



Xsolla

THE XSOLLA REPORT

STATE OF PLAY

FALL 2023 EDITION



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**Chris
Hewish**

Xsolla

As we present the Fall 2023 edition of "The Xsolla Report: The State of Play", a sense of enthusiasm and anticipation fills the air. The pace of change in our industry is swift, and your ongoing trust and engagement allow us to adapt, innovate, and lead.

A YEAR OF BOLD ACTIONS AND ACHIEVEMENTS

This year has been nothing short of transformative for Xsolla. We have made significant strides in market reach and product innovation that have fundamentally altered how we operate and the value we offer to our partners.

One of our proudest accomplishments is the robust performance of our Web Shop solutions. To put this into perspective, 40 of the top 100 mobile games have chosen to launch their Web Shops using Xsolla's comprehensive tools. But we didn't stop there—over the year, we assisted 151 games

FOREWORD



in launching their Web Shops. These achievements are not isolated events but point toward a greater trend: the relentless march of the mobile gaming industry toward multiplatform operations.

Our journey this year also took us to new territories in product innovation. We rolled out cutting-edge solutions like Headless Checkout and Xsolla Mall to meet the eclectic needs of our partners. These products not only enrich the portfolio we offer but also elevate the overall gaming experience for end-users.

Strategic partnerships have always been the cornerstone of our success, and this year, we further solidified our alliances. Collaborative efforts have yielded products like Venmo, Klarna, M-Pesa, and digital wallets in emerging markets like Africa and the Middle East. In the corporate arena, our acquisitions of companies such as AcceleratXR, Lightstream, Rainmaker, and API. STREAM has positioned us to offer our partners even more comprehensive and diversified solutions.

CHARTING THE COURSE AHEAD

The report that follows this introduction is a treasure trove of insights, trends, and analyses. It outlines the market dynamics in Payments, Mobile Gaming, and Product Development, offering you a clear view of the landscape we're operating in. As we look ahead, we focus on emerging markets and launch new products tailored specifically for the mobile gaming sector.

Please delve into this report as it reflects our past accomplishments and charts the direction for an exciting and promising future. At Xsolla, we remain committed to continual growth, innovation, and, most importantly, to you – our partners and community.

Sincerely,
Chris Hewish
Xsolla



EXECUTIVE SUMMARY

In a rapidly evolving landscape, the global gaming industry is poised for a resurgence after a brief setback in 2022. With projections indicating a market value [of \\$212.4 billion by 2026](#), industry stakeholders are actively seeking insights into market dynamics, emerging trends, and player preferences to inform their strategic decisions. This report, compiled by the gaming experts of Xsolla aims to provide a comprehensive overview of the gaming ecosystem's current state and future directions.

THE FORECAST

The global games market is expected to show sustained growth, generating revenues of \$211.2 billion by 2025. Mobile games are set to dominate, with an estimated contribution of \$103.1 billion driven solely by user spending. Meanwhile, cloud gaming is emerging as a significant disruptor, with an expected revenue of approximately \$8.2 billion. Additionally, the VR gaming sector is projected to gain traction, yielding around

\$3.2 billion in revenue by 2024. These forecasts underscore the diversification and dynamism within the gaming market, presenting both opportunities and challenges for industry stakeholders.

Xsolla has not only added 12 new solutions this year to help game developers achieve success, we've also played a pivotal role in launching Web Shops for 40 of the top 100 mobile games, reflecting our commitment to shaping the industry. In the inaugural edition of The Xsolla Report, our experts will share their insights on trends and changes in Fintech, mobile gaming, and product development, and with our two decades of video game industry knowledge and experience, we'll highlight current and upcoming trends and analyze valuable data that can inspire and identify unique opportunities for you, our partners, and our community.

Ready to navigate the chapters ahead, discover new information, and unlock insights about the future of the industry? Let The Xsolla Report be your guide.



IN THE NEWS

Recent industry news

GAMESTOP TO DROP CRYPTO WALLETS, CITES 'REGULATORY UNCERTAINTY'

Bloomberg

AFRICA'S GAMING MARKET PROJECTED TO SURPASS \$1 BILLION BY 2024

Business Insider: Africa

METaverse MARKET TO GROW BY USD 2,346.2 BILLION BY 2032

Global Newswire

VISA'S NEW HEAD OF FINTECH TALKS PARTNERSHIPS, VENTURE AND CREATORS AS AN ADDRESSABLE MARKET

Tech Crunch

SUPREME COURT: APPLE DOESN'T NEED TO OPEN APP STORE PAYMENTS YET

GamesIndustry.biz

Section 1

PAYMENTS



WHAT'S RELEVANT IN PAYMENTS AND FINTECH NOW?

Despite recent expansion in console- and mobile-based subscription growth, the sector could grow much larger. For example, market leader Microsoft is committed to putting blockbuster content on Game Pass to attract new users; September's release of Starfield will be the biggest litmus test for this strategy to date. The pending Activision Blizzard acquisition is also [part of this growth](#).

State institutions have started to pay more attention to the video game sector and its regulations, which includes the rise of scrutiny and limitations presenting challenges to those in the industry. The gaming market in China is a key example of this.



Most major markets either already have real-time payment systems in place or are in development as local governments seek to unlock the economic benefits of more efficient payments, and the growth of real-time payments is accelerating across the globe. Real-time transaction volumes around the world are forecasted to reach 511.7B by 2027, according to [ACI Worldwide](#), representing a compound annual growth rate of 21.3%.

There's an increase in the video game user market across new territories in developing countries (e.g. MEA and LATAM regions) and growing demand from foreign companies and emerging markets' game developers to add local payment methods to their games and find solutions that can help them expand globally. The population of the MEA region is very young; almost a quarter of its population is 15-24. This is why the region has the attention of many in the game development industry since this age group is most passionate about gaming.

Article

01



REVOLUTIONIZING GAMING TRANSACTIONS:

The Global Surge
of Real-Time Payments



Real-time payments have emerged as a transformative force in global electronic payments, with nearly **28% of all electronic payments worldwide projected to be real-time by 2027** – a remarkable year-on-year growth rate of 63%. This shift is captivating users with its advanced user-friendly features.

The growth of real-time payments can be attributed to many factors, with success stories in multiple geographies. One example is Brazil's introduction of PIX in 2020, a digital, low-cost, QR-code-based payment method. Since then, PIX has swiftly gained traction with 131 million users actively transacting through the platform. As a result, Brazil has emerged as the third fastest-growing real-time payments market, **achieving a year-over-year growth rate of 228.9%.**



2027
28% of all electronic payments worldwide projected to be real-time by 2027

GLOBAL REAL-TIME PAYMENT TRANSACTIONS

2022
\$195B YoY growth of 63.2%

GLOBAL FORECAST 2027

2027
511.7B CAGR of 21.3% between 2022 and 2027

INDIA AND BRAZIL ARE REAL-TIME PAYMENT LEADERS



2022

46%

of all **real-time transactions**
worldwide in 2022



2022

15%

of all **real-time transactions**
worldwide in 2022

228.9%

YoY growth, third fastest-growing
real-time payments market in 2022

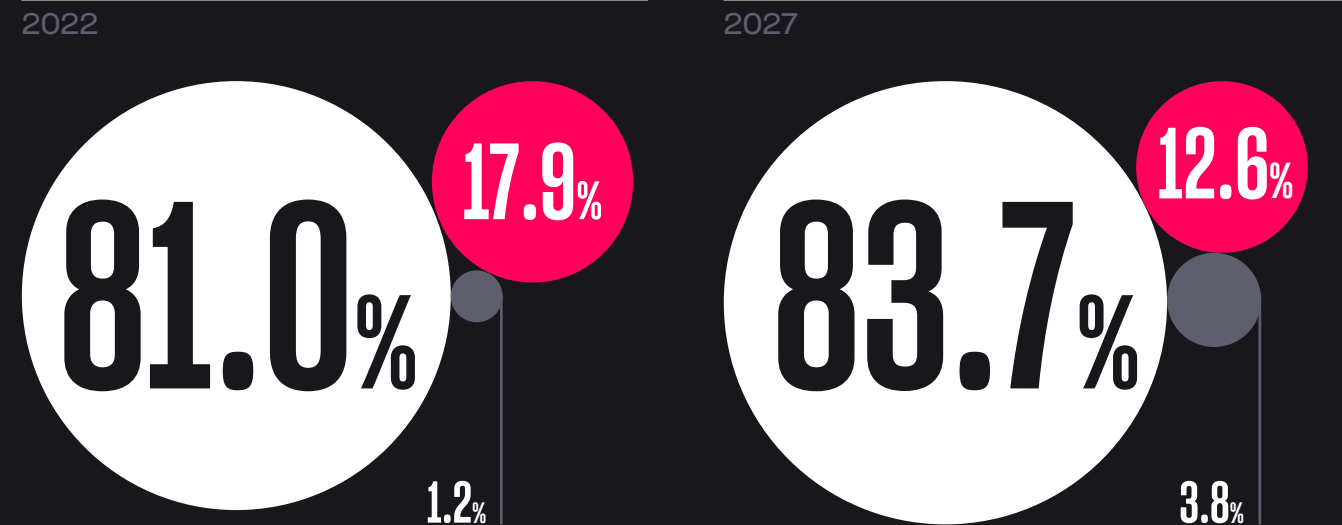
India, on the other hand, has long aspired to claim the top spot in the real-time payments market. The introduction of the Unified Payments Interface (UPI) by the National Payments Corporation of India (NPCI) in 2016 was a significant step towards this goal. UPI aimed to reduce cash-based payments in the country and extend digital payment accessibility to the unbanked population. In August 2023, UPI reached a historic milestone by crossing the 10 billion transactions mark, accounting for **46% of all real-time transactions worldwide in 2022**.

Inspired by the success of UPI and following close collaboration with NPCI while developing Google Pay, Google sent a letter to the US Federal Reserve in December 2019, urging them to consider implementing a similar system. In July 2023, the Federal Reserve answered by announcing the **launch of FedNow**, a new system for instant payments at a national level, now operational in the United States.

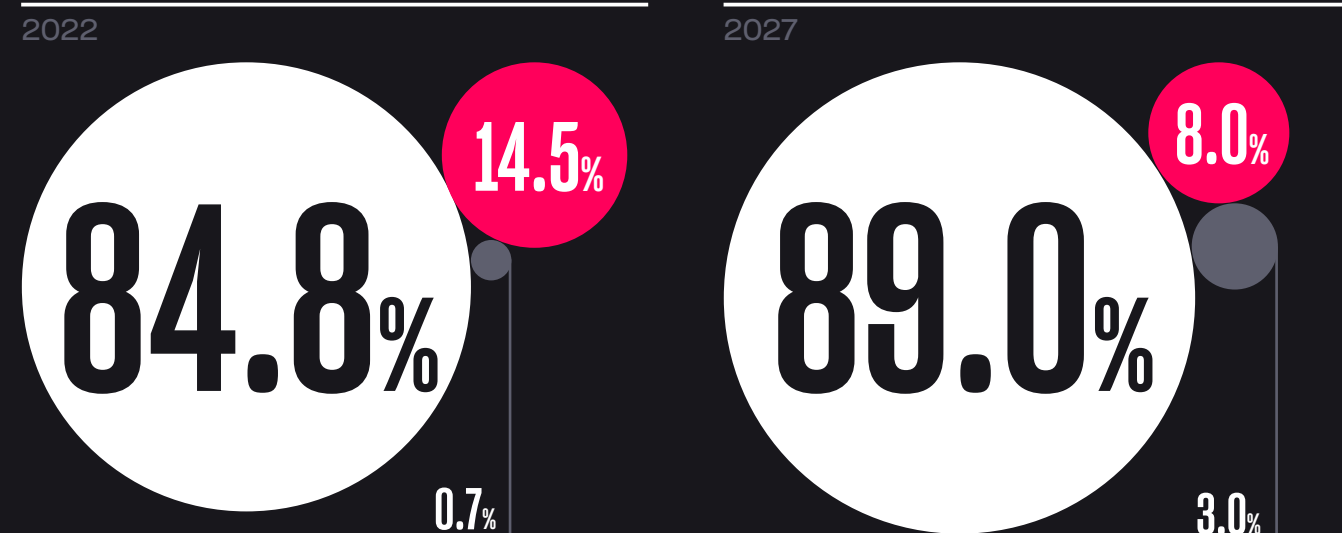


SHARES OF VOLUMES BY PAYMENTS INSTRUMENT (IN THE UNITED STATES)

Transactions



Spend (USD)

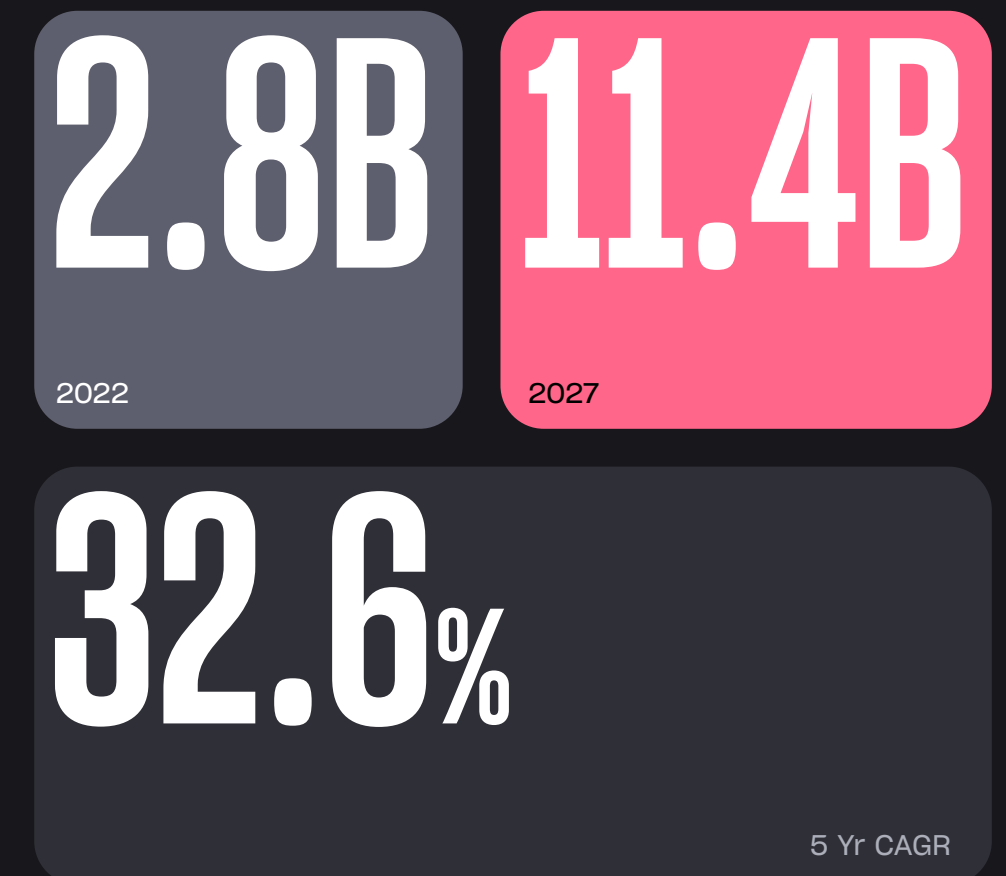


● Paper-based payments ● Electronic payments ● Real-time payments

Source: [ACI Worldwide](#)

The pilot launch includes 35 early-adopting banks and 16 service providers, integrated and prepared to facilitate transactions. With the introduction of FedNow, **real-time payments in the United States are projected to capture 11.4 billion transactions by 2027.** This marks a significant leap from the 2.8 billion transactions facilitated solely through platforms like Zelle and real-time payments from the Clearing House, which, unlike FedNow, are not operated by the central bank of the United States. **By 2027, electronic payment transactions in the United States are estimated to grow 12.6%.**

REAL-TIME TRANSACTIONS



Source: [ACI Worldwide](#)

WHAT DOES THIS MEAN FOR THE GAMES INDUSTRY?



The success of real-time payments in Brazil, India, and the United States serve as illustrations of the evolution of transaction opportunities. Here's how real-time payments will continue becoming an integral part of the modern payment ecosystem, offering players and developers alike the benefits of instant, seamless transactions:

GOING INTERNATIONAL

Real-time payments have gained widespread usage and adoption, with over 70 countries supporting this payment method across 6 continents. The reach extends beyond domestic transactions.

Brazil's PIX, for instance, caters to local users transacting abroad, providing instant and cost-effective transactions and real-time currency exchange to mitigate market fluctuations. India is also making significant progress in expanding its digital payment systems globally. RuPay, UPI (Unified Payments Interface), and other payment systems in India have been embraced by countries like France, UAE, Saudi Arabia, Bahrain, Singapore, Maldives, Bhutan, and Oman. This means users in India can now make payments through UPI and other systems in these countries.

FINANCIAL INCLUSION

Instant payments offer more than just speed, convenience, and confidence. They also promote financial inclusion, particularly for the unbanked population. Thailand's PromptPay, for example, enables users to make and receive payments using their phone number, citizen ID, or QR code, bridging the gap between the unbanked and the financial world.

With Xsolla's extensive knowledge of [global payment](#) and checkout options and the ability to connect game developers to more than 700 payment methods around the world, our experts are ahead of emerging payment trends that have the potential to **elevate transaction experiences and influence more players to pay**. And as real-time payments continue to integrate with global financial systems and promote financial inclusion, game developers are positioned to benefit from these instant, seamless transactions that offer a smoother experience for players, which could spark an increase in in-game purchases and engagement.

Article

02



EMERGING FRONTIERS IN PAYMENTS:

MEA and LATAM

As the world becomes increasingly interconnected, regions like the Middle East and Africa (MEA), and Latin America (LATAM) are emerging as hubs for gamers and developers eager to make their mark on an international level.

Africa, in particular, is full of potential with a substantial population representing a unique market opportunity for users to redefine the way payments operate. Nations such as South Africa, Nigeria, Ghana, Ethiopia, and Egypt are home to populations ranging from 32 million to 213 million people. An additional **300 million people in Africa are projected to gain access to mobile phones by 2025**, further fueling the future gaming ecosystem.

Let's dive deeper into these regions' user base and market share dynamics.

300M

people in Africa are projected to gain access to mobile phones by 2025



 LATAM

 MEA

AFRICA

SOUTH AFRICA

As of March 2023, [58% of South African consumers](#) indicated to have used their debit card, whereas online payment services like Paypal, the most-used online payment method, and direct debit followed with 49% and 31%, respectively. And Ozow, a fintech company based in South Africa, had a usage rate of 35%.

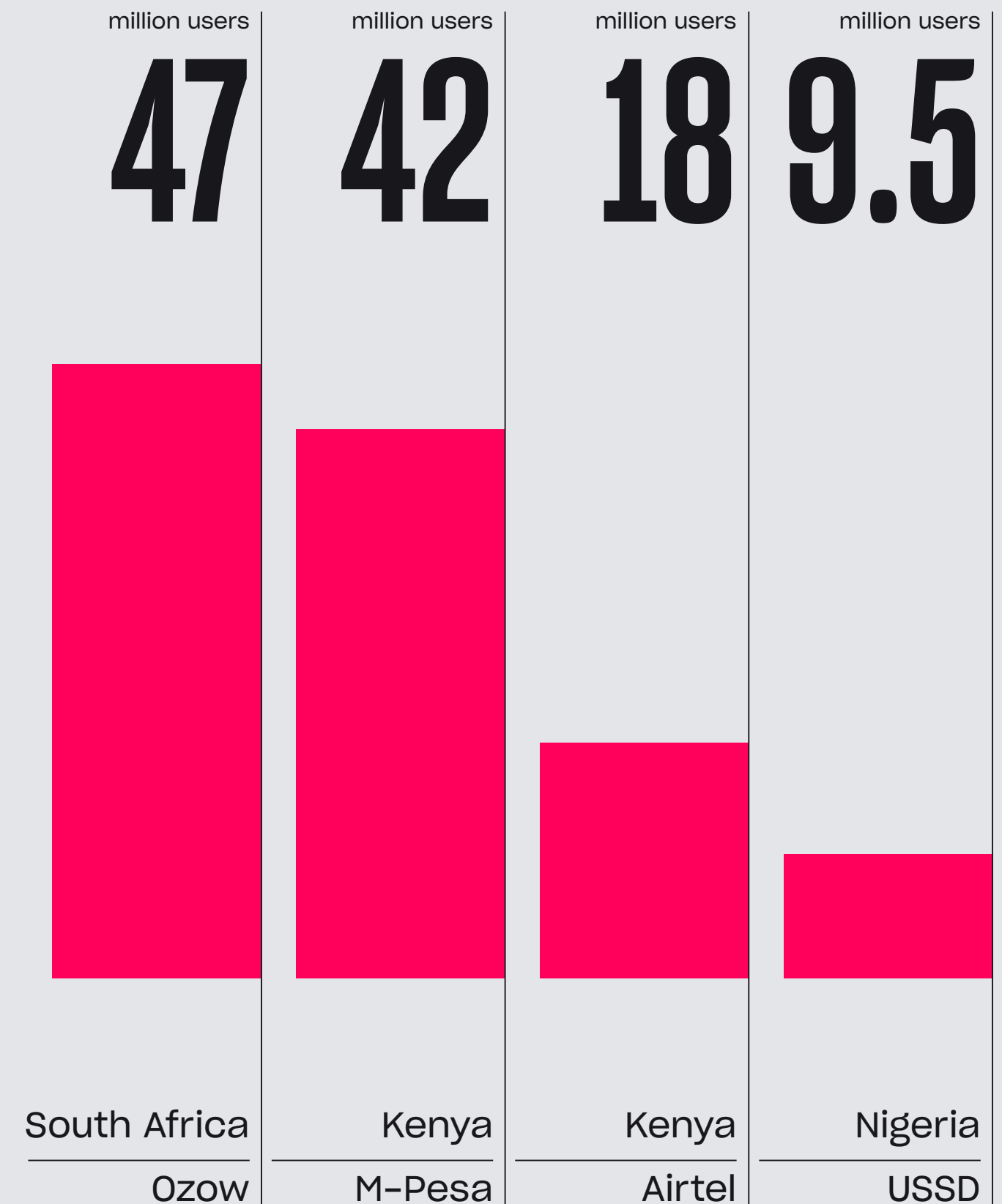
KENYA

Across seven countries, M-Pesa, Kenya's leading mobile money payment option, boasts an impressive 42 million active users, and holds a [96.5% market share](#). This illustrates the pivotal role of M-Pesa in the nation's financial landscape.

NIGERIA

Bank transfers account for 26% of the local payments market, showcasing diverse payment preferences in this dynamic region. Unstructured Supplementary Service Data (USSD) transactions accounted for [2.3% of all electronic transactions in Nigeria in 2022](#), underlining their growing significance.

TOP PAYMENT OPTIONS IN AFRICAN COUNTRIES



MIDDLE EAST

SAUDI ARABIA

[STC Pay](#) has successfully amassed a user base of over 7.8 million users, representing a remarkable **21% of Saudi Arabia's population who embrace the convenience of digital payments.**

EGYPT

According to [Statista](#), Fawry recorded a substantial 45.5 million users in 2022, while Vodafone witnessed 15 million users during the same year, indicating the adoption of digital payment solutions in Egypt.

USERS PER PAYMENT METHOD IN THE MIDDLE EAST



Latin America LATAM

BRAZIL

The **largest e-commerce market in LATAM**, Brazil accounts for a significant portion of online transactions in the region. Credit cards and cash dominate the payment landscape in Brazil, with credit cards and cash accounting for the largest portion of all online transactions.

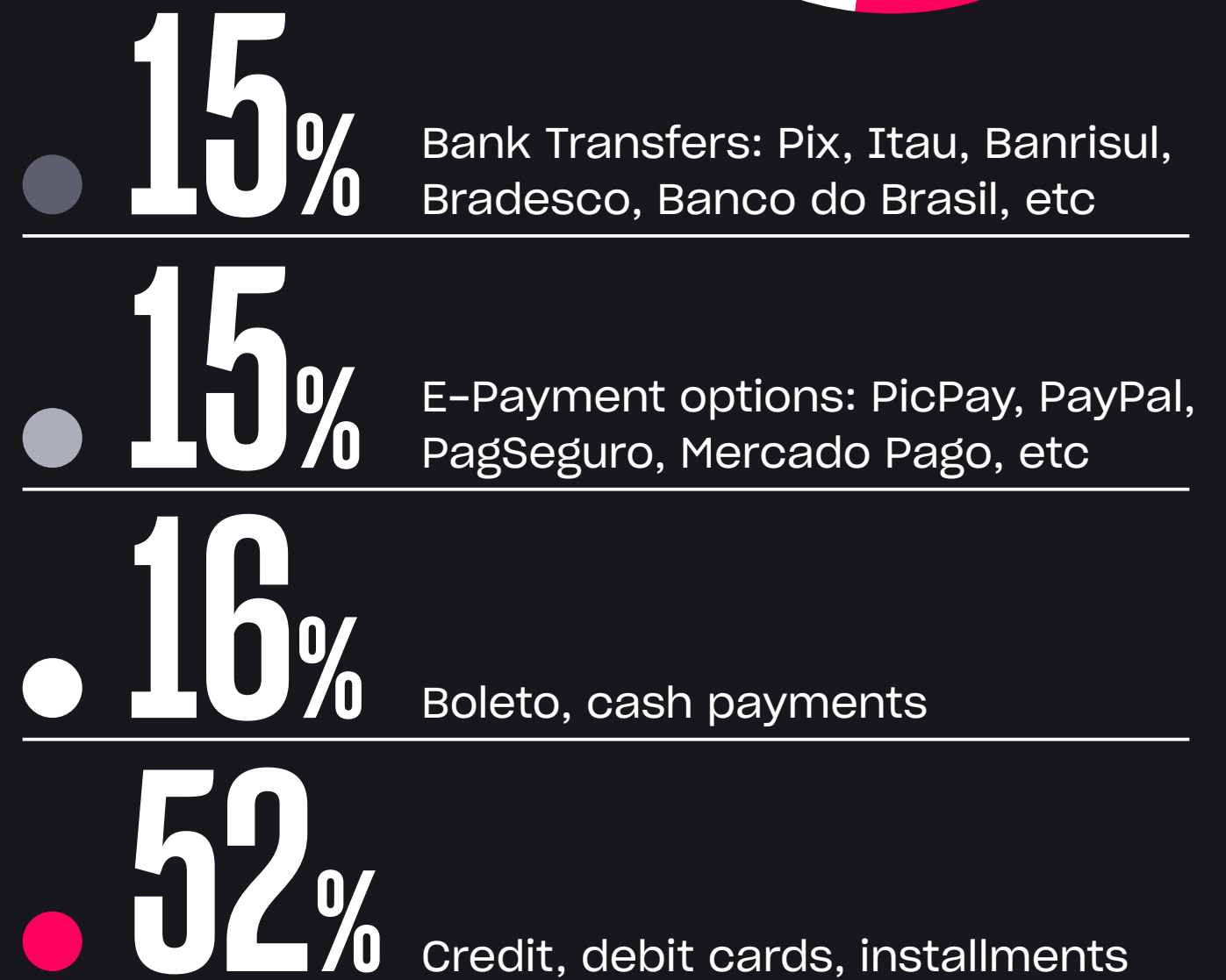
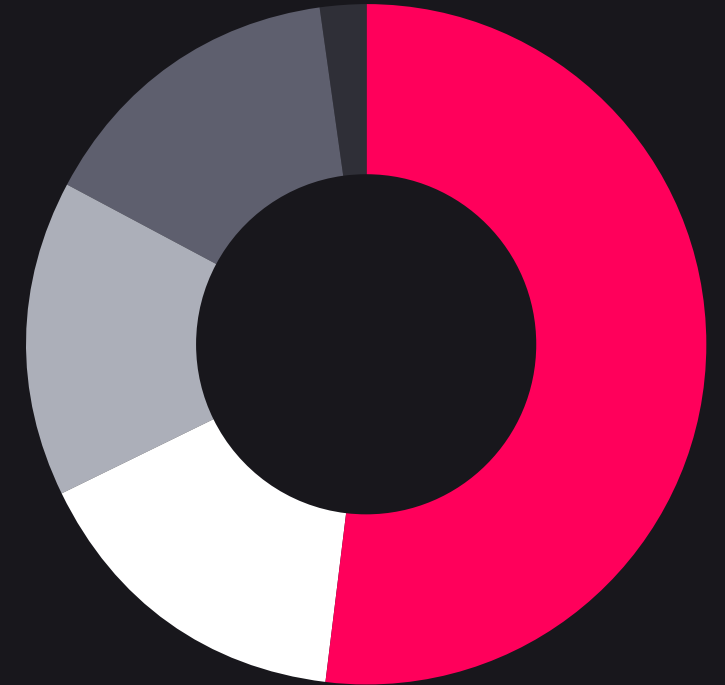
MEXICO

The second-largest e-commerce market in LATAM, Mexico presents its own unique payment landscape. **Credit and debit cards dominate the market**, accounting for more than half of all digital transactions. International brands like Visa, Mastercard, and American Express, along with e-payment options like PayPal and Spei, are widely accepted in Mexico.

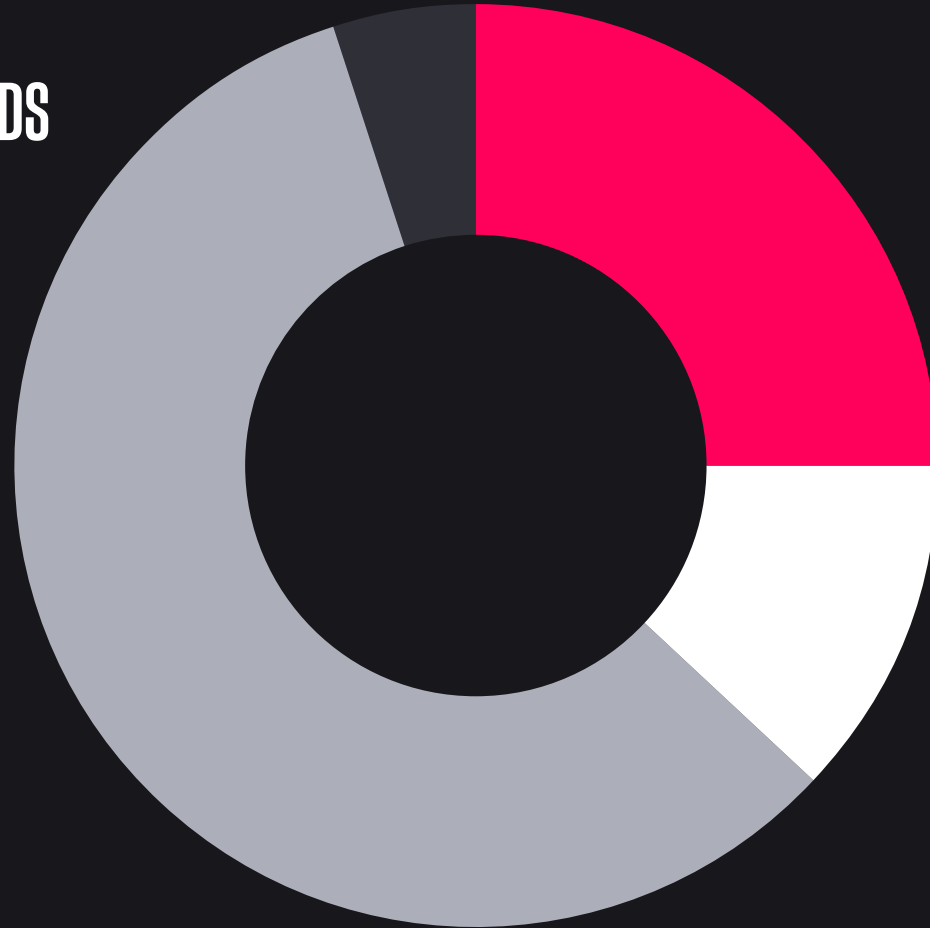
CHILE

Chile is **embracing e-payment options and instant payment systems**, taking steps towards establishing its own by creating low-value clearinghouses. This initiative aims to expedite transactions and create a more efficient payment environment.

MARKET SHARE OF PAYMENT METHODS IN BRAZIL



MARKET SHARE OF PAYMENT METHODS IN MEXICO

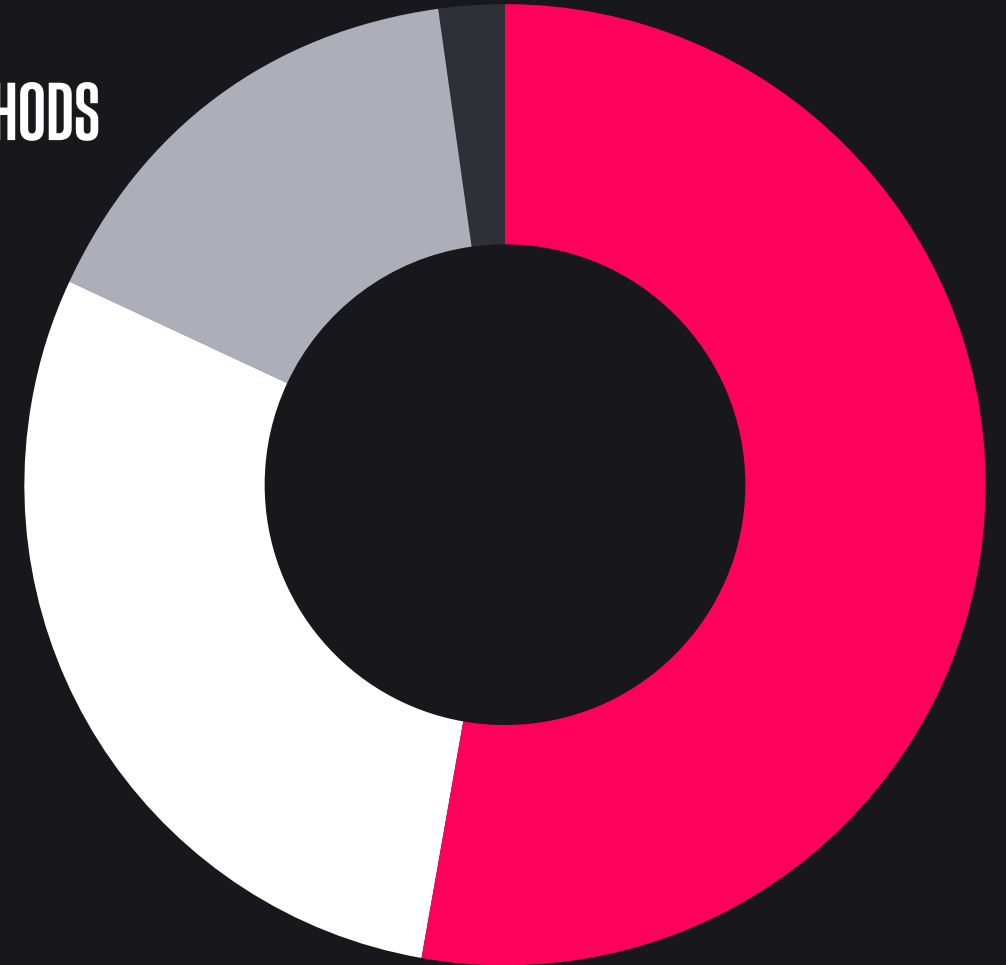


● **58%** Cash: Oxxo, Todito Cash

● **12%** E-Payment options: PayPal, Spei

● **25%** Credit, debit cards

MARKET SHARE OF PAYMENT METHODS IN CHILE



● **16%** Cash payments: Banco Estado, Banco de Chile, etc

● **29%** E-Payment options: MachPay, PayPal

● **53%** Credit, debit cards

WHAT DOES THIS MEAN FOR THE GAMES INDUSTRY?

The common denominator driving the growth of e-commerce in these regions is mobile commerce, which is projected to contribute 70% of the online transaction value in the Middle East and Africa (MEA) by 2025. The wider Africa region is expected to have an estimated 500 million e-commerce users by 2025.

In 2022, credit cards and charge cards held the top position as the most popular payment method for e-commerce transactions in the Middle East and Africa (MEA), representing 31% of the total e-commerce payments. Digital and mobile wallets, including mobile money, were identified as the second most prevalent payment method among digital shoppers.

Alternative Payment Methods (APMs), such as bank transfers and digital wallets, will continue gaining traction throughout the region. According to [EBANX's](#) annual study, Beyond Borders 2022-2023, APMs are projected to capture nearly 40% of the e-commerce volume in Latin America, showcasing a notable increase from 31% just two years ago.

This shift will be driven by several factors:

01

Interoperability. Users are demanding seamless money transfers between multiple banks, e-wallets, and apps.

02

PIX as a role model. PIX, considered one of the most transformative developments in the past decade, will serve as a model for financial inclusion, speed, and security in payments. In fact, it has quickly become an alternative to cash and cards in the region. Other countries in Latin America have introduced their own domestic payment methods built on instant payment foundations, like SPEI in Mexico, Sinpe Móvil in Costa Rica, Simple in Bolivia, and Pagos al Instante in the Dominican Republic.

03

Peer-to-Peer (P2P) payments. Facilitating instant transfers, Latin America has embraced over 20 technological schemes. Various economies in the region have fervent representatives, including Plin in Peru, MACH in Chile, Nequi in Colombia, and Mercado Pago, among others.

User behavior is shaping the evolution of the digital payment market across many regions of the world, from MEA to North America to LATAM. Several key trends will continue driving this transformation, including the growth of digital commerce, the increase of cashless economies, an increase in the adoption of mobile banking, and tapping into instant payments. For those in the games industry, these are trends that open an **avenue for international revenue and opportunities**. And with a [global partner like Xsolla](#) - which has the ability to tap into diverse markets, making your games, products, and digital goods available across more than 200 geographies - it's a **way to capture new gamers, tap into new payment methods, and discover new revenue streams** on an international scale.

Guest Column

When we talk about Africa as a region, it is important to say what we actually mean. Often, North Africa is excluded from these conversations because they are considered to be a part of MEA.

Many people treat Africa as a country or a homogeneous region – which is absolutely not true. There are 52 different countries, thousands of languages, and hundreds of thousands of different cultures.

So, trying to brush this notion of the African game doesn't really make any sense. So, what is of interest in South Africa is markedly different from what you would find in East Africa, Kenya, or Nigeria.



**NICHOLAS
HALL**

CEO, Co-founder,
and Chair at Interactive
Entertainment
South Africa IESA



Source: [80 Level Research](#)



Article

03



NEW WAYS TO PAY:

The Rise of Buy Now,
Pay Later Transactions

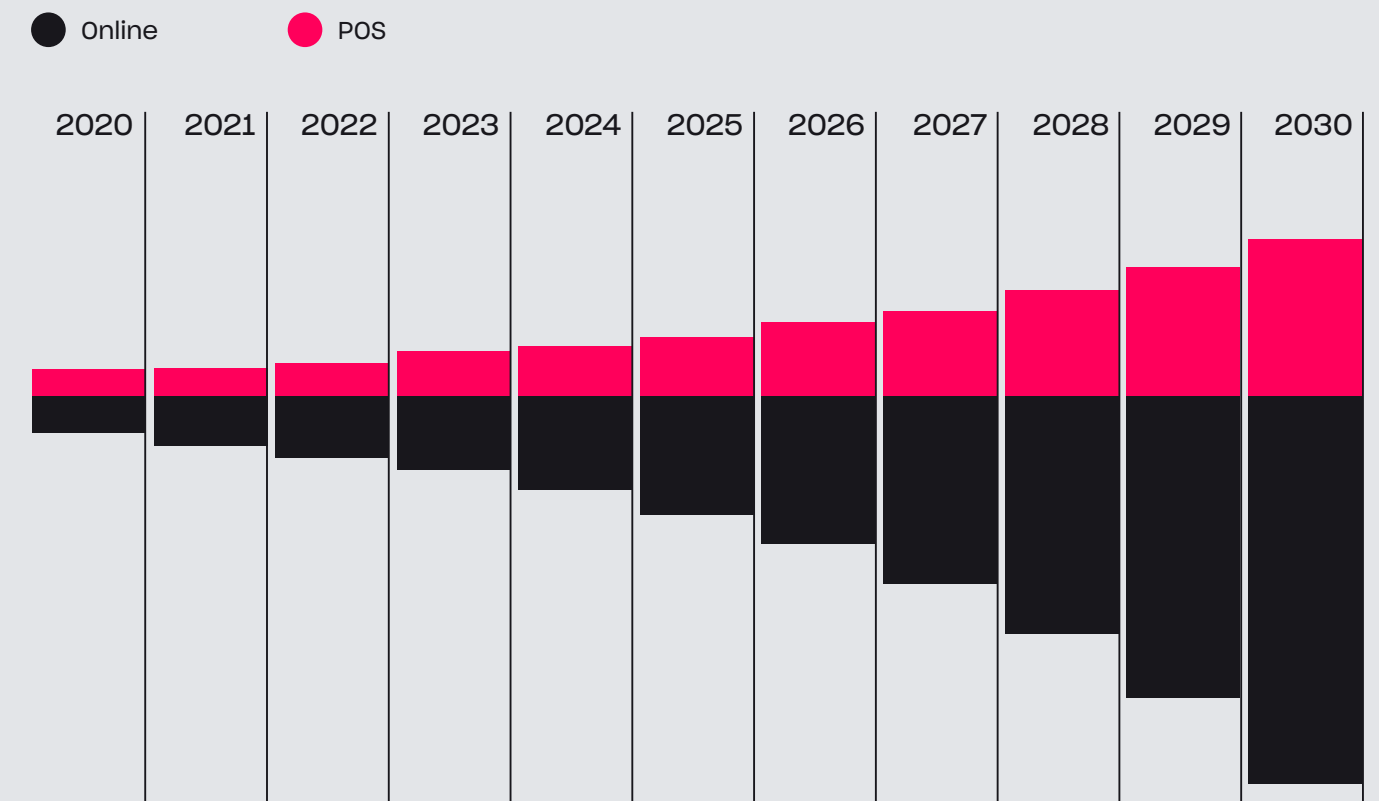
Payment convenience has become important for players and merchants alike. Buy Now, Pay Later (BNPL) solutions have emerged as a game-changer in this arena, not only offering financial flexibility but also enabling businesses to expand their user base while simultaneously increasing the average transaction value.

The global [Buy Now, Pay Later \(BNPL\)](#) market has witnessed remarkable growth, valued at over \$309 billion globally in 2023. Market analysts project a compound annual growth rate (CAGR) of 25% by 2030, underlining the sector's robust potential. BNPL users are anticipated to surge from 360 million to 900 million by 2027.



25% global compound annual growth rate

THE US BUY NOW, PAY LATER MARKET



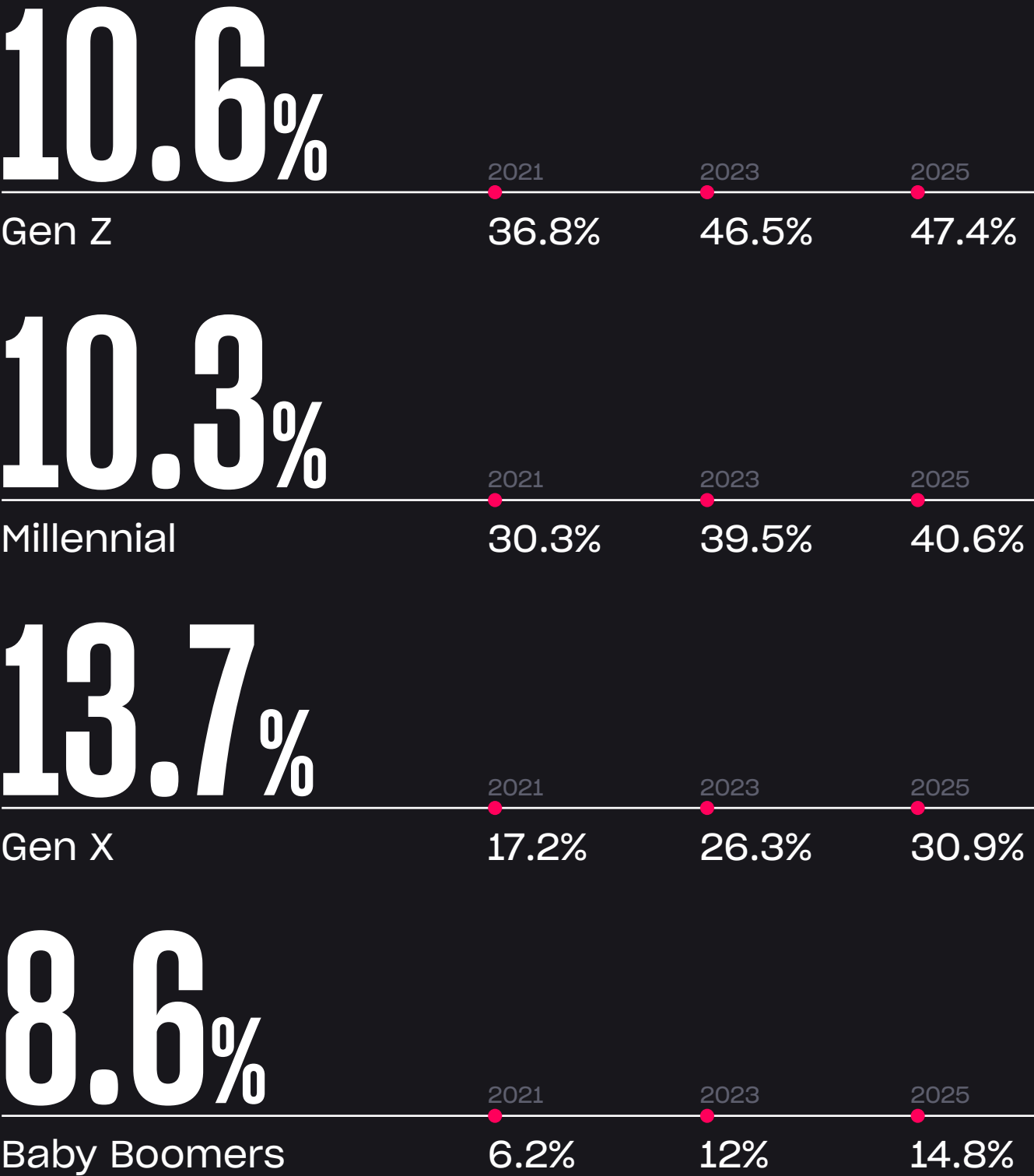
24.3% U.S. Market CAGR, 2023-2030

BNPL represents a form of short-term financing empowering users to make purchases and spread their payments over time, often without incurring interest charges. Research conducted by Bain & Co has revealed that BNPL has experienced widespread adoption across various age groups, particularly

among Gen-Z and millennials. It's also not confined to substantial expenditures like education, automobiles, high ticket user goods like televisions or real estate. Currently, BNPL options extend across a broad spectrum of purchases, from fashion and meal delivery to digital goods, video games, and more.



BREAKDOWN OF BUY NOW, PAY LATER (BNPL) USERS BY GENERATION



Source: Exploding Topics

Additionally, nearly **60% of consumers, regardless of their generational cohort, prefer BNPL over traditional credit cards.**

This preference is rooted in the convenience of setting up payments, a streamlined approval process, the absence of interest charges, transparent information regarding repayment timelines, and the ability to incorporate higher-ticket purchases into their budget through the flexible pay-over-time feature.

The surging popularity of BNPL has attracted new entrants to the market, with Apple announcing its integration of a BNPL product with Apple Pay in March 2023. This heightened competition complements the existing market leaders such as Klarna, PayPal, and Clearpay, fostering innovation and enhancing the user experience.

The BNPL landscape is global, with strategic partnerships forging new frontiers. Many global and local BNPL providers cater to almost every business region, including Affirm and AfterPay in North America, Twisto and Clearpay in Europe, Atome and Paidy in Asia, Tamara and Tabby in MEA, Afterpay and Zip in Australia and New Zealand, and Addi, RecargaPay, and Swap in Latin America.



60%

of consumers, regardless of their generational cohort, prefer BNPL over traditional credit cards

SHARE OF US CONSUMERS WHO HAVE USED A BNPL SERVICE

55.8%

Overall

61.2%

18-24

60.1%

25-34

60.6%

35-44

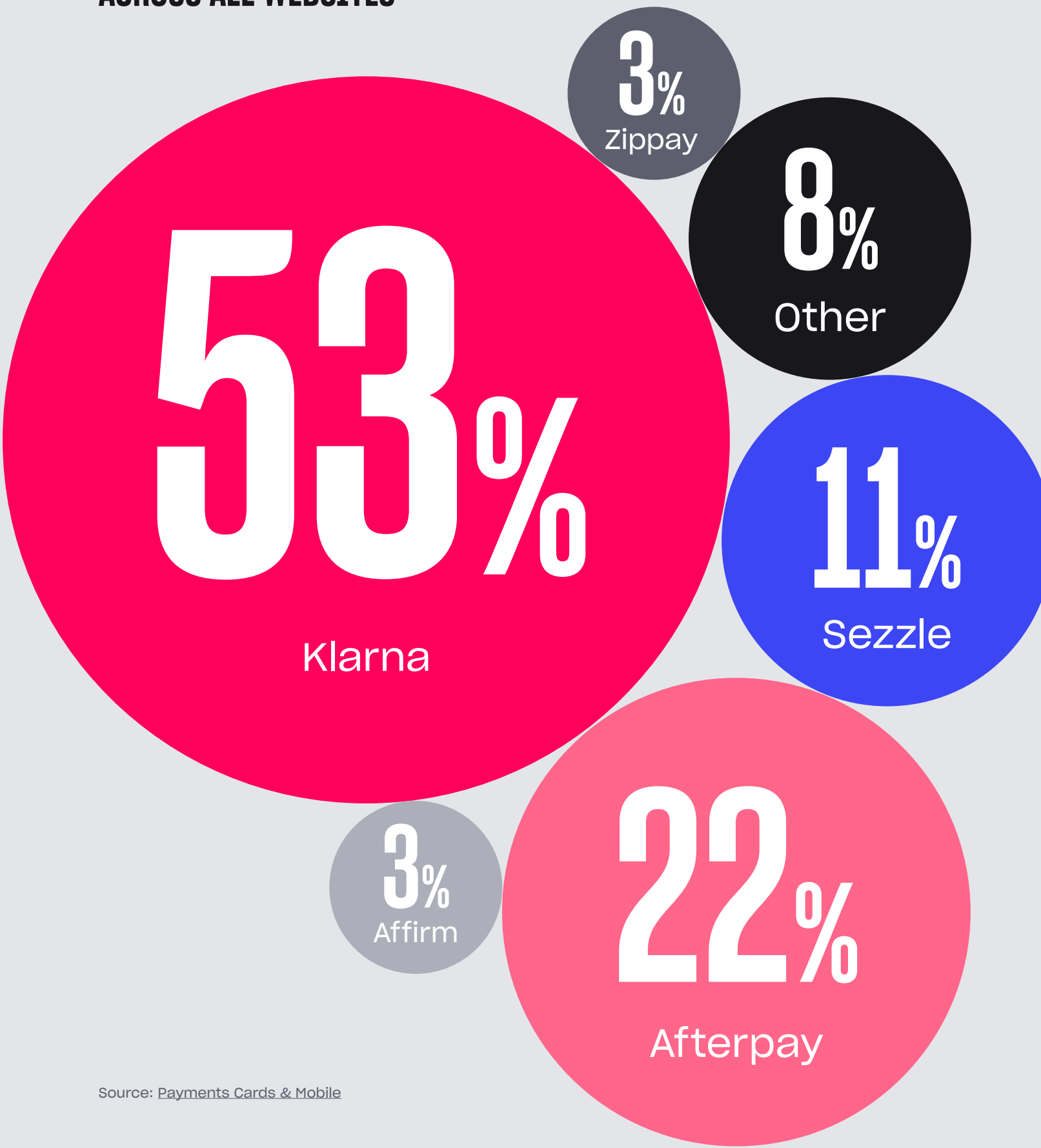
53.1%

45-54

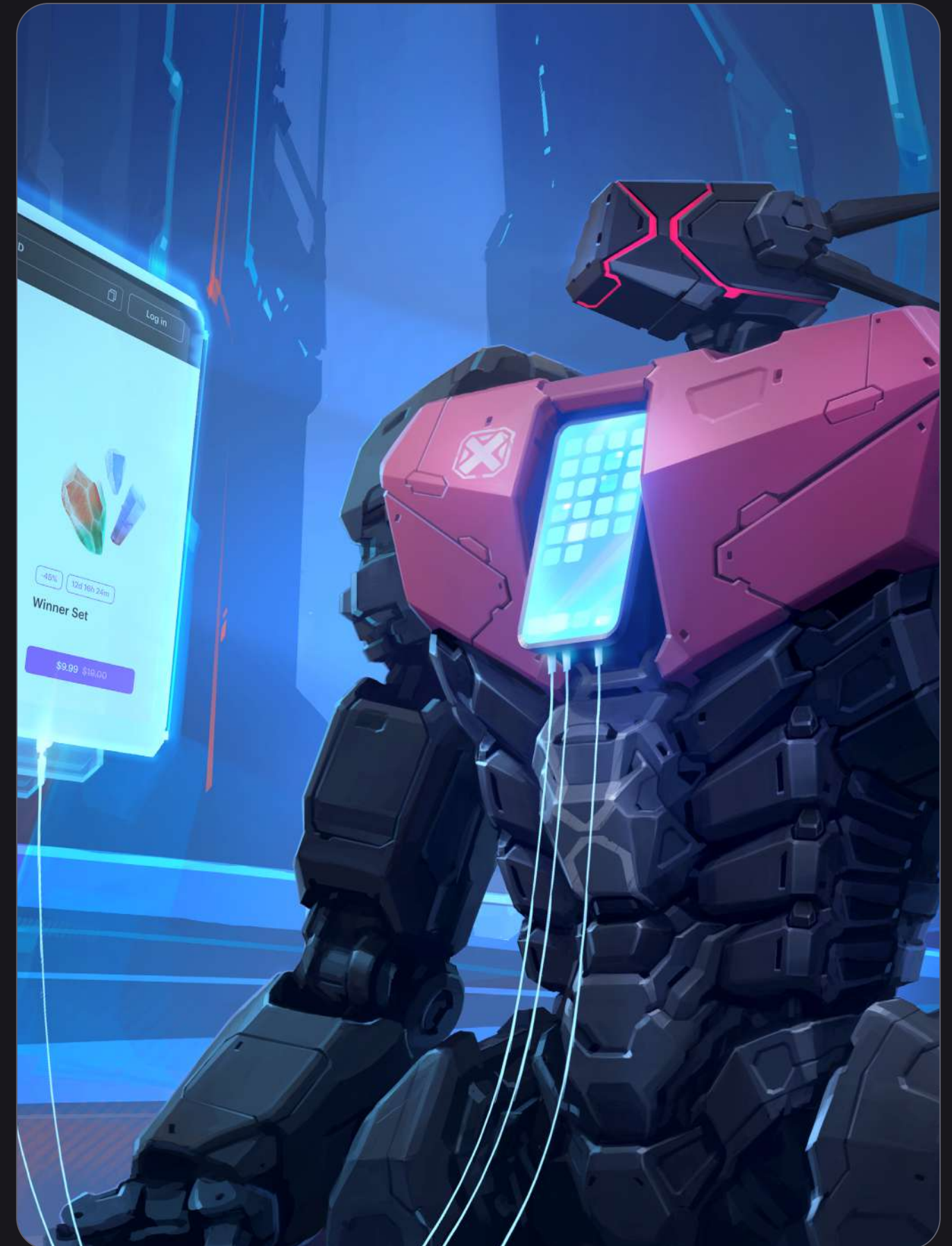
40.1%

55+

BNPL SERVICE DISTRIBUTION ACROSS ALL WEBSITES



Source: [Payments Cards & Mobile](#)



WHAT DOES THIS MEAN FOR THE GAMES INDUSTRY?



As BNPL continues to gain momentum as a payment method, its impact on the gaming sector is set to grow, **providing a seamless and flexible checkout experience for players and developers alike.**

01

There will be a growing trend of companies expanding into the Buy Now, Pay Later (BNPL) market in new regions. Some are even integrating real-time payments with installment plans. One example of this is Brazil's PIX, which will experience continued enhancements.

02

Leading BNPL providers will be aiming to develop super apps beyond just BNPL services. They will be diversifying their offerings to include rewards programs, physical cards, non-installment payment options, and price trackers. By becoming a comprehensive destination for shopping and financial management, these providers can **enhance engagement and create new sources of revenue for developers.**

03

Combining different offerings will allow BNPL providers to extend their reach and improve their overall suite of services. For example, companies like Affirm and Splitit are actively seeking to acquire technology assets to enhance their capabilities.

The growth of Buy Now, Pay Later (BNPL) solutions is reshaping the gaming industry's payment landscape, giving users more repayment leeway and offering a quicker and easier application process. According to market leader, Klarna, consumers spend 45% more when they use BNPL. And about the same percentage of people will make a purchase using BNPL that they otherwise would have delayed, which **directly translates to increased transactions** - making BNPL a win for game developers. This benefits gamers and offers game creators a powerful **tool to attract a wider audience and enhance transaction values.**

Section 2

MOBILE GAMING



WHAT TRENDS ARE WE SEEING IN THE MOBILE GAMING SECTOR?

The **Epic vs. Apple case** has marked the beginning of a shift in platform policy.

Despite Epic not securing a victory on their core demands (such as the permission to use third-party payment systems), they initiated changes in the distribution and monetization of mobile apps. The DMA and DSA acts are set to make platforms more open, providing

developers with opportunities for more advantageous distribution and monetization of their games.

The market has recognized that Apple and Google are not inclined to soften their guidelines, let alone relinquish their 30% fee. In countries like South Korea, where payments through third-party systems are allowed, Google still charges 26%, rendering the use of external systems unprofitable.



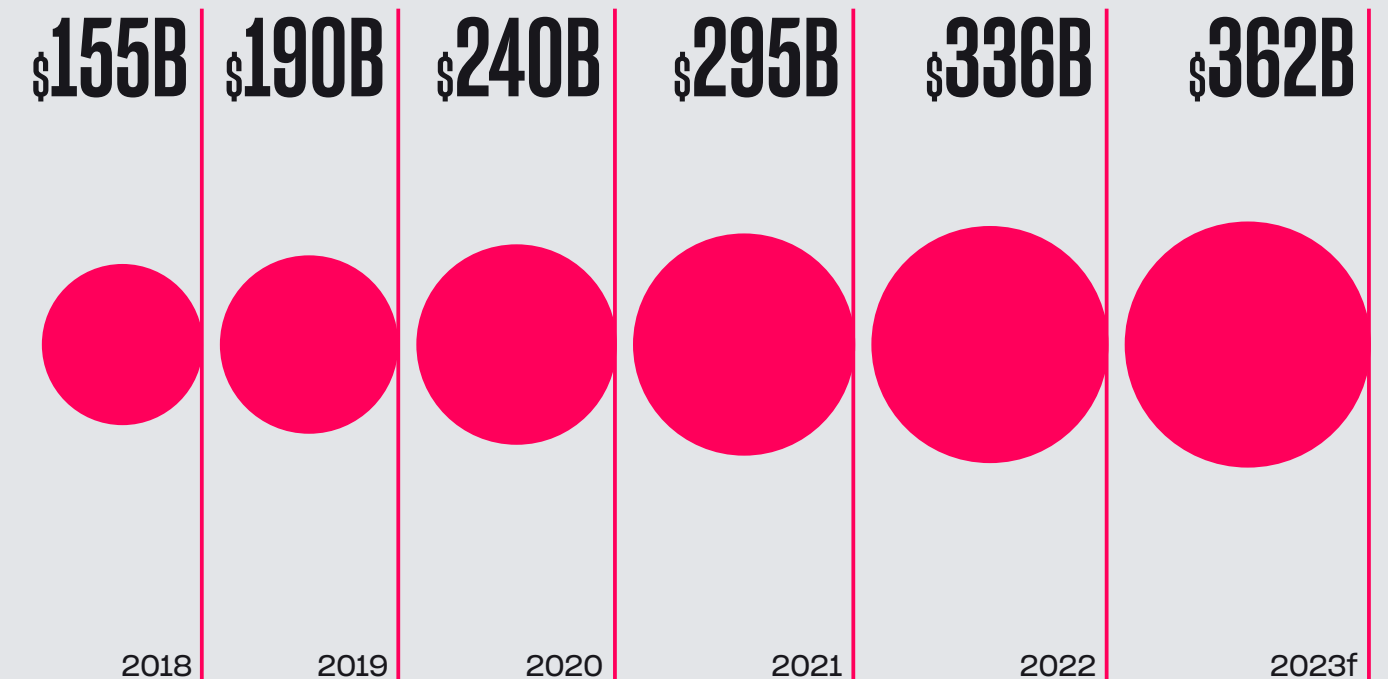
Mobile ad spend is projected to hit \$362 billion in 2023, representing continued growth for the past four years, but with a forecast of only 7.5% YoY growth - lower than 2020's 26.3%.

GameStop has announced the discontinuation of its cryptocurrency wallets, citing "regulatory uncertainty." The wallets, enabling users to manage cryptocurrencies and NFTs, will be removed from the market on November 1 of this year.

China has accounted for the most user spend on mobile games at \$42.4 billion, followed by the U.S. (\$24.02 billion), Japan (\$13.1 billion), South Korea (\$5.28 billion), and Germany (\$2.47 billion), according to [Adjust's 2023 Mobile Market Report](#).



GLOBAL MOBILE AD SPEND BY YEAR-OVER-YEAR GROWTH



18.5%

5-year
CAGR

Article

01



NAVIGATING PRIVACY CHANGES AND INTERNATIONAL REGULATIONS

In Mobile Gaming

Significant transformations in mobile gaming due to privacy changes and evolving international regulations have impacted developers' revenue streams, monetization strategies, and the ways in which they can prepare to thrive in an evolving landscape.

The introduction of the General Data Protection Regulation (GDPR) in 2018 marked a pivotal moment in privacy policies, bringing stringent data processing regulations to the forefront of mobile game development. In 2023, the enforcement of the Digital Markets Act (DMA) for major gatekeepers and the Digital Services Act (DSA) for all online platforms further amplified the need for compliance among developers.

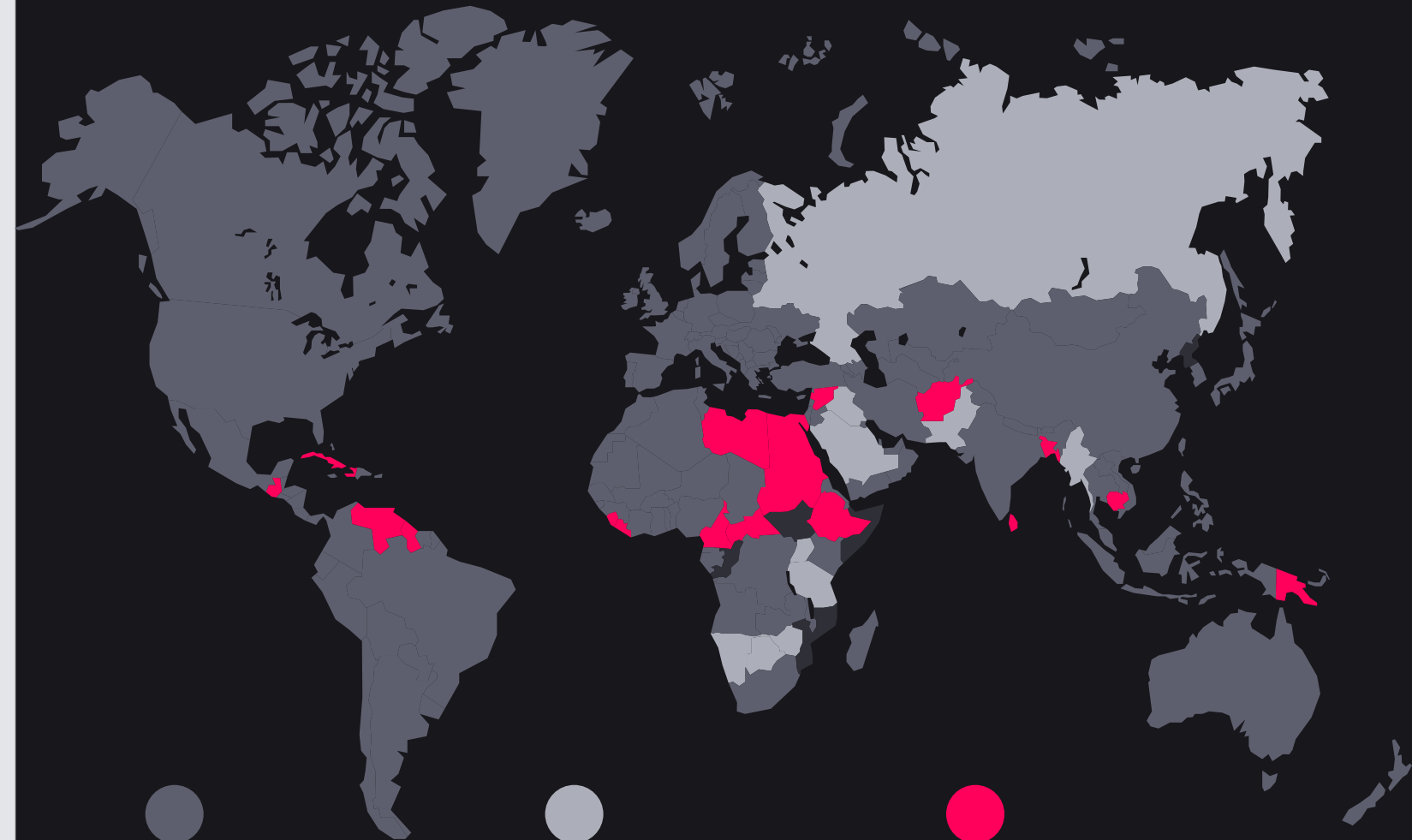


To successfully monetize apps and mobile games, developers must be authorized publishers and comply with GDPR and local regulations, necessitating the setup of different servers for each region and the creation of three main systems: a data collection system, a data storage system, and a data deletion system. In addition, adhering to local privacy policies, like LGPD, POPIA, and CCPA, is essential for global operations, requiring developers to specify the applicable regulation in the user agreement for residents of each country.

These regulations have ushered in an era of increased data protection, significantly impacting mobile advertising. These changes, extending across Europe and the United States, coupled with new iOS restrictions, have collectively diminished the efficiency of targeted mobile advertising.

Even industry giants such as Apple have been compelled to adapt to these evolving privacy landscapes. In 2021, Apple introduced the App Tracking Transparency (ATT) feature, a pivotal change that curtailed the ability to track user behavior. These regulations have left developers grappling with challenges in obtaining personal user information.

GLOBAL DATA PROTECTION AND PRIVACY LEGISLATION



66%

of countries
have legislation

10%

of countries
are drafting
legislation

19%

of countries
do not have
legislation

IMPACT OF PRIVACY CHANGES

To navigate this complex terrain successfully, developers must secure authorization as publishers and diligently adhere to the GDPR and local data protection regulations.

Notable [shifts between In-App Ads \(IAA\) and In-App Purchases \(IAP\)](#)

have reshaped the mobile gaming landscape. Hypercasual games once heavily relied on IAA for monetization, while hardcore games typically banked on IAP. However, an emerging trend now involves hybrid monetization strategies that seamlessly incorporate both IAA and IAP. Interestingly, [hypercasual games have seen a decline in popularity](#), while hybrid and casual games have surged in both sales and downloads.



IN APP ADVERTISING ONLY:

Losing popularity as hypercasual games fall

HYBRID IAA & IAP MONETIZATION:

Actively growing in hybrid casual games as well as hardcore game projects

IN-APP PURCHASES ONLY:

Declining popularity due to insufficient profits

REVENUE CHALLENGES

Privacy changes can significantly impede developers by limiting their access to vital player data required for informed decision-making. Additionally, stringent data protection rules curtail developers' options for delivering personalized ads. In 2022, mobile ad spending reached \$336 billion, marking a 13.8% increase from the previous year, the lowest annual growth percentage in recent years and 9% less than in 2021. Understanding player behavior is paramount for game development, and restricted metrics access puts the creation of new features and updates at risk.

Indie developers face additional hurdles, necessitating engagement with third parties to ensure compliance, potentially stifling their growth. Maintaining a robust marketing department to effectively identify and define target audiences becomes crucial.



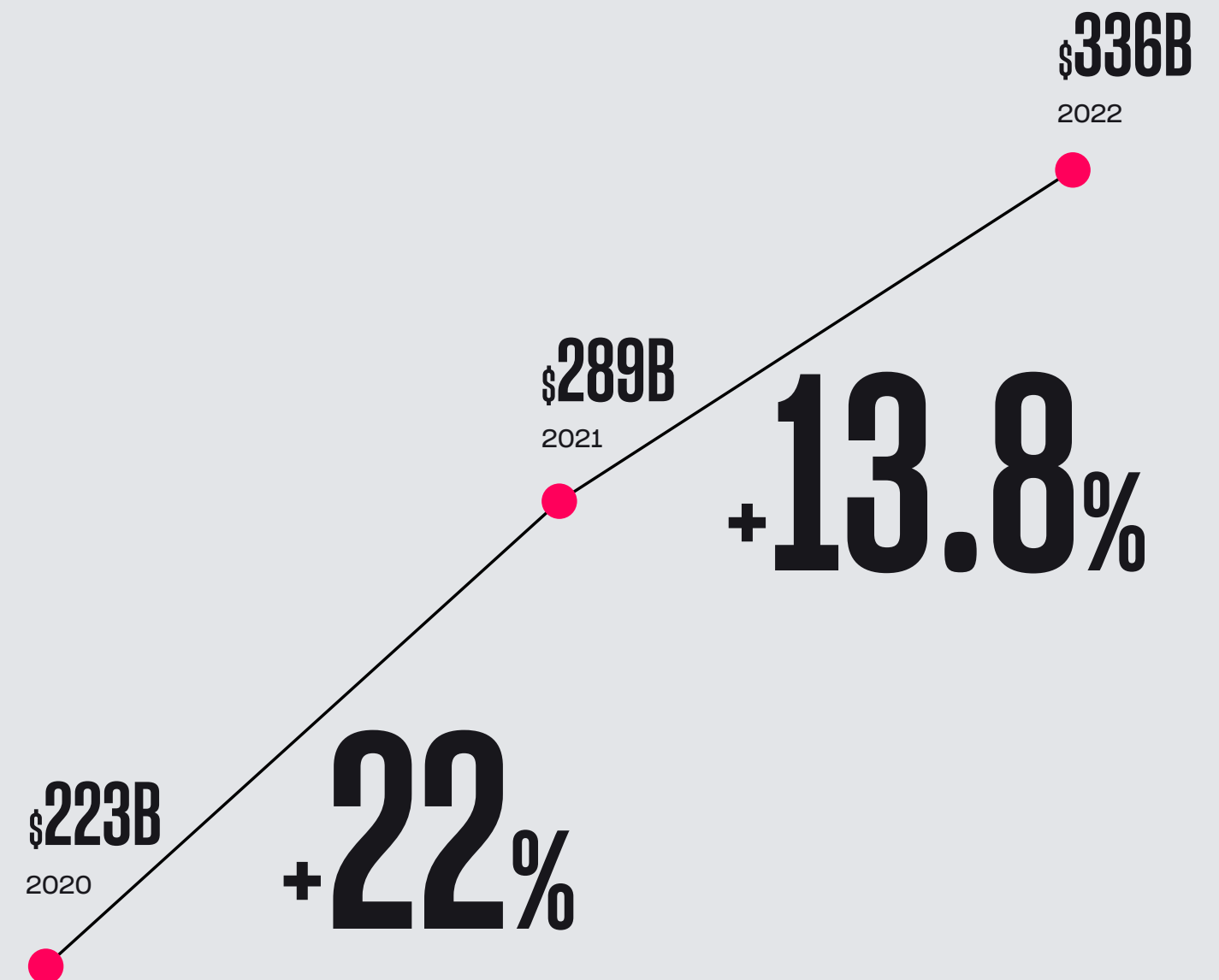
AD MONETIZATION REMAINS VITAL

Despite the challenges, developers maintain their commitment to ad monetization. AAA studios may be less affected due to their legal departments' capabilities to avoid legal clashes and identify loopholes. Additionally, adopting a direct-to-consumer strategy, which places significant emphasis on user engagement and community management for feedback, has proven effective. As part of this approach, integrating tools like [Xsolla Web Shop](#) can further enhance the developer's toolkit, offering valuable insights and support for their monetization efforts.

ANTICIPATING FUTURE PRIVACY CHANGES

Developers anticipate stricter privacy regulations in the coming years, with Apple potentially introducing more data collection and storage restrictions, possibly followed by Google. While technology evolves faster than policies, developers must adapt to new rules on the fly and explore methods to acquire customer information effectively.

ANNUAL MOBILE AD SPEND GROWTH, 2020-2022



WHAT DOES THIS MEAN FOR THE GAMES INDUSTRY?

Privacy and platform policy changes will lead to shifts in the mobile gaming and advertising industry, catalyzing innovation and adaptation to new realities. Traditional approaches to advertising will also change, which might affect the income of games focused on large volumes of traffic purchases in the short term.

In the long term, however, mobile gaming income is more likely to trend toward positive growth and we're already seeing a recovery in some

markets. For example, the US mobile market in 2023 has already shown a 3% increase compared to 2022.

Privacy and platform policy changes may also lead to higher traffic costs, impacting mobile developers' profits and forcing them to look for more and more new ways to optimize their revenue structure. And, given the combination of recent events in the market, the use of Web Monetization is becoming increasingly popular to save on platform

commissions, with the money saved being used to improve the economic situations of mobile studios.

In response to developers' needs, the market is evolving tools and mechanics to more effectively monetize existing players:

- **Hybrid Monetization.** Monetization strategies have shifted toward hybrid models that combine In-App Ads (IAA) and In-App Purchases (IAP). These games lost revenues from in-game advertising, which used to be their primary revenue-generating mechanism.
- **Development of Social Mechanics.** Games incorporate social mechanics that engage players not only at the gameplay level, but also through personal interaction. This includes competitive events that are increasingly prevalent outside of mid-core and core genres.
- **Expanding In-Game Purchases to the Web.** Developers are exploring various ways to boost revenue to offset the rising costs of player acquisition and retention. Creating Web Shops are an effective tool for generating additional revenue quickly and without altering the game itself.

There's been an upward trend of transitioning in-game stores to the web – [Xsolla Web Shop](#), for example, has launched **more than 150 web stores in the last 2 years** – and some are even establishing top-up pages on marketplaces. With a partner like Xsolla that brings experts who understand platform

policies and expertise in launching these stores, a mobile game can **earn more than 15% in incremental revenue**.

While privacy changes and regulations pose challenges to mobile game developers, they also present opportunities. These changes aim to weaken platform monopolies, opening doors for developers to increase revenue, notably through **reduced commissions on in-game purchases**.



JAMIE MCCLENAGHAN

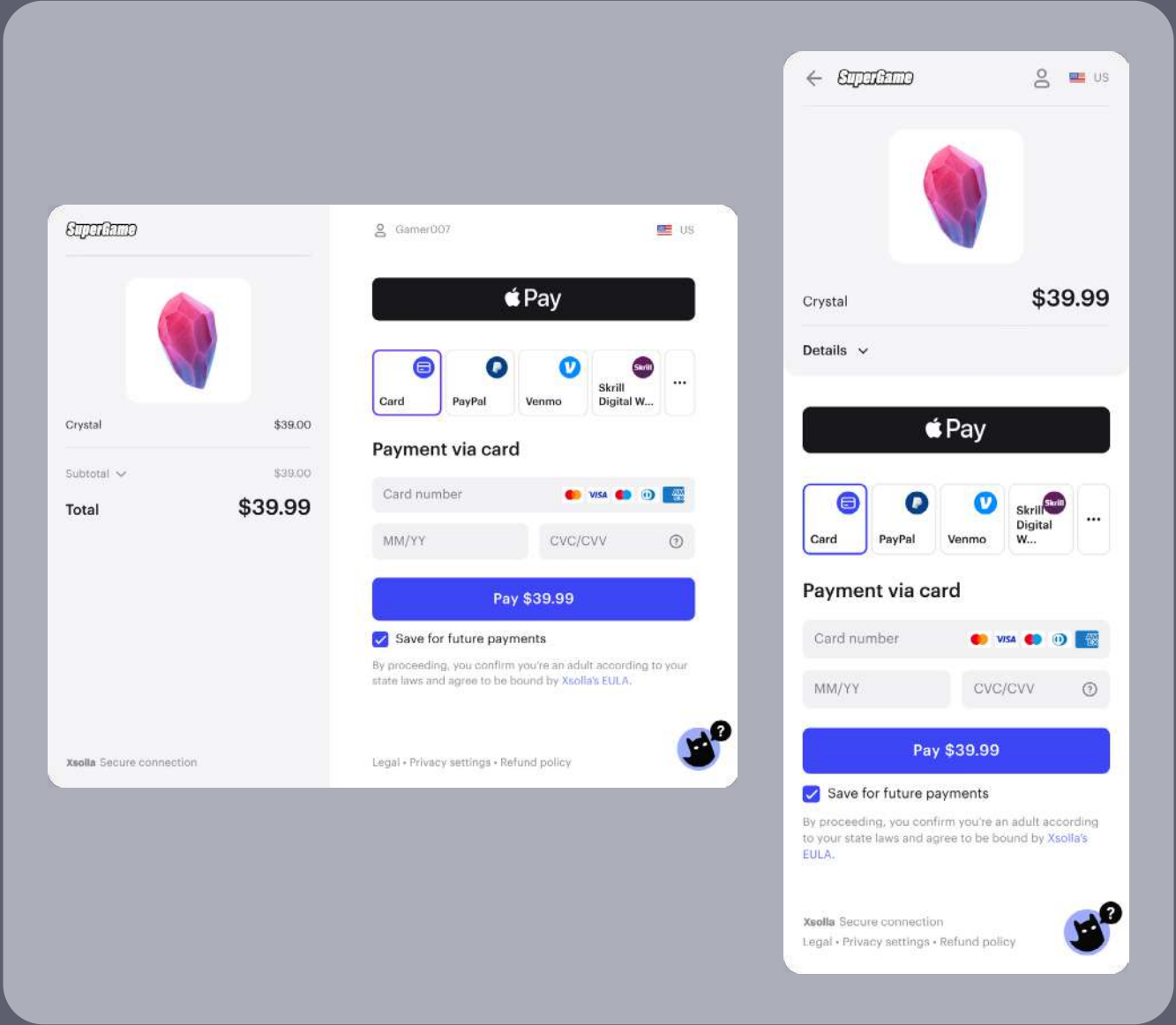
Founder & Lead Unity Developer |
Classy Games Studios

Guest Column

Games' revenue is decreasing because of privacy changes. **Understanding your player base is crucial. You can analyze how long they're on the platform, what levels they get stuck on, and where they spend.** When the majority of metrics are cut off, it makes your decisions to create new features and make updates more risky.

Section 3

PRODUCT



CURRENT NEWS AND TRENDS IN GAME DEVELOPMENT

CLOUD GAMING

A promising technology for both game developers and gamers, market trends show that hardware in data centers, cloud gaming on TVs, small cloud gaming services making big strides, and involvement from large media and entertainment companies will play important roles in the growth of cloud gaming.

Samsung has entered a strategic partnership with Xbox Cloud Gaming and NVIDIA GeForce NOW to introduce [cloud gaming to its line of smart TVs](#),

starting with models released in 2020 and onwards. This collaboration enables users to access and enjoy a variety of gaming experiences directly through their Samsung smart TVs. Samsung's Game Launcher also introduced a feature that enables gamers to [access and play games through cloud streaming](#) without requiring downloads, simplifying the gaming experience on their mobile devices. The addition aims to eliminate storage constraints and broaden the accessibility of mobile gaming for Samsung users.



AI

Investments in artificial intelligence continued to accelerate in Q2 of this year. User-generated content has also emerged as a key application of AI technology, making content creation more accessible. This is attractive to developers and users alike.

The implementation of **AI in gaming is expected to save up to 20% of development time for gaming companies**, and AI-driven technologies, like procedural content generation, are predicted to reduce game

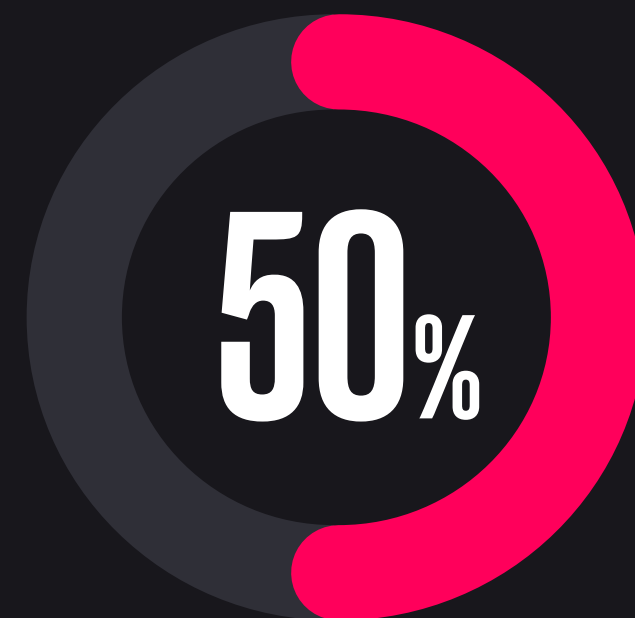
development costs by up to 15% in the next few years, according to [Newzoo](#).

By 2025, AI will be used globally in over [35% of game development projects](#) to create realistic in-game environments and characters.

A report from [Bain & Company](#) shows that **more than 50% of the video game development process will be supported by generative AI in the next five to 10 years**.



Video game content developed with generative AI today



Video game content developed with support from generative AI in 5 to 10 years

METaverse

Metaverse gaming is one of the most prominent gaming trends of 2023. The global [metaverse gaming market](#) is valued at US\$ 51 billion in 2023 and is forecasted to jump to a size of \$1,300 billion by the end of 2033, a CAGR expansion of 38.2% from 2023 to 2033.

InWorld AI, a pioneering AI game character company, [successfully secured a new funding round at a remarkable valuation of \\$500 million](#). This funding underscores the growing significance of AI-driven characters in the gaming industry. The substantial valuation indicates increasing investor confidence in the potential of AI-driven game characters and their role in gaming.



38.2% CAGR from 2023 to 2033

Article

01



CLOUD AND CROSS-PLATFORM GAMING:

The Impact of Hardware
Costs and 5G Accessibility



In the gaming industry, rising hardware costs have become a significant factor driving the popularity of subscription services and video game usage around the world. A high-quality gaming PC averages between \$1500 and \$4000, resulting in 78% of gamers upgrading their hardware less frequently than once every three years. Additionally, 5G networks have seen an exponential increase, from 5% in 2019 to 35% last year, and are expected to continue

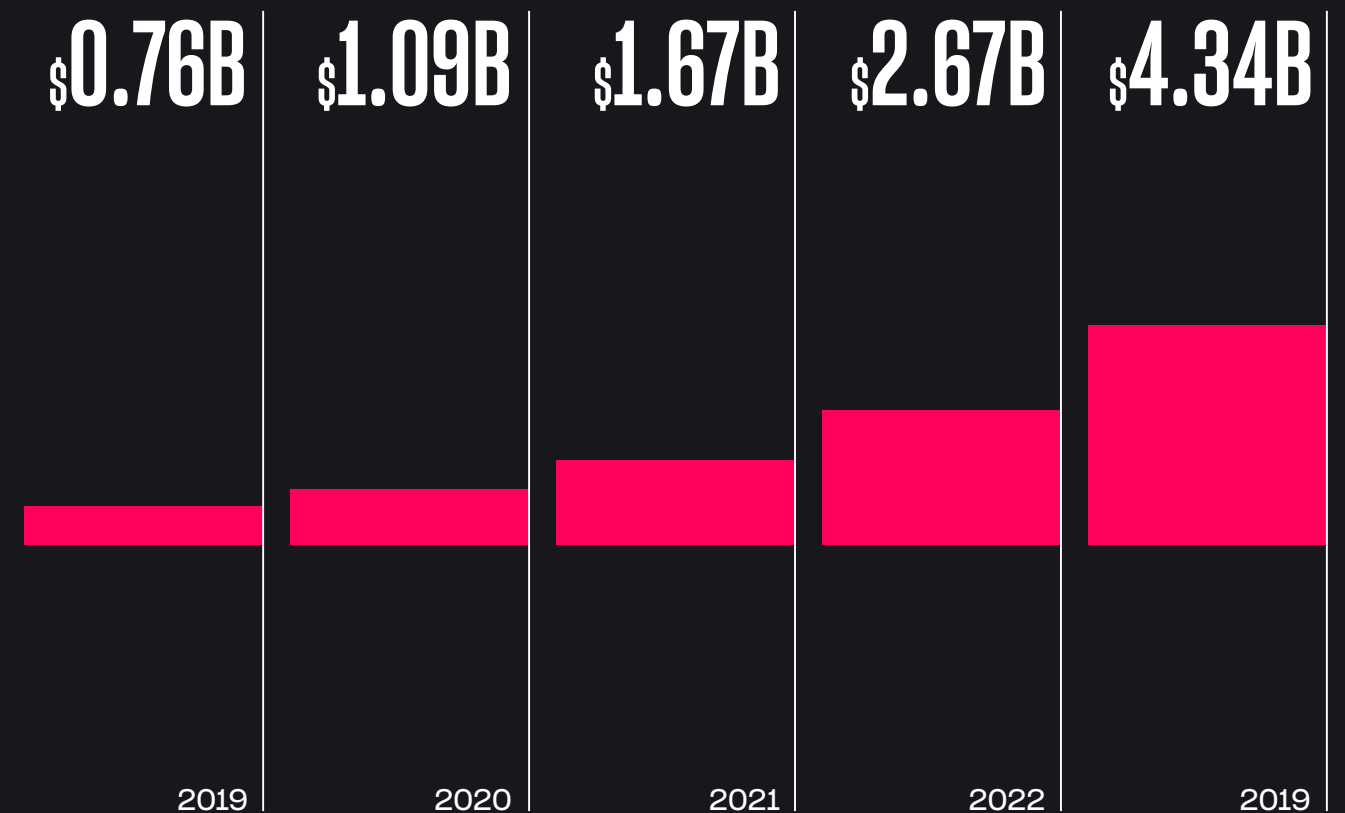
expanding coverage from 2023 onwards, [according to Statista](#). These developments are laying the foundation for cloud and cross-platform gaming growth.

In 2021, the cloud gaming market generated \$1.67 billion, which is predicted to rise to \$4.34 billion this year. It's also expected that more than **2.5 billion gamers will use cloud gaming services in 2024.**

2.5B

gamers will use cloud gaming services in 2024

RISE OF GLOBAL CLOUD GAMING REVENUE

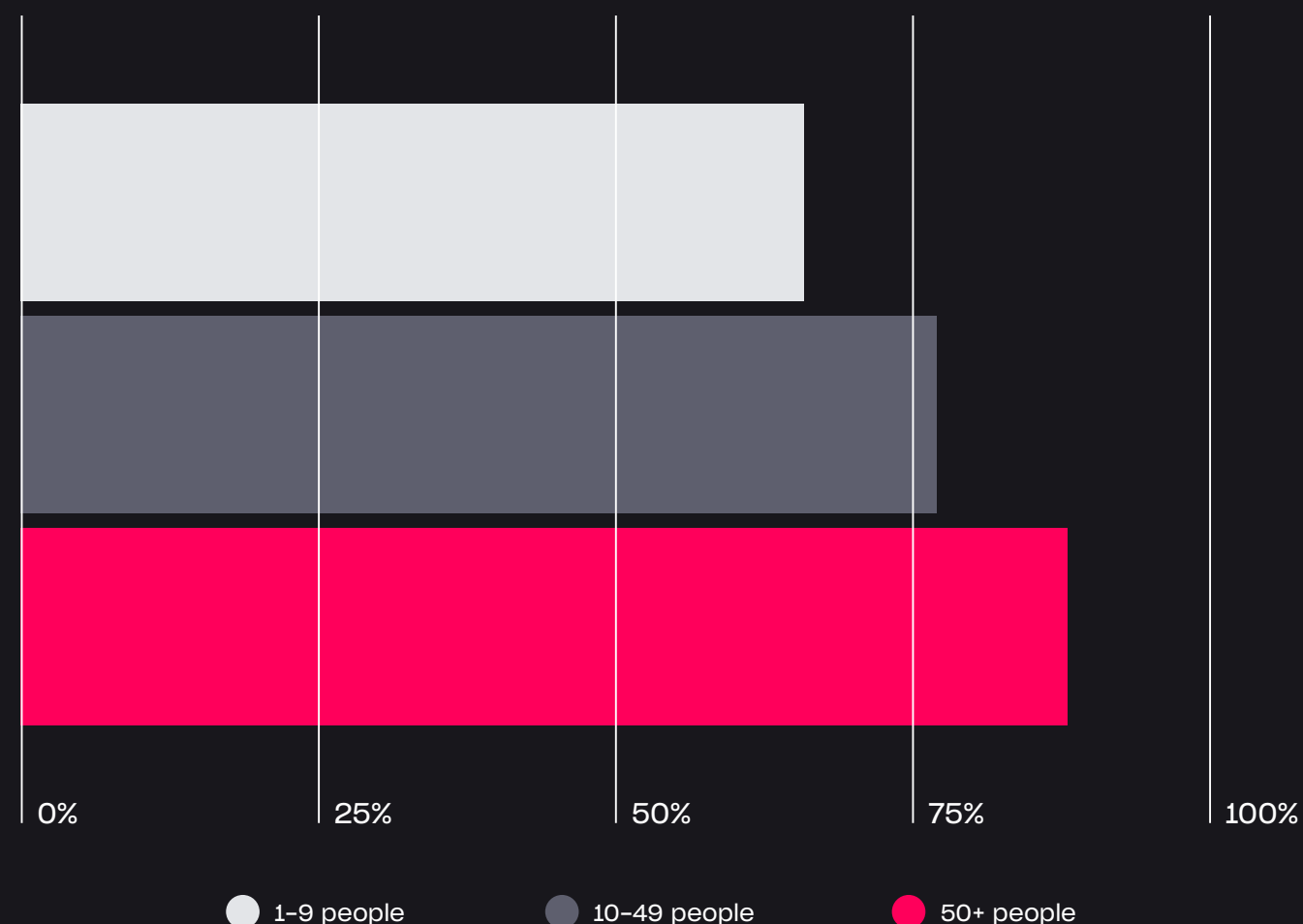


+471%

When it comes to cloud gaming, desktop computers and laptops are the favored platforms, with 41% of users having already tried them and 28% expressing a desire to do so. Mobile devices are also gaining popularity, with 32% having experimented with cloud gaming.

The demand for cross-platform gaming is also surging, with **87% of multiplayer gamers advocating for cross-platform mobile video games**. A global sentiment reveals that 43% of gamers are actively seeking more cross-platform gaming experiences. While smaller studios often stick to single platforms, [Unity's Report](#) highlights this growing trend.

THE MAJORITY OF STUDIOS WITH MORE THAN 50 PEOPLE ARE BUILDING CROSS-PLATFORM GAMES

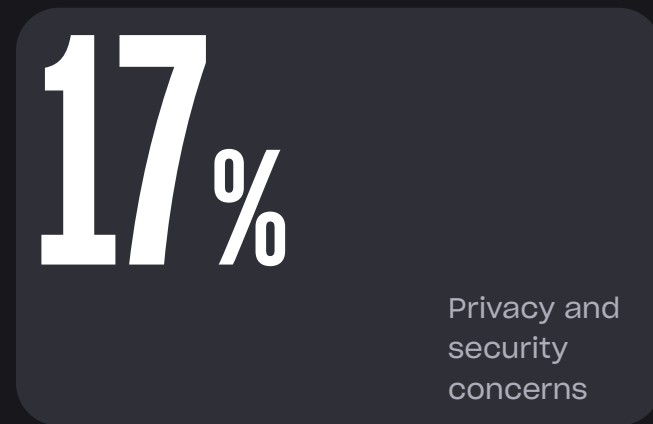
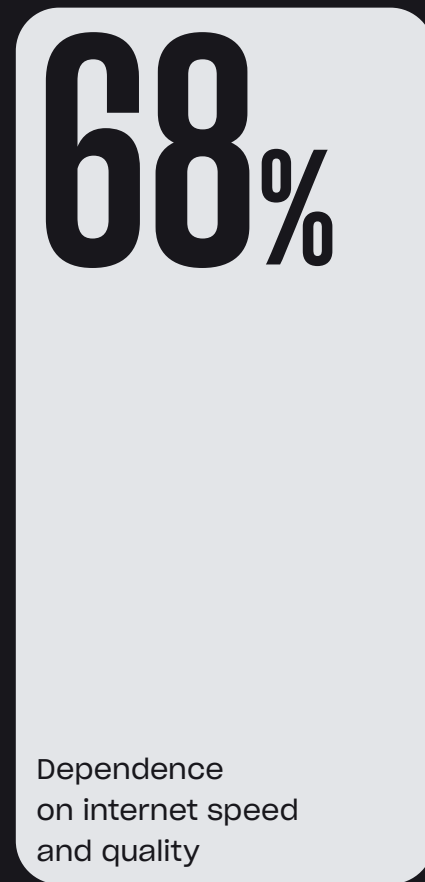
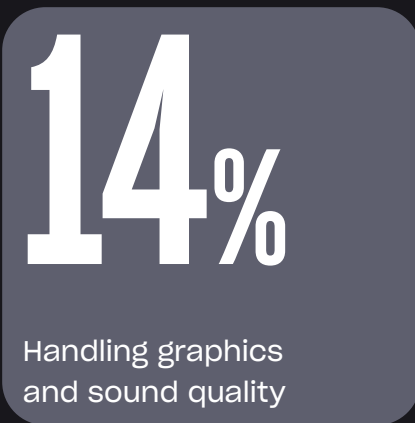
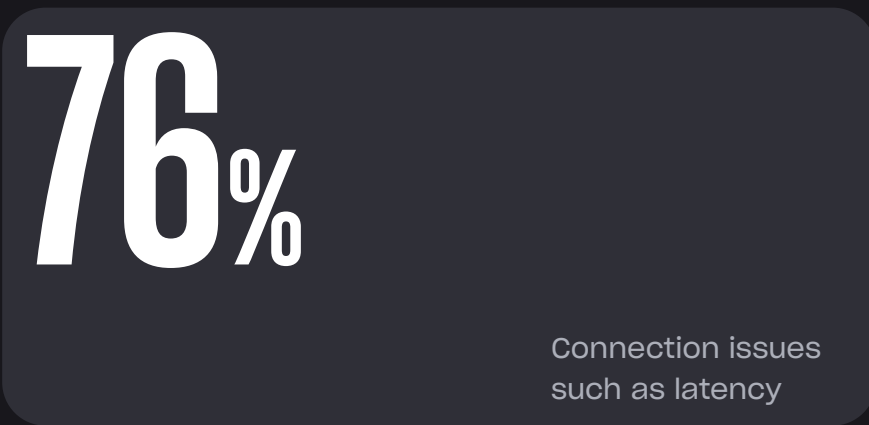
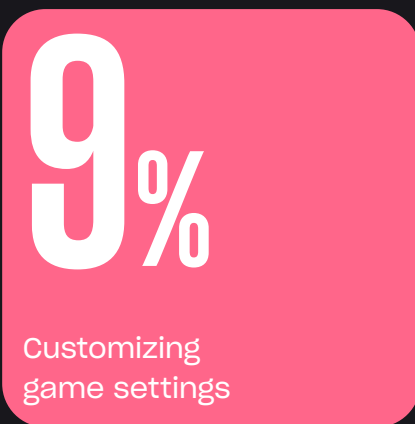


CHALLENGES

As cloud gaming continues to take shape in the industry, some disadvantages have also become noticeable. For example, 27% of gamers are not yet prepared to pay for cloud gaming services, according to [80 Level](#) research, which emphasizes the need for education and awareness-building regarding its value and benefits. Many cloud gaming providers also grapple with substantial user acquisition costs,

averaging around \$100 per user. The technology itself has also run into limitations, particularly concerning latency issues, which affect the real-time responsiveness of gameplay, as pointed out by 76% of gamers. The quality of the cloud gaming experience heavily relies on stable and high-speed internet connections, a drawback noted by 68% of gamers.

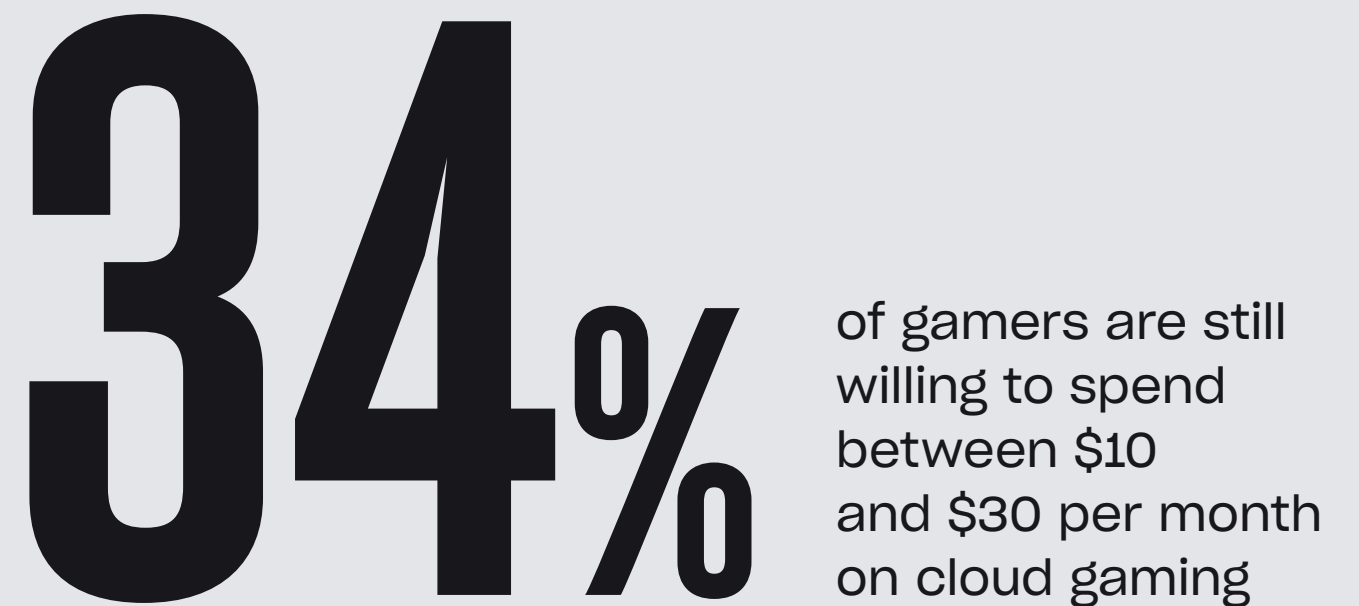




While the technology has its growing pains, **34% of gamers are still willing to spend between \$10 and \$30 per month on cloud gaming**, which signals a promising future. Widespread availability of 5G networks will also provide faster and more reliable cloud gaming experiences, enabling users to enjoy high-quality games on devices with limited processing power. Additionally, cloud gaming is set to succeed in emerging markets with high demand for gaming experiences, but access to high-end gaming hardware remains limited.

Cloud gaming services are becoming crucial discoverability tools for developers, as [Microsoft Statistics](#) revealed that Xbox Game Pass players using cloud services discover and play almost twice as many games compared to those who don't. This trend is particularly significant for mobile game studios, as cloud technologies enable the implementation of in-game purchases beyond traditional platforms like the App Store and Google Play. Dedicated devices like Logitech Cloud and PlayStation Project Q are also emerging to cater specifically to cloud gaming.

Cloud and cross-platform gaming represent new opportunities for gamers and game creators in the gaming industry. And as accessibility expands and the technology continues to evolve, these trends are positioned to redefine the way gamers play and connect across the globe.



Article

02



TRANSFORMING GAMEPLAY AND DEVELOPMENT:

The Power of AI

The driving force behind a lot of the innovative adaptations and processes in the gaming industry is AI. In fact, by 2024, more than 50% of the top 100 game studios are projected to employ AI for game design and development, according to ABI Research. [AI-powered](#) Non-Player Characters (NPCs) are also forecasted to constitute 30% of all NPCs in newly released games by the end of this year, which is bolstered by the 25% increase in player engagement and game duration due to AI-driven NPC behavior, according to Gartner.

This AI-driven evolution isn't only transforming gameplay, it's also redefining game development. Developers are increasingly weaving generative AI into their workflows, a fact substantiated by the [Unity Trends Report](#), which revealed AI's growing role in generating images, audio, video, and even code.

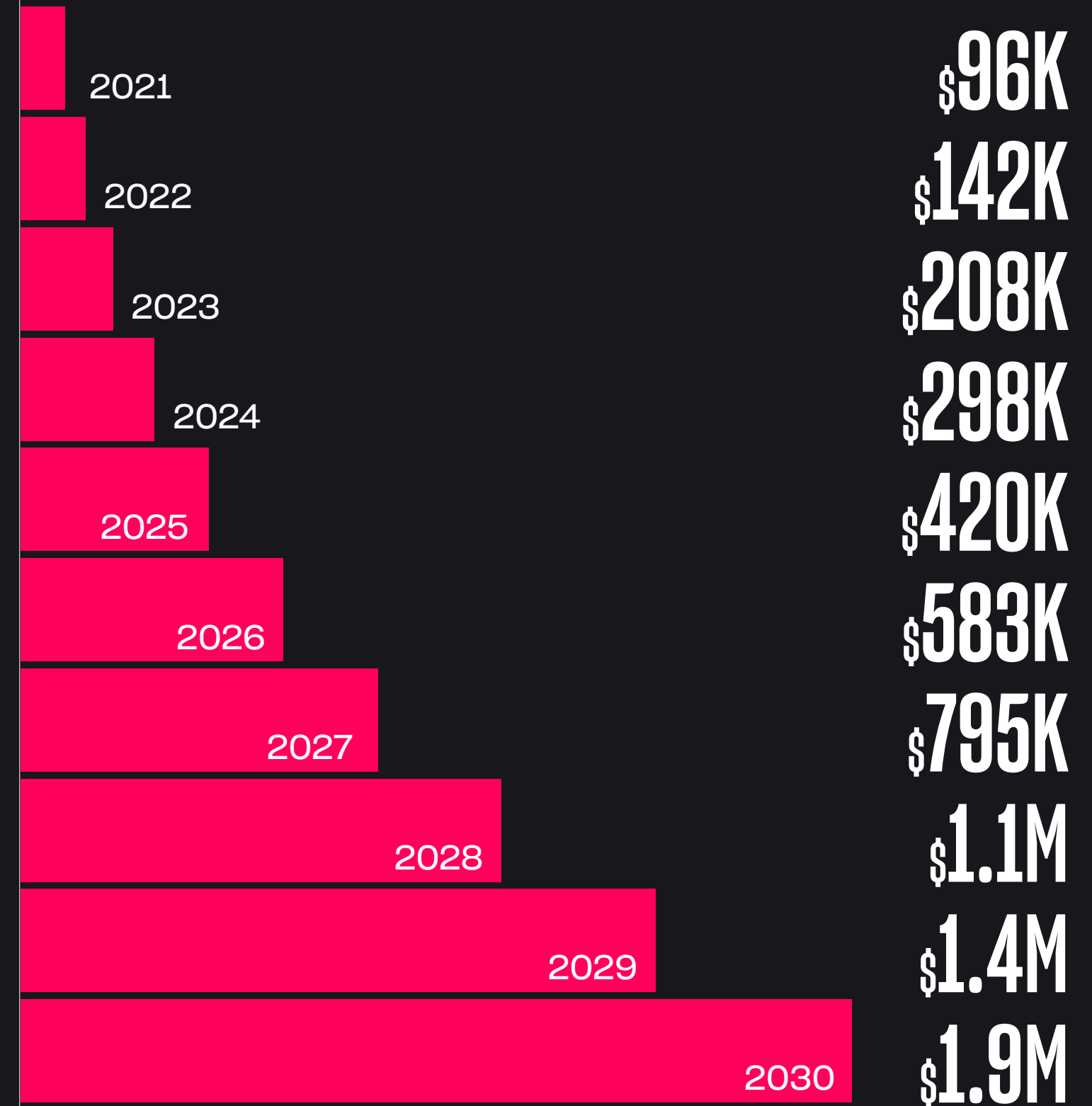
23.3%

CAGR
of generative
AI in gaming
market by 2032

\$7.105M

forecasted size
by 2032

ARTIFICIAL INTELLIGENCE (AI) MARKET SIZE WORLDWIDE IN 2023, WITH A FORECAST UNTIL 2030





AI's influence has extended further by connecting to cloud gaming, where Augmented Reality (AR) and Virtual Reality (VR) technologies have created immersive gaming experiences that bridge the gap between virtual and physical realities. This connection has the capability to elevate video games, offering advanced

and personalized encounters where players can interact with game environments and characters in new ways.

The growth of AI in the video game industry is marked by its advantages in a few important areas, including:

ACCESSIBILITY

AI-powered games are poised to be more inclusive, catering to players with disabilities such as visual or auditory impairments. This commitment to accessibility ensures that gaming experiences are enjoyable and engaging for a broader audience.

COST-EFFECTIVE DEVELOPMENT

AI's automation streamlines processes and reduces the overall cost of game development. Developers can allocate resources more efficiently by automating repetitive tasks and making execution of such tasks by team members more efficient.

SWIFT IMPLEMENTATION IN THE GAME DEVELOPMENT INDUSTRY

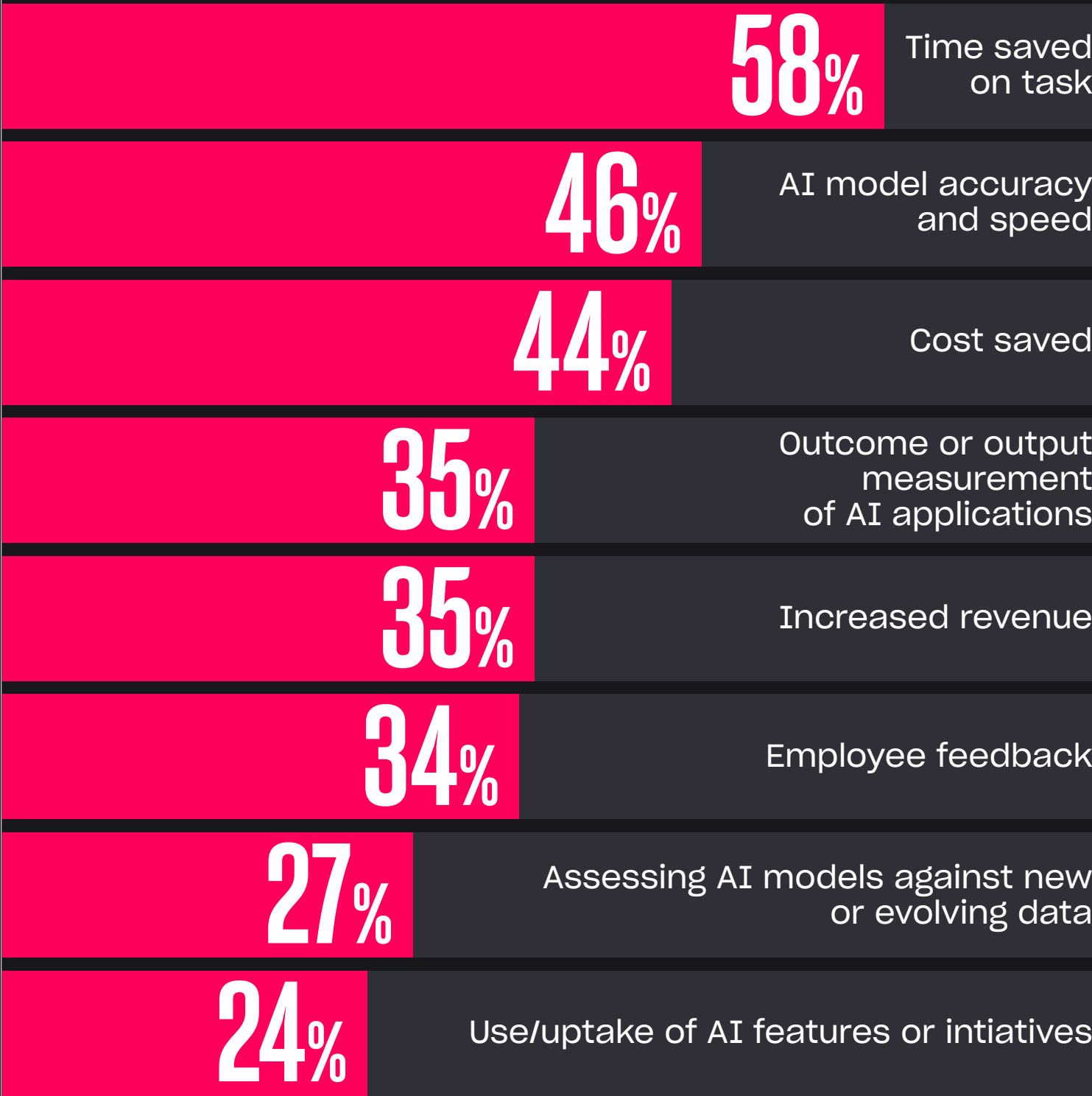
The gaming industry has a history of swift adaptation to emerging technologies that promise a competitive edge. AI is no exception. Expect to witness a proliferation of AI-powered games as the industry continues to harness the potential of this transformative technology.

ENHANCED EFFICIENCY

Mundane and repetitive tasks like game testing and bug fixing can be seamlessly managed by AI, leading to significant time and resource savings for developers.



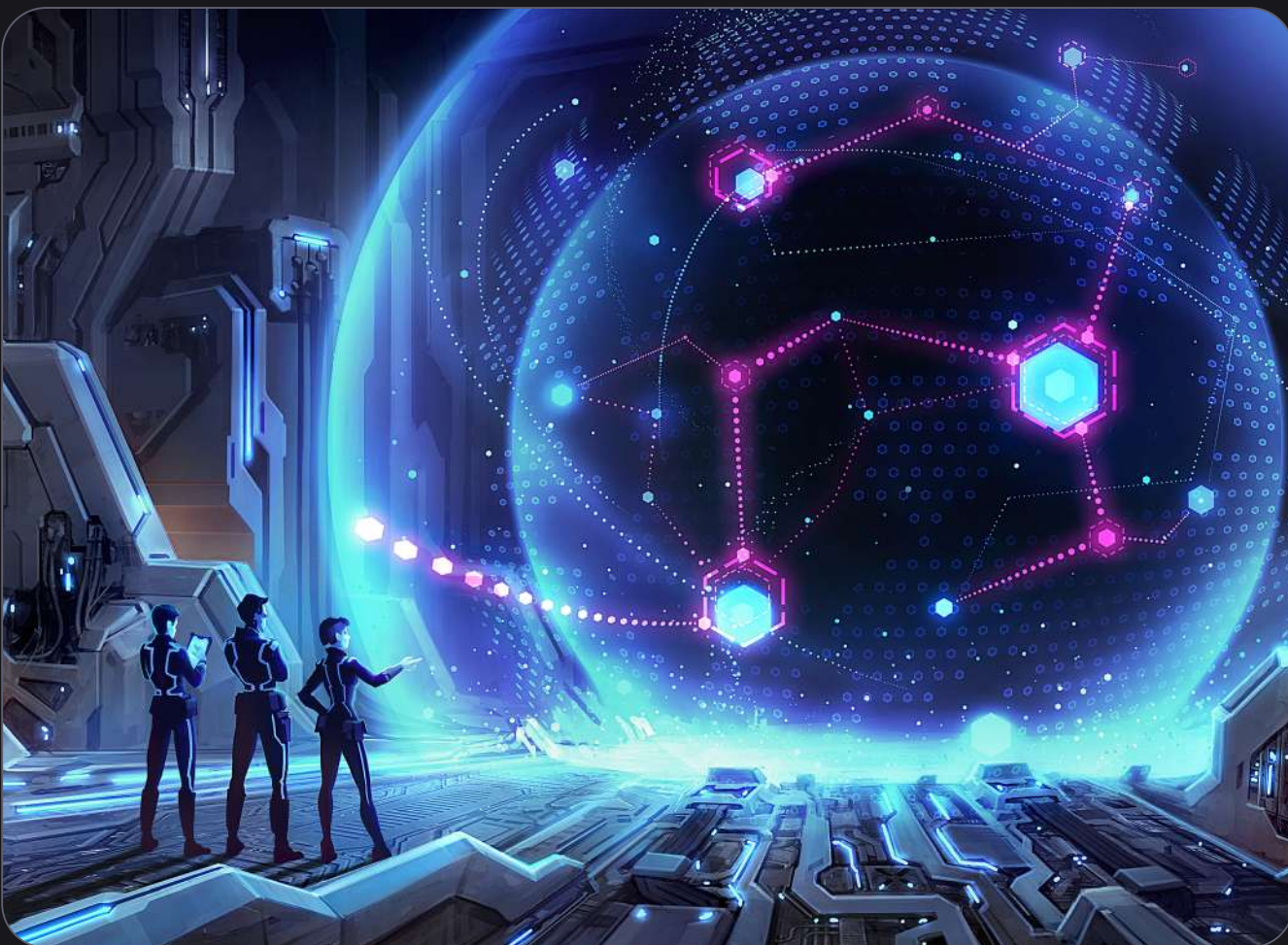
MEASURE OF ROI WHEN AI USED YOUR ROLE



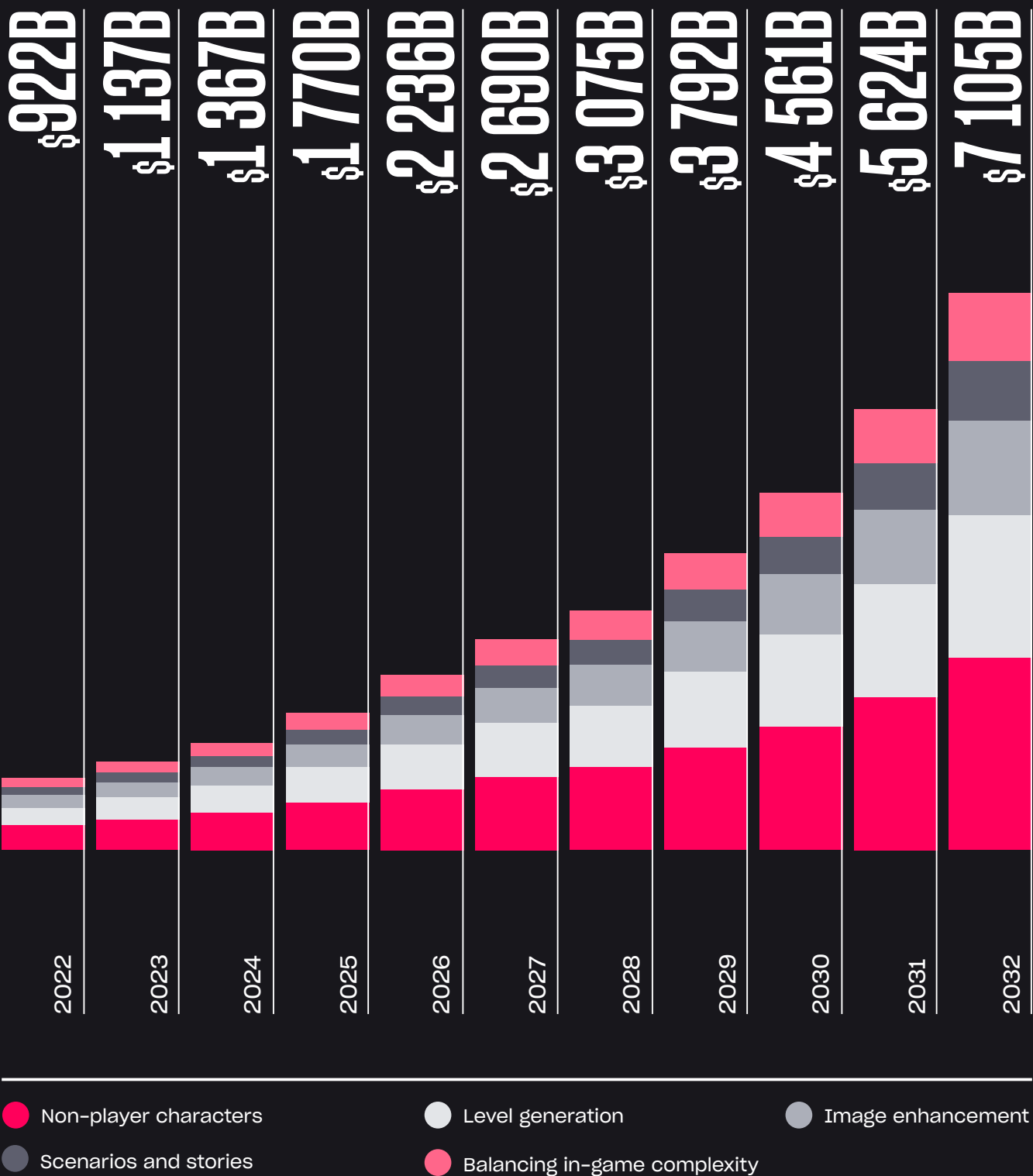
In the realm of cloud gaming, AI is set to play a pivotal role in elevating the player experience, analyzing player behavior to provide tailored recommendations, fine-tuning difficulty levels, optimizing game design, and breathing new life into game narratives. This AI-driven transformation extends across various facets of cloud gaming:

- **Intelligent Gameplay.** AI algorithms will scrutinize player behavior and furnish in-game strategies, significantly enhancing player engagement and performance.

- **Personalized Game Recommendations.** Drawing insights from a player's gaming history, AI will provide tailored game recommendations, aligning with individual preferences and play styles.
- **Enhanced Game Storytelling.** AI will weave its intelligence into the storytelling fabric of games, crafting dynamic and personalized narratives that evolve based on player choices and actions.



GLOBAL GENERATIVE AI IN THE GAMING MARKET



Source: [Business 2 Community](#)

WHAT DOES THIS MEAN FOR THE GAMES INDUSTRY?

A "hybrid" approach between traditional games and AI will create a symbiosis that combines the creativity and ingenuity of game creators with the technical production value of AI. And with AI as a more prevalent

part of the development process, industry roles will start to evolve, transitioning people from crafting to directing, where game creators can guide AI tools to build intricate gaming experiences.

Interactive AI Integration. Active utilization of chatbot-related startups will start to enhance player interactions, making engagements with non-player characters (NPCs) remarkably lifelike. Game developers have also started exploring the potential of ChatGPT and similar AI models for creating interactive storylines, generating game code, and even conceiving entire games from scratch based on player requests.

Revolutionizing Content Creation. Midjourney and Stablediffusion will become key components of the development and creative pipeline for many studios. What was initially perceived as a captivating novelty has rapidly transformed into an indispensable tool for content production, saving substantial time and resources. Studios are starting to leverage these tools for tasks ranging from prototyping to crafting intricate game content.

AI-Driven 3D Model Generation. Startups and tech giants, including Nvidia, are venturing into the domain of generating 3D models based on specific requests. Although production-ready solutions are still in development, there is significant progress being made. These innovations promise to stream the creation of 3D assets for games and other digital experiences.

With these trends on the rise, games are poised to be developed faster, with potential efficiency gains of up to 20-30%. It's also providing a glimpse into an era of abundant content, with developers who are able to create rich and diverse gaming universes without the need for hundreds of hours of manual programming. As the gaming landscape evolves, the combination of human creativity and AI innovation will open exciting new horizons for crafting new gaming experiences.



Article

03



THE METAVERSE:

A Virtual Gateway
to the Future of Video Games



The metaverse is gaining traction in the gaming industry, with the [introduction of new games that are helping to expand its accessibility to a broader audience](#). By introducing compatibility with Android and Quest 3, Meta has positioned itself to tap into the potential of mobile VR, making the metaverse more inclusive and immersive for users across a variety of platforms.

And with projections indicating that market size in the global metaverse in gaming sector could surge to [\\$710 billion by 2027](#), metaverses are opening up new opportunities for game developers:



Expansive Virtual Realms.

Game developers are intensifying their efforts to create vast, interconnected virtual worlds within the metaverse. These expansive landscapes promise unparalleled adventures and interactions for players.



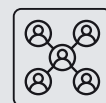
Immersive Tech Advancements.

Expect groundbreaking advancements in virtual reality (VR) and augmented reality (AR) technologies. These innovations will elevate immersion and redefine how players engage with the metaverse.



User-Generated Content.

The metaverse's growth is intrinsically linked to user-generated content. Gamers will have the power to shape and contribute to the metaverse, fostering a dynamic and evolving digital realm.



Cross-Industry Collaborations.

Collaboration with industries such as fashion and music will bring unique experiences and partnerships into metaverse gaming. This cross-pollination will spawn novel forms of entertainment.



Blockchain Integration.

The metaverse is set to integrate blockchain technology, enabling decentralized ownership and in-game economies. This move ensures greater security and autonomy for players.



Monetization Evolution.

The metaverse will explore innovative monetization models, including non-fungible tokens (NFTs) and virtual asset trading. These models promise new revenue streams and economic ecosystems within the metaverse.



METaverse GLOBAL MARKET GROWTH, 2022-2027

2022

\$36.81B

2027

\$710.21B

WHAT DOES THIS MEAN FOR THE GAMES INDUSTRY?

As the metaverse continues its dynamic growth, game developers are likely to intensify their efforts in creating expansive, interconnected virtual worlds within metaverse games, promising players unique new gameplay and interactions. Additionally, expect significant strides in virtual reality (VR) and augmented reality (AR) technologies that will further enhance immersion and interaction within the metaverse.

The metaverse's reliance on user-generated content will also drive players to actively shape and contribute to this evolving digital realm. Collaborations with industries like fashion and music could build partnerships within metaverse gaming, leading to new entertainment options.

The integration of blockchain technology will bring decentralized ownership and in-game economies to the metaverse as well, enhancing security and autonomy. Lastly, the exploration of innovative monetization models, such as non-fungible tokens (NFTs) and virtual asset trading, will open up new revenue streams and economic ecosystems within these virtual universes.

Game developers are set to create expansive, interconnected virtual worlds within the metaverse, driven by advancements in VR and AR technologies. Additionally, metaverses can transcend platforms, shifting from VR-only experiences to cross-platform accessibility. This inclusivity expands audience reach, making metaverses accessible to users across various devices and platforms.



CONCLUSION

Gaming industry trends across North America, Latin America, MEA, and Asia show the current economic and technological environment requires game developers and investors to pay attention to payment versatility, prioritize player privacy, and pay attention to innovation. With a shift in user focus toward both cost-effective game play and convenient ways to pay, keeping an eye on emerging technologies like cloud-gaming and real-time payments can help elevate gaming experiences – increasing revenue and player conversion.

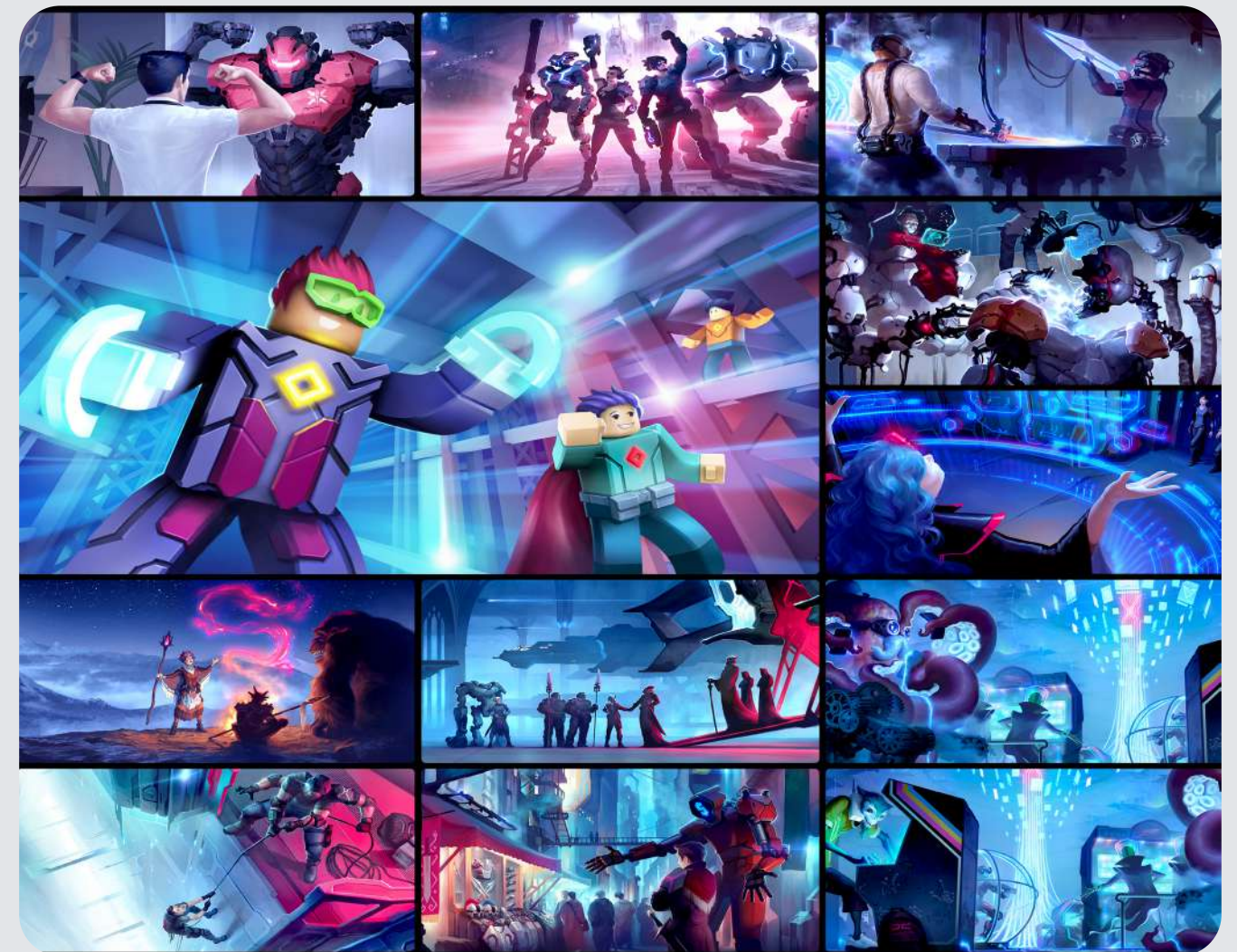
The payments sector continues to provide new ways to capture revenue as real-time payments, alternative payment methods, and Buy Now, Pay Later (BNPL) increase in usage globally. Regions like the Middle East, Africa, and Latin America have an increased adoption of mobile commerce and e-commerce as providers diversify their offerings to encompass rewards programs, physical cards, non-installment payment options, and more.

Mobile gaming faces unique challenges, including privacy changes and international regulations. Developers are focusing on existing successful games to increase profits. The industry is responding with innovative tools and mechanics, such as hybrid monetization models and social mechanics, aimed at effectively monetizing existing players and enhancing player engagement. Expanding in-game purchases to the web is also proving to be an efficient strategy for boosting revenue.

Game development is undergoing a significant transformation driven by cloud gaming, AI, and the metaverse. Cloud gaming services are facilitating game discoverability, especially among mobile game studios, while new devices are emerging to cater to this growing market. The metaverse is slowly gaining traction, with game developers focusing on creating expansive interconnected virtual worlds. User-generated content, collaborations with other industries, blockchain integration, and innovative

monetization models are set to redefine the metaverse and the gaming experience.

The video game industry stands at the cusp of exciting possibilities and challenges. These developments reflect our industry's resilience and capacity to adapt to new technology and economic shifts. At Xsolla, we remain committed to supporting and empowering our partners in navigating this ever-evolving landscape.



ABOUT XSOLLA



As a trusted partner with 18 years of expertise in the video game industry, Xsolla remains committed to providing innovative commerce solutions and valuable insights to our esteemed clients and industry peers. Together, we can navigate the evolving landscape, capitalize on emerging opportunities, and continue to shape the future of gaming.

Xsolla is a global video game commerce company, offering a comprehensive suite of tools and services designed for the video game industry. Since our inception in 2005, we have assisted countless game developers and publishers, regardless of their size, in funding, marketing, launching, and monetizing their games on a global scale and across various platforms.

As innovators in game commerce, we understand the intricacies of the global video game industry and aim to simplify the complexities of global distribution, marketing, and monetization in order to empower our partners to reach untapped opportunities, increase revenue streams, and cultivate lasting relationships with gamers worldwide. Whether you are a game developer, publisher, or industry player, we offer tailored solutions enabling you to thrive in this dynamic and exciting landscape.

Headquartered in Los Angeles, California, we have established a global presence with offices in key cities across the world, including Berlin, Seoul, Tokyo, Beijing, Kuala Lumpur, and more. We proudly support major gaming titles and collaborate with industry giants such as Valve, Twitch, Roblox, Ubisoft, Epic Games, Take-Two, KRAFTON, Nexters, NetEase, Playstudios, Playrix, miHoYo, and many others.

For more information, visit www.xsolla.com.

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