Group 5

The Metaverse - Hackathon III

1. Develop a short pitch describing how an online immersive virtual meeting could work and how it might improve the experience (and productivity) of attendees.

In a volatile corporate environment, the importance of business flexibility has never been more critical. Imagine a world free from disruption, built on global connection and offering a tailored employee experience. Welcome to the Metaverse.

Virtual meetings can bring together a dispersed workforce. Stay-at-home parents can be reintroduced to the crew while still being present in the home. Global teams can cooperate with a connection through avatar interaction. Virtual meetings expand to interviews, where neutral avatars and voice masks can provide a process with reduced gender, age and nationality bias. This creates an inclusive environment for all employees.

Within teams, cooperation can be enhanced. Both STEM and artist teams can work together to build 3D models of products and ideas. Visual learning in education settings makes subjects more tangible and accessible to different audiences. Powerful messages can be conveyed through metaverse immersive imagery

Employee training and marketing can be enhanced by providing simulated environments. The visionary power of meetings and collaborations transcends the physical limits of the real world. Social gatherings and company offsites no longer include the cost and time commitment of transportation. Virtual meeting spaces could even go as far as to reduce transport emissions of those commuting internationally for work, social events and experiences.

The metaverse is our future.

2. Identify suitable service industries that might be able to use your online virtual platform to deliver their services.

The metaverse offers many businesses the opportunity to enhance their customer experience, and many vital services can be delivered using metaverse technology.

For example, online shopping is currently limited - customers are often reluctant to buy certain products online because they want to see them for themselves. The metaverse can deliver virtual experiences which allow customers to “browse” an online shop in the same way they would in person. The entertainment industries can also exploit this technology to deliver new experiences, e.g., by creating virtual cinemas. The massive success of video games such as Pokemon Go also shows that there is a massive market for immersive, social video games.

The Metaverse could also allow many people to access services which would otherwise be out of reach, e.g., due to geographical remoteness or disability. People living in remote areas could attend doctor's appointments or counselling sessions remotely. While this is somewhat possible with today's video conferencing technology, these methods lack the immersion and social interaction made possible by virtual reality.

The metaverse has huge potential in the areas of training and education. Currently, most students fare poorly when forced to learn remotely (as seen during the COVID pandemic). This is especially true of practical education, where in-person instruction is essential. This is unfortunate, as there are many accessibility benefits to remote learning. The metaverse can combine the accessibility benefits of online education with the immersion and social interaction of in-person teaching. This may not be suitable for all students, but it provides a fantastic option for those without the ability to attend school or college in the real world for whatever reason. Furthermore, the metaverse and virtual reality can offer new ways of teaching - in the same way, that PowerPoint slides and computer simulations, 3D animations and other new technologies.

3. Identify what additional support services could be provided to users of your virtual meeting platform.

The Metaverse can break the physical limits of the real world. This means this new platform has the potential to offer additional services.

Health consultations with crypto payment and sensor technology could be implemented. Biomarkers and other various sensors could empower healthcare professionals to monitor non-critical patients remotely. Patients have the freedom to remain in the comfort of their own homes with the reassurance that the sensor technology will flag issues. Meanwhile, hospital traffic is reduced allowing for a more efficient healthcare provision. However, this service is not without very large potential risks. Data protection and the risk of technological failure could result in huge legal implications for hospitals that adopt the new technology. Strict measurements and legal protocols would be necessary for this field.

Some issues are too sensitive for current methods of digital communication. Video chat can feel detached and distant, without speakers being able to accurately gauge their audience. In the future, when virtual reality is widely accessible to a spectrum of income levels, the Metaverse could provide designated user spaces to discuss sensitive topics such as alcoholism and drug abuse. Speakers who may have reservations about such in-person meet up because of identity protection issues can have their identities protected through avatar personas. This may have the potential to empower those in disadvantaged situations.

Socialising from remote locations can be challenging. The metaverse could provide designated digital areas for discussion, socialisation and interactive games. Social isolation, alienation, as well as problems surrounding homogenous mentalities when you are only exposed to those within your area, culture and nation, could be alleviated. Socialisation is a vital part of human need and meta verse allows it to be experienced in a new format with much potential

4. Identify the industry-wide protocols [which] would be necessary to regulate the potential support services you have identified in (3). Note that you should assume that such services should be capable of being platform-independent, i.e., it is envisaged that some services should potentially work on all virtual environments in the Metaverse.

There is a need for regulation, as the potential for malice and lack of alignment between the goals of the user and the goals of the provider is ever-present.
If the multiverse is owned by one specific company and the needs of the metaverse become overwhelmingly concentrated in a single entity. Whether it be a government, organisation or for-profit entity. This poses a risk, if access to the metaverse shifts from a “nice thing to have” to a sufficient necessity for our everyday life, it has the potential to control the direction in which society gravitates. This level of control should not be in the hands of one entity, or at least if it is within the control of one entity its governance should be directly adjusted based on the opinions of its users.

Further integration of privacy and data protection needs to be put forward to prevent organisations from collecting potentially sensitive data and using it to prey on potentially vulnerable people. Especially with the advent of sufficient AI, which can dictate the user's “wants” even before the user himself knows and can create a society driven towards instant gratification.
If we look at companies today, the likes of Facebook, Instagram and TikTok, they prey on instant gratification and “dopamine hits” to make people addicted to their platforms.
These are fears that could be mitigated if people are aware and place emphasis on long-term life satisfaction over short-term gratification.

There needs to be rules and regulations built around the metaverse, to extend our protections into the virtual domain. There needs to be copyrighting within the metaverse, identity protection etc.

These regulations and protocols are all difficult to implement and probably will need to be implemented in response to how the metaverse plays out, we don't know what needs arise until after the technology becomes abundant. This is the problem with implementing regulation with emerging technologies. We don't know in which direction innovation will go, and we especially do not know how society will react in advance.

There will need to be a continuous discussion with all parties and require careful and considerate decision-making on behalf of the government, corporations and the general public.

5. Identifying any technical limitations of the proposed online virtual environment. Comment on how these limitations can be minimised or bypassed in the short term and how any technical limitations could be overcome in the longer term.

There are many technical limitations of the proposed online virtual environment. First of all, the Virtual devices and equipment required are very expensive which would put a huge cost on businesses.
A potential limitation of the metaverse is the cost of equipment and devices. This can create an access inequality in a society where disadvantaged individuals may not be able to access the technology. Hence, it is necessary to allow access to equipment at affordable rates so that disadvantaged communities can enjoy the benefits.
The technology also requires fast and reliable internet connectivity. This is possible through the help of fibre and 5G wireless connectivity which requires the correct infrastructure to be in place. Another issue to be dealt with is latency associated with real-time interactions on a scale as large as would be required for large businesses that would be interested in investing in the metaverse. Currently, the technology is not there for this latency to be overcome on a server-side hosted metaverse but if servers were to physically be hosted client side by businesses so that they are responsible for the size and upkeep of their server this may be overcome. As well as latency being an issue, computing power as it is now would not be adequate to render in real time a metaverse as complex as we are discussing here. Although it would not be possible today it is likely that in the next few years, once computing power follows the trend it is currently on then this would soon become a non-issue for us.

It may also be problematic in finding people who have the necessary skills and experience that can operate and work in the proposed online virtual environment. This would stunt the development of this new technology as it would reduce the business's ability to assess and use the equipment effectively. Another obstacle that would need to be overcome is that many people experience nausea and disorientation in virtual reality. This might cause the attendees to get distracted and be able to work during the virtual which would be both a waste of time and money on the business's behalf.

Another issue with an online virtual environment could be how susceptible it would leave these industries to cyber attacks. Cyber security on a scale this large would be extremely expensive especially with the sensitivity of the data to be protected if we are assuming that confidential business information is to be discussed in meetings in our metaverse.

Group 5

Due to a user's data being at risk of exploitation, it is necessary to use protection regulations to protect users' data. The introduction of government regulation into the sector could bring with it high levels of ‘blue tape’ and bureaucracy which would drastically slow all progress as it has done in almost all sectors here in Ireland.