

Metaverse: Closer than you think

Find the 'real value'
now in life sciences

Introduction

There's currently a lot of confusion, speculation and skepticism around the metaverse and the future it promises. But we believe that this next evolution of the internet represents a huge value driver for healthcare organizations – and a missed opportunity, if ignored.

The key will be to understand what the metaverse is, why does it matter in life sciences and how can it drive 'real' value for organizations including pharmaceutical, bio tech and medical device companies.



What is the metaverse?

The definition of the metaverse is evolving, but we think about it in a way that focuses on value, even as the concept continues to take shape.

This is how we define the metaverse right now: An evolution of the internet, but a revolution in the making for life science organizations.

The metaverse spans physical places and digital spaces, enabling us to collaborate and exchange value through shared interactions and experiences.

95%

of global executives believe that future digital platforms need to offer unified experiences, enabling interoperability of customers' data across different platforms and spaces.

Tech Vision 2022, Accenture

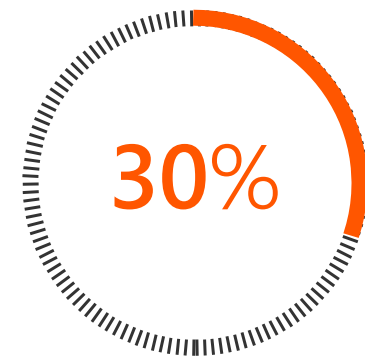
There's a reason the Metaverse is taking off now – we're craving more meaningful interaction online

Asynchronous, text and image-based communication only scratches the surface to truly connect across time and distances. Interactions incorporating multiple senses and a sense of space, as those in the Metaverse do, allow us to feel present, together, while generating better interpersonal connection and group cohesion.

By 2026...



of people will spend at least one hour a day in the Metaverse



of the world's organizations will have products and services ready for the Metaverse

Source: Gartner, "[Gartner Predicts 25% of People Will Spend At Least One Hour Per Day in the Metaverse by 2026](#)," February 7, 2022.

Why the metaverse in life sciences?

We believe the true opportunity for life sciences falls comfortably into three low risk accelerators, each with high value drivers designed to introduce the metaverse into the clinical and operational life cycle.



Future ready skills

Enhance employee training with a greater sense of presence and exposure to real life situations where skills are mastered in a safe and risk-free environment.

Training is a natural for the metaverse. Virtual training programs help train and virtually transport sales teams, for example, into real world settings where sales can interact with simulated clients and share best practices in the moment.

Access to experts is limitless. Virtual teaching assistants and experts worldwide can come together to provide interactive employee education about a range of topics. An employee can talk with and learn from the lead pharmaceutical scientist about a new drug therapy.

Technical knowledge often delivers the market advantage needed to effectively compete. Medical device and life science companies can use the metaverse to continually upskill employees through direct interaction with their devices and therapeutics.

Metrics: Offset staffing shortages for skilled workers, decrease employee retention challenges; quickly train new employees; increase productivity and reduce time and cost of travel.



Enrich data insights

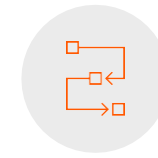
Harness the growing masses of data and extract meaningful patterns of information with AI enabled technologies to rapidly fuel modern therapy development.

Clinical trials and the metaverse introduce the amazing possibility to starkly reduce the cost and time required to run reliable clinical trials. For example, you can run multiple simulations using digital twins to study and analyze processes and predict the impact of medications.

Artificial intelligence and machine learning help design the right structure for drugs and make predictions around bioactivity, toxicity and physicochemical properties. Overlay expert contextual data in the metaverse to ensure understanding.

Access to multiple data sources. Enable unparalleled access to multiple data sources including the electronic health record to enrich clinical trial design. Use [block chain](#) to securely transfer information for patient privacy.

Metrics: Reduce clinical trial cycle times; improve productivity, lower development costs, accelerate speed to market and safeguard data.



Visualize supply chains

Increase the efficiency of supply chains and visibility into the potential risks and weak points with self-correcting, self-improving capabilities.

Collaboration throughout all supply chain tiers, both internally and externally is achievable in the metaverse. Increased potential in connectivity enables a direct collaborative approach with suppliers to transform the cost of manufacturing and simplify and accelerate synchronization up the value chain.

Remote operations are more viable as the metaverse allows people to connect from anywhere providing opportunities for humans-in-the-loop to work from any location and operate equipment from a safe distance with precision.

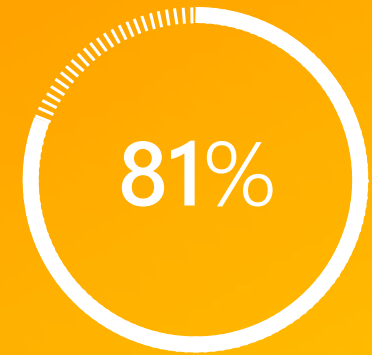
Transparency will be improved with 3-D images of how manufacturers make, deliver and market products. This transparency will make the end-to-end chain visible and responsive, incorporating crystal clear and efficient cost negotiations among vendors and buyers.

Metrics: Reduce lead times, produce real-time shipping costs, deliver accurate transit times and anticipate and reduce delays.

The technology behind the experience


The metaverse spans physical places and digital spaces, enabling us to collaborate and exchange value through shared interactions and experiences.

It's a unique **convergence of technologies** that have created a place where healthcare professionals, providers and patients can accelerate learning, experience together and connect from anywhere.



of healthcare executives **expect the metaverse** to have a positive impact on the healthcare industry.

Five of the top 10 most tested and adopted **emerging technologies** will power the metaverse:




Internet of things (IoT) and edge computing




Blockchain



Next-generation connectivity



Digital twins



Extended reality

Ventilator Challenge UK builds a resilient supply chain

Avanade helps Consortium manufacture 20 years' worth of ventilators in 12 weeks using the power of Microsoft.

Business situation

As tens of thousands of UK residents fell sick at the beginning of the COVID-19 pandemic, many of the most seriously ill required ventilators to help them breathe. With projections that the National Health Service (NHS) could need nearly five times the number of available ventilators, the British government called for a rapid, homegrown solution to make up for the global demand cutting off the supply from overseas.

Thousands of leading organizations from across industries were brought together – branded as the Ventilator Challenge UK Consortium – with a shared goal to manufacture more than 10,000 ventilators in 12 weeks.

Solution

Avanade quickly dispatched a team from across Europe and India to help deliver multiple digital solutions to support the supply chain and ventilator production. We implemented Industry 4.0 technologies, including business applications, data analytics, artificial intelligence and mixed reality for:

- Rapid supply chain management using [Microsoft Dynamics 365](#)
- Ventilator assembly line training with a Microsoft HoloLens 2 mixed/extended reality solution
- Control tower dashboarding using [Microsoft Power BI](#) for a single source of truth and production

Results

Over the course of the initiative, 15 million parts from 88 global suppliers flowed through the Dynamics 365 supply chain solution, and the Consortium produced 13,437 ventilators. That's 20 years' worth of typical ventilator production in just 12 weeks. With ventilators available to those who need them, the NHS now has the critical equipment to continue its fight against COVID-19.

[Learn more at Avanade.com](https://www.avanade.com)



But for the Metaverse to engender trust and connection, we must overcome the challenges of building and maintaining it

Accessibility & inclusivity

Create a welcoming environment for everyone. Use accessibility features to make experiences more enjoyable for every user.

Privacy

Obtain clarity and consent for what data is collected / aggregated and how it's controlled and used, while instituting safeguards that keep pace with the quantity and granularity of data generated by the Metaverse.

Identity

Look for ways to safely carry identity management and authentication protocols across worlds and platforms to protect against fraud and abuse, taking extra precautions if using biometrics for identification.

Safety

Identify and address any physical threats to personal health and safety that might exist in the Metaverse. Maintain that same level of care for emotional safety so participants feel protected from abuse, harassment and other potential harms.

Human psychology

Understand short- and long-term psychological implications before widescale technology adoption. Consider how individuals might use new tools for self-expression, personal growth, satisfaction and engagement, while anticipating shifting norms.

Identity

Look for ways to safely carry identity management and authentication protocols across worlds and platforms to protect against fraud and abuse, taking extra precautions if using biometrics for identification.

Digital assets

Maintain customers' trust in the authenticity and security of transactions and investments they make in the Metaverse by exploring digital assets like cryptocurrency and NFTs.

Security

Maintain a secure environment by assessing the risk of attacks, breaches and outages for your unique Metaverse use cases and positioning security as a core component of user trust.

Oversight & accountability

Institute an ethical framework to safeguard experiences and outcomes. Create experiences that reflect your core values to build trust with customers and employees, while maintaining dialog with stakeholders.

The right approach to the metaverse is a pragmatic one

At Avanade, we're helping our clients become metaverse ready. We're guiding them on a journey that takes advantage of the most significant investments and strategic trends in the metaverse. **We also make sure to identify and address the challenges.**

Using our expertise in data and experiences and our strong alliance with Microsoft, we're helping clients build proofs of concept and pilots that realize the opportunity of the metaverse – for healthcare organizations to be and do more, and to find value in all the new ways that we'll relate to places, data and each other.

We encourage small, concrete steps now to start building a foundation that minimizes risks and takes advantage of the metaverse opportunities in life sciences.



The expertise to become metaverse-ready

We can provide access to Microsoft capability, including [Mixed Reality Capture Studios](#), and [AltSpaceVR](#), a unifying holographic virtual collaboration across virtual and augmented reality, laptops and smartphones.

Accenture, our parent company, recently set up the [Metaverse Continuum](#), offering creativity, technology and deep industry experience to design, build and operate metaverse capabilities.

Where to begin

1 hour

Let's chat over lunch or set up a meeting in the Metaverse.

1 day

Let's get together with a few of your colleagues and explore the potential of the Metaverse for your organizational needs.

1 week

Let's build a Metaverse roadmap and strategic plan together.



Meet us in the metaverse

Avanade is reimagining metaverse in life sciences – whether it’s a strategic vision for the metaverse or accelerating immersive learning environments, it’s time to take control of the future with connected professional communities designed to mediate teamwork and efficient collaboration, upskill workers and visualize new efficiencies in the supply chain. **Let’s get started.**

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About Avanade

Avanade is the leading provider of innovative digital, cloud and advisory services, industry solutions and design-led experiences across the Microsoft ecosystem. Every day, our 56,000 professionals in 26 countries make a genuine human impact for our clients, their employees and their customers. With the most Microsoft certifications (60,000+) and 18 (out of 18) Gold-level Microsoft competencies, we are uniquely positioned to help businesses grow and solve their toughest challenges. As a responsible business, we are building a sustainable world and helping young people from under-represented communities fulfill their potential. Avanade was founded in 2000 by Accenture LLP and Microsoft Corporation. Learn more at www.avanade.com.

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