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Explore how cloud is driving the retail sector and how T-Systems, with its innovation center, is poised to welcome the advent of the Metaverse.

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**Some things simply take time. Ever since Mark Zuckerberg announced last summer that Facebook would be concentrating on developing a metaverse, the term has been on everyone's lips. But it was invented 30 years ago by U.S. science fiction author Neal Stephenson. As I said, some things come slowly, but then possibly quite powerfully.**

And how is it here? Is "wait-and-watch" a good idea? What is it all about? And what is the vision of Metaverse for our industries? Take for instance, the retail trade, which has just been turned upside down worldwide by Amazon and Co.

You can imagine the metaverse as a complementary reality, or as a convergence of the physical and digital worlds. Similar to

the virtual world of gamers today, in which augmented reality (AR) and virtual reality (VR) are linked. This will be applicable not only to digital experiences – as they are already successively becoming commodities in the tourism industry or the global museum landscape – but also to digital goods. It will thus change how people interact with each other, but also with brands; in the process, it will not only become a new retail market, but also an economic space, a kind of parallel universe.

Analysts' estimates of the market volume underpin this: Bloomberg Intelligence sees the global metaverse market volume alone at around \$800 billion worldwide by 2024. PricewaterhouseCoopers (PwC) sees the potential for VR and AR as essential technologies for functional participa-

tion in metaverse events to increase global GDP by up to USD 1.5 trillion by 2030.

It's possible that this scale and speed will take our breath away, but shouldn't we have seen it coming? So much for the phrase "wait and watch".

#### Flashback: Where did we come from?

Retail has witnessed a veritable boom in the last 10 years. The oft-mentioned digital transformation we have experienced has driven e-commerce take-up, and the health crisis of 2020 only accelerated the trend exponentially. While in 2010 online sales barely accounted for 5% of all transactions, sustained annual growth between 2010 and 2019 was considerably higher

for e-commerce businesses than their brick and mortar counterparts. In fact, the latest figures from strategy consultancy Oliver Wyman's report titled "Is E-commerce Good For Europe?", showed an annual growth rate of 14.6%, which, when combined with the boost over the past two years due to the health crisis, leads us to unprecedented proportions of sales via e-commerce.

The Spanish fashion industry giant Inditex provides a highly illustrative example. In 2021, online sales growth was up 28% on 2020 and 124% on 2019, surpassing 25% of the group's total sales. That went beyond initial expectations and showed that investment in the company's digital transformation processes and customer-facing technology drives results.

There is no question that technology has established itself as an irrefutable engine for change within retail, providing companies and their customers with new possibilities for interaction. These, in turn, sparked changes in the behavior of consumers with an increasingly digital profile, ultimately unleashing an unprecedented transformation within the sector. Now, consumers are no longer satisfied with acquiring a product; rather, they seek

increasingly immersive experiences that provide them with added value beyond their purchase.

This change in consumer habits has led to an evolution in the *shopping space* that has increased in size from the physical to the digital. Thus, retail companies have complemented brick-and-mortar store networks by creating a digital footprint with the development of online apps and an increasingly important social media presence. This means, new generations of 100% digital consumers with high levels of technological maturity can enjoy a real omnichannel shopping experience in which they get to decide where they are going to shop at all times. And it can even mean combining the physical and digital channel in a single transaction, in a unified phygital commerce model, creating a scenario where both social media and apps are increasingly important as drivers of sales and loyalty. The shop-in-shop principle, with which primarily clothing brands found shelter in department stores and malls worldwide, became the customer's "shop-in-your-mobile", omnipresence and 24/7 opening hours included.

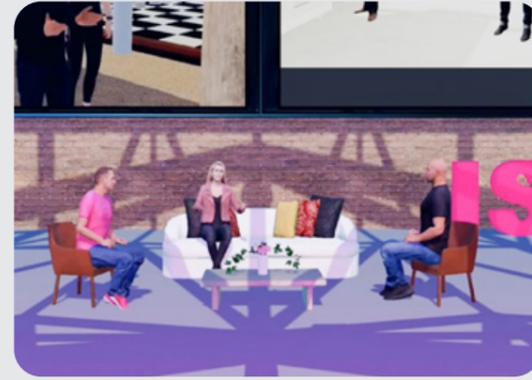
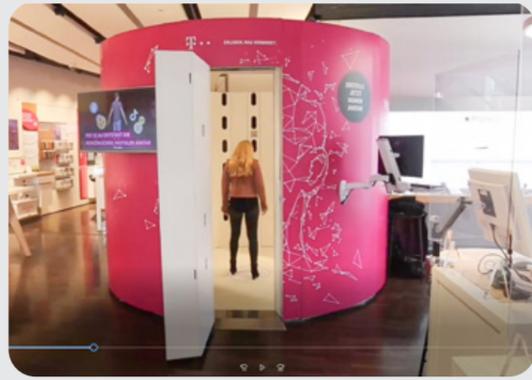
This transformation of the shopping space will reach a new level with the imminent

emergence of the Metaverse, thanks once again to the interaction of technologies such as virtual reality, cryptocurrencies, and blockchain. These are pillars of future retail that have accelerated their development and democratization in recent years and which open up a new – this time, virtual – world of possibilities for developing retail.

In conclusion, and if we look to the future, it is likely that the trend towards mass digitalization within the sector will continue, as noted by forecasts from leading consultancy firms. Moreover, scenarios such as the one modelled by Oliver Wyman, with e-commerce accounting for 30% of all retail sales in Europe by 2029 may, at current growth rates, be clearly surpassed.

#### Metaverse: a more immersive and experiential reality

In this new environment, retailers will have the option of creating more immersive experiences, allowing them to further penetrate consumer minds. In other words – and this is what makes the potential huge – Metaverse will gain immense reach in record time. Predictions



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are that 70% of major retail brands will be present in the Metaverse over the next five years. And the first ones are already there. The question is: are these just cute little early birds or forward-looking raptors?

The arrival of the Metaverse is sparking a reaction among major and traditional retailers that are keen to develop new experiences with which to surprise their customers. Beyond creating “wow moments”, the goal is to make the entire shopping experience “wow-worthy”. In this regard, some leading companies have already started moving towards having a presence in the Metaverse. Nike, for instance, has created its very own universe of Nike-land, other brands such as Gucci are selling their own virtual clothing “the Gucci Virtual 25 sneakers”, and then there is H&M, whose latest clothing collection was launched in this new virtual world.

A development that is more closely connected to the gaming world – with examples such as Fortnite or Roblox – is thus being adopted by the retail sector, which has successfully seized the opportunity to create distinctive shopping experiences such as the one created by Balenciaga, which introduced its products on Fortnite, or the one from sneaker brand Vans, which created its “Vans World”, in this case, in Roblox.

On the online gaming platform, the 47 million daily active users can now browse

Ralph Lauren's virtual stores too and dress their avatars in the latest designer goods – at prices ranging from three to five dollars for virtual puffer jackets, plaid hats, or ski wear in the winter season.

This still makes Ralph Lauren one of the comparatively inexpensive sellers in the Metaverse. Last summer, the luxury fashion brand Gucci sold its virtual Dionysus handbag for about \$4,100. According to the business magazine Forbes, even the real version of the handbag was far cheaper.

While this trend sounds absurd, and even GQ marveled at it early this year, but in fact pointed out that “this form of shopping is predicted to be a potential new goldmine”. According to the style bible among men’s fashion magazines, investment banking and securities trading firm Morgan Stanley predicted that the Metaverse could represent a windfall of more than \$50 billion for the luxury industry in particular over the next decade. The vision of this new virtual world is that the Metaverse will provide a more immersive and three-dimensional experience than the Internet has provided to date.

#### Innovation as the backbone of Digital Transformation

There is no doubt that the Metaverse and its wide range of opportunities ought to be on our radar, but it is also an evolving

sector which poses its own unique challenges. In other words, getting as close as possible to the customer, gaining as much knowledge as possible about them to strengthen their satisfaction and loyalty, or designing the best way to interact with them are challenges that require a digital transformation plan.

For this plan and in order to align it with a concrete business model – which is nevertheless in a state of constant change – a comprehensive, mature, and efficient innovation management within the company is key. That also includes aspects such as collaboration at all levels within the company and between companies, and experimentation, which allows us to validate new organizational models, processes, services, products and solutions, as well as adopting the technologies that support them.

#### Cloud Business Lab for Retail: the cloud at the center of innovation

In this sense, for T-Systems, technology and experimentation are the two pillars that shore up the evolution of the retail sector. And the technology on which the sector’s transformation rests is primarily cloud computing. Throughout the value chain, whether it’s production systems, logistics and supply chain systems, cross-cutting systems for management, marketing or those that represent the omnichannel frontend with the customer,

it is essential that the supporting IT has the flexibility and adaptability necessary for a business. The one constant in this high-speed evolution remains: the customer is king. But this means that companies must offer answers to the rapid quantitative and qualitative changes in demand at the same pace. In other words, provide concrete offers and products and move closer to a real model of Retail-as-a-Service.

Technological evolution that has accelerated over the last two years in particular, reveals the constant need to invest in solutions that need to be tested and validated from the early stages. It is essential that the innovation process under which that analysis is carried out provides sufficient experimentation to guarantee less uncertainty during decision-making pro-

cesses, allowing for a better understanding of customer needs and how technology can provide a viable and scalable response. Experimentation through innovation managed by T-Systems is driven through the concept of Cloud Business Lab for Retail.

How? By creating for that purpose an environment that allows for accelerating the process of analyzing and adopting digitalization in the face of new business challenges. (see box)

The Cloud Business Lab for Retail therefore represents a clear example of T-Systems’ commitment to contributing business value to retail companies, adapting our knowledge and experience in comprehensive technology management

and digital transformation processes to the specific needs of an extraordinarily competitive sector. Our ambition is to support retailers as valuable partners in their constant process of evolving and adapting to a constantly changing environment, tackling the arrival of new players and more specialized competitors, along with new consumer trends and behaviors that require new ad hoc solutions for these new needs.

In short, the Cloud Business Lab for Retail by T-Systems is our response to the sector’s current and future challenges, in which we bring innovation and technology together to accelerate the construction of a unique shopping experience. ■

#### How it works

An environment in which cloud computing unites with the technologies (5G, RA/RV, IoT, RFID, Data Analytics or AI) that enable users to capture, analyze, and transform data into key information, with a working model that is committed to co-creation and collaboration with each customer and partner, the latter mostly being start-ups with value-added solutions.

The focus is on building scenarios that respond to existing and future business needs. For that purpose, and as a core of possible tech solutions, architectures and cloud-based services from different hyperscalers that constitute a de facto market standard are used.

Furthermore, prototypes and MVPs of use cases are very quickly developed, designed using the concept that we at T-Systems offer to the market under the name of “Retail Plug & Play” (RPP), based on pre-existing scenarios with both physical and digital assets (devices or sensors and apps, respectively) that are ready for immediate integration against the available cloud environments.