

A company-wide metaverse event as a PoC experiment

PwC Consulting LLC



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1. Introduction

At PwC Consulting LLC (hereinafter, PwC Consulting), we conducted a three-day metaverse event for our employees from 27 to 29 June 2022. A post-event survey conducted of over 600 employees revealed a higher degree of satisfaction and desire to participate again in business events hosted in the metaverse than for business events hosted using existing online tools, and we found that participants positively reviewed the metaverse event for aspects that were distinctly different from in-person events.

At the same time, however, we faced issues regarding setup, VRsickness, and concerns over personal information that need to be resolved. Realistically

speaking, a combination of in-person events and metaverse events that use both VR headsets and other devices is likely to be necessary for the foreseeable future. Going forward, the metaverse could be used not only for internal events, but also for large-scale B2B exhibitions and business events, new product presentations and press releases, and employee training.

PwC Consulting plans to continue to experiment with the metaverse first-hand to accumulate experience, and to provide the knowledge and insights we gain through these efforts to our clients.

2. Overview of the event

2.1 Objective

The event was held to promote internal understanding of PwC Consulting's business strategy and three-year plan established in July 2021, and to test the possibilities of the metaverse, a technology we expect to be widely used in business in the future.

2.2 Dates

Monday, 27 June 2022 - Wednesday, 29 June 2022 (three-day event)

2.3 Participants

PwC Consulting members (leadership, managers and staff)

2.4 Programme

The event consisted of the following programmes:

Type of programme	Description
Presentations by leaders	Explanation of our business strategy and three-year plan for employees
Discussions	Discussions among industry experts and employees
Entertainment	Performances by artists and comedians

Number of programmes:

Presentations and discussions: 11

Entertainment: 12

Total: 23

2.5 Number of participants

Overall number of participants (total accesses): approximately 8,800

Number of unique participants (unique accesses): approximately 1,500

2.6 System architecture

The event consisted of two venues: a main venue and a sub-venue.

All programmes were held in the main venue, and the sub-venue was created for the purpose of allowing users to experience the metaverse. VR headsets were distributed only to employees who wished to borrow one, as there were some issues concerning personal

information during setup (IDs had to be linked with personal social media accounts), VR sickness and the need to collect personal information as part of the distribution process.

Although the sub-venue required a VR headset, participants could access other parts of the event from their company PCs or smartphones.

Venue	Description	Usable devices		
		PC	Smartphone/tablet	VR headset
Stage area	<p>The stage area was the main venue where the event was held, and it was where the following three types of programme were held:</p> <ol style="list-style-type: none"> 1. Keynote speeches: Our leaders explained our new business strategy in presentations. 2. Discussions: Experts were invited to come and discuss the metaverse business and its possibilities with PwC Consulting professionals. 3. Entertainment: Celebrities, artists and comedians gave performances in the metaverse. <p>These sessions incorporated entertainment, a field in which the metaverse is being increasingly used, to provide employees with an event they could enjoy participating in.</p> <p>Note: These programmes were held in a dedicated environment built on Cluster.</p>	✓	✓	✓
Communication area	<p>The communication area served as a sub-venue where participants could interact with one another and experience VR. Employees were encouraged to use this event as an opportunity to communicate with each other in the metaverse space. For example, the area had dedicated rooms for specific teams or for specific topics (e.g. a room for discussing the event, a room for discussing businesses that use the metaverse, VR and Web 3.0, a room for discussing internal events).</p> <p>Note: VRChat was used for the sub-venue.</p>	✗	✗	✓

2.7 Event organisation (planning and execution)

The event was planned and executed by using the following framework:

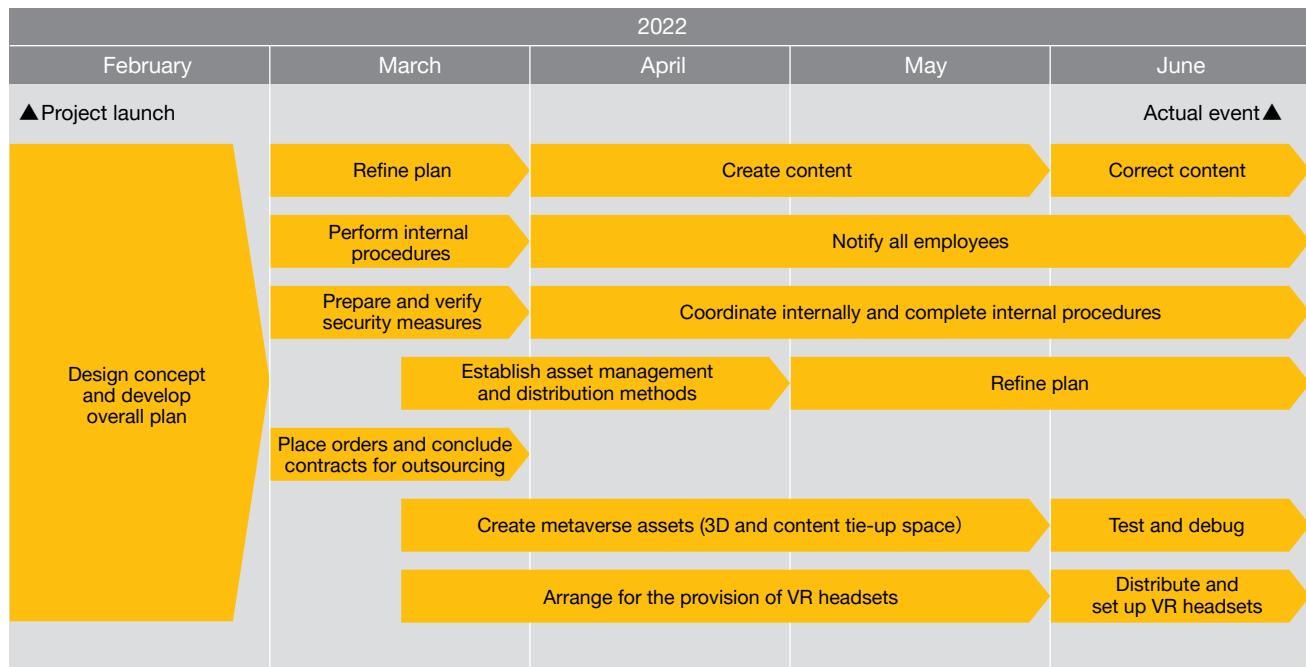
Type of stakeholder	Description
Event organiser	The company that hosted the event (PwC Consulting)
Event management company	The company that provided support for planning and executing the event
Metaverse development companies	The companies that built the metaverse environment for the event
VR headset vendor	The company that provided the VR headsets

PwC Consulting's event management team consisted of the following roles:

Role	Description
Event manager	Oversaw and managed the entire event
IT staff	Responsible for planning and managing the IT aspects of the metaverse event
Event planning staff	Responsible for the overall planning of the event
Security staff	Responsible for planning and managing system security

2.8 Timeline (from event planning to execution)

It took five months to plan and host the event.



3. Participant survey

3.1 Objective

We decided to publicly release the results of the participant survey to reveal the challenges, issues and benefits of hosting an internal event in the metaverse, in the hope that it will help raise momentum for the enterprise metaverse market.

3.2 Methodology

We conducted a survey of all employees after the event.

Number of respondents: n=628 (including nonparticipants)

3.3 Survey period

8 July 2022 – 22 July 2022

4. Survey results

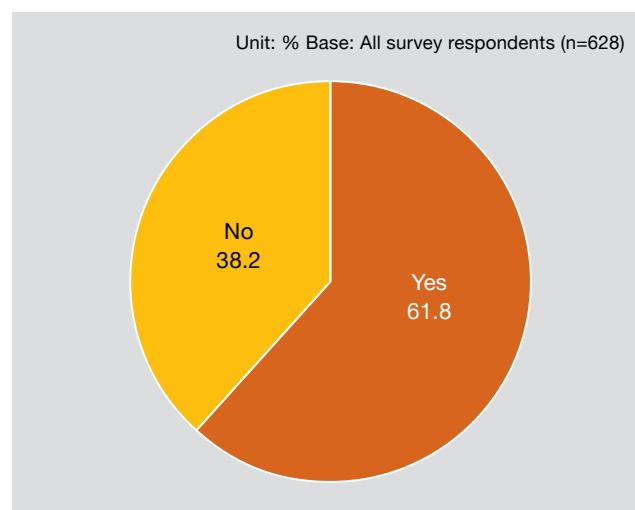
Note: Not all figures add up to 100%, as a result of rounding percentages.

4.1 Participation in and satisfaction with the VR event

Over 60% of participants requested a VR headset

We provided optional VR headsets for event participants, and over 60% of participants requested to borrow one. Considering the venue fee we would have needed to use a hotel or similar facility for such a large-scale company event, this shows that we can expect a higher return on investment in by purchasing VR headsets that can be reused numerous times in the future.

Figure 1: Did you borrow a VR headset to participate in this event?
(Select only one response.)



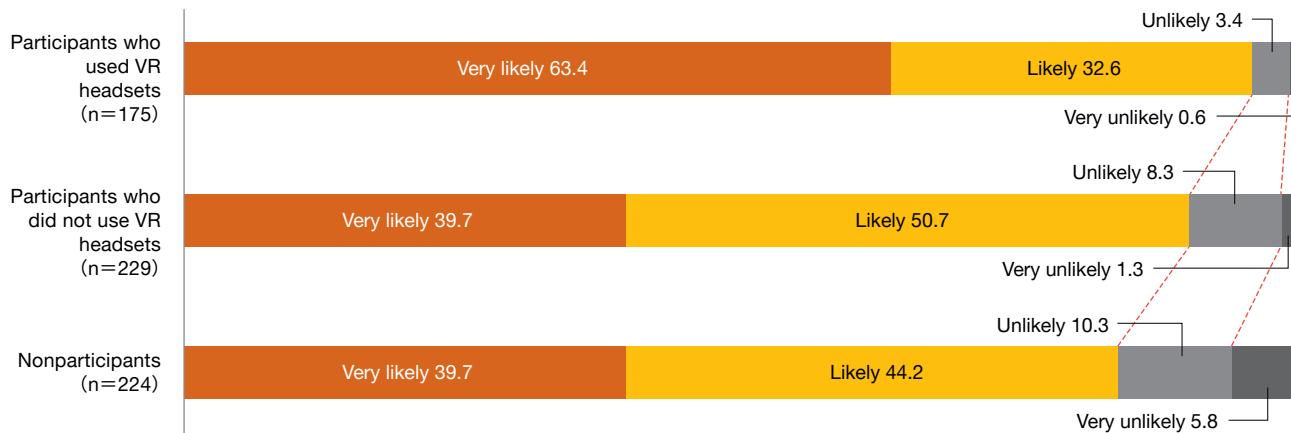
Participants expressed a high degree of enthusiasm for VR events

As shown in Figure 2, 96% of participants who used a VR headset expressed a desire to attend a similar event again in the future. (This figure represents the total number of respondents who answered 'Very likely' or 'Likely'.) Participants who used VR headsets also tended to review the entire event more positively compared to those who did not.

In the free answer section, respondents also mentioned that the interactive events held through VRChat created a place to have discussions on equal footing, which encouraged people to speak up.

Figure 2: How likely are you to attend other VR events in the future? (Select only one response.)

Unit: % Base: All survey respondents (n=628)



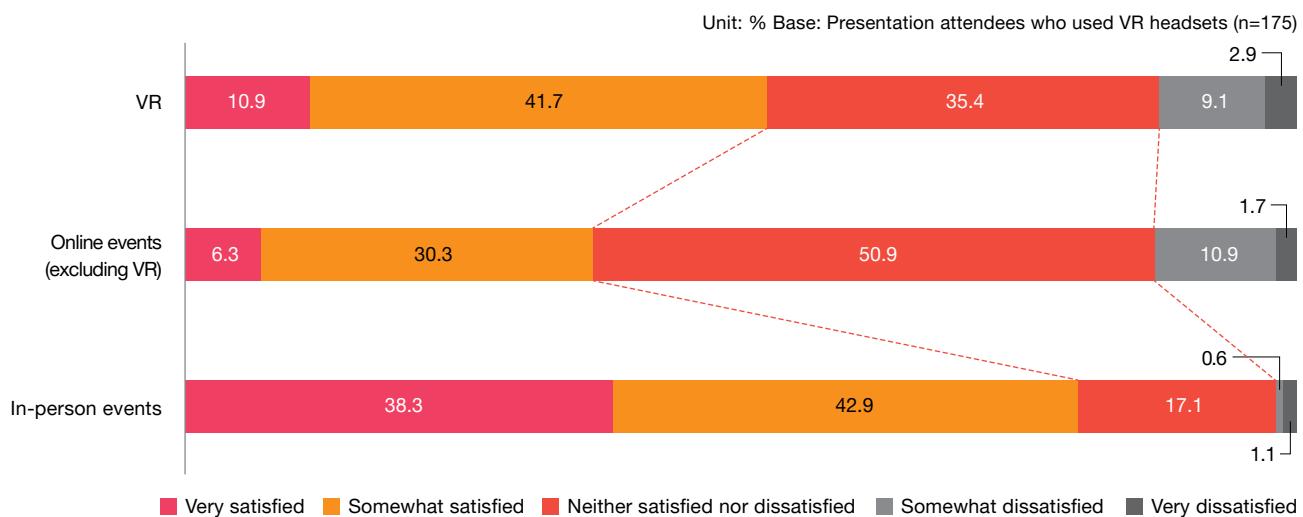
4.2 Characteristics of the metaverse

The metaverse offers unique advantages like freeing attendees from time restrictions, and combining the metaverse with in-person events may heighten experiential value

As a new initiative, the event faced high expectations, but the actual satisfaction rating given by participants for the experience showed that in-person events were still considered the most satisfying, although the VR event ranked second, above traditional online events (Figure 3).

However, in the free answer section, respondents shared their overall impression of VR as compared to in-person events, and some suggested the metaverse as a complementary solution for the issues that come with in-person events, offering benefits such as 'freeing participants from time restrictions' and 'allowing attendees to share their feedback'. Some respondents also shared positive opinions of the metaverse for providing a type of experiential value that is unattainable from an in-person event. In the future, hybrid events with a mixture of in-person and VR sessions may result in a higher satisfaction rating.

Figure 3: [Overall rating] Comparing this VR experience to your previous experience with in-person events and online (e.g. chat, streaming or video) events, please indicate your level of satisfaction for each type of event. (Select only one response for each type of event.)

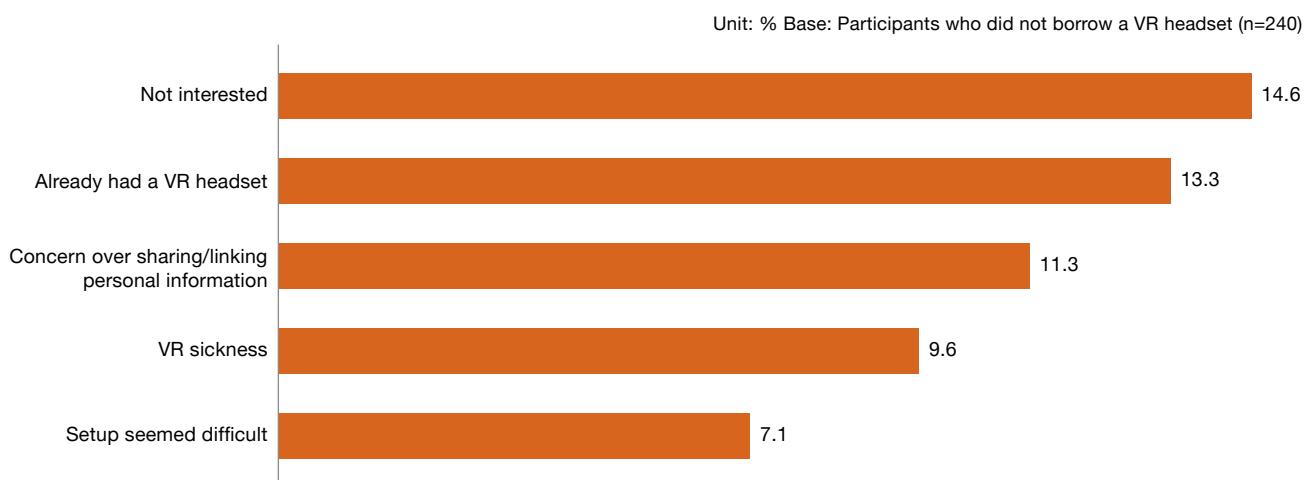


Participants provided both positive and negative reasons for not borrowing a VR headset

Responses showed that participants had both positive and negative reasons for not borrowing a VR headset. Examples of negative reasons included participants' disinterest in using a VR headset or the experience, concerns over sharing personal information and VR sickness.

On the other hand, as examples of positive reasons, some participants responded that they already had a VR headset (Figure 4). In the future, functional updates by platform providers or the progressive evolution of devices may mitigate concerns over personal information and VR sickness.

Figure 4: Please select your reason(s) for not borrowing a VR headset (select all that apply).



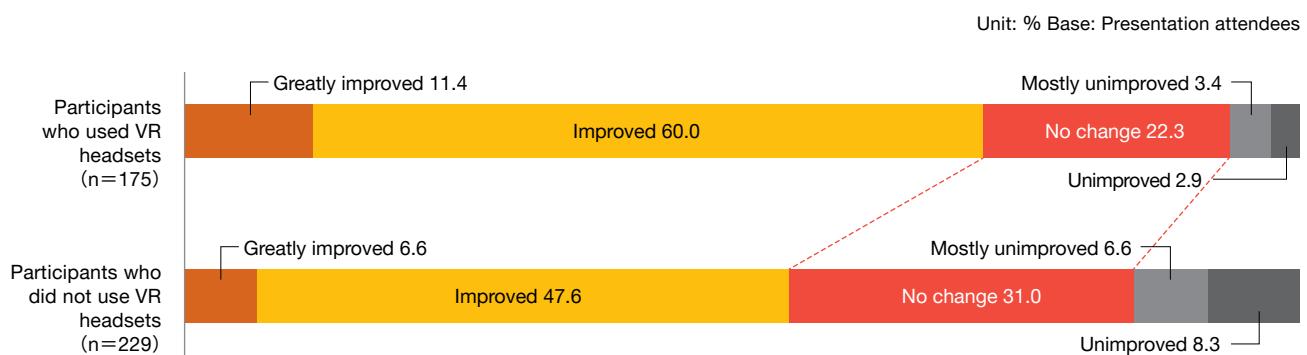
4.3 Effects on organisational development and employee engagement

Participants who participated in the metaverse experience feel they better understand our corporate strategy

One of the event's objectives was to explain PwC Consulting's business strategy and three-year plan to our employees, and over 50% of all participants (including those who used VR headsets and who used other devices) answered that their understanding either 'greatly improved' or 'improved' as a result of the event.

Participants who used VR headsets, in particular, responded especially favourably, with over 70% (a 20% increase over those who did not use VR headsets) answering that their understanding had 'greatly improved' or 'improved' (Figure 5).

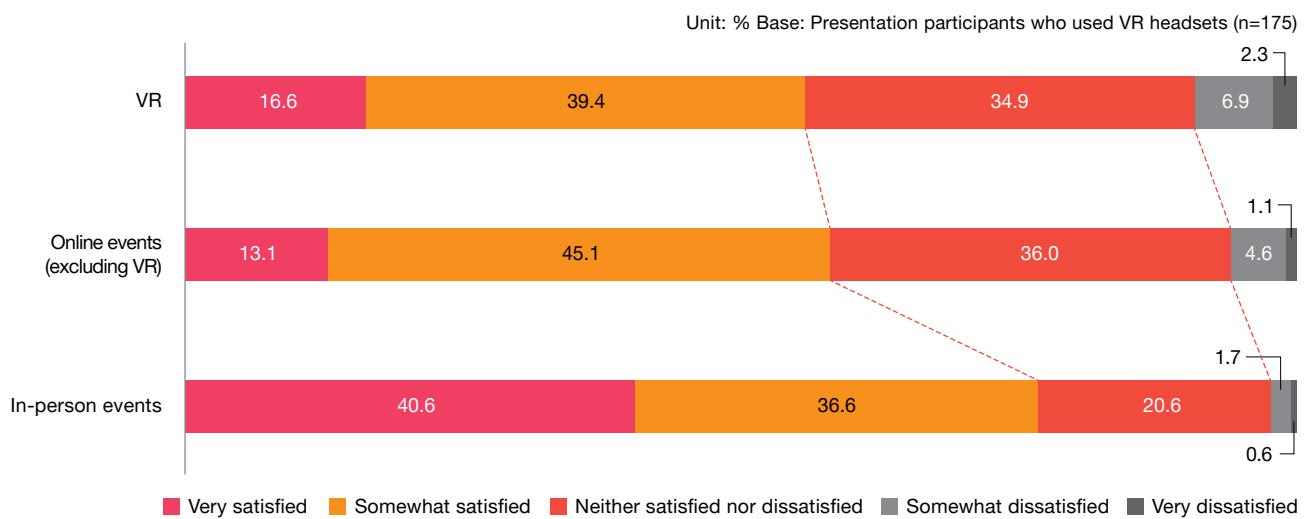
Figure 5: How helpful was the event in improving your understanding of our corporate strategy? (Select only one response.)



From these results, we can deduce that participants who wore VR headsets were able to focus completely on the event, which prevented them from multitasking, which is a common issue during online events. This physically blocked participants from doing other things while they listened to the presentations and naturally eliminated any distractions.

In recent years, there has been an increase in the frequency and number of online events and meetings, and many people multitask during these events. Therefore, VR headsets could be an effective method for ensuring that employees focus and pay attention to the events they attend.

Figure 6: [Understanding content] Comparing this VR experience to your previous experience with in-person events and online (e.g. chat, streaming or video) events, please rate your satisfaction for each type of event. (Select only one response for each type of event.)



The event also created a difference in how positively participants viewed the company and its leadership

After the event, participants who used VR headsets were far more inclined to view the company and its leadership favourably than those who did not use them (Figure 7). As reasons for their favourable opinions, more than 50% of employees selected 'The company takes forward-

looking initiatives', 'The company takes initiatives that other companies have not', or 'The event itself was newsworthy' (Figure 8). As of now, the act of hosting a metaverse event ahead of industry peers is likely to have a positive impact on a company.

Figure 7: How would you describe your view of the company and its leadership in light of this internal VR event?
(Select only one response.)

Unit: % Base: All survey respondents (n=628)

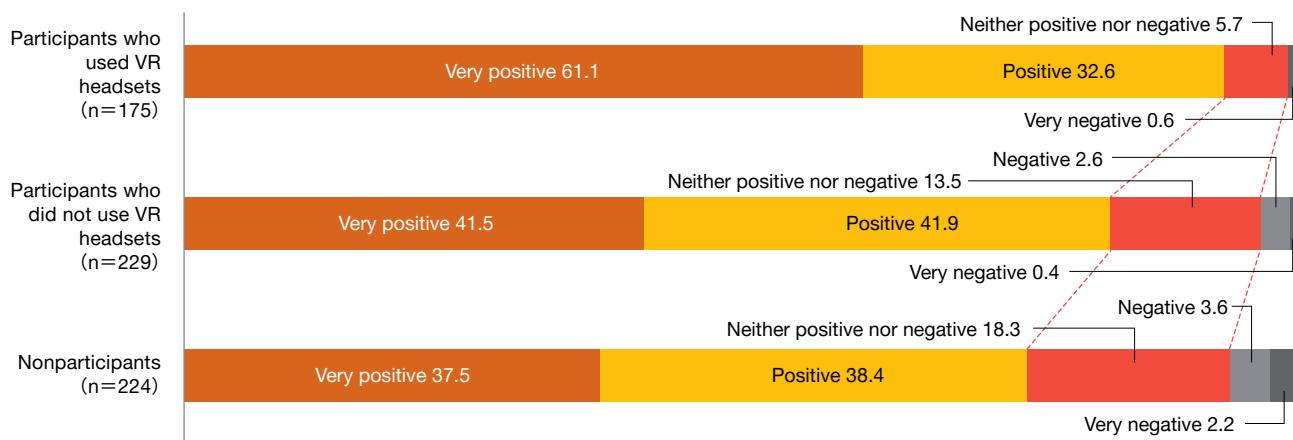
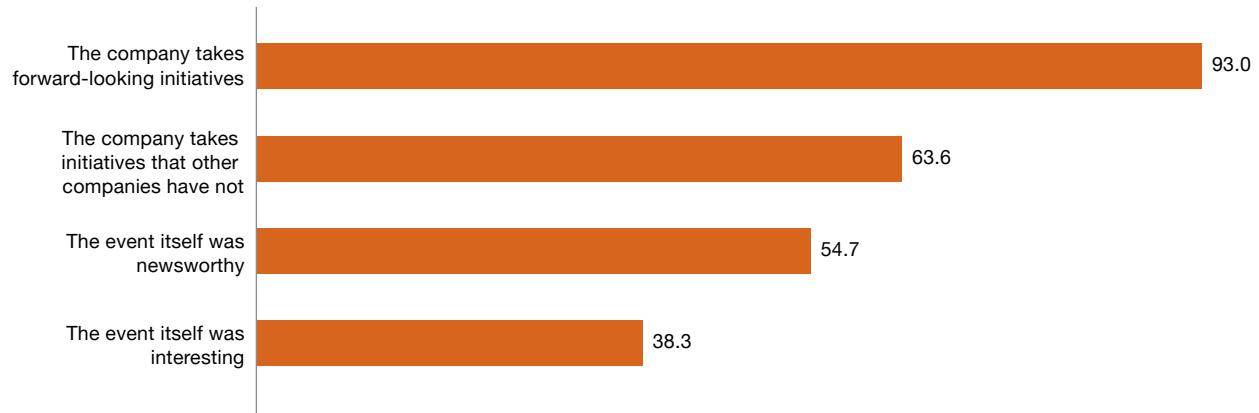


Figure 8: Please select your reason(s) for your positive opinion (select all that apply).

Unit: % Base: Respondents who described their view of the company and its leadership as 'very positive' or 'positive' (n=525)



4.4 Issues and challenges for metaverse implementation

Various user issues and concerns

As nearly 26% of users experienced VR sickness, events should be designed to be accessible from several types of devices

Nearly 26% of people who used VR headsets (about one in four people) experienced VR sickness or a headache during the event (Figure 9). While we hope that devices will evolve to resolve these issues, we also acknowledge that events should be designed to be accessible from multiple types of devices in the future.

About half of the users expressed dissatisfaction with the setup of VR headsets

There are currently several issues regarding the setup of VR headsets. For example, the form for inputting a user ID and password is not optimised for the VR headset, and users need to input their information using an onscreen software keyboard. If users manage their passwords by using a password manager or if the initial password is provided through a notification, then users need to take off their headset to see the password, then put it back on. Also, many employees felt that the time and effort it took to set up was an issue,

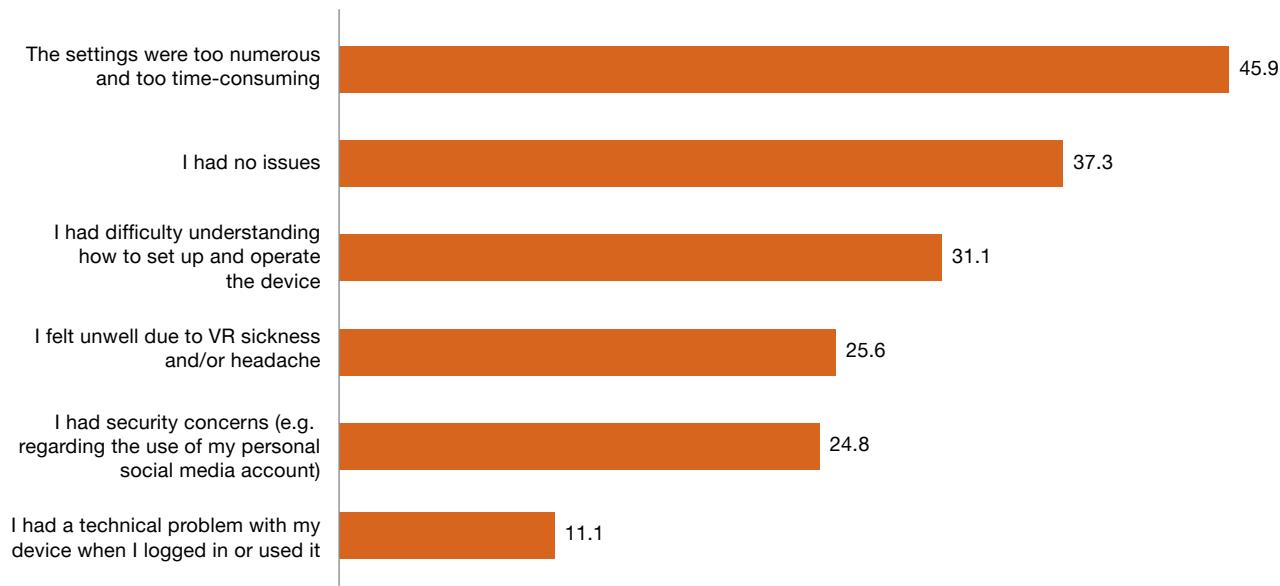
with nearly half (46%) responding that there were too many time-consuming settings and 31% responding that it was difficult to understand how to set up and operate the device (Figure 9). Although a detailed setup and operation manual was available, users had to take off their headset to see the manual, which was inconvenient. Users' experience is likely to improve if those instructions could be imported into the VR headset for easy viewing without having to take off the headset.

The need to link with social media accounts caused security concerns for users

Nearly 25% of employees had security concerns over privacy due to the need to link to personal social media accounts during setup (Figure 9). To address this point, a functional update is said to be planned for the platform in the future, which should enable users to use a separate account rather than a personal social media account.

Figure 9: Did you have any issues or concerns when setting up your device or installing the necessary software? Please select all that apply.

Unit: % Base: Participants who borrowed a VR headset and did the initial setup (n=351)



Designing an event that enables two-way communication is key for higher experiential value

Due to various restrictions, the style of this event only allowed one-way communication, in which attendees listened to live events or pre-recorded sessions. By using the metaverse, attendees were able to share their comments or reactions amongst each other but not with the presenters or those on stage, resulting in a lack of two-way communication. This was raised as an issue by several participants in the free-answer section.

Going forward, in addition to improving communication methods, the honest opinions, reactions and ideas provided in free response section of this survey suggest that the metaverse could be used in the upstream part of a business value chain, for example to generate ideas in the planning stage or for consumer research.

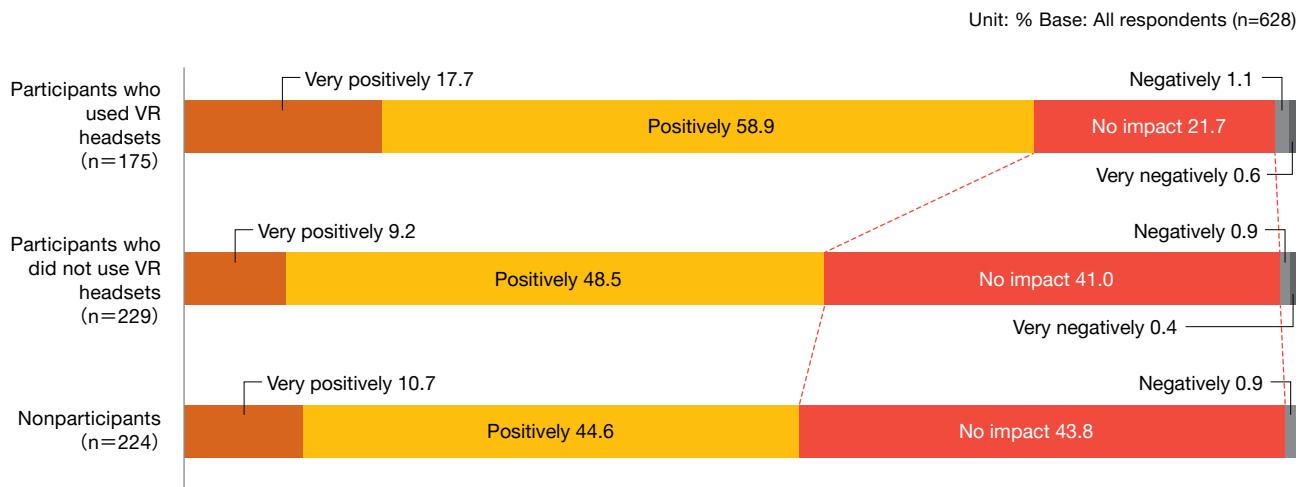
4.5 Other findings

Those who used a VR headset to experience the metaverse were more likely to think VR will have a positive impact on work in the future

The survey revealed that participants who used VR headsets were more inclined to positively evaluate the future impact of VR on their workstyle or job (Figure 10). Comments in the free-answer section indicated that many participants expect VR to enable virtual collaboration and co-creation with others both inside

and outside Japan, and mentioned the possibility of using VR to solve social issues. However, despite the majority of respondents expressing favourable views, we also received comments indicating that more in-depth testing is needed for specific usage scenarios.

Figure 10: How do you think VR will impact your workstyle or job? (Select only one response.)



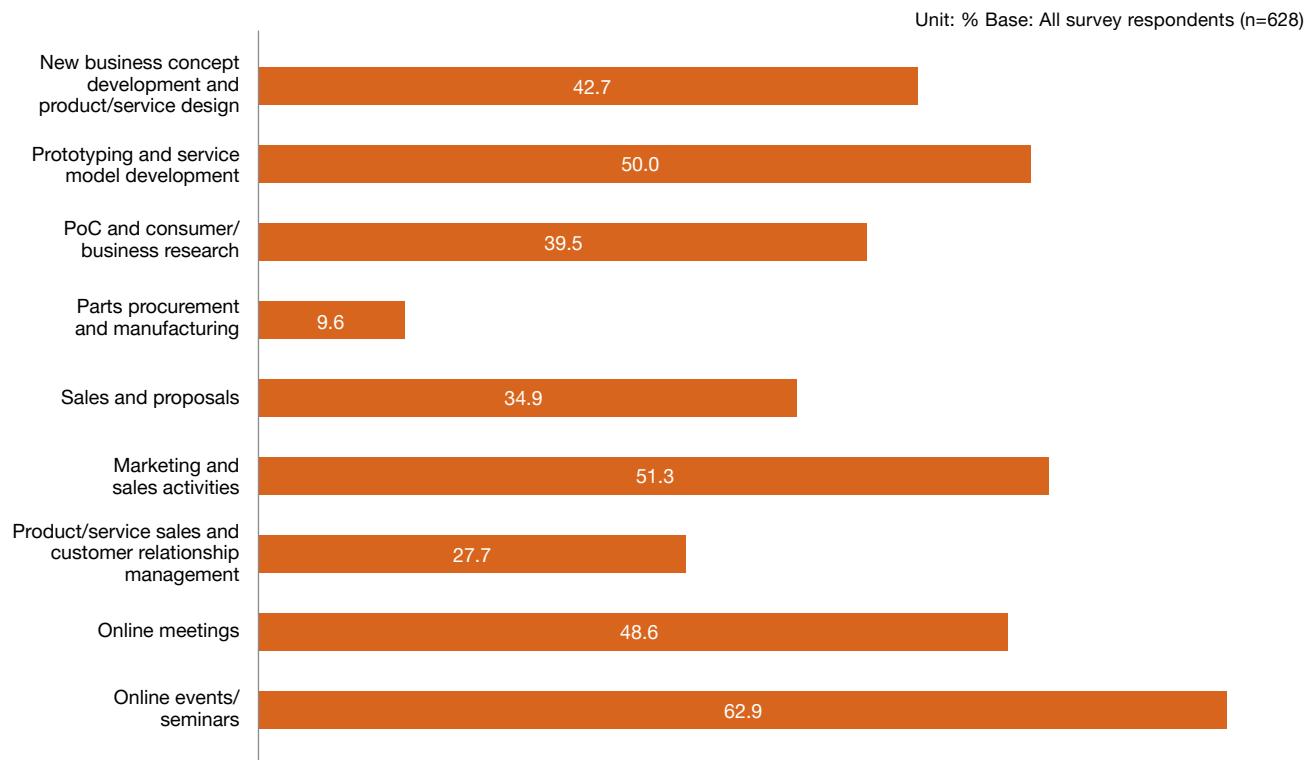
Experiencing the metaverse can help create usage scenarios

The survey showed that event participants gained a better understanding of how the metaverse could be used in various areas of business (Figure 11). This suggests that the use of the metaverse may expand into a wider range of fields as more people experience

the metaverse in the future.

These results verified our initial hypothesis that experiencing the metaverse first-hand will be effective in developing new business ideas.

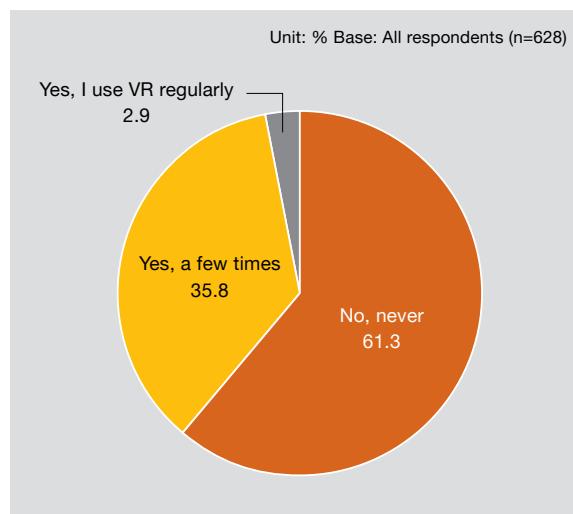
Figure 11: How do you think the metaverse could be used in the future (in clients' businesses)? (Select all that apply.)



Less than half of the participants had prior experience with VR headsets

Over 60% of participants had never used a VR headset before. Key factors for the future success of such events include the further penetration of VR headsets, the establishment of easier participation methods to replace VR headsets, and the availability of opportunities for people to gain more experience with VR.

Figure 12: Have you used a VR headset or experienced VR before? (SA)



5. Issues in event planning and management

5.1 Event planning issues

The challenge was to plan and execute our first-ever internal event in the metaverse, and we had a certain degree of success in that we managed to plan and host the event in less than five months. At the same time, there were some areas which had room for improvement. For example, we weren't able to

sufficiently incorporate the key features of the metaverse and its potential into this event, and ended up designing it as an extension of a traditional online event rather than offering an experience that is unique to the metaverse. Our findings from this event should enable us make improvements in the future.

Issues	Description
Time of the event	The main event was set to take place during the day, although participation rates would have been higher if it took place in the evening instead.
Level of excitement during the event	Due to system limitations on simultaneous rendering, there was a difference in the level of excitement of actual participants and the level of excitement that could be displayed within the venue.
One-way communication	Due to the necessary preparations and the fact that it was our first attempt at a metaverse event, we designed the event to only allow one-way communication. However, some participants commented that it caused the event to feel similar to our usual online videos, and that the event would have been more exciting if we had allowed two-way communication.
Changes to presentation slides	As presentations were given in the metaverse, they needed to be created in the metaverse environment in advance, and as a result, it was not possible to make last-minute changes to the slides.

5.2 System security issues

Some necessary platform, environment and device functions were either not present or were not working properly, and addressing the related issues took time. These issues will likely be resolved with time, but for any that remain, we will need to consider workarounds.

Because we had no previous examples of such an event to reference, it was difficult to assess security. However, we should be able to apply the know-how gained from this issue to our client projects and offer our knowledge as additional value.

Issues	Description
Selecting VR headsets	At the end of June 2022 when we hosted the event, there were no VR headsets for enterprise use, and we could only make our selection from among devices intended for consumer use. Because each VR headset could only be used in the specific platforms it was compatible with, it was not possible to make a simple comparison among various headsets. Practically speaking, the type of VR headsets we would use was determined automatically when we selected the platform.
IDs for using VR headsets	At the time of the event, there was no ID management function available for enterprise use, and users had to individually obtain an ID to participate. This represents a security and governance issue regarding ID management for enterprise use. However, because various platform providers are planning to release enterprise functions, we believe this issue should be resolved with time.
Asset management for VR headsets	We also had no management function for VR headsets, so it was necessary to create an asset register to manage those physical assets.
Whether to make VR headsets a prerequisite for participation	If the use of VR headsets were to become a prerequisite for participation, this may present a disadvantage to those who experience VR sickness or do not want to use one.
Addressing negative effects caused by VR headsets	Due to the difficulty in addressing all negative effects, PwC Consulting purchased insurance for the metaverse for this event.
Platform limitations (e.g. simultaneous connection and rendering)	Each platform has different specifications and limitations (for example whether it allows simultaneous connection and rendering or log acquisition), so we needed to confirm those details in advance.
Disrupted connection due to issues with security products	Connections to the metaverse environment were sometimes disrupted, presumably due to the effects of security products within the users' PCs or other endpoint devices.
Securing studio space for filming	We rented an external studio for this event, but if these events were to be hosted regularly, we would likely need an internal studio where such contents could be filmed. However, as we are not sufficiently aware of the requirements for setting up such a studio, this would pose a challenge.
Time-consuming security assessment	The risks of the metaverse environment are yet to be sufficiently identified. There are still only a few examples of incidents available, and it will take time for the initial security assessment to be completed.
Handling inquiries	If inquiries regarding the metaverse were to be handled by the regular IT helpdesk, the staff would need to undergo special training. As we had limited time for this event, we decided to set up a separate helpdesk for the event to address any inquiries.
Determining whether to use an open or closed environment	This decision should be made based on the level of information handled. However, building a closed environment would take a lot of effort.

6. Conclusion

At PwC Consulting, we hosted an internal event for employees using VR headsets as part of a metaverse PoC. As the technology is still under development, there are still issues that need to be resolved for further advancement, but overall, we saw the potential of the metaverse to be used in business. As an additional benefit, the event also encouraged a favourable view of the company and its leadership by demonstrating to

employees how the company is undertaking forward-looking initiatives, and it was a meaningful experience as it allowed participants to gain more specific ideas on how the metaverse could be used. PwC Consulting will continue to pursue similar efforts in the future to accumulate experience with the metaverse and use that experience to provide greater value to our clients.





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