



DIRECT CARRIER BILLING REPORT 2023





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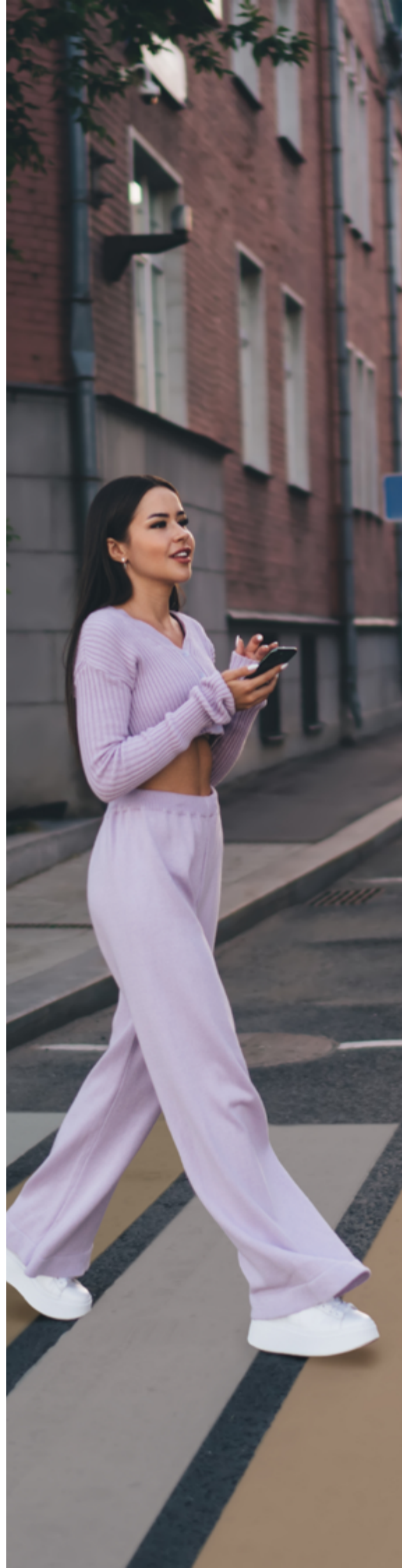
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INTRODUCTION

THE RISE OF ALTERNATIVE PAYMENTS

Introduction

The world is becoming increasingly interconnected globally. With the rise of mobile alternative payment technologies, users can choose the most convenient method depending on their needs and the product or service they purchase.

Since 2020, when consumer habits changed forever, digital payments have become the center of social conversation.

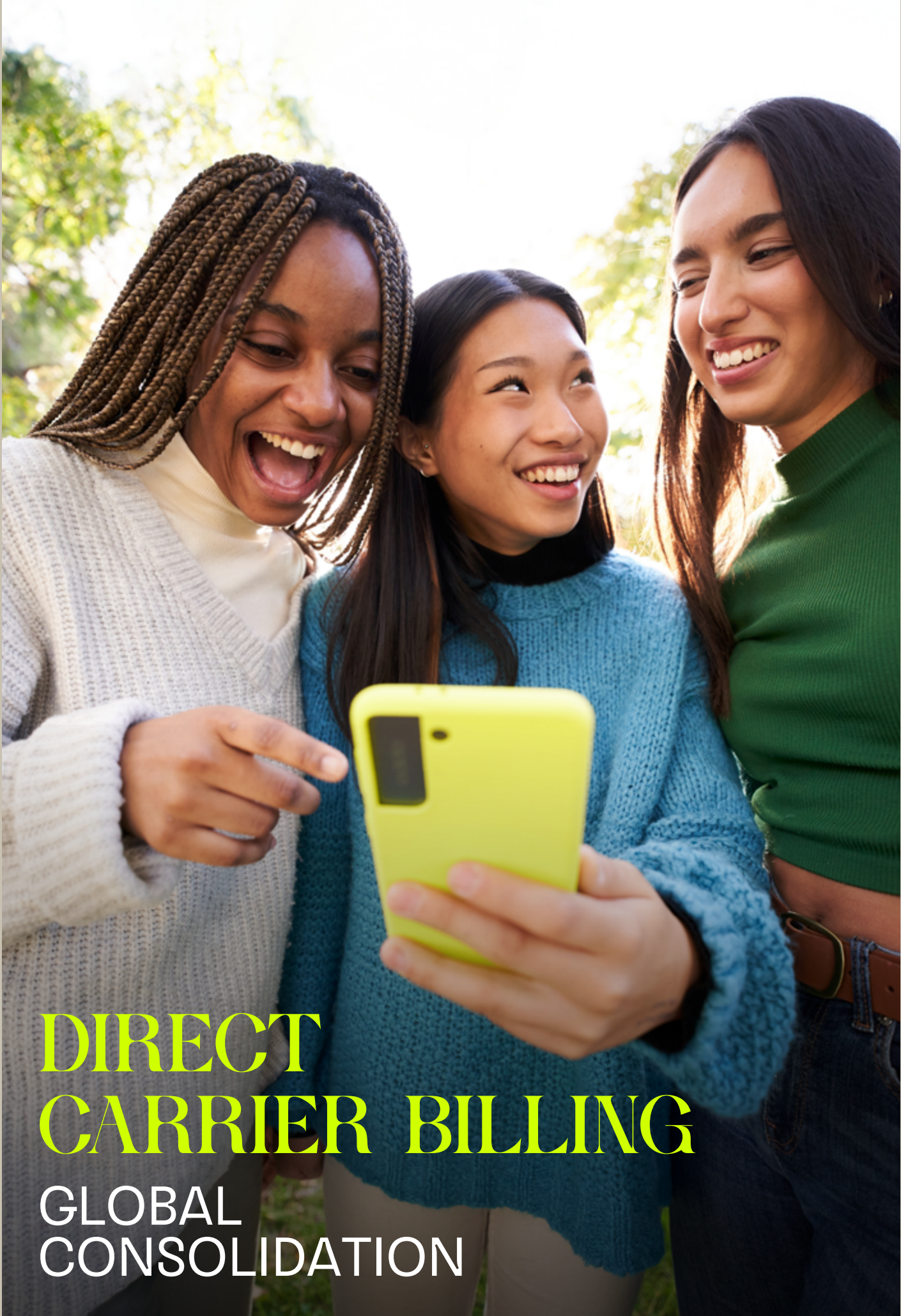
The growing demand for the adoption of alternative payment systems, such as Direct Carrier Billing (DCB), automated payments, and local solutions, is a result of users' current needs for faster and more convenient ways to make purchases. The range of available payment methods is expanding, and it will continue to grow, mainly due to technological improvements and the trust of users willing to try new methods as long as they enhance their overall experience.

Checkout is the moment of engagement between a user and a brand: 7 out of 10 e-commerce cart abandonment instances occur at this stage. This point in the checkout process is precisely one reason why the industry has always strived to simplify payments. Simplifying the payment process has always been a goal for industries, especially for the success of mobile services and subscription models.

Telecoming is collaborating with mobile telecom operators to develop Direct Carrier Billing technology, which enables users to pay through their mobile operator's bill without having to create an account or enter their bank details. This technology streamlines the payment process and boosts conversion rates.

The DCB ensures users privacy

Aside from fraud, one of the major concerns facing the digital world is data privacy. This poses a massive threat to both users and companies. As digital transactions become more prevalent, so do opportunities for fraud, which is a constant worry for everyone. Therefore, it is crucial to ensure payment security by avoiding entering sensitive information that could expose users while making any transaction through their mobile phones. One of the safest methods is DCB, which allows users to pay through their mobile phone bill without providing any banking information.



DIRECT CARRIER BILLING

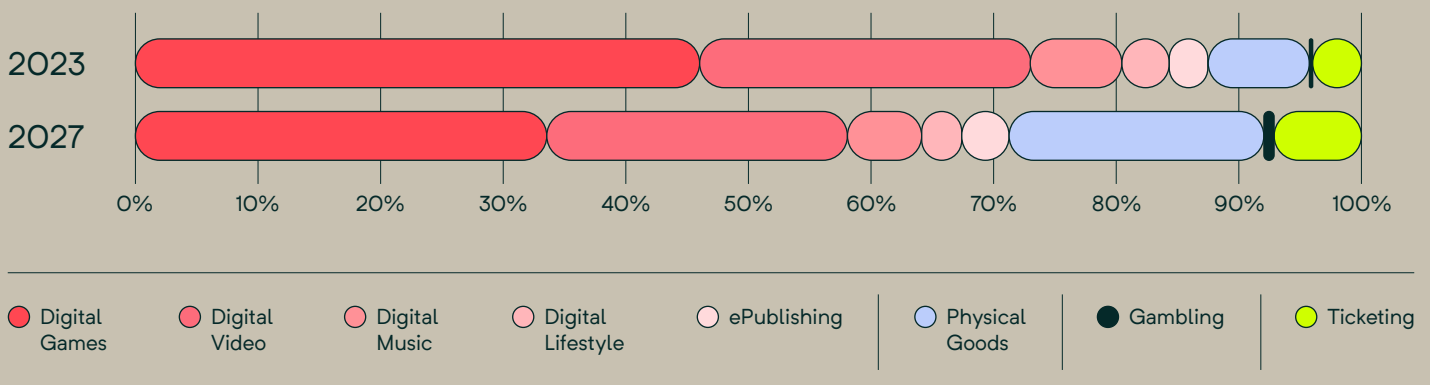
GLOBAL
CONSOLIDATION

DCB is dominated by the digital content sector

Globally, the operator payment market is experiencing steady growth across multiple sectors, reflecting the increasing adoption of mobile payment methods. The Direct Carrier Billing (DCB) market is becoming increasingly diverse, offering users a wide range of options and services.

FIG. 1

SPEND VIA DCB SPLIT BY CATEGORY



Digital services continue to drive operator payments worldwide, encompassing various products and services like apps, entertainment, and online purchases. Spending in this sector is steadily rising, underscoring the growing use of DCB as a convenient payment technology for users.

Video games remain the primary driver of operator payments, accounting for 47% compared to 26% for video services and 6% for music. This trend of purchasing video games through DCB is expected to persist due to the expansion of complementary devices. However, its market share is decreasing with the growth of other sectors, particularly physical goods.

The operator payment market thrives by enabling customers to make purchases of higher-priced physical goods without the need to pay the full amount upfront. The market's growth is not solely reliant on an increase in average transaction value. Other factors, such as the

expansion of Direct Carrier Billing services, the widespread adoption of mobile devices, improvements in telecommunication infrastructure, and growing trust in this payment method, contribute to its success.

Globally, spending on physical goods through Direct Carrier Billing is on the rise, with projected growth from \$5.803M in 2023 to \$25.279M by 2027.

FIG. 2

TOTAL END USER SPEND VIA DCB SPLIT BY CATEGORY

	2023	2027
Content & Commerce	\$59.128M	\$83.961M
Digital Games	\$32.139M	\$40.614M
Digital Video	\$17.968M	\$28.481M
Digital Music	\$4.308M	\$6.527M
Lifestyle	\$2.620M	\$3.944M
ePublishing	\$2.092M	\$4.396M
Physical Goods	\$5.803M	\$25.279M
Gambling	\$147M	\$891M
Ticketing	\$2.720M	\$8.620M
GLOBAL	\$67.798M	\$118.751M

WING • VIDEOS
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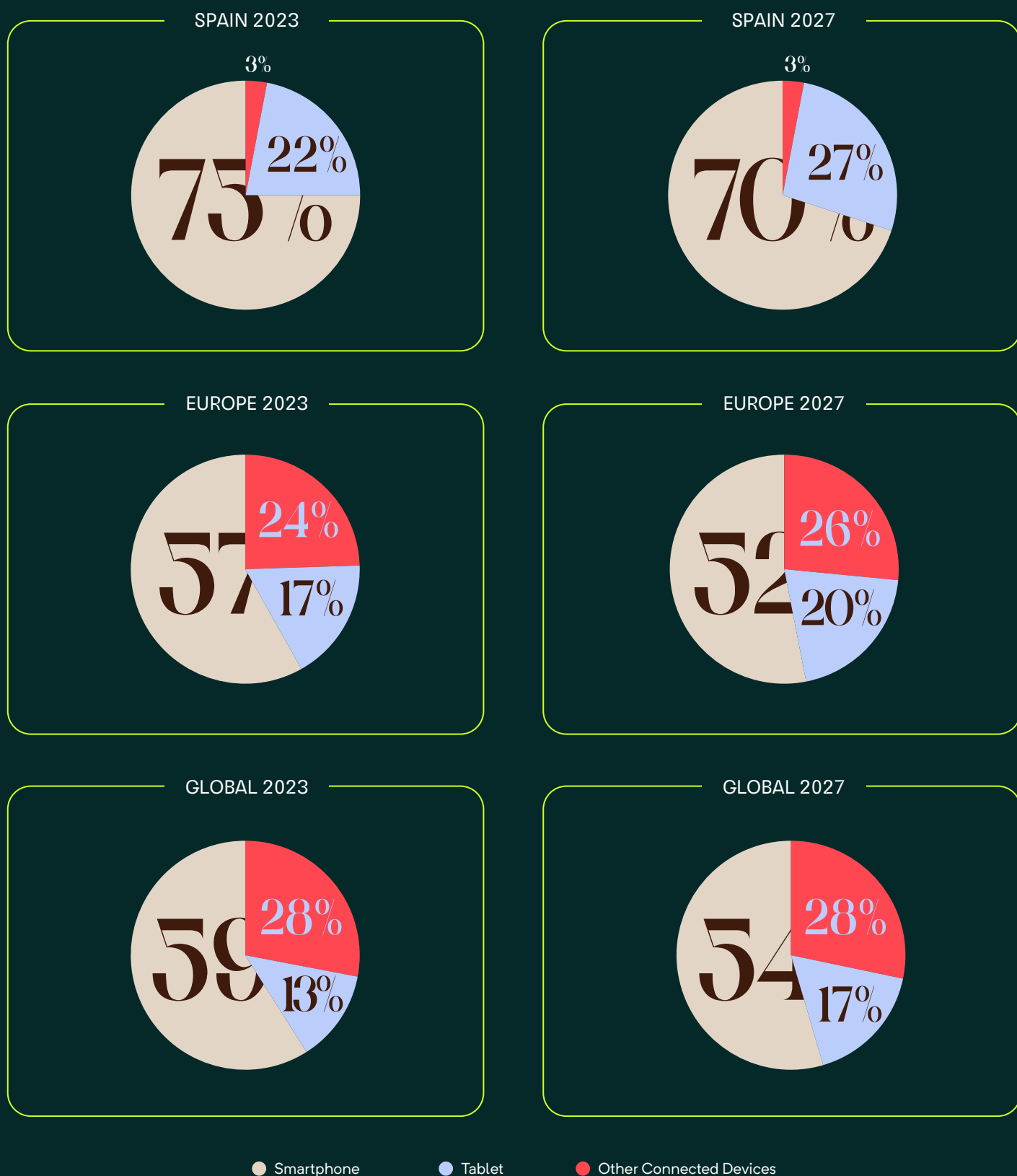




DEVICES
AS DCB PAYMENT
CHANNELS

FIG. 3

DCB MARKETS BEHAVES DIFFERENTLY DEPENDING ON THE DEVICE



Gradual decrease in the usage of smartphones

Although smartphones remain the most popular device for purchasing digital content with Direct Carrier Billing (DCB), their usage is gradually declining. This is due to changing user preferences and advancements in payment technology. This decrease in smartphone usage for DCB payments is observed globally, including in Spain and Europe. In Spain, smartphone usage for DCB payments is expected to decrease from 75% in 2023 to 70% in 2027, while Europe and the rest of the world will see a decrease from 57% to 52% and 59% to 54%, respectively. This trend indicates a shift in user preferences towards other devices gaining prominence.

Smartphones are highly portable and convenient devices, which make them an ideal option for on-the-go payments. DCB allows users to make fast and easy transactions without relying on other payment methods.



Tablets grow and other connected devices remain steady

While the use of smartphones for DCB payments is decreasing, there is a slight increase in the use of tablets in Spain, Europe, and globally. This trend is expected to continue from 2023-2027. Users are starting to use tablets as an alternative or complement for digital purchases.

However, in Spain, the use of other connected devices for DCB payments is growing slower than the European average. The DCB market for connected objects in Spain lags behind other European countries because most paid content through these devices is related to consoles.

Spain market is in an early stage compared to other European countries, where consumers and businesses are more used to making DCB payments through various channels. Other factors, such as the penetration of devices like smartwatches or SmartTVs and consumer education and awareness, also influence this trend.





DIGITAL GOODS

AS DRIVERS
OF DCB PAYMENT

The DCB market according to content type

FIG. 4

SPAIN

	2023	2027
GAMES	64%	55%
VIDEO	16%	17%
MUSIC	5%	5%
LIFESTYLE	2%	3%
EPUBLISHING	12%	20%

FIG. 5

EUROPE

	2023	2027
GAMES	52%	49%
VIDEO	27%	30%
MUSIC	10%	9%
LIFESTYLE	5%	5%
EPUBLISHING	6%	6%

In Spain, the gaming industry dominates the DCB market. It accounts for most consumer spending, gradually decreasing its share from 64% in 2023 to 55% in 2027.

Meanwhile, the paid video industry remains stable in the DCB market, hovering around 16–17% throughout the analyzed period. Video services, such as audiovisual content purchases or rentals, stay popular and maintain a stable consumer base. The video sector is gaining importance in Europe, increasing from 27% in 2023 to 30% in 2027.

Music also has a consistent share of around 5% in the operator payment market. Spaniards spend a significant portion of their budget on mobile music services, such as streaming subscriptions or digital music purchases.

Finally, the digital publication sector experiences notable growth in its DCB market share, increasing from 12% in 2023 to 20% in 2027. The interest of Spanish consumers in purchasing e-books, digital magazines, and other editorial content through DCB is on the rise. While the sector in Europe has remained stable at around 6% over the analyzed period, Spain has shown higher figures.

Gaming: the big market for the DCB

The spending on digital games in Europe is expected to grow significantly through DCB, increasing from \$9.082M in 2023 to \$15.676M in 2027.

Spain is projected to show substantial spending on digital games through Direct Carrier Billing, with estimates ranging from \$851M in 2023 to \$1.255M in 2027.

Germany is the most prominent digital gaming market in Europe, with steady growth in spending over the years.

Europe's share of global spending on DCB gaming is expected to increase over time, reaching approximately 39% in 2027. The 5G network will play a significant role, increasing data speeds significantly compared to previous technologies enabling smoother internet experiences, faster downloads, and high-quality video streaming.

Direct Carrier Billing (DCB) for video games is expected to increase significantly in the coming years. By 2027, DCB will account for 16% of the total revenue generated from digital game sales, up from \$32.139M in 2023. This growth is mainly due to the popularity of mobile gaming and the wide selection of digital games available in the market.

Spain is following the general trend in Europe, where 3 out of every 10 euros spent on video games in 2022 were paid through DCB, which is expected to rise to 13% by 2027. The widespread adoption of digital games and the establishing of a solid payment ecosystem around DCB are contributing to this increase in usage. Overall, the future looks bright for DCB as a preferred payment method for buying video games.

FIG. 6

2023 TOTAL END USER CARRIER BILLING SPEND ON DIGITAL GAMES

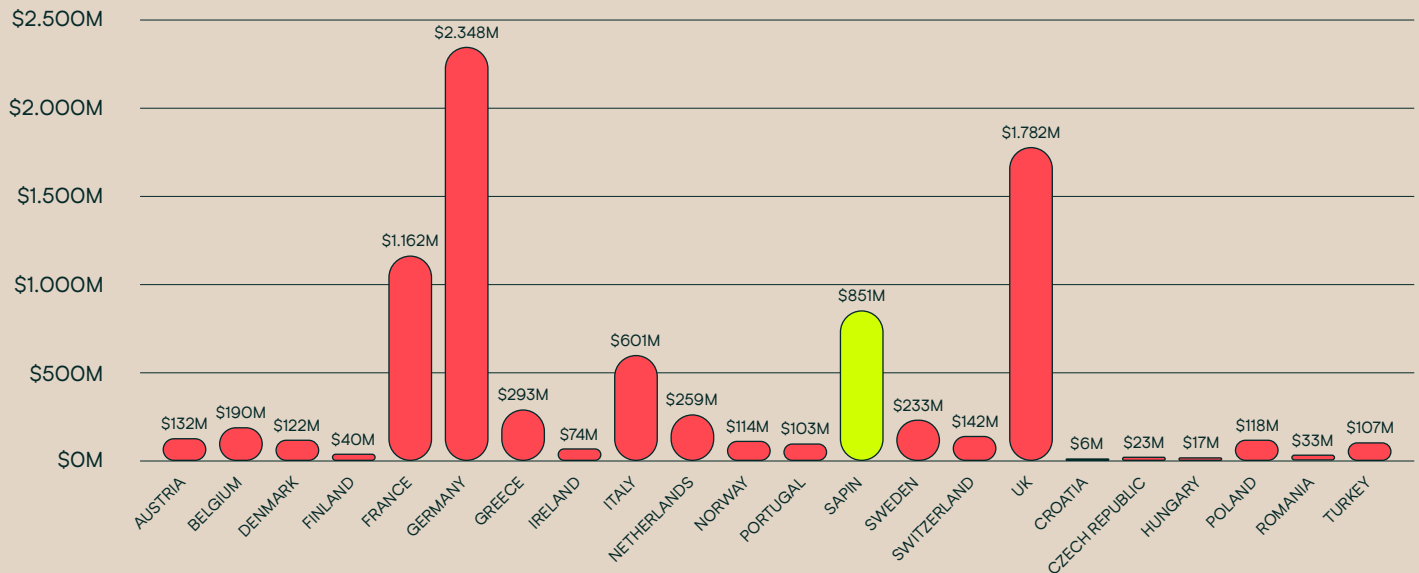




FIG. 7 DCB AS PERCENTAGE OF ALL BILLED DIGITAL GAMES SPEND

	2023	2027
GREECE	38%	26%
BELGIUM	37%	26%
GERMANY	33%	18%
FRANCE	28%	16%
NETHERLANDS	28%	14%

Greece

DCB payments for video games account for 38% of the total expenditure, making Greek users the top spenders in this digital content category. However, this percentage is predicted to decrease to 26% by 2027.

Belgium

Ranks second in terms of the percentage of digital game purchases made using DCB. In 2023, nearly 40% of all euros spent on digital gaming will be paid for using DCB. However, this figure is expected to decrease to 26% by 2027.

Germany

While it has a relatively high percentage in 2023 (33%), it will also experience a significant decrease, reaching 18% in 2027.

Direct Carrier Billing (DCB) adoption for video game payments varies significantly across Europe. Some countries, like Belgium, Greece, and Eastern European countries, prefer this payment method, while others, such as Scandinavian and Western European countries, have lower penetration rates. The trend shows a decrease in the use of DCB in the video game sector in Europe due to changing consumer preferences and the introduction of other alternative payment methods expected to democratize mobile payments.

However, the market volume for games paid with DCB is still growing due to increased unit spending and greater premium content availability. Mobile games often use DCB as a payment method, especially for in-app purchases such as virtual coins, upgrades, or unlocking content.

World of Games, PlayStation Plus, and cloud-based services like GeForce Now and Amazon Luna have changed how people consume video games. Instead of buying individual games, users now access them through subscriptions.

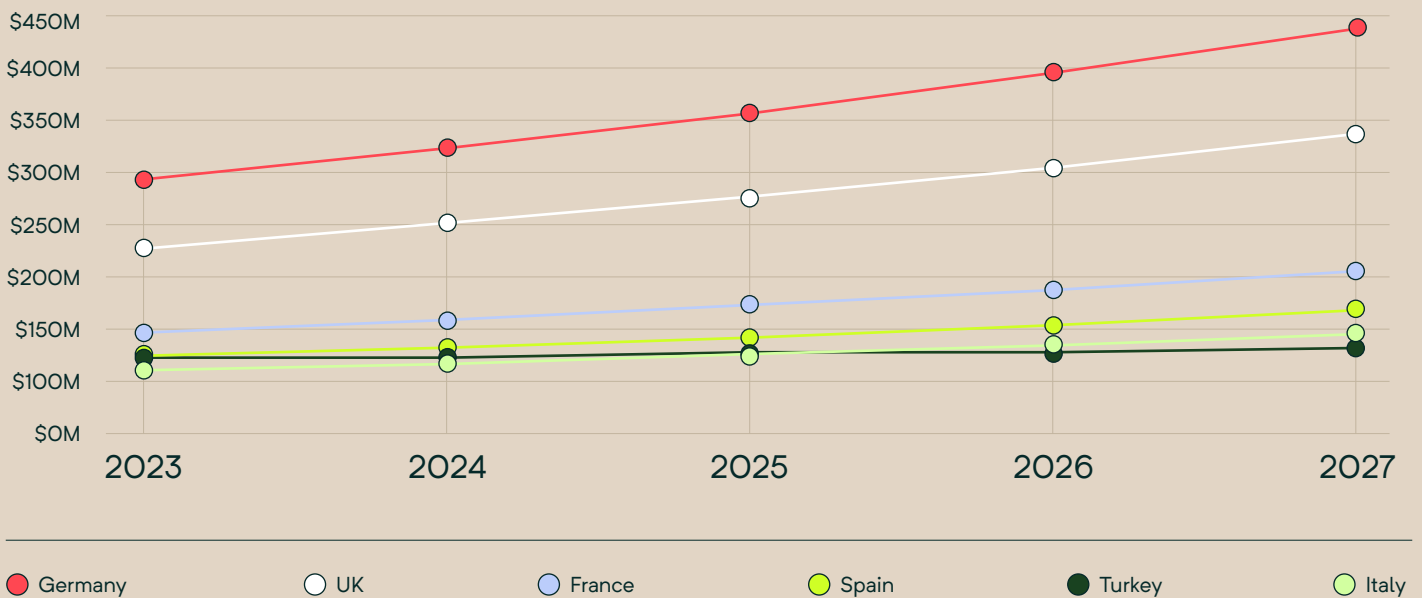
The gaming industry has been at the forefront of the digital revolution for years. Still, recent data shows that subscription services still need to become the dominant model for gaming consumption. While these services have been successful, their growth has stagnated.

To continue promoting Direct Carrier Billing (DCB) as the preferred payment method for gamers, operators can work closely with game developers and content providers to expand the range of games and services available through operator payment. This could include adding popular games, creating game subscriptions, or offering attractive packages and promotions for users. Augmented reality (AR), virtual reality (VR), and game streaming will lead to more immersive and engaging gaming experiences.

Digital music for everyone

FIG. 8

TOTAL END USER CARRIER BILLING SPEND ON DIGITAL MUSIC



In general, end users' total expenditure on digital music through Direct Carrier Billing is increasing throughout Europe. This growth has been consistent from 2023 to 2027. However, some countries such as Croatia, the Czech Republic, Hungary, Poland, and Romania show slow or almost no growth.

Germany, the United Kingdom, and France are at the top of total expenditure, with Germany leading the way with a significant market volume increase from \$243M in 2023 to \$387M in 2027.

Although total spending in Europe is increasing, its share in the global market for paid music with DCB is slightly decreasing, from 25% in 2023 to 24% in 2027. Other regions of the world are increasing their expenditure on digital music faster than Europe.

Germany, the United Kingdom, France, and Spain have annual growth rates of around 12.2% - 12.7% from 2023 to 2027. The European DCB music market shows a slightly lower average growth rate, about 9.5%. Global revenue from digital music increased by 6.7%¹.

Like the rest of the world, Europeans are attracted to operator billing for music services due to its ease of use, security, and convenience. However, specific factors such as the diversity of operators and telecommunication infrastructure have a powerful influence on European users. Europe has many mobile phone operators with

reliable infrastructure that offer direct carrier billing, making it easy for users to choose their preferred payment model.

Additionally, Europe has high rates of mobile technology adoption and a significant penetration of smartphones.

Streaming music consumption is primarily done on mobile devices. Popular digital music services such as Spotify and Apple Music are widely used throughout Europe and offer operator billing as a payment method. Mobile music consumption is consolidating, driven by new generations of users who discover music on other platforms. According to a survey, 80% of users consider TikTok their preferred platform for discovering new music, surpassing other digital media, streaming services, and even recommendations from friends².



¹ Internacional: Se publican los datos de ingresos y consumo de música grabada en el año 2022

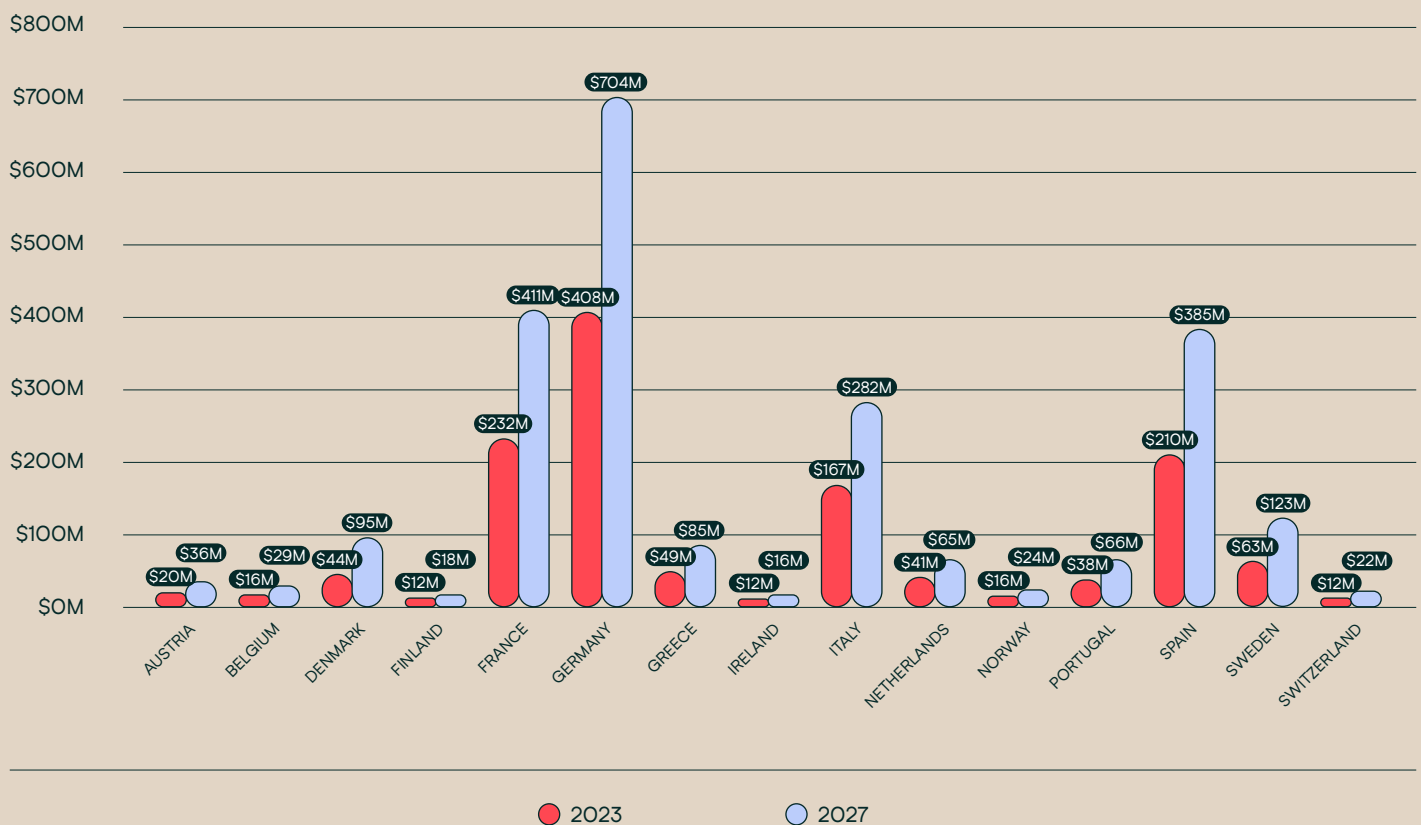
² Un nuevo estudio revela cómo TikTok está cambiando la industria de la música para las marcas, los artistas, el público y las compañías

Video is becoming increasingly prevalent in DCB payments

By 2023, Germany will be at the forefront of the paid video market with DCB, spending \$408M annually. Following closely behind are France with \$232M and Spain with \$210M.

FIG. 9

TOTAL END USER DCB SPEND ON DIGITAL VIDEOS



Overall, all countries are expected to experience steady growth in the digital video market until 2027, with Direct Carrier Billing (DCB) becoming a popular payment method.

Despite Europe having a higher DCB usage rate than the global average, the share of the digital video market paid for with DCB remains modest.

This is because of the presence of other payment methods and regulatory constraints. Many video platforms offer annual packages that surpass the €50 DCB payment limit in a single transaction.

The use of mobile devices for digital video consumption has grown rapidly, thanks to modern smartphones with high-resolution screens,

enhancing the viewing experience and driving growth in the sector. The deployment of 5G and the widespread availability of WiFi in public areas have made downloading or streaming video content on mobile devices faster and more convenient.

Younger generations are growing increasingly comfortable with consuming video content on mobile devices. While television and computer playback remain significant, mobile devices are becoming a more popular choice for video consumption, especially for shorter and social content.



The growth of paid digital content through Direct Carrier Billing (DCB) is propelled by sports and short videos

As online video streaming continues to gain popularity, short-format videos and sports highlights have become particularly popular among younger audiences, who often prefer this format over watching full games.

This trend is related to the decreasing attention span of viewers, driven by the prevalence of edited and reduced-sized content on social media platforms. Fans, especially younger ones, often watch highlights through apps like YouTube, Snapchat, and TikTok instead of a full match.

The personalized experience for consuming digital content is an excellent opportunity for the sports industry. The sports community is changing its habits, with less interest in live game broadcasts on TV and a preference for short video formats showcasing a sports encounter's highlights.



Lifestyle, a mobile industry 100% integrated into users' routines

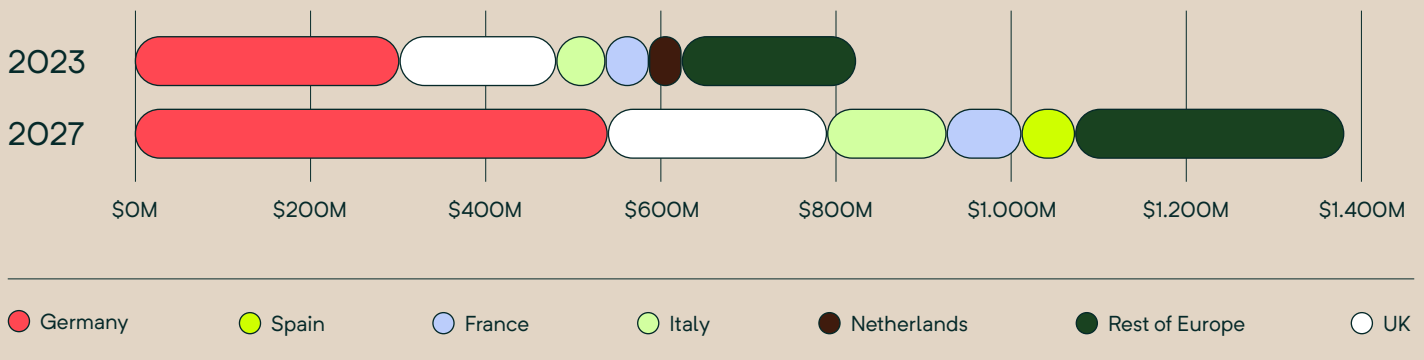
Overall, technology and the internet have been consistently increasing in Europe and worldwide. Telecommunications companies are incorporating additional services into their packages to attract and retain customers.

As digitalization becomes a fundamental part of everyday life, spending on digital lifestyle services is becoming more accepted and

valued. However, not all European countries have the same interest in this segment.

By 2023, five European countries will account for 75% of the DCB lifestyle market, with a significant concentration of spending.

FIG. 10 TOTAL END USER DCB SPEND ON DIGITAL LIFESTYLE - TOP 5 COUNTRIES AND REST OF EUROPE



Germany and the United Kingdom are the leading spenders on lifestyle services through their operator bills in Europe. They will account for over 57% of digital lifestyle content spending through DCB in 2027, ahead of Italy (10%), France (6%), and Spain (4%). Germany's spending will increase from \$299M in 2023 to \$539M in 2027, while the UK's will go from \$181M to \$251M. In 2027, Spain will surpass the Netherlands regarding DCB-paid lifestyle service spending.

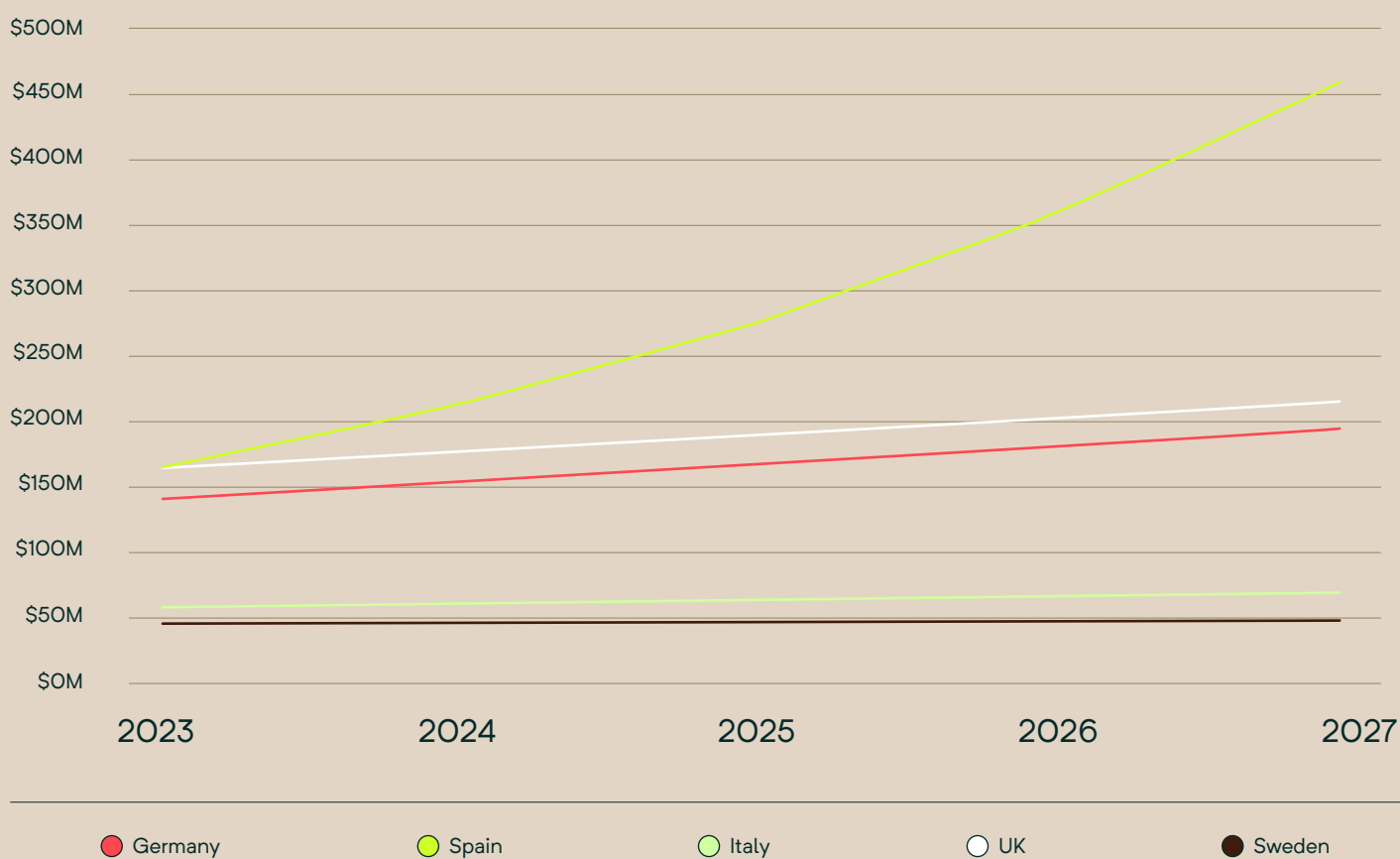
Spain's spending will increase from \$28M in 2023 to \$61M in 2027, while the Netherlands' market will go from \$38M to \$56M over the same period. Despite starting with lower spending in 2023, Spain's growth rate will be higher.

Globally, Europe's total expenditure in 2023 is \$823M, representing about 31% of global spending of \$2.620M. This proportion slightly increases to 35% in 2027. The total spending figure for Europe goes from \$823M in 2023 to \$1.38B in 2027.

Epublishing: the payment for information and digital books, an unstoppable trend

FIG. 11

TOTAL END USER DCB SPEND ON EPUBLISHING



Carrier Billing technology is a safe, universal, and fast payment option for any digital media. Compared to traditional payment models, DCB reduces the payment process by five times and increases conversion rates by 15%.

In Europe, there is a consistent increase in ePublishing spending through DCB, from \$824M in 2023 to \$1.351M in 2027. Spain is expected to experience significant growth in ePublishing spending through DCB, from \$164M in 2023 to \$460M in 2027.

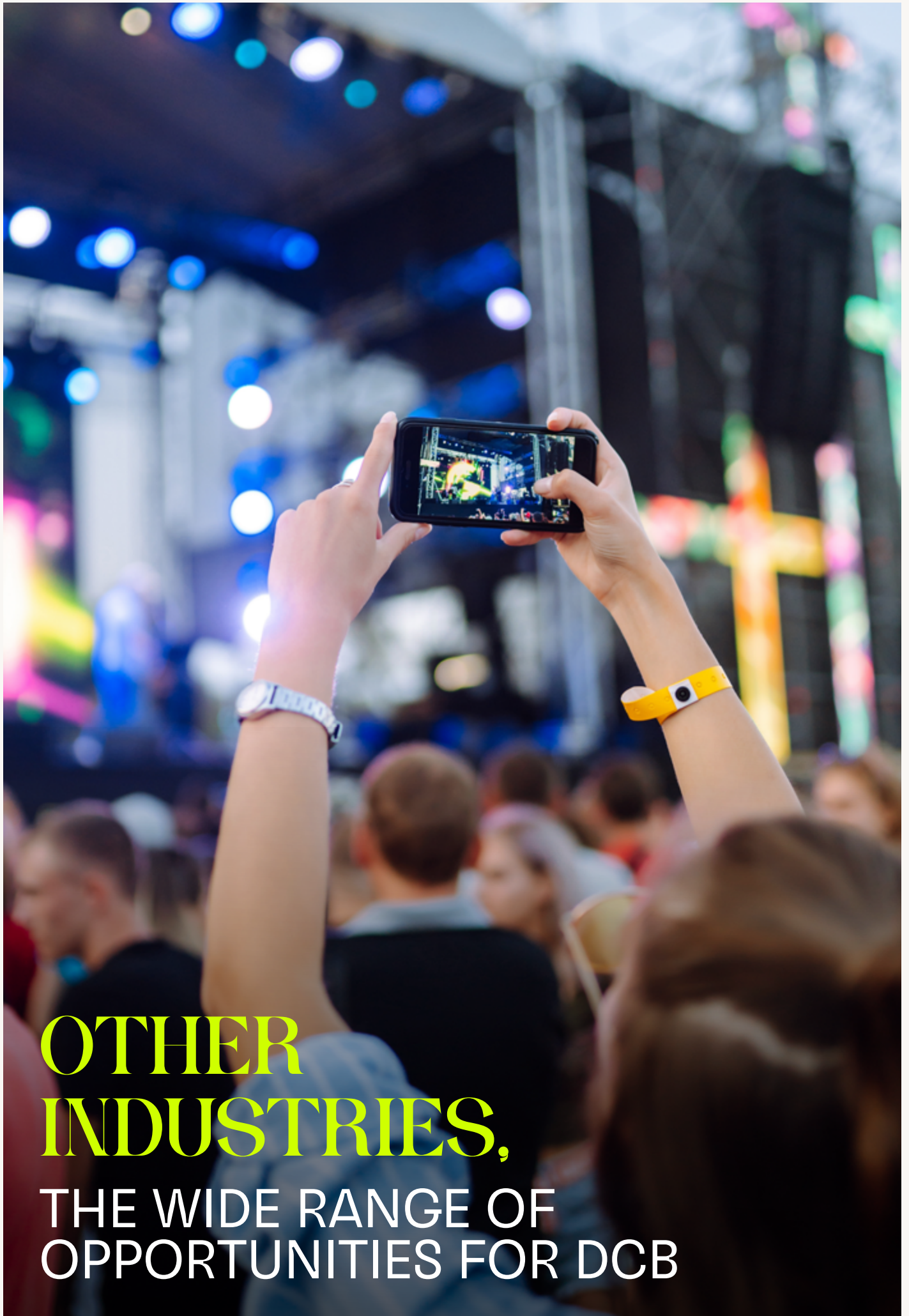


Germany and the UK are leading in ePublishing spending (eBooks, newspapers, and magazines) through DCB in absolute terms, and both countries show growth, indicating a mature market and high DCB adoption rates. Spain stands out in spending, particularly from 2025 onwards, when it experienced a significant increase. Implementing paywalls in the digital press is a global trend that has accustomed users to pay for information seen as an added value.

The introduction of payment systems like Dpay is crucial for digital journalism, as subscription-based business models are becoming increasingly popular.

This confirms that Spanish companies are focused on providing consumers with convenient payment options, such as billing through their service provider or other accessible methods, for ePublishing content.

As the use of smartphones and tablets continues to rise across Europe, there is also an increase in spending on ePublishing through DCB. These devices are commonly used to access and consume digital editorial content.



OTHER INDUSTRIES,

THE WIDE RANGE OF
OPPORTUNITIES FOR DCB

Since the approval of PSD2 in 2015, various stakeholders have made efforts to promote digital payments:

Traceability

Digital payments can be traced, reducing cash payments and underground economic activities.

Safety

Digital payments are secure because they do not involve the input of sensitive data that could compromise users' privacy. Only the mobile phone number is required to complete the payment process.

Promotion of Financial Autonomy

Digital payments are ideal for individuals and groups without a bank card.

European regulations and their incorporation into national laws have expanded the scope of Direct Carrier Billing (DCB), allowing payment processing for phone bills without the need for a banking license. This applies to digital content, transportation, ticketing, and parking.

However, there is a legal restriction in place: purchases cannot exceed €50 per transaction and €300 per month. This limit ensures proper risk management by operators who aim to provide new services to their customers.

SAFETY
TRACEABILITY
PROMOTION
OF FINANCIAL
AUTONOMY

The ticketing industry is a thriving market with endless opportunities

In ticket sales, DCB enables users to purchase tickets for various events, including concerts and sporting events, with ease. This method streamlines the ticket purchasing process, as users can complete transactions with just a few clicks, eliminating the need to enter banking or identification information.

phone ownership. This industry primarily caters to younger generations who seek straightforward, secure, and instant payment options, without encountering any friction or barriers during the payment process.

DCB also effectively widens the reach of ticket sellers, especially among groups with lower credit card penetration but high mobile

FIG. 12

TOTAL TICKETING SPEND MADE VIA DCB PER ANNUM



France is leading Europe in Direct Carrier Billing ticketing expenditure, experiencing consistent growth year after year, from \$278 million in 2023 to \$804 million in 2027. Undoubtedly, it is the country with the largest market in Europe, significantly ahead of the others.

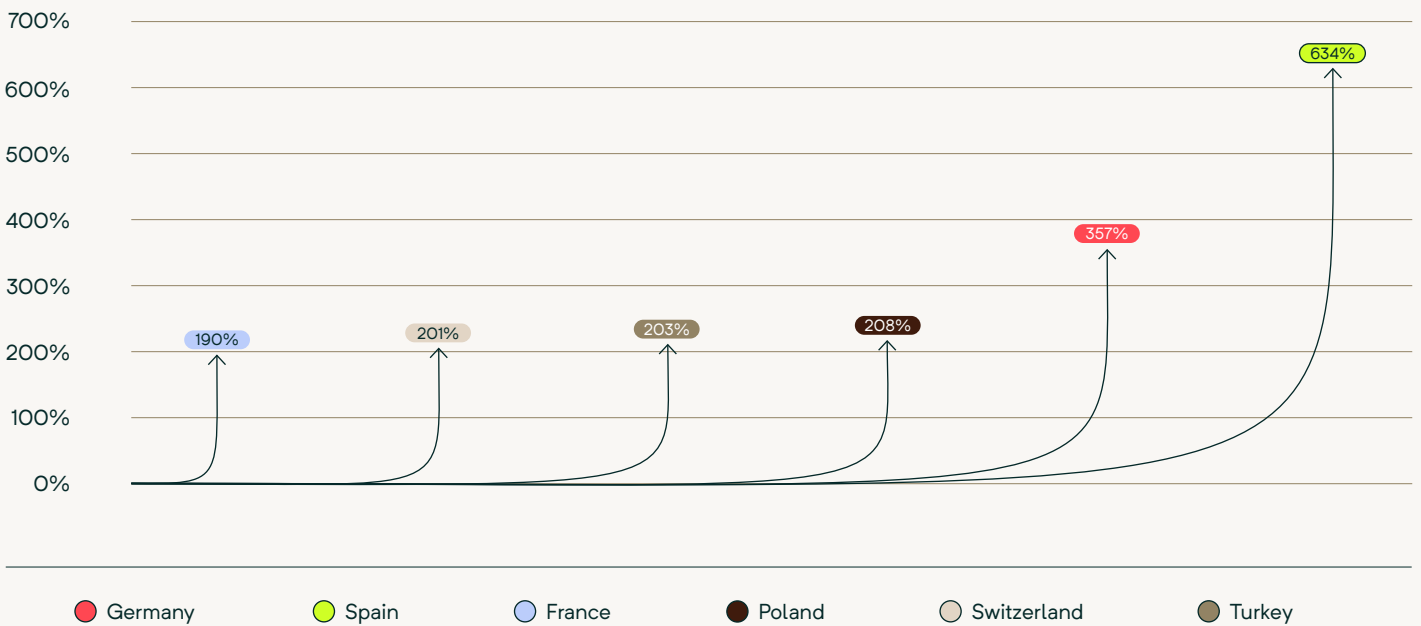
Spain is also showing substantial growth, rising from \$13 million in 2023 to \$95 million in 2027. Its significance in the European market is increasing from 3% in 2023 to 5% in 2027. This upward trend in

Spain is driven by the growing use of mobile payments, driven by the popularity and convenience of Direct Carrier Billing, as well as the increasing attendance at live events.

Europe accounts for 16–20% of the total global expenditure on Direct Carrier Billing ticketing from 2023 to 2027. While Europe remains a crucial market for this sector, significant growth and adoption are also occurring in other parts of the world.

FIG. 13

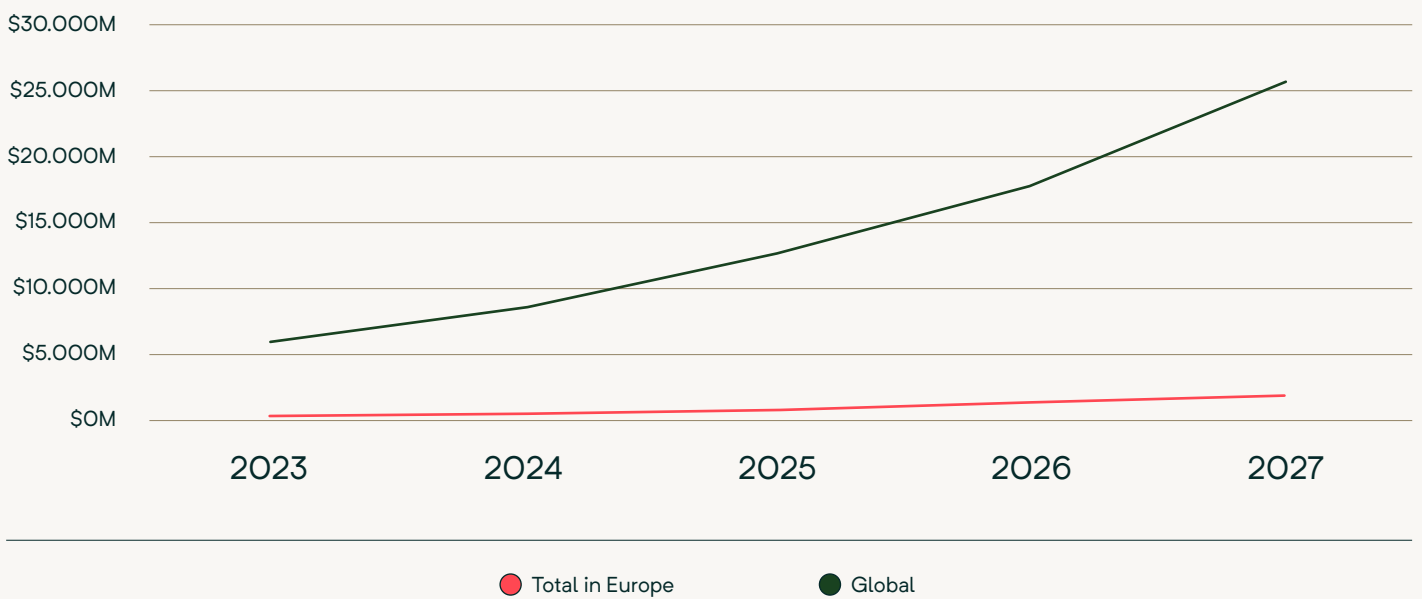
DCB TICKETING MARKET GROWTH 2023-2027



Physical goods will drive the market for mobile alternative payments through the DCB

FIG. 14

TOTAL END USER DCB SPEND ON REMOTE PHYSICAL GOODS



Europe's expenditure on physical goods paid through DCB is relatively low compared to global spending. By 2023, the European market is estimated to be worth \$262M, while the worldwide expenditure is \$5.818M.

This indicates that Europe accounts for approximately 4.5% of the global spending on physical goods through mobile billing. Europe still needs to catch up in global expenditure in this area due to regulations that limit non-bank licensed operators from conducting these transactions, which are a significant barrier to the development of this market.

Nonetheless, some operators are already financing physical goods purchases for users who can pay via their telecom bill. This Buy Now Pay Later (BNPL) model enables customers to buy products without making an immediate cash payment. It is a globally popular model allowing licensed operators to enhance their customer offerings.



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