

European Commercial - February 2023

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SPOTLIGHT
Savills Research

Gaming Occupier Outlook



• Digital Growth • Workforce • Occupier Requirements

6 key takeaways

- 1) The European gaming sector is primed for revenue growth of 8% per annum over the next five years, driven by rising user growth, digital adoption, corporate investment and a competitive developer landscape.
- 2) Salaries for European software developers compare favourably on a global scale, with discounts of circa 30-40% compared to the major US cities.
- 3) Global gaming companies tend to seek non-CBD locations with strong connectivity and within close proximity to talent pools. Fitout costs remain high relative to other tech sectors due to bespoke development and production studios, so tenant base is 'stickier'.
- 4) Attracting and retaining talent in the industry remains one of the largest challenges facing occupiers, with approximately 5,000 gaming developers currently seeking new employment opportunities across Europe.
- 5) Given the backdrop of a competitive labour market, many gaming companies would rather not co-locate in office buildings. Gaming developers put incredible value on their intellectual property and highly value security. Consequently, most of the demand for development studios in a large gaming company's portfolio will be in self-contained offices.
- 6) Sustainability remains a challenge for the sector. Given the high energy consumption of gaming hardware, real estate occupiers are opting for greener real estate to reduce their emissions.

Why is gaming relevant?

Europe’s gaming market continues to grow from strength to strength, buoyed by online user growth, a competitive developer landscape and record levels of corporate investment into the sector, creating new real estate demand for occupiers across Europe’s major cities.

The gaming industry dates back to 1970 and traditionally refers to electronic games played using an electronic device which can be categorised into computer games and console games, and in the last decade, smartphone games have emerged as a new category. The global gaming industry has an estimated revenue of \$209bn at end 2022, according to

Statista. In Europe specifically, revenue is forecasted to grow with a CAGR of 8.0% till 2027 to reach \$37.7 bn, reflecting faster growth than both China and the US. By 2027, the UK (\$8.9bn), France (\$4.7bn), Germany (\$6.6 bn), Italy (\$2.7bn) and Spain (\$1.5 bn) are expected to represent among the largest markets.

Growing user base & digital adoption

This consistent growth of revenue is fuelled by the expanding user base. Globally, there are more than three billion active gamers. Within Europe, on average, gamers spend 8.6 hours per week playing video games, up from 6.4 hours per week pre-Covid, according to

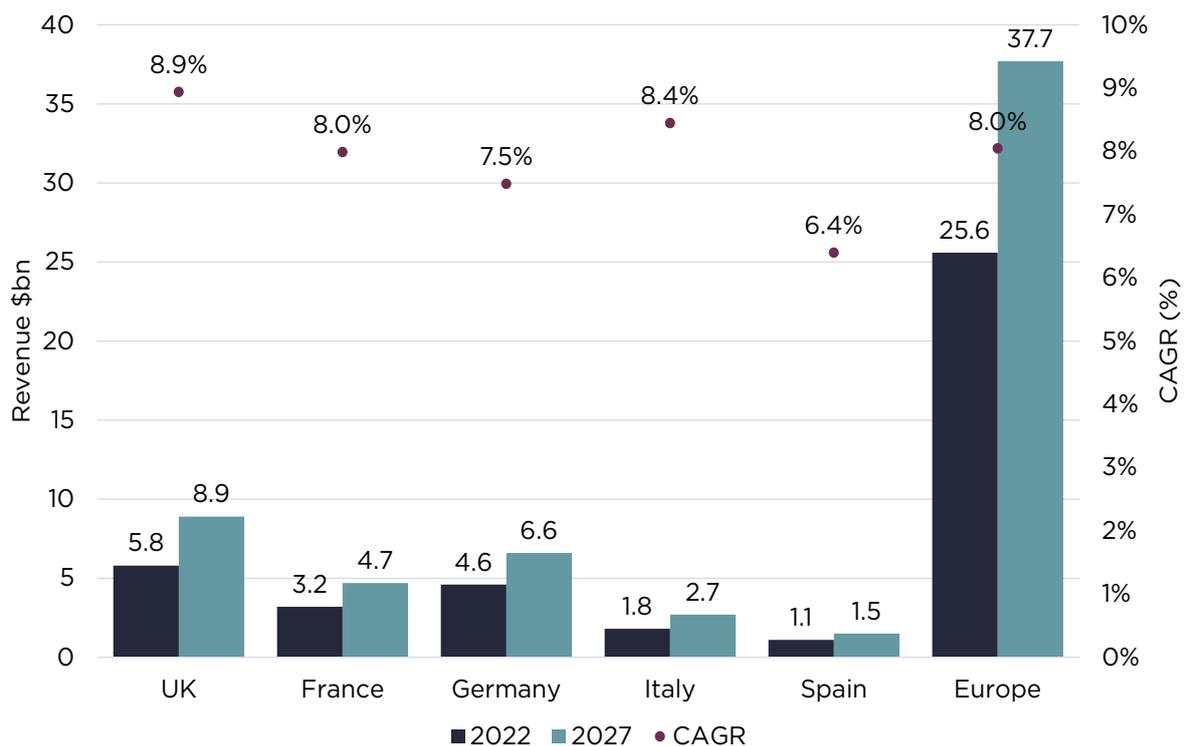
Gaming Smart’s survey of 800 gamers worldwide. UK and German gamers reported among the highest average weekly hours, playing over seven hours per week.

Digital gaming generates on average three times revenue per user, compared with physically sold games, providing developers with more diversified income streams. Across Europe, there were 276 million digital video game users, which is expected to increase by 25% over the next five years.

Corporate investment

Rising levels of corporate investment is reaching the sector as a result of the consistent growth in users and revenue.

Chart 1: Gaming industry revenue in Europe (\$bn, projected growth 2022-27 % pa)



Source: Statista

In 2022, approximately €10bn of venture capital investment was raised by gaming companies worldwide, of which €1.6bn was invested into European headquartered companies, marking Europe's second strongest year on record, after 2021.

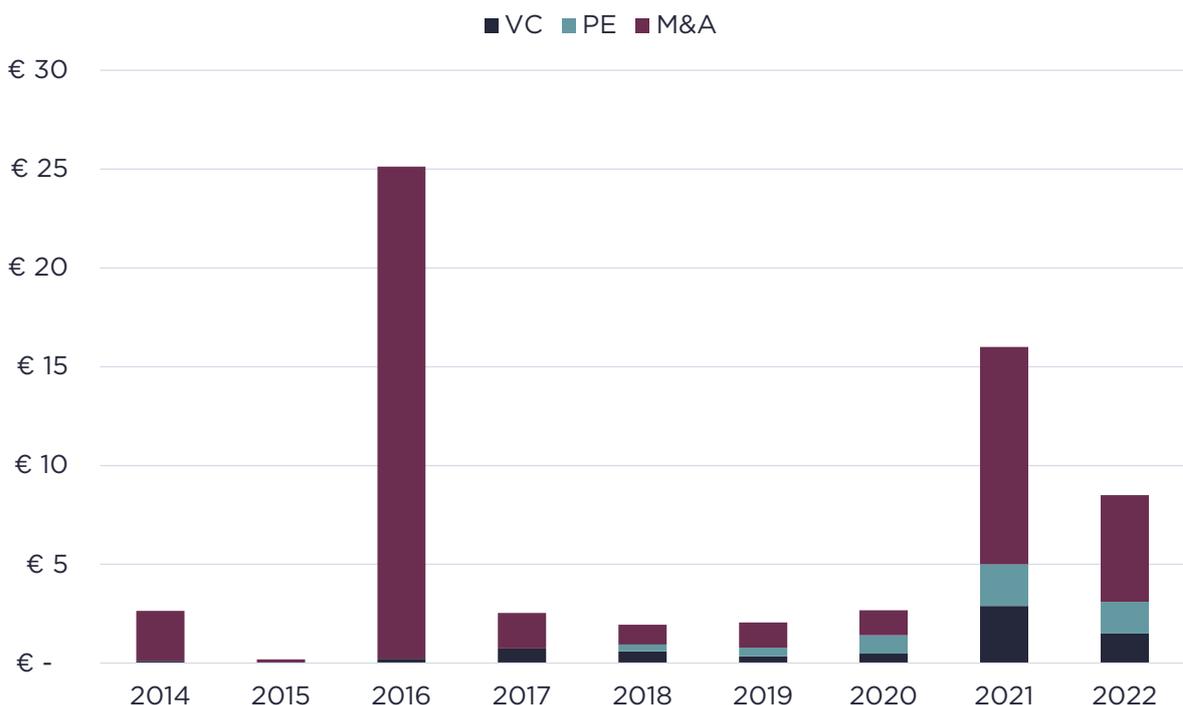
The UK overtook France to become Europe's most actively invested market, with €959m invested, driven by Metaverse platform developer, Improbable, raising almost €250m. However, Paris-based gaming companies including Voodoo, Homa Games and Shadow have attracted significant volumes of capital in recent years.

Usually, around 12-18 months after funding has been raised, gaming companies seek to expand from incubator to office space, with Tripledot Studios, for example, operating a gaming studio to develop casual mobile games.

However, corporate mergers and buyouts are becoming more common and involve larger transactions, as €5.3bn of M&A activity took place in the European gaming sector during 2022. Tencent acquired Sheffield-based Sumo Digital for €1.1bn, whilst G.N Store acquired Copenhagen-based SteelSeries for €944m in 2022, according to PitchBook data. Big tech conglomerates are seeking to boost their exposure to

the gaming sector to expand customer base, increase technical expertise and improve client offering. Ultimately, these companies are seeking to either upgrade or consolidate office space to improve efficiencies.

Chart 2: Corporate investment into European gaming sector (€bn)



Source: PitchBook

Talent and labour costs

Where can occupiers find talent and how much will it cost?

Among the top considerations for gaming occupiers is the access to talent pools for game developers. Similar to the life science community, in the gaming sector, the collaboration of industry and education in an incubator environment is essential for startup growth.

According to the QS World University Rankings, Europe boasts six of the top 20 universities globally for computer science and information systems courses. However, many university cities struggle to compete with the lure of higher salaries and career progression as talent migrates towards international cities.

Talent scarcity

According to the latest Eurostat data, the number of persons employed as ICT specialists in the EU generally held out against the effects of the global financial

and economic crisis and the downturn experienced in many labour markets in the last decade. As a consequence, the share of ICT specialists in total employment increased from 3.2% in 2012 to 4.5% in 2021.

However, the supply of newly qualified and skilled talent entering the labour pool is struggling to keep up with the increasing demand. In 2014, the European Commission predicted a shortage of 900,000 IT professionals for 2020. In 2017, this number was revised to a shortage of 500,000. Although it may be smaller than initially estimated, the shortage is real- in 2020, more than half of European companies that recruited, or tried to recruit ICT specialists, reported difficulties in filling these vacancies. For example, in 2020, 12% of all companies in the Netherlands

were looking for ICT specialists and 70% of the companies hiring had difficulties finding these experts.

These numbers relate to the more generic term of ICT professionals and therefore provide a good high level overview of shortages within the IT sector but not necessarily to the gaming sector.

Active gaming labour supply

Using data from LinkedIn, Savills has analysed the labour/talent specifically within the gaming industry.

According to LinkedIn data, there are approximately 30,000 professionals active in the gaming industry in Europe with most professionals being male (85%) and located in the UK (3.8k) mainly in London (1.3k) and



France (2.1k) most in Paris (1.1k). More interesting is the number of professionals in the CEE countries such as Ukraine (1.9k), Poland (1.5k), and Romania (1.1k), driven by the relatively cheaper workforce.

LinkedIn data shows that there are currently more than 5,000 professionals within the sector open for new opportunities. This relatively large number of professionals open for new opportunities is reflected in the median tenure of professionals which is around 1.2 years, indicating relatively high job turnover and a low employer retention rate. Furthermore, the average job postings indicates an 11.2% YoY growth in Poland, followed by Netherlands (10.9%) and France (10.7%), whilst the Ukraine/Russia war negatively impacts the demand in Ukraine (-1.9%).

The universities, schools and organisations that produce most of the heavily sought-after talent are ISART Digital Paris, with 270 professionals who attended the school, Breda University of Applied Sciences (202), Teesside University (196) and Universidad Complutense de Madrid (187). The largest companies, by number of professionals in Europe are Ubisoft with 740 professionals, Electronic Arts (253) and Rockstar Games (170).

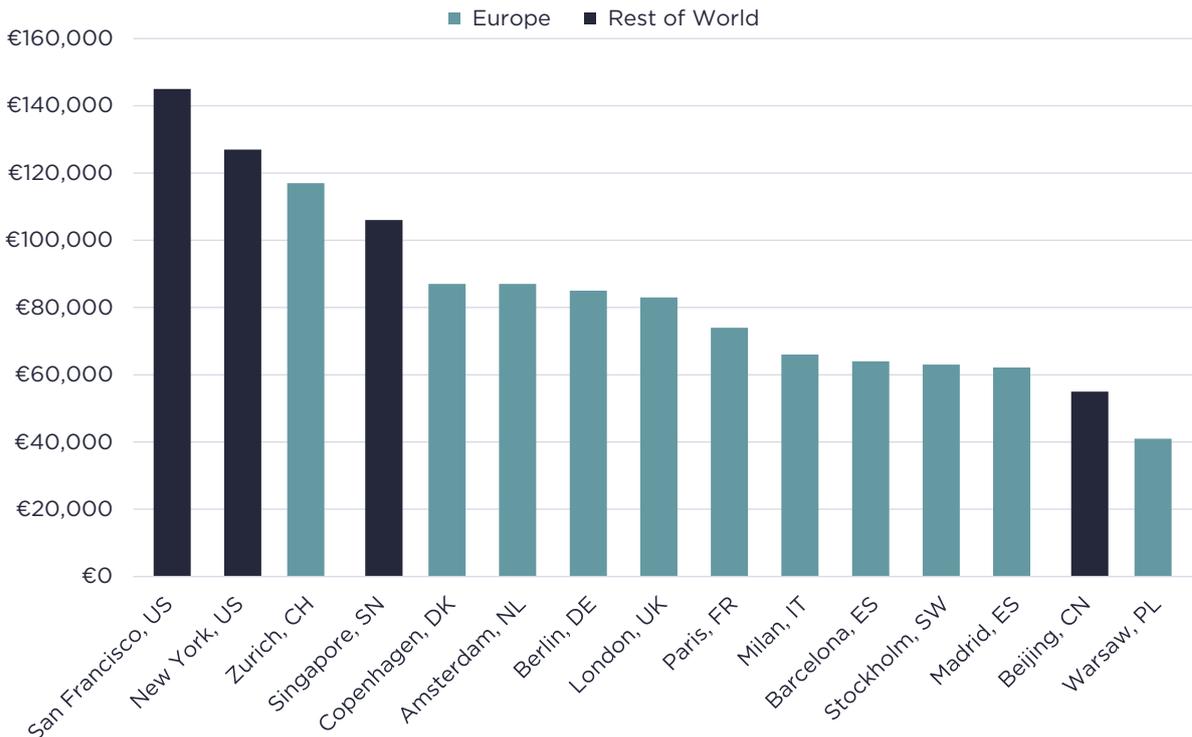
Further shortages in available IT labour across Europe are only set to continue growing. This labour shortage is not limited to Europe; according to the U.S. Bureau of Labor Statistics, the global IT labour shortage is expected to reach 85.2 million by 2030. This consequently has an impact on the labour costs which are set to increase

as a result of the demand and supply dynamic.

Talent costs

Savills Research has outlined the average software developer salaries from Glassdoor for Europe’s established tech cities. Warsaw remains a buoyant occupier market due to the technical expertise, lower wage costs and nearshoring potential. Europe also remains attractive for employers on a global perspective, with many Western European markets at a 30-40% discount compared to New York and San Francisco.

Chart 3: Software developer salary by city (€)



Real estate impact

How is the gaming industry impacting commercial real estate?

As the gaming industry evolves and grows further, companies' physical presence and requirements grow as well. In general, gaming companies' offices incorporate studios for development and production of new games and technologies.

Specifications

Development studios typically have great open floor plans, facilitating a highly collaborative environment and are highly teched out with state-of-the-art hardware. This hardware generates large amounts of heat and require additional cooling, making the studios less densely occupied as traditional offices. The high end hardware and additional cooling equipment require large amounts of energy, which need to be highly resilient as power blackouts/cuts are detrimental. Furthermore, online security is highly important for gaming companies as the Intellectual Property (IP) security is essential. Finally, studios need to be modern, state-of-the-art and appealing to attract sought-after talent.

Location

Larger gaming companies such as EA, Tencent, Rockstar Games and SEGA, tend to search for non-CBD

locations that are well-connected and in close proximity to talent pools, e.g. universities. These larger companies tend to develop more campus-type offices and studios where multiple teams and departments are clustered.

On the other hand, small studios and growing developers with less capital to relocate to or develop these campuses typically look for prime buildings in prime locations to attract talent.

The war for labour and talent in the sector combined with the sensitivity around IP security creates an extremely competitive market, limiting the benefits of clustering and/or co-locating. The fear is that employees will swap roles quickly when they are surrounded by industry competitors with a fear of loss of IP as a consequence.

Remote working and flex

The hybrid way of working is also having its impact on the gaming sector, albeit below that of the wider tech sector given the need for collaboration between different departments in various stages of product development, making physical presence more necessary. Nevertheless, the current economic challenges present gaming companies

with a need to manage costs and optimise their occupational footprint, as the talent pool seeks more flexibility.

Therefore, the flex office sector is becoming more appealing for gaming companies given that it provides them with more flexibility to cope with the economic uncertainties whilst facilitating more flexibility to their employees. However, flex offices come with challenges for gaming companies in terms of IP security when the flex offices are multi-let to other occupiers, especially when other occupiers are in the same sector. Furthermore, larger gaming companies fear a loss of productivity when their employees are more flexible since it lowers the collaboration between teams.

Key gaming requirements

- High-quality fitout due to state-of-the-art hardware requiring high and reliable energy supply
- Grade A, best-in-class offices
- Close proximity to talent pool clusters
- Pending on occupier size, either a prime location, or campus-style offices in well-connected periphery locations with access to talent pools.



Building an ecosystem

What does a successful gaming ecosystem look like?

GameBCN is an incubator located in Barcelona to help video game developers continue the development of projects with the greatest possible potential of the local specialised university programmes and supporting them to become new startups. The programme offers training, mentoring, grants, demonstration days with publishers and the aim of the programme is to position Barcelona as a centre for the gaming sector in southern Europe, attracting global talent.

The initiative is both publicly and privately funded and was formed jointly between the business incubator Incubio, the Department of Culture of Catalonia through the Institut Català de les

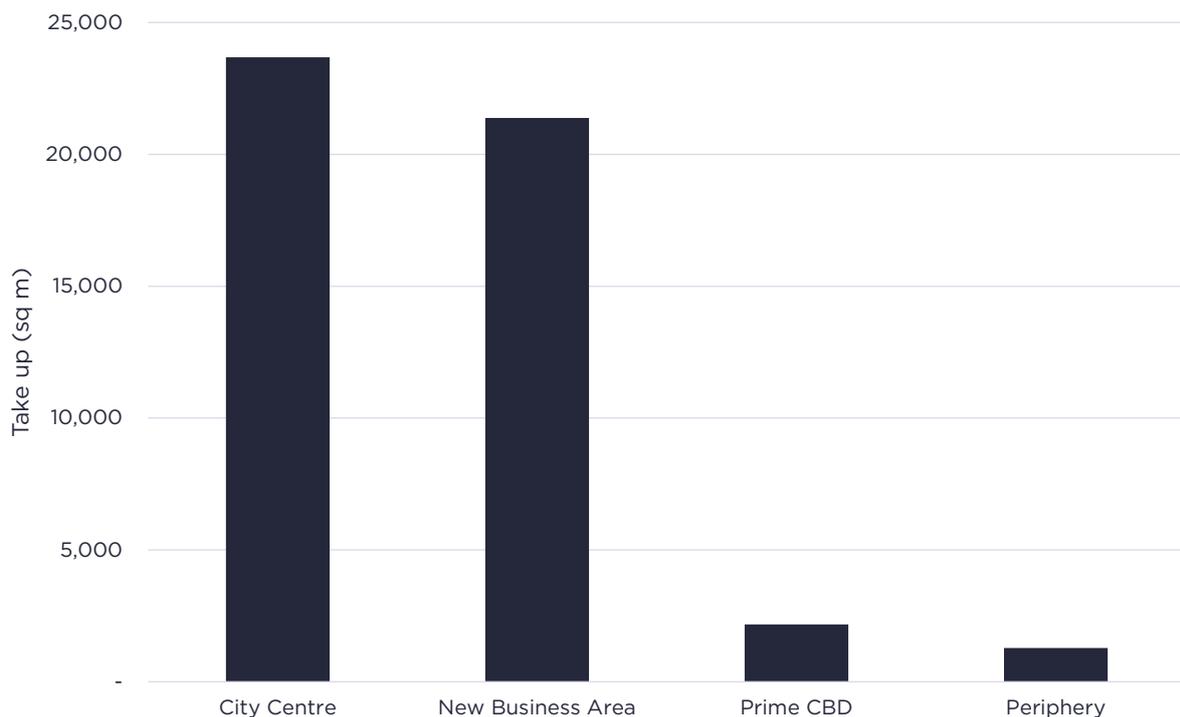
Empreses Culturals, and Caixa Capital Risc, the venture capital arm of the bank, La Caixa.

ACCIÓ, is the Catalan government’s agency for business competitiveness and has supported more than 33,000 clients in generating business investment and providing programmes and support services, supporting the growth of the gaming industry. Barcelona’s gaming industry has raised €30m over the last three years for startups headquartered in the city, according to PitchBook data.

In recent years, key gaming occupiers have signed for space in the city, including Social Point (4,900 sq m in 2022) and Scopely Games (2,116 sq m

during 2021). Ubisoft also signed for 4,250 sq m during Q4 2019, with the majority of occupiers located in the city centre or NBA.

Chart 4: Barcelona gaming sector take-up by zone (sq m, since 2005)



Source: Savills

Challenges and opportunities

Where can occupiers find talent, and how much will it cost?

2023 is likely to be a challenging year for the tech industry as a whole. An impending recession is shifting businesses to manage costs, and a reduction in advertising expenditure is likely to impact big tech companies' balance sheets, hence recent press coverage of planned job cuts. Furthermore, the cost of living crisis is likely to have an impact on consumer spending power in the gaming sector. Nevertheless, we believe the structural drivers will position the gaming sector for resilience, and that further corporate acquisition activity will drive both expansion and consolidation of office space over the next couple of years.

Challenges

Supply chain bottlenecks have impacted the sector since the Covid pandemic, as observed with Sony's PlayStation 5. The manufacturing speed needed to keep up with the growth in demand was impossible to achieve due to chip shortages, making the console an extremely hard piece of kit for gamers to get their hands on. However, this is expected to ease further in the coming

years as many manufacturers have diversified and optimised their supply chains, reducing cost pressures.

The **regulatory environment** in China is likely to impact expansion across Europe. Beijing launched a campaign in 2021 to rein in the technology industry's growing power and capping playing time for minors. However, recent evidence suggests Chinese regulators are granting new licences for games, indicating that the crackdown on the sector is being eased.

Another challenge facing the sector is the **availability and supply of new talent/labour**. As highlighted in this report, available talent/labour is vital to high-quality game production and the forecast is that the labour shortage will increase further.

Sustainable office space is essential in attracting gaming developers across Europe. Evolution Gaming signed for 5,000 sq m at De La Vega Business Park, Madrid, which Savills advised on. The business park is co-owned by Tristan

Capital Partners and Savills Investment Management and achieved LEED Gold, due to its low CO2 emissions, water efficiency and sustainable travel provision.

Additionally, Medusa Group has designed a 6,000 sq m development for one of Poland's largest gaming developers, CD Projekt, with construction set to commence in 2025. The new headquarters will contain motion capture studios, sound studios, and training rooms, whilst the building exterior will be overgrown by vegetation and vines.

Opportunities

The gaming industry has a leading role when it comes to technological innovations that not only impact the gaming sector but has the potential to impact wider society as a whole. Most gaming companies are developing these technological innovations and are the front-runners of implementing them. We have identified below some technological innovations that are likely to have game-changing impacts.



Quantum & cloud computing- The (increased) usage of new computing technologies such as quantum, cloud, and edge computing will have game-changing effects, especially quantum computing is expected to have a big impact as it can significantly speed up gaming development time and costs. Quantum computing is currently already in use but to limited extent, as it requires expensive state-of-the-art hardware. Therefore, the impact to the gaming sector is subject to adaptation, availability, and affordability.

Web3- The introduction of Web3, this latest version of 'the internet' refers to a decentralised internet with open standards and protocols that protect digital ownership rights, providing users greater data ownership and control over how their data is monetised, catalysing new business models. Web3 thus comes down to decentralisation of the internet and users enabling to transact business peer-to-peer, cutting out intermediaries and removing power from controlling entities with a greater focus on user privacy, transparency and ownership.

According to McKinsey, the first and main industries that most likely will adopt and start using Web3 are:

- Media and entertainment; gaming and digital art
- Retail; online shopping & marketing
- Financial services; blockchain technologies

There are, however, some hurdles for Web3 to take before being fully implemented. These hurdles relate to the evolving internet regulations and policies, consumer protection, sustainability concerns, and the reliability and functionality of the design and ecosystem of the Web3 coding and infrastructure.

VR, AR, AI & Metaverse- Finally, the implementation of the different kinds of new online realities, such as virtual (VR), augmented (AR), mixed realities (MR), Artificial Intelligence (AI) and the Metaverse, will impact the sector. Currently, the improvements and developments within these online realities follow each other rapidly but are not yet fully accepted and used

in today's society. The continuous and rapid improvements in these technologies will be realised in the coming years and will then have a moderate to high impact on the gaming industry.

Esports- The popularity in esports is forecast to grow significantly in the coming years and will result in more revenue and interest in the gaming sector as a whole. Data from Statista shows that in 2022 the global esports revenue totalled \$1.38bn and is forecasted to increase by 36% to \$1.87bn by 2025, and the number of esports spectators is forecasted to grow by 20% from 532 million in 2022 to 641 million viewers by 2025. This will result in higher demand for (esport) game development and provide unique opportunities for gaming companies to broaden their businesses model and attract more customers, labour/talent, and investors to the sector.



Savills Commercial Research

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