Embracing the metaverse

Advisory Services insights
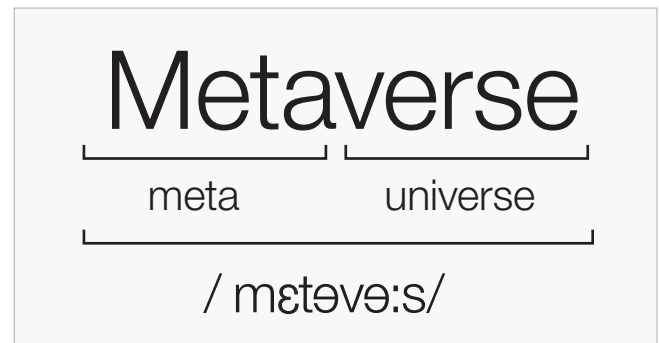
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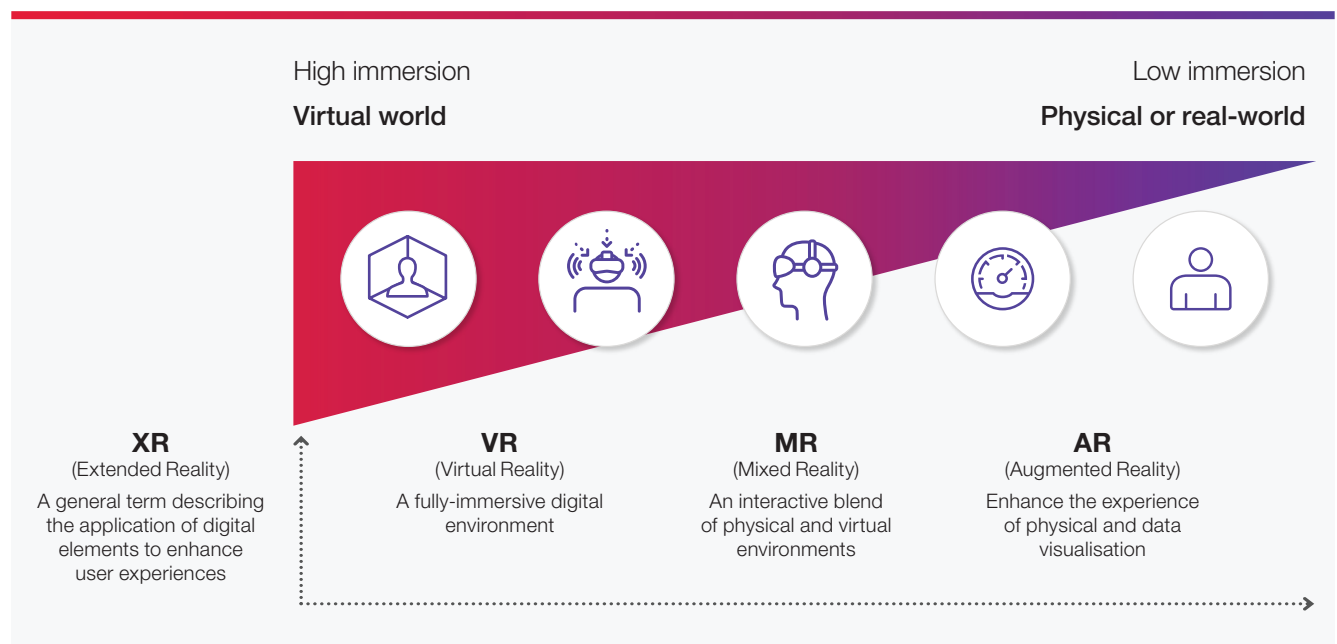
The metaverse: a reality or a metaphor?

The metaverse is a portmanteau of the words "meta" and "universe", describing the convergence of physical and digital reality. It embodies a collective virtual space where users share experiences and interact in real-time.

Metaverse

meta   universe

/ mɛtəvəːs/

For most, the metaverse's defining feature is one of visual immersion, with its ability to digitally enhance and reimagine the physical world with new, virtual experiences. That is however, if we can guarantee that it is built responsibly and provides a safe environment for users in the physical world.

Whilst there are questions around its potential and longevity, there is no doubt that the metaverse could drive a very different world in the next decade. Although the fully-immersive metaverse we all imagine is not currently feasible, we undoubtedly have opportunities now to unlock the next wave of digital disruption, using the potential of these technologies to transform everyday life: how we work, shop, communicate and collaborate.

These immersive technology experiences include:

High immersion   Low immersion
Virtual world   **Physical or real-world**

XR
(Extended Reality)

A general term describing the application of digital elements to enhance user experiences

VR
(Virtual Reality)

A fully-immersive digital environment

MR
(Mixed Reality)

An interactive blend of physical and virtual environments

AR
(Augmented Reality)

Enhance the experience of physical and data visualisation

# Value creation – the future of connectivity and virtualisation

In the future, it is very likely that "the web" as we know it will be synonymous with the metaverse, as users' "online" experiences (a phrase that will become less relevant) will increasingly incorporate immersive features.

Whereas today the web is defined by the creation and consumption of content we interact with, the metaverse will seamlessly combine our digital and physical lives using immersion, enabling real-time interactivity, and offering new ways to visualise data. For users, this new normal will involve merging our physical existence with a virtual presence using avatars that are unique to our identities, thereby breaking down social barriers through digital representation.

Immersive experiences will initially be curated by humans but will increasingly become AI-generated as virtual communities aggregate and interconnect to enable new experiences that organically evolve.

We therefore believe the future strength of the metaverse relies upon de-centralised ownership, enabling a loose global network of immersive, persistent, and interactive experiences that incorporate the latest in Web 3.0 technologies including distributed ledger, blockchain and AI-driven curation.

The very nature of shared ownership will empower freedom of expression, the building of communities and sharing of ideas, with serendipity and infinite collaboration leading to a further scientific and social renaissance.
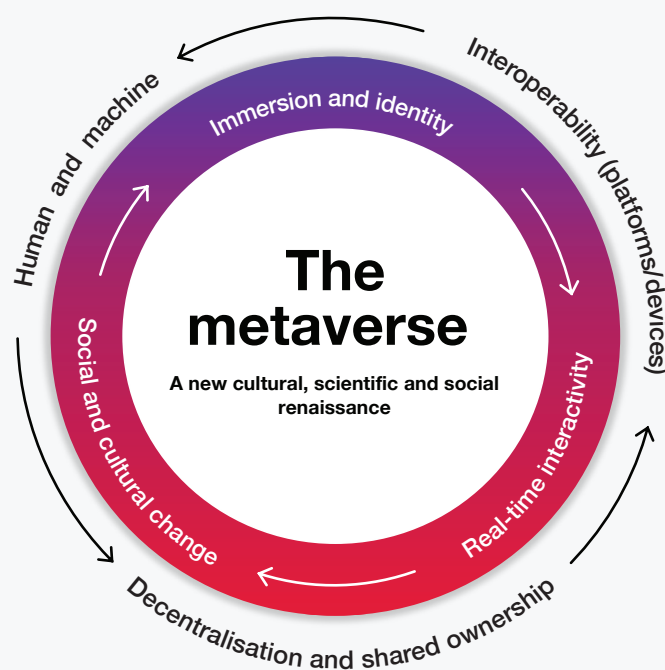
Envisioning the future, today

Whether we realise it or not, the metaverse's underlying technology already exists in our everyday lives. From Facebook changing its name, to debates about cryptocurrency, it's clear the metaverse is a growing trend in mainstream media, and the likes of blockchain, artificial intelligence (AI) and augmented reality (AR) highlight that this technology has long been part of our world.

So, whilst many generalise the metaverse as an innovative and exciting experience for the younger generation to enjoy as part of entertainment and video games (for example, the use of virtual reality (VR) headsets, or the pre-pandemic AR phenomenon of Pokémon Go), its growth does in fact evidence a fundamental change in our society.

The pace of its development will depend on multiple technological and user-experience factors, and is not limited to one platform, device, or even technology.

The drivers (albeit generational) are directly linked to the degree of investment from large technology companies, as well as the levels of regulatory scrutiny applied to an uncertain digital world.

Nevertheless, this is a change which we are unknowingly embracing every day. So undoubtedly, now is the time to start thinking about what the metaverse might mean for our future, with regards to both society and organisations.

Advisory Services, credible thought leaders

We aim to bring the innovation of the metaverse into real-world applications, to solve real problems for real people.

For over 45 years, organisations have trusted CGI to transform their operations with innovative and reliable services and solutions. Committed to supporting our clients for every step of their digital journeys, we established our Advisory Services, where our experts utilise their vast knowledge and experience of delivering world-class IT to collaborate closely with clients and help them unlock their full potential.

As trusted advisors, we were therefore keen to explore the potential of the metaverse so that we could deliver the best guidance to our clients. So, what's our conclusion?

The consensus is that the ultimate vision for the metaverse to build immersive and persistent virtual communities is still a few years away. For now, we view the metaverse as a disruptive technology, and believe we should focus attention on those elements of its vision and potential that can create innovative solutions for the traditional, persistent challenges we currently face in our modern world.

Embracing the metaverse in your organisation

Every organisation has its own unique ecosystem: the economics of its marketplace, customers channels, organisational structure, and employee landscape. It is therefore essential to deeply understand the exact opportunities and threats of a new disruptive technology before it is adopted.

We recommend our clients start now to begin to understand the nature of the metaverse to inform remedial or opportunistic actions within their organisations. This may include early adjustments to get ahead of competitors, or preparation to meet the changing nature of your marketplace or consumers.

This requires a human-centric approach, applying a customer- or employee-focused lens to understand the transformative impact of applying a new immersive consumer experience. At CGI, we employ human-centred design (HCD) to understand user sentiment, empathy and emotion in the development of the metaverse, helping us to better understand customer journeys, map experiences and shape potential use-cases for clients.

For evolving technologies such as the metaverse, this early evidence of its value is crucial to attracting investment, especially when you focus on use cases that seek to solve your organisation or sector's specific challenges. We also recommend you select a use case that will deliver easy to measure outcomes through small investments, thereby highlighting the obvious benefits delivered. This will set the right perception of the metaverse from the start and encourage excitement around future innovations.

Engendering digital trust whilst the metaverse is still in its conceptual stage

The development of the metaverse brings clear societal hurdles, where people need sovereignty and control over their data and information. That's because those participating in the metaverse will be connected to each other and to everything else: services, brands, servers, networks and more. Therefore, when assessing the need for the metaverse, you should ask:

• What are the economic benefits and/or pitfalls?

• How will it change my market?

• Does it provide novel solutions to my existing challenges, or create new problems?

• Does it deliver opportunities for me to exploit?

At CGI, we chose to focus on solving the common challenges perceived around supporting new employees in a remote or hybrid working model. We built an interactive virtual experience called the Meta Hub, where our senior executives meet with new joiners in a virtual version of our CGI head office, providing a memorable and exciting onboarding experience.

What's next for your organisation?

Real-life benefits are already emerging for those organisations that are early adopters of the metaverse. From digital assets to immersive experiences, here are a few examples your organisation might consider for the early adoption of the metaverse:
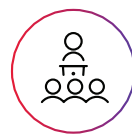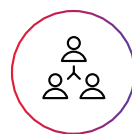
Learning and knowledge acquisition
Moving from instructions to a first-person experience.

Experience acceleration
Experience something that is hard to replicate in the real world.
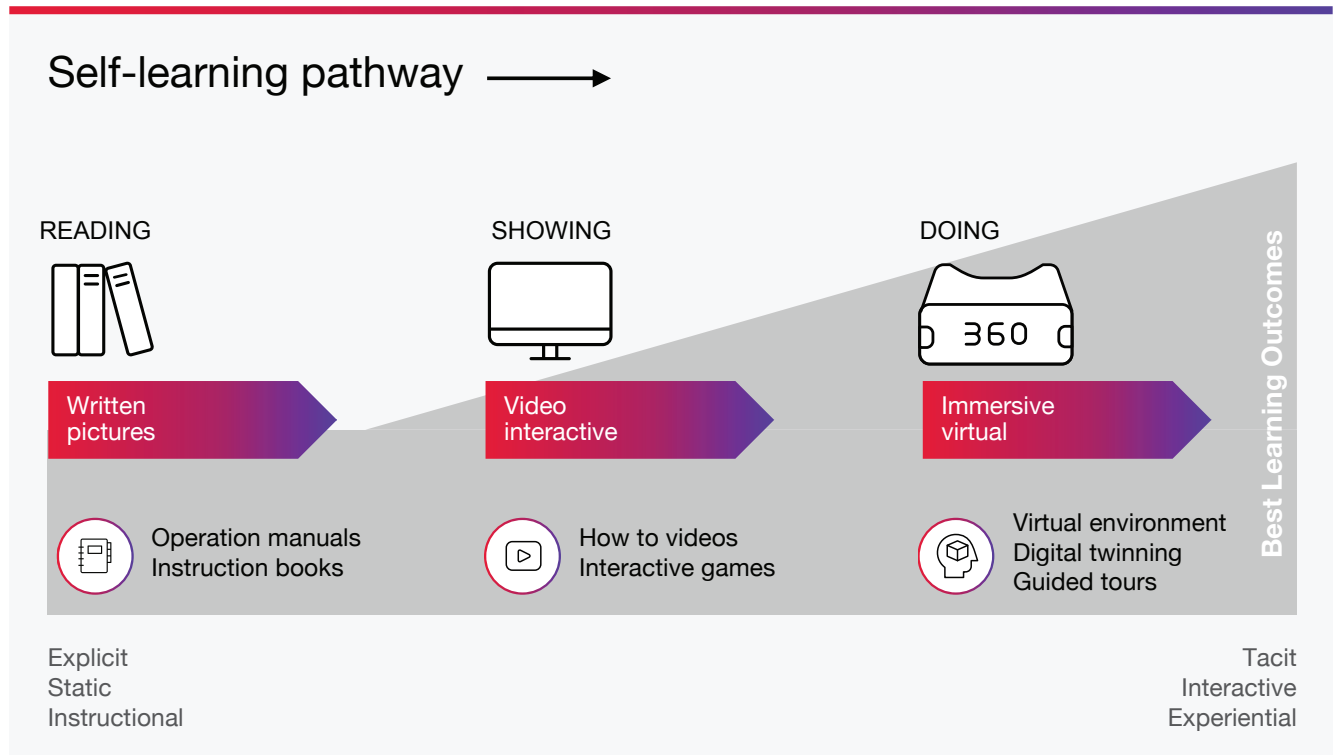
Collaboration
Creating better working and social environments.

Immersive learning and development

Self-study pathways traditionally rely upon the explicit knowledge gained through written or instruction-led learning, and lack the implicit knowledge gained through "doing". However, the path from familiarisation to expertise is greatly accelerated when providing students with the opportunity to actively experience a lesson, after all, no one has ever learnt to ride a bike through reading a book!

Immersive technologies thereby provide boundless opportunities for improving learning and development. For example, the use of social media platforms and videos to convey meaning through showing has already enabled a significant step forward for self-learning.

The next step is to experience lessons in a virtual environment. A virtual immersive learning experience would provide AI instruction and gamification as well as 3D, virtual representations of complex scenarios, enabling students to experience things that are impossible in the physical reality, for example, to tour offshore wind platforms or the inside of nuclear reactors.

Self-learning pathway ⟶

Best Learning Outcomes

READING

Written pictures

Operation manuals
Instruction books

SHOWING

Video interactive

How to videos
Interactive games

DOING

360

Immersive virtual

Virtual environment
Digital twinning
Guided tours

Explicit
Static
Instructional

Tacit
Interactive
Experiential

Infinite opportunities

Learning and development

Use of immersive training in VR to facilitate training programmes.

- Staff training facilitation
- Virtual classrooms
- Enhanced familiarisation
- Health and safety
- Interactive games

Marketing and messaging

Creating interest and interaction through immersive experiences.

- Facilitate public engagement
- Awareness campaigns
- Social media connections
- Outreach programmes

Smart places and data visualisation

Use of IoT sensors to generate real-time data, cross-referenced against geospatial mapping to create rich visualisations.

- Smart cities
- Buildings management
- Sustainability and net zero
- Geospatial data visualisation
- Field team optimisation
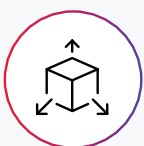
3D modelling and design

Create 3D models for VR to inform complex design decisions.

- Simulations
- Photogrammetry and 3D models
- Architecture and planning

Digital twin/digital operations

Virtual stimulation of real-world systems with real-time data feeds.

- Virtual service operation
- Monitoring and intervention
- AI and machine learning
- Asset management
- Environmental monitoring
- Intellectual security

Virtual events and occasions

Provision of virtual event capabilities for both internal and external meetings.

- Virtual public events
- Partnership showcases
- Digital augmentation

Demonstrations and virtual tours

Create virtual experiences of real-world locations or products.

- Virtual tours
- Real-time product demonstrations
- Familiarisation training
- Product experience and branding

Employee and workplace

Use of immersive technology to enhance collaboration and support employee services.

- Recruitment and onboarding
- Training and familiarisation
- VR collaboration and safe spaces
- Staff wellbeing and inclusion
- Sustainability and net zero
- Immersive 3D team calls
- Co-pilot - virtual human

How we help organisations transform with the metaverse

So, you've likely got a lot of questions around the potentiality of the metaverse for your organisation. How can you begin to use the breadth of metaverse disruptive technologies to bridge the gap between the physical and virtual worlds? How can the metaverse transform how we work, shop, communicate, collaborate and live our everyday lives?

We understand that no digital transformation programme is simple, and the metaverse is an especially complex topic! As trusted advisors, we are here to help you develop the right solutions which are aligned to your specific business capabilities and ambitions, to securely and sustainably transform the way your organisation works.

A people-centric approach

We take a people-centred approach to assess employee and customer needs, with the goal of creating fantastic experiences that also drive our clients' business outcomes. We do this through the exploitation of disruptive digital solutions such as the metaverse, to streamline end-to-end services, create human-centred design and simplify IT infrastructure.

When partnering with CGI, we will help you understand your organisation's tailored metaverse journey and the end-to-end opportunities and benefits you will achieve for your business, community and customers. Specifically, our design experts and digital technologists will work with you to:

- Explore the potential of the metaverse, bringing skills and expertise to aid innovation

- Shape your strategic position

- Understand early use cases and their benefits, then identify candidates for further exploration

- Plan a roadmap to grasp the opportunity

- Develop proof of concepts, products and services, and support early adoption

- Create communities of interest to learn from each other, developing a partnership for future innovations.

This support is encompassed in our three-step approach, designed to encourage and nurture our clients' metaverse transformations.

1. Explore	2. Strategise	3. Scale
• Explore the potential of the metaverse for your organisation • Prove the concept by immersive demonstration • Deliver a minimum viable product (MVP)	• Design-led tailored use case co-creation • Align your strategic user experience goals • Prioritise a roadmap to grasp the opportunity	• Iterate and optimise the MVP design • Scale to meet production usage • Adapt processes around the use case, organisational change • Iterate design of further products and services

Experienced partners

Backed by our robust three-step approach, we create our clients' solutions using expertise gained from practical experience and knowledge.

We have already applied the concepts of the metaverse to some traditional, real-world challenges, having developed several solutions in-house and alongside our partners:

- Creating our own Meta Hub office environment to improve the onboarding experience for new joiners

- Facilitating international virtual events such as COP27 as part of our commitment to sustainability and net zero

- Using AR to enable on-site visualisations for building design

- Digital twinning to enable diagnosis and team preparation for neurosurgery

- Familiarisation training to support managing social anxiety for children on the autism spectrum.

CGI's metaverse partnership ecosystem

Supporting clients using our extensive domain expertise and strategic partnerships.

From VR boutiques that specialise in digital twinning, to digital agencies for shaping virtual worlds, as well as our global partnerships with Microsoft, Amazon and Google.

Human-centred design

A specialist team to explore and collaborate with you, and showcase metaverse opportunities.

A small, agile team that works directly with clients to help explore customer, colleague, employee and student experiences, then co-creation, workshop and interview processes to develop and showcase the value of the metaverse.

CGI's Meta Hub platform

An independent development platform to build metaverse business solutions.

Built on traditional Indie Dev platform principles to reduce the barrier to entry and facilitate crowdsourcing contributions, particularly from the wider student and independent development community.

CGI's sandbox journeys and solutions

Accelerators for creating your own metaverse experiences.

We are developing metaverse archetypes where immersive virtual experiences provide opportunities to tackle traditional challenges in novel ways. These experience templates are designed to enable rapid developments for our clients.

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across 21 industry sectors in 400 locations worldwide, our 90,000 professionals provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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