

PAYING IN THE DISTANCE

# DIRECT CARRIER BILLING REPORT 2020

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SPAIN & EUROPE









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# Introduction

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The digital sphere has become an ecosystem with great impact in everyday life. It changes the ways we relate to each other, how we work and how we have fun.

The number of Internet users in the world is already close to 4.6 billion people, about 60% of the world's population. Last year, 346 million people joined the digital community (8.2% compared to 2019) which means roughly 11 new users per second connected for the first time to the Internet, where they spend an average of 6.42 hours per day<sup>1</sup>.

Year 2020 has triggered the relevance of the Internet and has had a significant impact on digital consumption patterns. Connectivity has never been so much relevant in people and countries' lives. It has contributed to ensuring the performance of essential services and emergency equipment, as well as productivity of many companies due to remote work, operations and services management. In addition, cyber-activity has also skyrocketed with increased conversations between users and brands, while digital entertainment has also been crucial.

On the other hand, Internet is the gateway to an increasingly wide range of products and services, information and training. ECommerce and mCommerce transactions have increased, there is a growing number of mobile apps for all types of activities and subscription economy is reaching new levels. Digital payment systems in general, and DCB in particular, are broadening their scope.

As a result of this accelerated digitalization and connectivity scenario where new players are looking for their space, there is a spread of various online payment methods. Accordingly, Direct Carrier Billing (DCB) or operator payment is advancing as a convenient choice for many transactions in the most digitized communities, and also in countries with limited banking services, as well as in new segments of the population, such as younger consumers.

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<sup>1</sup> Datos de *we are social*





# 1. DCB remains focused on digital content

## 1.1. MARKET FIGURES PER REGION

Worldwide turnover of payments made through DCB will total \$37 billion in 2020 and is expected to triple to almost \$102 billion<sup>2</sup> within five years, with a year-on-year growth of around 20% on average.

Europe accounts for 24% of global figures, with a turnover of \$9 billion in 2020. It will grow at an estimated 20% year-on-year to almost \$23 billion in 2025.

94% of the DCB market is used for digital content consumption, which will exceed €35 billion this year and €87 billion in 2025.

Only 1.3% of the digital content in Spain was billed through the mobile phone in 2020. This figure is significantly below other

European countries such as Germany (5.8%) or the United Kingdom (3.8%). Still, within five years, the content covered by mobile phone bills will exceed \$1 billion in Spain and will grow at an annual rate of 18%.

	G1.- TOTAL SPENDING VIA DCB(M\$) <sup>3</sup>					
	2020	2021	2022	2023	2024	2025
<b>Global total</b>	\$37.342	\$45.180	\$54.930	\$66.664	\$81.565	\$101.760
<b>Europe total</b>	\$9.034	\$10.842	\$13.023	\$15.627	\$18.866	\$22.932
<b>Spain total</b>	\$486,8	\$573,0	\$676,5	\$798,4	\$947,0	\$1.129

<sup>2</sup> Source: *Telecoming and Juniper Research*

<sup>3</sup> Source: *Telecoming and Juniper Research*



## 1.2. CONTENT INDUSTRIES THAT STAND OUT IN DCB PAYMENT

Digital games and videos account for 83% of this global DCB market for digital content. The gaming industry leads the ranking, and its turnover will double in the next five years.

G2. - GLOBAL DCB SPEND BY CONTENT CATEGORIES (M\$)

	2020	2021	2022	2023	2024	2025
<b>Games</b>	\$20.929	\$24.266	\$28.151	\$32.536	\$37.763	\$43.940
<b>Video</b>	\$8.354	\$10.524	\$13.442	\$17.456	\$23.124	\$31.347
<b>Music</b>	\$2.170	\$2.517	\$2.958	\$3.546	\$4.292	\$5.225
<b>Lifestyle</b>	\$2.105	\$2.356	\$2.650	\$3.005	\$3.422	\$3.912
<b>ePublishing</b>	\$1.819	\$1.966	\$2.126	\$2.303	\$2.498	\$2.713

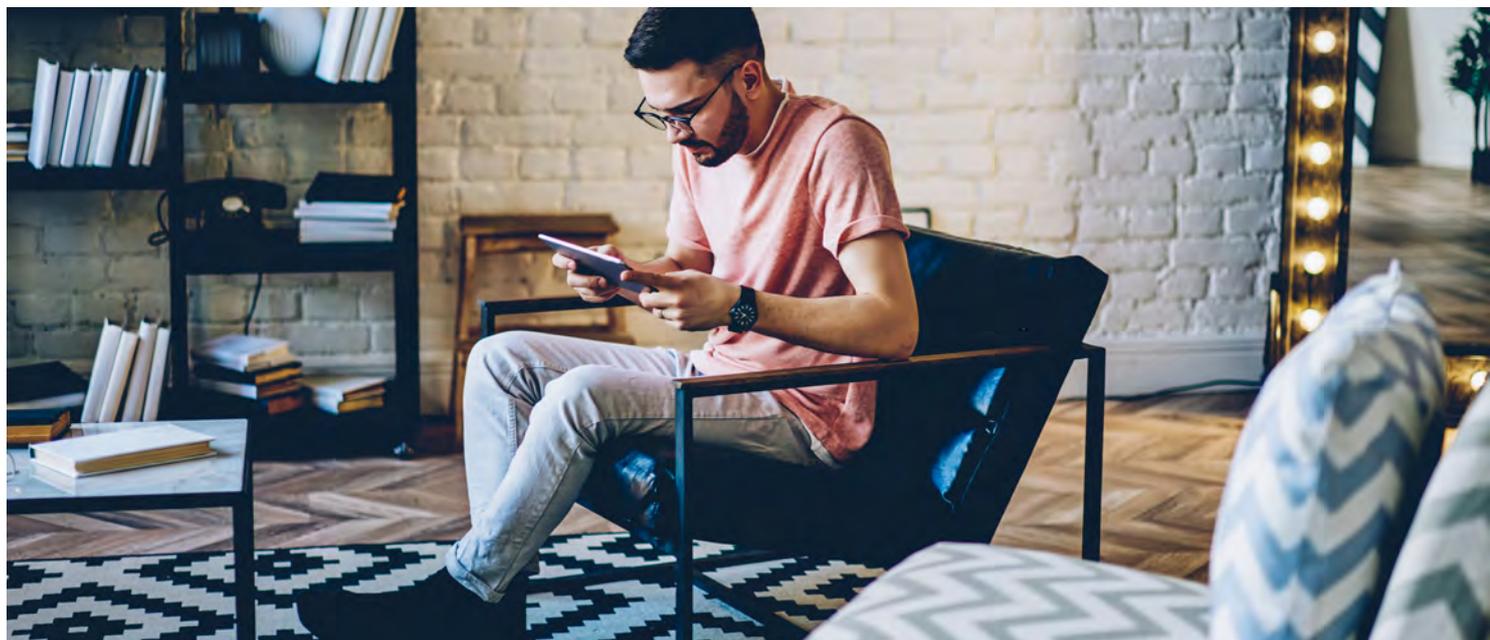
The digital games industry is the largest source of revenue for DCB. The spread of other means of mobile payment and the

introduction of new content products and services monetized through DCB will reduce the impact of the games segment, from 59% in 2020 to 50% in 2025, maintaining its leadership in the market.

The global turnover resulting from DCB gaming will increase at an annual rate of 16%, rising from \$21 B this year to \$44 B at the end of the period, driven by the large online gaming platforms and other mobile applications to download games.

G3. - DCB PAYMENT GROWTH BY DIGITAL CONTENT CATEGORY (% AVERAGE 2020-2025)

	Game	Video	Music	Lifestyle	ePublishing
<b>Global</b>	16%	30%	19%	13%	8%
<b>Europe</b>	17%	30%	19%	16%	10%
<b>Spain</b>	15%	22%	28%	26%	11%



While Europe accounts for 26% of global consumption of digital games paid with DCB (\$5.4 B in 2020) it is expected to grow similar to the global average to reach almost \$12 billion in five years. This segment accounts for 50% of DCB spending across Europe and will lose a couple of percentage points by 2025.

The world's mobile internet consumers will use over half a trillion gigabytes of data by 2020, and almost two-thirds of that total will be used to stream and download video content<sup>4</sup>. In that context, two-thirds of Internet users aged 16-64 watch TV content through some subscription service, a model increasingly based on DCB.

As broadcast services have become more popular, the video has captured almost a quarter of the Direct Carrier Billing market attributed to content, and it will be the segment with the most promising forecast in the coming years. This segment is expected to grow by an average of 30% each year until 2025 on a global scale.

This includes films, video clips, series and TV shows. These contents currently account for some 24% of the DCB turnover and will account for 36% in 2025.

Video content revenues allocated to DCB worldwide will rise from \$8.4 B in 2020 to \$31.3 B in 2025.

20% of the world market for DCB video is in Europe. Consistent with the global trend, it will grow at a yearly 30% rate, thus enabling European DCB turnover for digital and streaming video consumption figures to rise from just \$1.7 B in 2020 to over \$6 B in 2025.

DCB revenues from videos in Spain will rise from \$105 M in 2020 to \$285 M in 2025, a steady 22% year-on-year increase.

<sup>4</sup> Source: Ericsson Mobility Reports June 2020

Although far behind games and videos, the progressive implementation of DCB as an option on large-scale platforms will boost revenue from DCB attributed music content. On a global scale, it will rise from \$2.1 B in 2020 to over \$5.2 B in 2025, with an average annual increase of 19%.

In addition to streaming consumption, payment for small music downloads from mobile billing will maintain a 6% share in the analyzed period. It is both intuitive and user friendly: ideal for this content.

In Europe, income will double from \$563 M in 2020 to almost \$1.4 B in 2025, with a 26% share of the global market.

Music is the paid content market with the greatest growth potential in Spain in the coming years. It is expected to increase by almost 250% in the period 2020-2025. Revenues in this industry will rise from \$16 M to \$56 M over the next five years, with an average year-on-year growth of 28%, exceeding the global and European averages (19%).

Lifestyle content market structure is a segment with little weight in the global market, accounting for 6%. However, lifestyle content invoiced through the operator will double from \$2.1 B to almost \$4 B in 2025, with annual increases of 13% (average).

The lifestyle spending attributed to DCB (content related to health, relationships, wellness, sport and leisure) will increase in Europe from barely \$550 M in 2020 to over \$1.1 B in 2025, thus accounting for 29% of the world total in that year.

The category of lifestyle content in Spain will grow quicker than in Europe and the rest of the world, with a year-on-year average of 26%. Turnover will rise from \$16 M to \$51 M in five years in this content category, which currently accounts for 3% of the European total.

Payment by bank card is the leading player in the ePublishing segment. However, DCB is gaining ground with the launch of new platforms and Apps that find this payment method appealing for small purchases and for subscription models. EBooks, digital newspapers and magazines paid via DCB will approach \$3 B by 2025 worldwide.

Projected growth in Europe is improving the overall trend. The European DCB ePublishing market is expected to generate more than \$1 B in revenues within the next five years and will then account for 43% of global spending in this area.

ePublishing invoiced via DCB in Spain will grow at a year-on-year rate of 11% to reach almost \$15 M, with a 9% market share in Europe.

G4.- TURNOVER ATTRIBUTED TO DCB BY CONTENT CATEGORY IN SPAIN (M\$)

	2020	2021	2022	2023	2024	2025
<b>Games</b>	\$282	\$327	\$378	\$433	\$497	\$570
<b>Video</b>	\$105	\$128	\$156	\$191	\$233	\$285
<b>Music</b>	\$16	\$20	\$25	\$33	\$43	\$56
<b>Lifestyle</b>	\$16	\$19	\$24	\$31	\$40	\$51
<b>ePublishing</b>	\$65	\$72	\$80	\$88	\$98	\$108



## 2. DCB stays loyal to smartphones

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Slightly over half of the world's population, 3.8 billion people, are also accessing the Internet from their mobile phones. This figure represents an annual increase of 2.4%, adding 250 million new users per year<sup>5</sup>. Digital infrastructure progress, quality and an improved user experience have reinforced the position of the mobile phone as the preferred device for accessing the online world.

6 out of 10 euros invoiced via DCB, on a global scale, are spent from a smartphone. Over the next five years, the number of payments performed through tablets and other connected devices that are gaining prominence in digital consumption, will increase.

Tablet use will gain some followers for these transactions, but connected objects and other devices will become even more relevant in the market. Still, the smartphone will remain the king of DCB in 2025.



## 2.1. MARKET EVOLUTION BY DEVICE TYPOLOGY

Whilst 65% of DCB payments worldwide are made through mobile phones, in Europe, the proportion reaches 74%. Global payment for digital content via DCB from smartphones will exceed \$24 B. Europe accounts for 23% of the world market with nearly \$6 B in 2020.

G5. - BREAKDOWN OF DCB MARKET  
BY MOBILE DEVICE IN THE WORLD

	2020	2021	2022	2023	2024	2025
<b>Smartphone</b>	65%	63%	62%	61%	59%	58%
<b>Tablet</b>	12%	12%	13%	13%	14%	14%
<b>Other devices</b>	23%	24%	25%	26%	27%	27%

G6. - BREAKDOWN OF DCB MARKET  
BY MOBILE DEVICE IN EUROPE

	2020	2021	2022	2023	2024	2025
<b>Smartphone</b>	74%	72%	71%	69%	68%	66%
<b>Tablet</b>	15%	15%	15%	15%	15%	15%
<b>Other devices</b>	11%	13%	14%	16%	17%	18%

Over the next five years, DCB's revenues from smartphones will continue to increase significantly across all regions. Globally, they will amount to \$59.2 B, with a 20% year-on-year growth rate, compared to \$13 B in Europe, registering an 18% growth per year (average).

Although smartphones will lose some ground to tablets and other devices, average operating expenses will almost double over the next five years. Thus, the average DCB spend per smartphone will reach \$11 globally within five years, whilst in Europe, the average will be over \$14.

G7. - AVERAGE ANNUAL SPENDING  
ON DCB PER SMARTPHONE.

	2020	2021	2022	2023	2024	2025
<b>Global total</b>	\$5,8	\$6,5	\$7,4	\$8,3	\$9,5	\$11,0
<b>Europe total</b>	\$7,4	\$8,4	\$9,6	\$10,8	\$12,4	\$14,3

Feature phones will play an important role in DCB in regions where there are mobile subscribers who are either unbanked or dependent on the use of operator billing for their financial needs. However, spending on these devices will remain very small, as smartphone penetration will increase in these regions.

## 2.2. SPAIN, A "SMARTPHONE COUNTRY"

In Spain, almost 8 out of every 10 euros paid via DCB are done from a smartphone (79%), well above tablets (19%) and other connected devices (2%).

G8. - DCB MARKET BY MOBILE DEVICE IN SPAIN

	2020	2025
<b>Smartphone</b>	79%	72%
<b>Tablet</b>	19%	25%
<b>Other connected devices</b>	2%	4%

Although mobile phones are losing ground to tablets and other devices, the average spending of content billed via DCB from mobile phones will continue to rise, reaching \$14.4 in 2025, compared to \$7.8 in 2020, in both cases above the European and world averages.

G9. - AVERAGE ANNUAL SPENDING ON DCB PER SMARTPHONE

	2020	2021	2022	2023	2024	2025
<b>Europe total</b>	\$7,4	\$8,4	\$9,6	\$10,8	\$12,4	\$14,3
<b>Spain total</b>	\$7,8	\$8,7	\$9,8	\$11,1	\$12,6	\$14,4

Video games and paid audiovisual content platforms have been the drivers of online spending in Spain.

In this context, the Spanish market still accounts for a low share of the European total by content categories: games 5%, video 6%, music 3%, lifestyle 3% and ePublishing 9%, which suggests that Spain is waking up to the need to pay for high-value information content.

Gaming and video are consolidated industries which will continue to grow in the coming years. Together with ePublishing, they concentrate most of DCB's turnover in Spain. Almost 6 out of every 10 euros Spaniards spend on mobile content is dedicated to gaming. With a turnover of nearly \$300 M this year and some estimated \$570 M in 2025, Spain represents 5% of the European DCB market in digital games.





## 3. Other DCB markets

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### WHERE ARE WE 5 YEARS AFTER PSD2?



**Cyrille Thivat**  
CEO OF TELECOMING

The Payment Services Directive, also known as PSD 2, was approved in 2015. It came into force on 13 January 2018 and was transposed into local law in the following months and years. This comprehensive, complex standard aims to promote digital payments throughout Europe.

As far as Direct Carrier Billing is concerned, the directive provides for its role in the new digital economy by including this technology as one of the exceptions. Given its nature, the European Union has determined that this activity does not require a banking licence.

Telecommunications companies can offer this payment technology to their users, for services in markets such as digital content, ticketing, transport or donations. Of course, it's just for payments below 50 euros per transaction and 300 euros in total per month. By doing this, the EU aims to support operators, integrators and other technology players in their efforts to achieve the full potential of this means of payment in the golden age of mobile usage.

At Telecoming, we have worked with local institutions to ensure that the legal framework supports us on this journey.

And 5 years after the directive's approval, what has happened? Where are we? If we focus just on the DCB industry, the order has opened up many as yet unfulfilled opportunities.

Transport, ticketing and NGOs were the primary industries when wallets were starting to hit hard. It certainly created an opportunity for DCB specialists who have been working hard for years to offer adapted technology to an untrusting user who does not want to make their life more complicated. There have been DCB pilots in urban mobility and ticketing in various European countries.

However, there are several challenges we must face as an industry. The first is to guarantee the security of this monetisation technology to both the merchant and the end-user. This is key to gaining consumer trust and influencing their choice of DCB over other technologies at the time of payment.

It is, therefore, important to remember that DCB does not require mobile commerce consumers to enter their data when making payment transactions. It is safer than traditional ways of payment due to minimal repeated requests for the user's personal data.

DCB is also the best payment technology for the new subscription economy. The main revenue source for the major streaming platforms is a subscription: Netflix (182M subscribers), HBO (140M) and Amazon Prime Video (150M). Current successful brands such as OTTs or large international media (NYT 4.4M paid subscribers, Wall Street Journal, 2M, Washington Post 1.5M) are already using this model to make their businesses profitable.

We have no choice but to seize the opportunity to make DCB (Direct Carrier Billing) the leading payment technology in a new economy that is increasingly digital, smarter, more sustainable and subscription oriented.

The user understands that to enjoy quality content, they must pay. However, in addition to wanting to pay, they do not want to have to be worried about anything else. A first check will be enough to sign an agreement and confirm your details, as well as the express intention of wanting to be part of the brand community to which you have subscribed.

*In this way, Carrier Billing is the perfect ally for the monetisation of digital goods for several reasons. Firstly, it improves user experience, offering a more agile and safer shopping process.*

*In addition, the DCB system contains a highly innovative component in terms of acquisition by simplifying the purchase process five-fold. DCB thus helps to increase revenue from the digital sector and encourages digitisation at all levels. Finally, DCB is an inclusive technology offering financial autonomy to specific segments of the population who do not have bank cards to make their payments.*

*Looking back to the beginning of the current regulation on payment services, what do we, mobile payment market players, need to move forward?*

*The answer is simple, but the solution is a little more complicated.*

*DCB will be consolidated as a payment model in future years. The work and responsibility we have as developers are, on the one hand, to educate the user and, on the other hand, to request more agility from our regular partners. The challenge is to design processes able to add value to an increasingly agile and competitive payment market.*

*We must find a common point of understanding among the many things that are now barriers. Geographic, economic, competition, consumer, integration, acquisition and settlement constraints must go hand in hand with innovation and speed, which characterise this large mobile payment model. This race has just begun.*





### 3.1. LIMITED RISE OF NEW MARKETS

Currently, digital content concentrates almost all DCB spending, although it will gain prominence in other industries in regions where regulation is more open, other electronic payment systems are less established or where the population is less banked.

In addition to the evolution of consumer habits, the trend towards the new economy of subscription, omnichannel services and regulatory frameworks are driving the birth of new businesses that are suitable for DCB. Social distancing and health security measures implemented by the pandemic

in 2020 will also impact on physical and digital goods consumption habits.

Buyers around the world are increasingly failing to distinguish between online and offline. About three-fourths of Internet users aged 16 to 64 buy something online every month<sup>6</sup>. Globally, the DCB market for physical goods will exceed 1.5 B by 2020 to nearly 9 B by 2025. This segment's growth in the global market will be at 43% year-on-year, well above the traditional DCB market for digital content.

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<sup>6</sup> Source: Ericsson Mobility Reports June 2020



### 3.2. TRANSPORT AND EVENTS. QUIET SECTORS WITH GREAT POTENTIAL

Ticketing (ticket sales for events and transport) has been severely impacted in 2020. Many countries' enforcement measures caused a drop in overall demand for ticketing services, both in terms of travel and events.

Spending on ticket purchases will fall by 45% this year and, although a change in trend is expected in 2021, the market will not fully recover until 2022<sup>7</sup>. It is likely that in a post-Covid scenario, people will be more unwilling to attend large events, which will result in fewer tickets sold for concerts, festivals and other gatherings.

In the other hand, the other big driver of ticketing, transport, will benefit from the fact that mobile payment eliminates the minimum contact involved in cash. Our analysis points out that ticketing billed via DCB will increase from \$422 M in 2020 to more than \$5 B in 2025, with an average increase of 73% during this time.

<sup>7</sup> Source: Juniper Research "DIRECT CARRIER BILLING Deep Dive Strategy & Competition 2020-2025"



## 4. IoT - The future opportunity

Although it is still emerging, Internet of Things has a huge potential for DCB given the large number of products and services entering the digital ecosystem. It is estimated that by 2020 there will be more than 33 B connected objects worldwide, 26% more than the previous year. In three years, that figure will exceed 64 B, which means a 94% accumulated growth in that period<sup>8</sup>.



Connected devices, such as watches, cars and all those that are part of smart homes, are a huge potential market for the consumption of services paid through the net to which they are connected.

**Roberto Monge**  
COO OF TELECOMING

## 4.1. ENCOURAGING FIGURES IN EUROPE

On a global scale, connected objects will have a turnover of more than \$105 B in 2020, a 23% growth compared to 2019 (\$85.7 B). The turnover of this industry is expected to exceed \$180.5 B in three years (+71% in 2020-2023).

Europe represents 33% of the world total IoT devices and around 25% of the global turnover. This year there will be 11 B connected objects in Europe, turning into more than 21.5 B in 2023. In the same time, the turnover of this sector in Europe will increase from \$26 B to more than \$41.4 B (+59%).

At a global level, spending attributed to DCB through other devices will grow by an average of 26% year-on-year to reach \$28 B in 2025, compared to \$8.6 B in 2020. Over the same period, turnover in the European market will rise from \$1.7 B to more than \$6 B, with an average annual increase of 30%.

In Spain, revenues from DCB attributable to other connected devices this year will almost reach \$8 M, but the business will grow at an annual average of 42% to reach \$44 M in 2025.

G10. - DCB SPEND ATTRIBUTABLE TO OTHER CONNECTED OBJECTS (MILLION \$)

	2020	2021	2022	2023	2024	2025
<b>Europe</b>	\$1.667	\$2.190	\$2.842	\$3.654	\$4.687	\$6.019
<b>Spain</b>	\$8	\$13	\$19	\$26	\$34	\$44

The gap between countries in the same context is significant. The average of European DCB turnover attributable to other devices is 11% whereas in countries such as Germany it already represents a 26%, at the same level as tablets (21%) although still behind the smartphone (53%).

G11. - SHARE OF DCB SPEND ATTRIBUTABLE TO OTHER CONNECTED DEVICES

	2020	2021	2022	2023	2024	2025
<b>Europe</b>	11%	13%	14%	16%	17%	18%
<b>Spain</b>	2%	2%	3%	3%	4%	4%

## 4.2. HARDWARE AS A SERVICE: NEW BUSINESS MODELS

The new subscription economy plays a large role too in the optimistic forecasts for the IoT market. 24/7 connectivity and technology are the pillars of the recurrent revenue business models that support a trend known as Subscronomics.

Experts agree on the fact that there are different ways to monetize IoT and subscription is a real option. This model can convert hardware into services (HaaS), such as audiovisual platforms are already doing.

When it comes to the Internet of Things, a subscription-based model presents the business as a service for a system made up of software and hardware. Data collection and analysis, together with ongoing communication with the client, enables companies to design a flexible range of services with new functionalities and personalized solutions.

The introduction of 5G technology, with faster, significantly safer, simpler, lower latency and, obviously, much smarter networks, will also contribute to boosting this model. There are

7 M devices connected in Spain, and this figure will exceed 21.5 M by 2025<sup>9</sup>.

In this context, DCB is an ideal means of payment, given that we are considering either purchases of large content packages or services for minor amounts, in both cases, charged regularly.

IoT, in short, can be crucial for the future of DCB. The biggest challenge will be to address and adapt the payment method to a massive network of connected devices and objects.

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**Monetizing connected devices is an important challenge of the future. The business has changed radically in recent years, and IoT allows to consolidate the payment through the operator's invoice for all the services they can offer.**

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<sup>9</sup> Source: *Fundación Telefónica* "La Sociedad Digital en España 2019".





# TOP 5 BENEFITS OF DIRECT CARRIER BILLING

## Usability

DCB is excluded from Enhanced Authentication as it is within the exception of PSD2.

## Penetration

There are more mobile phones than credit cards. DCB promotes the digital economy's growth because everyone can use it, even if they do not have a bank card.

## Trust

Users already have a relationship with their mobile operator, so they trust telecom's brand when it comes to paying.

## Privacy

DCB does not require personal data to execute the payment, so users remain anonymous during the process.

## Simplicity

DCB reduces the purchase process to a single click, increasing conversion rates considerably. It is the ideal payment method for compulsive or low-amount purchases.



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