct development suite:** There are innumerable options when it comes to making and app that is accessible from any device, from anywhere. [Amazon](https://aws.amazon.com/), [Google](https://cloud.google.com/appengine/) and [Microsoft](https://azure.microsoft.com/en-us/) are the market leaders in hosting and development but there are countless other PaaS solutions like [Flutter](https://flutter.dev/), or platform contextual SDK’s like [Android’s](https://developer.android.com/) development suite.

Through research we ended up deciding on Eclipse, Java, JavaFX, and Azure for hosting.

* **Our ability to use the software:** Only a few of us are learning to program, and of that fewi we are still beginners. This suggested that learning to write in the required frameworks for dynamic web app creation was something that we were all basically learning from scratch and would be highly unlikely to achieve in the time given.
* **The time we had:** With only a few weeks at best, the realistic possibility of writing, debugging and testing SocialCare before being able to successfully launch something we could vaguely call a reasonable web app was incredibly small. Our only hope was to produce smaller artefacts that would one day make up a whole, but even that would be a prospect.
* **The need to invest our own money:** We arrived at the point that if we wanted to push on with creating SocialCare, we would need to invest our own money, as a subscription service, specifically in-regards-to hosting and user data accessibility. Some of these costs could end up being massive, with no guarantee of return on investment.

These were very real concerns to us, and heavily influenced our choices with how we would move forward. Our target has been to be as realistic as possible and produce something in line with that scope. Weighing the risks has directly led us deciding to make a presentation of a future incarnation of SocialCare, while developing the body of the app alongside.

To only look at right now would be foolish and although short term problems have led to short term decisions, we have also discussed future possible ramifications of app development. An app is something that grows relative to user interaction, and that is a largely unpredictable force that we would have to have accurate plans to combat.

In setting ourselves up for success we discussed the following future possibilities:

* **The competition:** There are many other key players in the world of peer-to-peer video chat on familiar platforms that many people already have downloaded. We saw that there is a need to distinguish ourselves from the others by creating an app that is niche and easily accessible for elderly people that also develops a medium to facilitate a connection between specific people.
* **Unforeseen costs:** Hosting, testing and development time are expensive and time consuming. As SocialCare grows larger than we can manage, we would also need to hire employees, introducing wages, superannuation, and additional management requirements.
* **Data breaches and malware:** Protecting our data and preventing access to unwanted third parties is a new concept for us. There is no easily accessible rule book to this and takes study and experience to master, especially in large scale web applications, something we are not yet accomplished in.
* **Our choice to launch on the web:** The conventional way of accessing apps for the general user has been through a smartphone, on the OS-specific app store. There are many web applications, and it has been the major player in delivering apps to customers since the conception of the internet but is largely considered the exception today, despite claims that mobile app popularity is on the decline (Lance NG, 2018). Ultimately, we decided to go with a web app as we believe that in the long run it is more accessible for elderly people and is likely to grow in popularity as people realize the widespread benefits.
* **Continuous marketing:** Marketing is akin to the chicken and the egg question; the continuous stream of marketing required to build and maintain public interest in our app is too massive a cost to legitimize without previous interest. Unfortunately, it is the cost required to generate interest in SocialCare and therefore must be paid out beforehand. Through expansion this cost would increase and could potentially become massive, and necessary, before SocialCare has developed the coffers to afford it.

Above all else the most important issue to place our attention on is what exactly SocialCare is and how people would realistically use it. We aim to create and app that actively and directly facilitates the connection between two people, one young and one old. Although we can have a lot of control over exactly who ends up being a user on our app, people are people, and anything could happen.

There are many issues directly related to SocialCare:

* **Awkwardness:** If the app does not flow and feel engaging for the users it will affect their conversations. Also, people can be incredibly awkward, especially when first meeting each other. We believe it is important that SocialCare has a good human-interface and to involve “break-the-ice” features like questions or games. We are hoping that traditional games are a good way for both players to bond but for the young to also learn from the wise masters.
* **Technical ability:** The older generations are not necessarily known for their tech-savvy, but the younger is. To combat this, we have decided to involve two “sides” two SocialCare. The elderly log in would be streamlined and involve bigger buttons and straight forward navigation. We would likely disable most settings, game set up and chat room functions to the older person and leave those to the younger person as it is considered common knowledge for them now.
* **Opinions:** Most Xenniels and younger hold very different values that the elderly did in their time. We now have huge differences of opinion, lifestyle, moral values, and visions of the world. Colloquially known as being “gapped”, this is a very real problem. It is important that SocialCare helps users find conversational topics that they may see eye-to-eye on and “facilitates” conversations between the two people rather than just throwing a millennial and a boomer into a chat room and letting them go wild. We may need to permanently ban “okay Boomer”.
* **Poor health:** As people get older, their health declines. There will likely be periods when two people have developed a bond but unfortunately the elderly persons health afflictions increase, putting them in periods of long hospitalization or, in worst-case but highly likely scenarios, them passing. We would need to give the younger person the tools to deal with this and even possibly how to look for early signs of poor health and seek attention for them from a professional. We have even considered the possibility of the users eventually entering a “buddy” system wherein the younger person is alerted to critical health issues of the elderly person like falls or strokes.
* **NSFW:** Let us be honest, this can go both ways. People are unpredictable and putting them on video chat together has traditionally led to a variety of things you would not discuss over dinner with the family. We made the choice to not make it possible to enable NSFW, but it is still going to happen. It will be necessary to develop functions to catch “bad” content, a good public relations process for “reported” content and strong methods to remove, suspend and ban users if they break the rules.

Confident in that we have assessed the most likely risks involved with making SocialCare, we believe that we have the information required to make the right choices moving forward and have given ourselves the best shot at making something we once considered impossible. The nature of anything customer facing and associated with business is that the challenges it faces will constantly evolve and must be reassessed relentlessly. We are prepared to do this and have a plan-of-action on how we will likely face most expected problems as they arise.

Group Processes & Communications - Vanessa

Over the past 9 weeks, team XVI have kept frequent contact throughout the entire process. In the first week, everyone appeared to be a little apprehensive. The assignment was new and we didn’t know our team members.. However, as soon as one member started conversation, the whole team got involved and since we have had incredible communications throughout our time working together, consisting of jokes, memes, peronal information, other university topics, and specifically the assignment at hand.

The team decided to schedule regular weekly catch ups after our webinar with Thomas, this allowed the team to actually catch up weekly in the first 4 weeks through Discord via voice chat and proceeded to chat almost every day regarding the assignment to some extent. All members of the team felt comfortable with each other’s abilities therefore any form of micromanagement wasn’t required. At times, there were members that were difficult to get in touch with as they had other commitments such as work, which also meant they missed weekly catch ups. This meant we had to adjust and ensure all members were kept up to date on progress and next steps. This enabled the team to effectively complete assignment 2.

Throughout assignment 3 and 5, the team kept the scheduled weekly catch up to Thursdays but added another session as we felt it was required; the team continued to chat almost daily through Discord as well. As there were some sessions missed by members due to different reasons (being unwell or working), we continued to keep everyone informed of progress and action items. It also meant we needed to approach things slightly differently in regards to action items for those missing catch ups regularly. This did not affect the way the team worked, it actually helped as everyone understood what was going on and who was doing what.

In any case where members did not respond straight away, within a 12 hour time frame they generally would. There were members in the team that were shyer than others so speaking directly to an individual at times was much easier.

The dynamic of the XVI appeared to change as part of the team struggled with their own hurdles due to different reasons. Towards the end of A3 & A5 the team became quiet and activity dropped, the team worked far more independently with limited communication.

*… more to add after week 11 & 12 collab.*

**6. Skills & Jobs**

Ollie

**7. Group Reflection**

**8. References**