

DIGITAL TECHNOLOGY REVOLUTIONIZES  
BUSINESS TRANSFORMATION

# OLYMPIC INNOVATION

01 'Fintech'

02 'Blockchain'

03 'Payments'

04 Drones

05 'Robo advisors'

06 Internet of the things (IoT)

07 Big Data

08 Financial inclusion


09 Digital Transformation



The background features a vibrant, abstract composition of overlapping, semi-transparent colored lines and shapes in shades of blue, green, yellow, orange, and pink. In the lower-left corner, a silver laptop is visible, with a person's hands typing on the keyboard. The hands are adorned with several bracelets, including a green one and a white one.

01

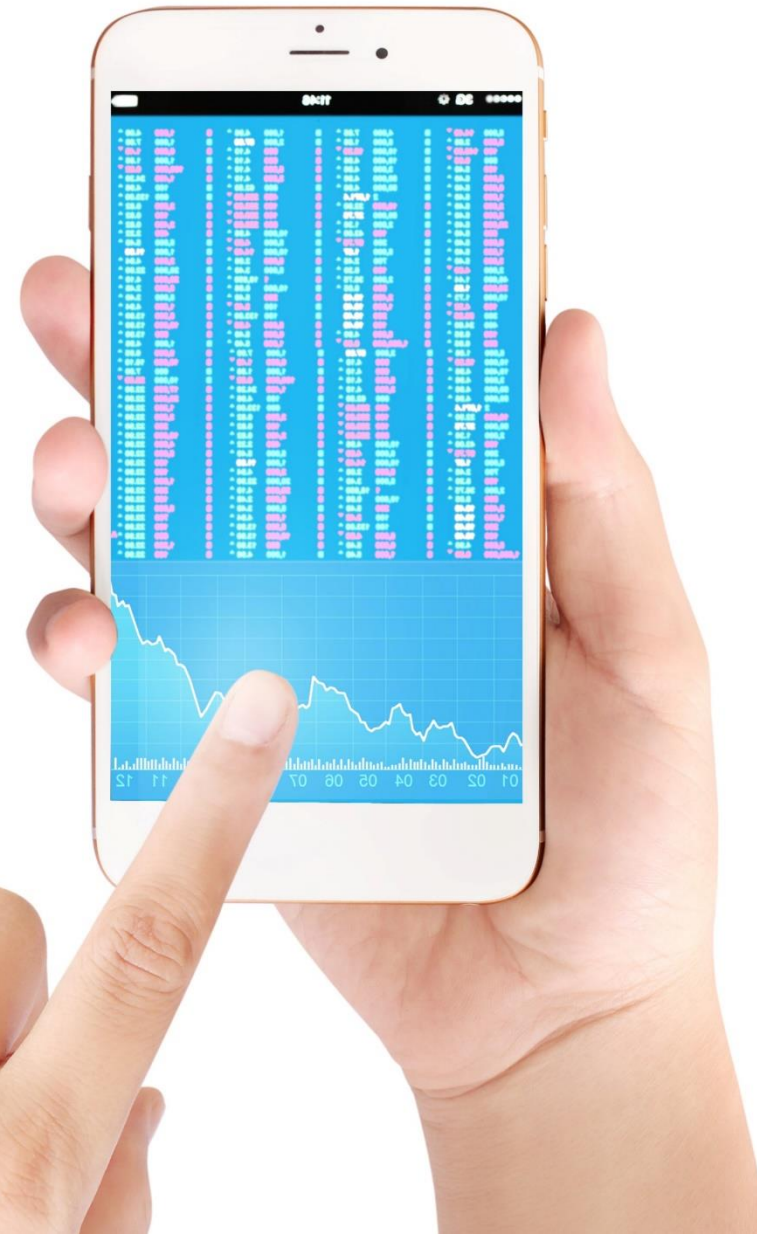
## ‘Fintech’ madness

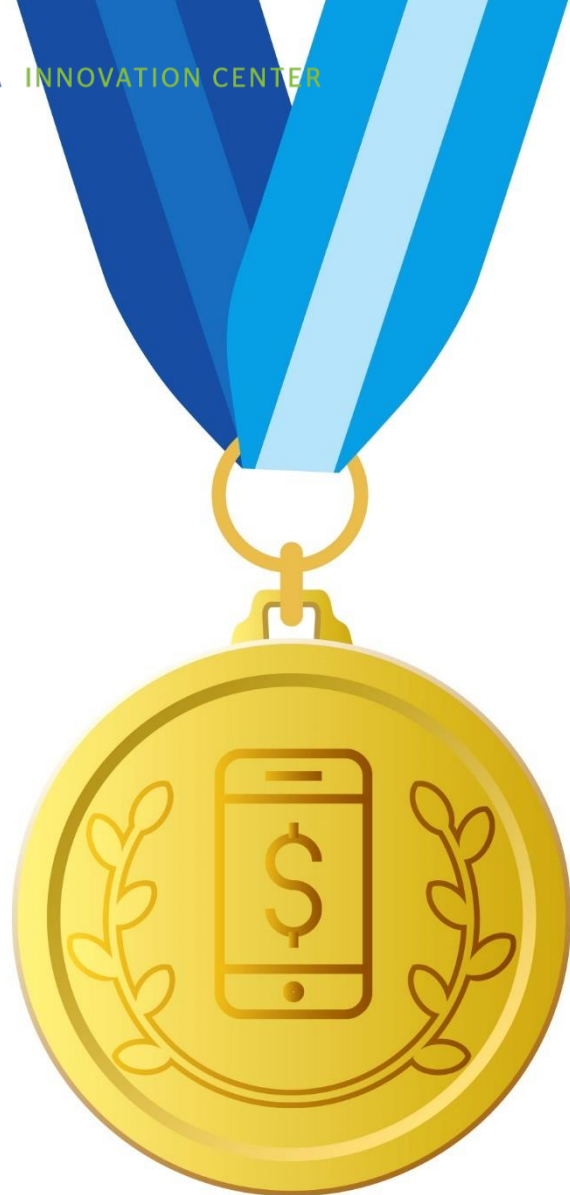
In June international experts touched down at the Innovation Center in Madrid to talk about the fintech revolution. All concurred that the digitization of traditional banking gives a great impulse to the [fintech sector, which is experiencing a historical moment.](#) 

[Forbes](#) has stated that the global take-up rate for – fintech – understood as the percentage of users in the digitally active population – is currently around 15.5%. The three main cities dominating the market are New York (33.1%), Hong Kong (29.1%) and London (25.1%), according to Ernst & Young.

Goldman Sachs values the fintech market in the United States at 4.7 billion dollars. At the [Fintech University conference](#) held in the BBVA Innovation Center in Madrid it was emphasized that **"collaboration between governments, traditional banking and fintechs is essential** to create a new financial environment".

Among the many fintech [companies playing a prominent role this year](#), we call attention to three: **f**





## Atom Bank

[Atom Bank](#) --The first mobile access bank to obtain a license in the United Kingdom, in which BBVA has a 29.5% stake - allows customers to be registered completely online. Its use of machine learning to speed up customer queries is an outstanding feature. This startup company, based in the city of Durham in England, also uses biometric technology and gamification. Its co-founder and CEO, Mark Mullen, [emphasizes that users](#), "don't care where the technology used to create the products and services comes from. They **just want a transparent relationship with services understood as a platform**".



## Las GAFA

Google, Facebook and Alibaba also aspire to becoming the “Uber” of banking. **The GAFA** (Google, Apple, Facebook and Amazon) companies do not want the fintech revolution to leave them behind. With millions of users, they are playing an ever more prominent role in the financial ecosystem. The Google Wallet mobile payment system allows consumers to make purchases online and send money by email; Apple Pay is a digital wallet and mobile payments service; Facebook Messenger allows users to send money to each other; Amazon Lending offers loans and Alibaba has 400 million active users monthly for its AliPay Wallet<sup>6</sup>, highlights [this report by Accenture](#).

## N26

N26- This year all eyes have been on this Berlin based startup, which has triumphed with users and aroused interest in the banking sector. The bank is expanding in seven countries - Germany, France, Greece, Ireland, Italy, Slovakia and Spain - and already has around 200,000 users despite its short life. One particular feature it has is that it only takes **8 minutes** - using a mobile phone - to **open an account**. Another of its strong points is the use of artificial intelligence to offer services to its customers. [in](#)

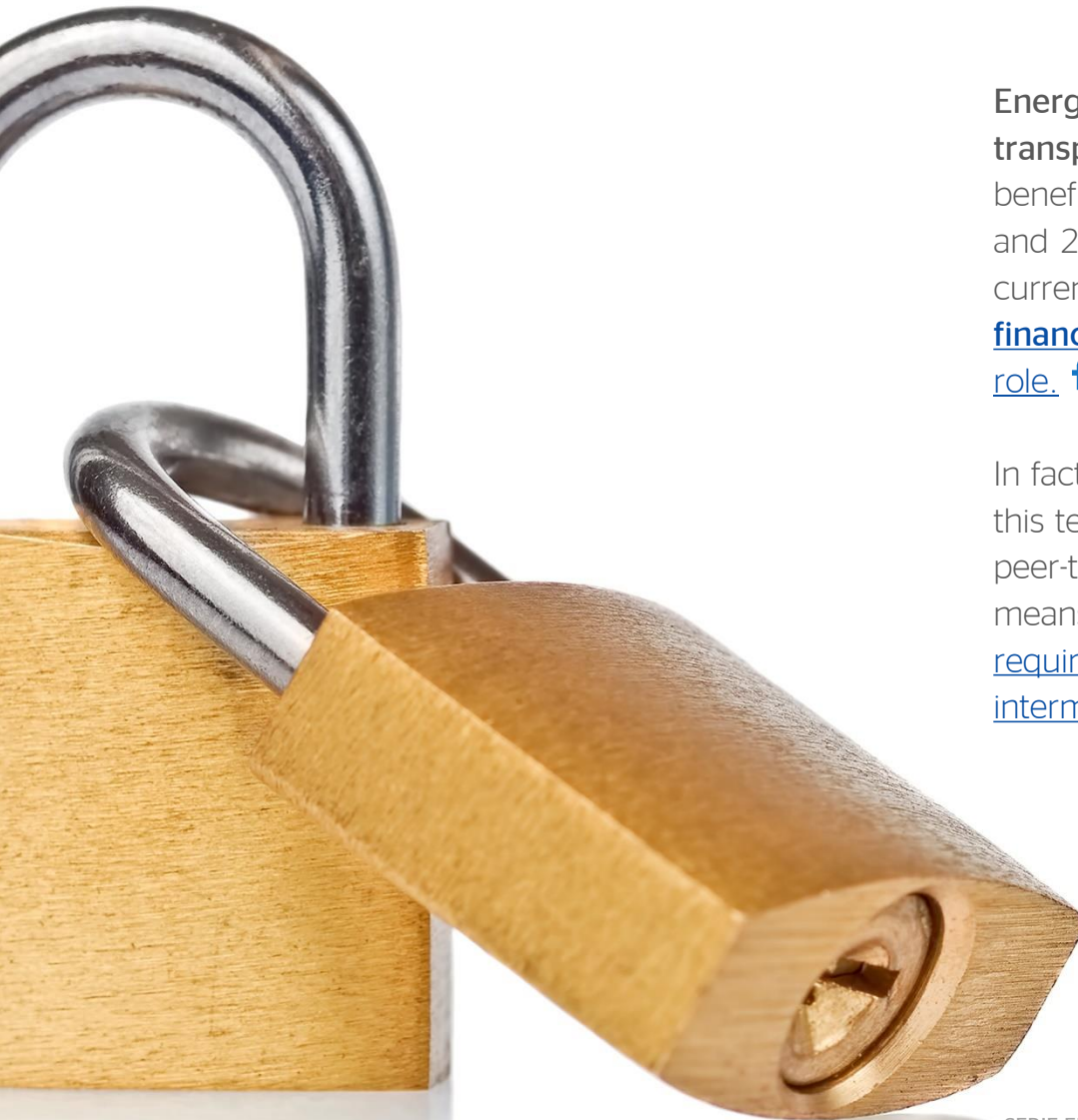


# 02

## Blockchain: the technology behind bitcoin

Blockchain technology became famous thanks to the bitcoin currency, although it is increasingly looking like cryptocurrencies will be sidelined and blockchain [technology will be used in many sectors, not only in the financial industry.](#) 





**Energy, services, telecommunications, transportation and many other companies** will benefit from blockchain technology, which in 2017 and 2018 -independent from the famous bitcoin currency- is expected to extend far beyond the [financial sector, where it is already playing a key role.](#) **f**

In fact, numerous companies are already embracing this technology -which BBVA Research defines as “a peer-to-peer public accounting system maintained by means of a distributed network [of computers which requires no central authority or third parties acting as intermediaries.](#) **in**



## Everledger

The *startup* that won the latest edition of [BBVA Open Talent](#) specializes in **antifraud security**. This English company has created a system to detect irregular actions in the diamond trading market thanks to the traceability of the stone. And all thanks to so-called blockchain technology. The combination of primary diamonds with blockchain technology makes it possible **to create transparent and secure accounting with a focus on commerce**.



## Ethereum

Finally, and although it looks like blockchain technology is set on taking a different path from bitcoin, we shouldn't overlook the importance of technology in the **financial world**. Ethereum is the new buzzword for candidates looking to replace the bitcoin currency.

The cryptocurrency created by [Vitalik Buterin](#) is encrypted in the same way as bitcoin, although the difference is that it not only focuses on currency exchange but also makes smart contracts.

It currently already has 20 million dollars in circulation. And rising.





## Provenance

Run by Jessi Baker and Jutta Steiner and headquartered in southeast Asia, it provides an important opportunity for transformation in the field of logistics, transport and other **mercantile activities**.


The region is home to four of the five most important transport ports in the world -Shanghai, Shenzhen, Singapore and Hong Kong- and this umbrella includes a wide variety of activities that Provenance is looking to develop, such as the luxury goods sector.

Thanks to blockchain technology it has been able to eliminate intermediaries in one of its potential markets: the world of art. One of the aims of this startup is precisely to revolutionize this sector.



# 03

## Payments: Traditional banking reacts to new players

Payments are undergoing a revolution in both the emerging and developed markets. Apple, Facebook, Google and Amazon ([the "bad boys" of the technology world](#)) are changing the rules of the game. 

According to [Forbes](#) traditional banks in **developed markets** are facing a "triple threat": Apple, Samsung and "the others." And these players are generating technological changes at such a fast pace that no consumer can help noticing them. In this new context, **traditional banking must prepare its counter-attack.**

[BBVA Compass](#), for example, signed an agreement with the technology platform [Dwolla](#) so that all of the bank's customers can use the U.S. startup's network in real time to carry out

transfers. This agreement will **guide BBVA's digital transformation** so as to respond to new consumer habits - customers wish to make payments in real time 24x7.

As for **emerging markets**, the interoperability of "mobile" money is taking giant steps forward since it was first launched in Tanzania. As a result, there has been a rise in financial inclusion, an improvement of the customer's life by streamlining banking activities and transactions and an [increase in speed and convenience during their day-to-day routine.](#) [in](#)



Forbes stresses the success of interoperability in developing markets in Africa. Interoperability reached Africa in 2014 with a pioneering agreement between Tigo, Airtel and Zantel, a collaboration which Vodacom has recently joined. With this agreement, **Tanzania became the first African market with full interoperability** for peer-to-peer mobile money transfers.


Back in Europe, Spanish banks have just invested 100 million euros in the Bizum platform for peer-to-peer payments via a mobile application. This application also makes it possible to make payments in e-commerce retailers as well as contactless payments in physical stores. This project is a reaction to the threat posed [by technology giants such as Samsung, Apple, Vodafone Wallet and Orange Cash.](#) **f**





# 04

## The year of the drones

Drones are conquering the skies thanks to interest from investors, [their appeal to consumers, market possibilities and favorable regulation.](#) 



Drones have conquered the skies in the first months of 2016. And their **rise looks unstoppable**. [Amazon has just announced](#) an **agreement with the United Kingdom** to launch its [Prime Air service](#) for **drone delivery in rural areas**.

The Amazon agreement, which will see the service rolled out in England ahead of the United States, is designed to deliver packages of up to 2.2 kg within half an hour or less using drones capable of working in a perimeter of over 16 km.

The difference between the United States, and what makes it possible to deploy Prime Air in the UK is that the latter **allows drone flights beyond the view of the pilot**, unlike in the United States.



## Who leads the drone sector?

According to the [consulting company Droneii](#), the **Chinese company DJI** is in first place. A world leader in the sale of unmanned aircraft, the company, founded in 2006, manufactures affordable and very attractive drones -priced at under 1,000 dollars- and is known as the “Apple of the air”. Its Phantom and Inspire models have been wildly successful. [The company run by Frank Wang](#) currently employs 3,000 people and is valued at over 10 billion dollars.

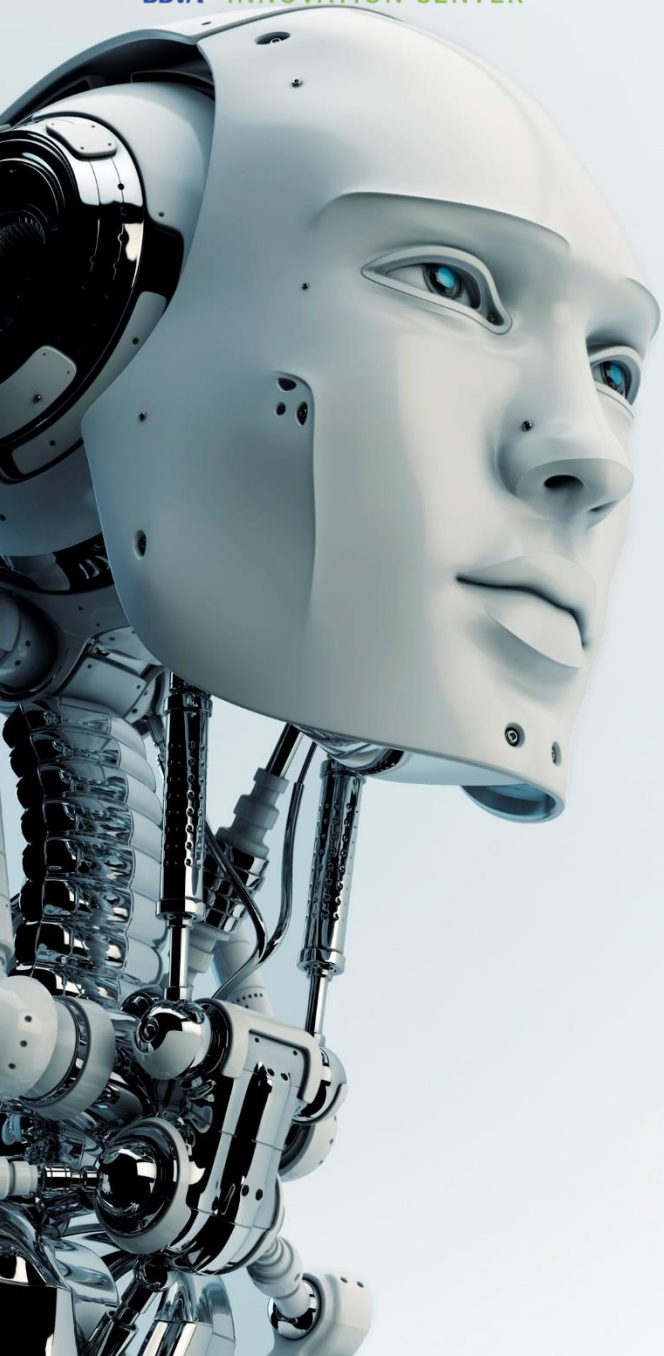
[The French company Parrot](#) is in second place in the ranking, ahead of the American company 3D Robotics. In 2015 Parrot sold over 1 million aircraft and its Bebop2 model [-costing around 400 euros-](#) [has its sights on ending China's hegemony.](#) [in](#)






The Spanish company [Catuav](#), which first appeared on the Droneii list at the beginning of the year, receives a special valuation. Two of the models it markets, Atmos6 and Mineos, made the list of the 10 best in the world in the 1 to 4 kg category. Catuav also featured on the list of heavier drones with its models Argos Electric and Furos.

The Catalan company, founded by Jordi Santacana in 2003, has won awards **for detecting landmines in Bosnia**.



# 05

## The inexorable advance of robo- advisors

In the last five years robo-advisors have made great inroads in the industry. In spite of some initial suspicion, investors have come to trust them as [an efficient wealth management service.](#) 

Traditional industry is being challenged by the demands of investment in the digital age, and robo-advisors have attracted modern investors because of their capacity to manage modest portfolios with figures way below the astronomical ones of the past. Robots are cheaper than human advisors and manage smaller sums of money, although all is not yet lost for the flesh-and-blood variety. After all, humans have an added value which—to date, at **least—financial robots can't match**: a direct, personalized manner with customers.

In spite of the advantages of dealing with humans, there is no doubt that robo-advisors are here to stay. According to Morgan Stanley, these automated advisors are [still at the takeoff stage but "have a long runway for growth"](#). [f](#)

As proof of this, the pioneer in automated advice, Betterment, has surpassed \$5 billion in assets under management by robo-advisors. Experts believe that a hybrid system—the **systematization of robo-advisors** and the personalization offered by human advisors—will [make it possible to customize services and offer customers the best deal](#). [in](#)





Three companies in particular are promoting robo-advisors:

## Betterment

[Betterment](#)- Offers the most complete services for people thinking about retirement. Users enter all their savings and investment accounts into an engine that calculates their annual spending during retirement. It also works out how much they need to save each month.



## Indexa capital

Spain's automated investment manager [Indexa Capital](#) focuses on the passive management of six index funds. With a minimum investment of 10,000 euros, the algorithm calculates and assigns portfolios according to the user's risk aversion, objectives, age and income. It invests in indexed funds which replicate both fixed-income and equity stock exchange indices or mutual funds. Indexa builds portfolios with unlisted investment funds, which are cheaper than active management funds.

## Vanguard


Vanguard is one of the largest investment management companies in the world, **specialized in index-linked funds and ETF** (exchange-traded funds). Its hybrid system automates customer data but also uses human advisors to guarantee safety, attracting investors who are comfortable with technology but still want to be able to talk with a real person.





# 06

## IoT: Our lives connected to the Internet

Devices that are *wearable*, cars that drive themselves, household appliances that we can control via wifi or bluetooth and even clothes connected to the Internet; what more proof is needed that we live in the age of the Internet of Things (IoT), or rather, intelligent objects that multiply their usefulness and make our lives easier because of automation and the [control we have over them thanks to digital, wireless and cloud technologies?](#) 



The Gartner advisory firm highlighted the fact that there were 5 billion devices **connected intelligently in 2015**. Cisco, on the other hand, expects this figure to increase to 50 billion devices connected to Internet by 2020. These figures reveal an increasingly exciting **scenario for the deployment of more intelligent devices and settings**.

These are some of the players that are [betting the most on the Internet of Things](#): **f**





## Cisco IoT System

[Cisco](#) is one of the companies of reference when it comes to connectivity, wireless access, digital storage, analytics, security and automation and has all the necessary features to [make a name for itself among the key players in the Internet of Things.](#) [in](#)

To do this, Cisco proposes **the Cisco IoT System**, which is a **comprehensive set of products and technologies focused on creating secure IoT applications** with the main aim of providing thorough analytical information and data. Cisco IoT System solutions are focused on areas such as manufacturing, gas and oil, transportation, mining and the industries of the public sector.

Beyond the Internet of Things, Cisco is committed to the **"Internet of Everything"** evidenced by its increasing interest in the creation of [intelligent cities](#) that boost their development based on this technology.



## Google

One of the most important signs revealed by Google to show its interest in the Internet of Things was the **purchase of Nest**, a company that manufactures intelligent thermostats; possibly a first step for the development of homes that are completely connected, managed and monitored, both automatically and remotely. Likewise, it has made **great progress in the development** of an [intelligent vehicle that drives on its own](#).

More recently, Google has revealed its Brillo project, which it develops along with other companies like INTEL and Marvell and that consists in an Android-based operating system that is centered on the Internet of Things.

# Amazon Web Services IoT

[Amazon](#) is one of the leading **companies in cloud services**, which gives it a significant advantage in handling data and creating connections between services, applications and objects on a gigantic scale. This has made it one of the most preferred platforms of many **startups that explore the IoT**.


The AWS IoT promise is based on "routing" messages and data swiftly and safely to manage and track devices. It also allows users to create their own applications for IoT to control sensors remotely.

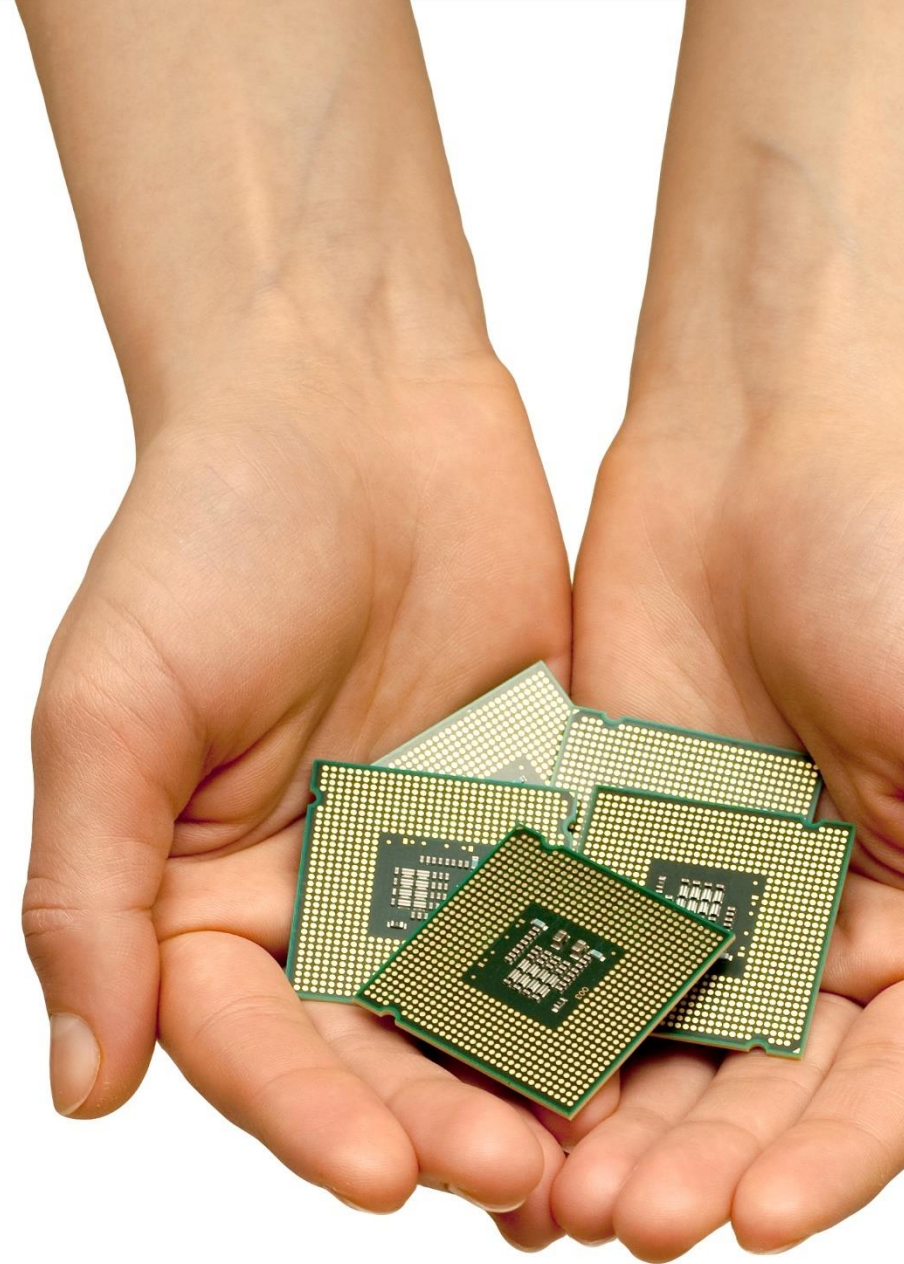
Amazon recently launched Echo; a voice-operated device designed for home use to control a **variety of applications**, such as lights, thermostats, audio and video services, news and household orders.



# 07

## The Power of Data

Information is one of the greatest assets a company owns, which is why it is so important to have an organized, scalable database that can be consulted and, above all, can be used easily and quickly to identify trends, predict events, and [make decisions based on reliable data and statistics.](#) 





## Alation

[Alation](#)'s mission is to help its customer find, understand and **create data management policies** so that they can make better decisions faster. Its solutions include data search and discovery, collaborative analytics, and data governance, all with a view to capturing information about the data they describe, [where it comes from, who's using it and how.](#) [in](#)





## BigML

[BigML](#) 's goal is to innovate in machine learning technologies: in other words, in machines and programs that learn on their own, grow and become more intelligent to the point where they can make predictions based on the data used to train them. Besides, the information gleaned from the data can be consulted in a user-friendly manner.

In an article on the portal [KDNuggets](#) comparing the performance of Amazon ML, Google Prediction API, PredicSIS and BigML, [it was this latter tool that was ranked the fastest.](#) **f**



## Sqream

[Sqream](#) is renowned for creating an [SQL-powered](#) technology that claims to analyze big data 100 times faster "than any other competitor on the market". With large-scale data management solutions targeted at genomic research, finance, cybersecurity, telecommunications and the Internet of Things, the company delivers its services from the cloud, on premise, or as a hybrid combination of both.


Forbes, The Huffington Post, The Next Web, Fast Company and The Wall Street Journal have all carried stories on the innovations and achievements of Sqream, and the company is also a recipient of the Red Herring Global Award.





# 08

## The importance of financial inclusion

Access to financial services is a key element for rising out of poverty, and technology is heralding a range of new models that provide a variety of services and [products that can be adapted to the needs of each population sector.](#) 



# BBVA Microfinance Foundation

The World Bank estimates that around **two billion adults have no access to banking services** -in other words, 38% of the world's population. In Latin America this affects 210 million people. The [BBVA Microfinance Foundation \(BBVAMF\)](#) -distinguished by the United Nations- operates in several Latin American countries to bring Responsible Productive Finance to vulnerable individuals by offering them a model of personalized service and advising them throughout the whole process. [83% of its customers are poor or vulnerable, and 61% are women.](#) **f**

Since its creation in 2007, the **BBVAMF has granted loans worth over 7.2 billion dollars to almost 5 million entrepreneurs.** **32.5% of the entrepreneurs** supported by the BBVAMF escape poverty two years after joining, and after three years their sales increase by 57%.



## ONGD


This situation is being tackled by the [Fundación África Directo](#) (Africa Direct Foundation - a NGO for development) with its [PrestAD](#) project, which allows people from Spain to help directly finance projects by African women.





## AFI


Another highlight is BBVA's agreement with the [Alliance for Financial Inclusion \(AFI\)](#) to promote projects to help SMEs and low-income individuals gain access to banking services. The result of this agreement is the [Open Talent](#) financial inclusion award, which last year went to the Chilean startup [Destacame.cl](#).

The startup enables people on low incomes to gain access to credit. All they have to do is register -free of charge and using a simple procedure- and provide information on what they spend on water, light, gas and telephone services. Once this registered, the Destacame.cl platform checks this data to decide whether [the user is a responsible payer and a good candidate for receiving a microcredit.](#) 

The World Bank also notes that women are 20% less likely than men to have a bank account and 17 % less likely to have received a loan from a formal financial institution.

# 09

## Striving for digital transformation

The number of customers who communicate with banks via digital channels goes up every day. Digital transformation is the goal and main [challenge faced by large companies; it affects all enterprise areas.](#) 





**Digital transformation** plays a key role in **corporate survival**. According to Accenture Strategy, the digital economy will represent 24% of GDP by 2020. And organizations are accelerating their [transformation process so that they are not left behind.](#) **f**

Through its [alliance with Red Hat \(provider of corporate solutions\)](#), BBVA is able to expedite its innovation, manage the increase in financial operations based on mobile devices and offer digital banking services to its customers across the world.

BBVA invests in technology with the aim of becoming a more flexible, scalable and customer-focused [bank in a cloud environment, with maximum service automation.](#) **in**

The hotel chain Meliá Hotels is another example of an enterprise with a clear path toward digital transformation. The company from Mallorca won the award for Best Digital Transformation Enterprise at the [Digital Enterprise Show \(DES2016\)](#). The award was given in recognition of its shift from the traditional model to the digital business.

# SERIE FINTECH BY innovation edge

BBVA Innovation Center creates the **Fintech Serie By Innovation Edge** to keep informed about the financial innovation trends with its milestones, analysis, cases studie, interviews with experts and infographics to display the data that describe each of these trends.

share



## LASTEST ISSUES



Technology companies come to the bank



The advance of bitcoin and virtual payments



Biometric systems voice, face and fingerprint advance in personal recognition.



The takeoff of emerging companies in a competitive world

Follow on:        

Register  
to keep up with  
the latest trends

**BBVA**

INNOVATION CENTER

[centrodeinnovacionbbva.com/en](http://centrodeinnovacionbbva.com/en)

Innovation  
**edge**

[centrodeinnovacionbbva.com/innovation-edge](http://centrodeinnovacionbbva.com/innovation-edge)



BBVA no se hace responsable de las opiniones publicadas en este documento.