

# Technology / Knowledge Based Services



## Why invest in Argentina?

Argentina is the third largest economy in Latin America, with a GDP of USD 445 billion, and the third largest recipient of Foreign Direct Investment (FDI) in the region. With a population of 45 million people, 60% of which is under 35 years old, it has preferential access to the main South American markets, which altogether have about 295 million inhabitants.

At the global level, it is the eighth largest country, with over 50% of arable land. It has the second largest unconventional gas reserve and the fourth largest unconventional oil reserve in the world, as well as an extensive maritime platform of over 1.78 million km<sup>2</sup>, which is rich in energy and fishing resources.

In terms of renewable resources, it is among the six countries with the highest wind consistency, with an annual average capacity factor of 20%. It also has great potential for the development of solar energy, especially in the Andean and sub-Andean regions, where global horizontal irradiation (GHI) ranges between 2,400 and 2,700 kWh/m<sup>2</sup>.

Moreover, it has great potential for mining development due to its over 705,000 km<sup>2</sup> of promising mining areas, its long tradition in the production of gold, silver, lead, aluminium and copper, and its positioning as a new global leader in the exploitation of lithium—the country has the third largest global lithium reserve and is the fourth largest global producer.

Argentina is characterised by a diversified economy that produces and exports agrifood, manufactured products, minerals and energy, knowledge-based services, culture and art, among others. Throughout the country, multiple activities with a high potential for investment and growth have been developed.

The country is internationally renowned for its leadership in the production and export of products such as soybean oil, yerba mate, utility vehicles, maize and wheat grains, raw peanuts, insecticides, powdered milk, beef, lemon essential oils, black tea, shrimp, pears, sunflower oil and combed wool.

Argentina does not only stand out for its natural resources. With a dynamic scientific community, its human talent has shown its capacity in a wide range of sectors. Among Latin American countries, it ranks third in the number of academic articles published, third in patent applications and first in the Global Skills Index<sup>1</sup> ranking for Data Science.

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<sup>1</sup> The Global Skills Index (GSI) 2019 is the first index conducted by Coursera, an online education platform with a large skills database of 38 million students and over 3,000 courses, specialisations and undergraduate courses of the main universities available. For each country, Coursera calculates a GSI that measures the average skills expertise of the platform's students.

## Economic activities by region

### NOA •

- Sugar
- Tobacco
- Viticulture
- Bovine meat
- Mining
- Petroleum and refinery
- Textile and metal-mechanic industry
- Automotive and trucks industry
- Inbound tourism

### NEW CUYO •

- Viticulture
- Stone fruits peach, plum and, to a lower extent, pome fruits
- Olive
- Mining
- Manufacturing
- University education
- Inbound tourism
- Domestic tourism

### PATAGONIA •

- Pome fruit, apples, and pears
- Viticulture, Alto Valle del Río Negro
- Fine fruits
- Ovine, wool, and meat
- Mining
- Textile, aluminum, and other industries
- Oil and gas, mainly
- Alternative energies
- Inbound tourism

### NEA •

- Yerba mate and tea
- Citrus fruit
- Bovine meat
- Forestry and paper industry
- Oil and gas (weak)
- Inbound and domestic

### AMBA

- Food industry
- Textile industry
- Automotive, metalworking
- Refinery
- Petrochemical, chemical and plastic
- Financial services
- Business services
- Logistics trading
- Software
- University education
- Inbound and domestic tourism

### CENTRO •

- Cereals and oilseeds
- Beef, poultry, and pork
- Citrus fruit
- Iron and steel, automotive, metal-mechanic industries
- Refinery, petrochemical, chemical and plastic industries
- Software
- University education
- Biotechnology
- Business services
- Logistics trading

## Infrastructure

 Railway network	 Maritime container traffic	 Flight departures	 Airports and ports	 National and provincial routes	 Ducts
17,866 km N.º 2 in LATAM N.º 13 in the world	~2 M TEU N.º 6 in LATAM	163,000 flights all over the world . N.º 4 in LATAM	Airports: 55 Ports: 101	500,000 km National routes: 37,500 km	Gas pipeline: 16,000 km Oil pipeline: 1,200 km

With longstanding policies of universal access to education and local scientific development, Argentina is the second country in the region with the highest public spending on Education (6% of GDP) and Science & Technology (0.6%). It should also be noted that Argentina is the second country in Latin America with the most unicorns (a total of 11) and the region's leading software exporter (50% of the sector's exports are destined to the USA).

The country offers benefits in terms of human resources and cultural and gender diversity policies for investors:

- The Knowledge Economy Act promotes activity in the sector through income tax reliefs (60% for micro and small companies, 40% for medium-sized companies and 20% for large companies).
- Every year, more than 150,000 professionals graduate from college.
- It is the Latin American country with the highest English language proficiency, which represents a comparative advantage in terms of service exports.
- It ranks ninth in the World Economic Forum's global ranking for leading efforts to encourage inclusiveness, equity and creativity in firms.
- It has the lowest gender gap in South America, and it ranks fifth in Latin America and the Caribbean.

Moreover, Argentina is a member of the selected group of countries that harness atomic energy for peaceful ends, building small and medium-sized modular reactors.

Thanks to these developments, Argentina can export to 170 countries around the world, achieving strong brand recognition for the quality of its products (meat, wine, oil, etc.), technology (satellites, turbines, reactors, etc.) and services (software, professionals, etc.). The country is also the main tourist destination in South America, with 7.4 million international arrivals in 2019.

Lastly, the development of maritime, aerial, rail and road infrastructure offer advantages that allow the country to access any part of the world as a competitive economy.

**The AAICI has prepared these sectoral reports in order to facilitate access to essential information as well as to advantages, benefits and opportunities for those investing in Argentina—one of the countries with the greatest potential to attract FDI in the world.**

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<b>ALADI</b>	Latin American Integration Association
<b>BPO</b>	Business Process Outsourcing
<b>BPTS</b>	Business, Professional and Technical Services
<b>CRO</b>	Contract Research Organisation
<b>CUIP</b>	Charges for the Use of Intellectual Property
<b>GSI</b>	Global Skills Index
<b>GSLI</b>	Global Services Location Index
<b>ICT</b>	Information and Communication Technologies
<b>ITO</b>	Information Technology Outsourcing
<b>KBS</b>	Knowledge Based Services
<b>KPO</b>	Knowledge Process Outsourcing
<b>Mercosur</b>	Southern Common Market
<b>MSME</b>	Micro, Small and Medium-sized Enterprises
<b>OBS</b>	Other Business Services
<b>OECD</b>	Knowledge Economy Observatory
<b>PCRS</b>	Personal, Cultural and Recreational Services
<b>pp.</b>	Percentage points
<b>R&amp;D</b>	Research and Development
<b>RCA</b>	Revealed Comparative Advantage
<b>SIPA</b>	Argentine Integrated Pension System
<b>SITS</b>	Software and IT Services
<b>STP</b>	Secretariat for Productive Transformation
<b>USD</b>	United States dollars
<b>VAT</b>	Value Added Tax
<b>WTO</b>	World Trade Organization
<b>YOY</b>	Year-on-year

The Knowledge-Based Services (KBS) sector is one of the most dynamic ones. It has some of the best prospects for the coming years, an enormous growth potential and the capacity to attract investments, increase exports and generate quality employment.

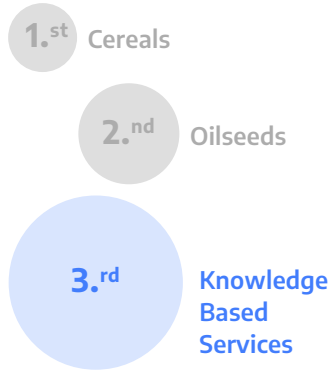
Knowledge-Based Services (KBS) are one of the most dynamic world trade activities. Although they represent Argentina's third largest export complex after oilseeds and cereal, they still possess an incredible growth potential and important investment opportunities.

- The KBS category includes software, audiovisual, professional, geological, R&D, financial and health services, among others.
- They are one of the most dynamic sectors of the economy and provide solutions to the other sectors.
- They intensively employ people with medium-to-high qualifications. The sector is expected to create 500,000 new highly qualified jobs in the next decade.
- Its growing international insertion helps to diversify the export offer of the countries.
- Regarding their presence in the domestic market, the most important areas are the manufacturing and service-providing industries, the financial, public, oil & gas and agriculture sectors, and the household services.
- The foreign market mainly demands software, IT services, audiovisual products and professional services from Argentina.
- KBS represent 7.5% of total private employment—this percentage has been steadily increasing for the last five years.
- KBS hubs or clusters are present in 19 of the country's 24 jurisdictions, mainly concentrated in Buenos Aires and Córdoba.
- According to the Global Skills Index (GSI), Argentina is at the forefront of technological skills globally and is the leader of data science and English proficiency in the region.

**In 2021, Argentine KBS exports reached USD 7 billion.**



### Third largest export complex



KBS are Argentina's third largest export complex.

In 2021, exports reached USD 7 billion.

Source: INDEC. Data from 2021.

### Extensive staffing



Professional services\* represent **34%** of total private registered employment for KBS.

Total formal employment in the IT services sector stood at approximately **127,908 workers** (27% of KBS jobs and a new all-time high).

Source: OEDE from the MTEySS. Data from 2021.

Note: (\*) Includes legal, accounting and other business services.

### Competitive advantages

Argentina has comparative advantages:

- Geographical location.
- Shared time zones.
- Cultural closeness to the EU and the USA.



### Highly qualified human capital

Argentina is the region's leader in:

- Data Science.
- English proficiency (the only one with a high level, according to Education First).



### Leadership in skills

According to the Global Skill Index 2019, Argentina is the world's leader in technology, thanks to its performance in:

- Systems Engineering.
- Operating Systems.



The Knowledge Based Services encompass activities that intensively use high-technology and/or require qualified jobs to make use of technological advancements (OECD, 1999). Some of these activities are linked to professional services (back and front office, advisory services and consulting services), others are based on scientific or technical knowledge (R&D, engineering, software), and others are related to creativity (audiovisual, designing, advertising). The KBS can be divided into four main categories:

### **Personal, Cultural and Recreational Services (PCRS)**

Editing, cinematography, radio, television, health, education.

### **Software and IT Services (SITS)**

Software development, consultancy and IT services, infrastructure and networks, application management, video games, animation and simulation.

### **Business, Professional and Technical Services (BPTS)**

Accounting and legal services, research and development, process development and management, HR, back office services, call centres, contact centres.

### **Charges for the Use of Intellectual Property (CUIP)**

Patents, trademarks and copyrights, R&D, marketing, intellectual property rights.

The KBS have become especially relevant in the last decades, particularly when it comes to foreign trade. Some of the reasons for this process are:

**Outsourcing of services by corporations**

Companies are increasingly choosing to focus on their core business and outsource activities that were previously handled in-house—from routine tasks, such as catering, security, cleaning and transport, to complex ones, such as IT, logistics, back and front office processes, and even design and R&D.

**Added value**

Nowadays, an important part of the added value of an industrial, agro-industrial or primary product is generated by services (R&D, design, software, logistics, branding, marketing, etc.) that need highly qualified personnel. This is the result of the evolution of competitive and technological dynamics in the different branches, and is part of the so-called servicification or dematerialisation of the economy.

**New consumption patterns**

Following the population growth and an increase in living standards, the demand for health and education services and for entertainment and cultural services is also increasing. Mirroring this, the booming development of audiovisual media and communication networks has led to the rise of new patterns of consumption and social interaction mediated by ICTs.

**Deverticalisation of the organisation of production around primary activities**

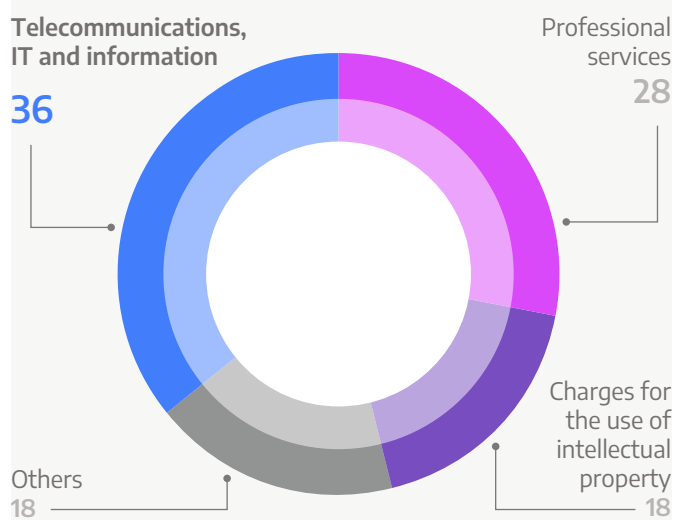
A growing number of suppliers have developed to support primary activities (agriculture, mining, oil, forestry, etc.) and specialised services (in activities such as engineering, R&D, software and IT services, quality, traceability, logistics, communications, professional advice and consultancy, and various other professional and technical services specific to each value chain).

**World exports**

As the economy digitisation moves forward, local and foreign KBS demand increases. Global KBS trade exceeded USD 6 trillion in 2021, accounting for 42% of total services. Telecommunications, computer and information services accounted for 36%, followed by professional services with 28% and charges for the use of intellectual property with 18%.

**Composition of KBS global trade in 2021**

Figures in percentage.



Source: WTO (2021).

## Trends

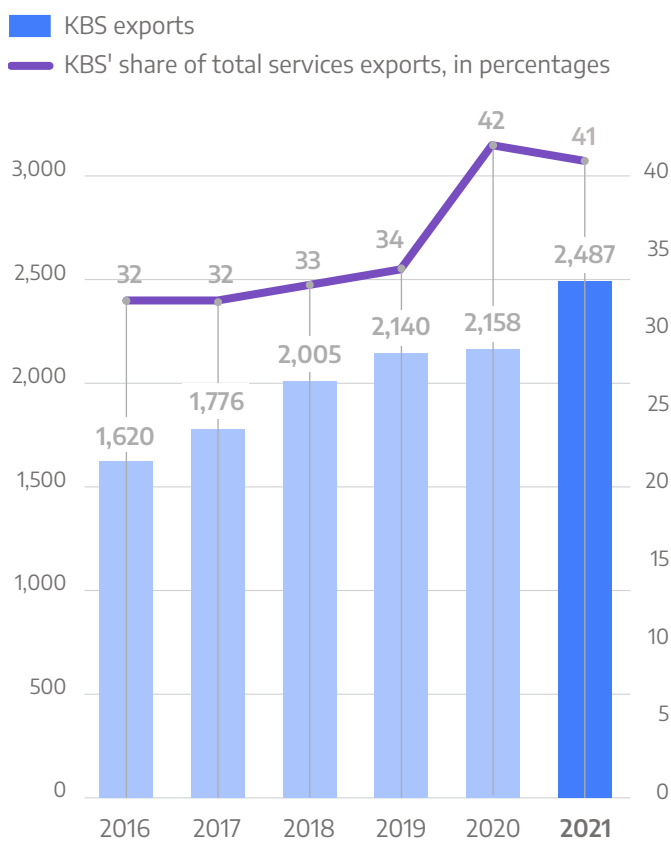
Between 2016 to 2021, the global trade of KBS registered an average annual growth of approximately 9%, well above that recorded by total services (4%). Thus, KBS gain share in the total—from 32% in 2016 they went to 41% in 2021. Looking at the main exporters, the top ten exporters account for 65% of total world exports. The US is the leading exporter, with almost 17%.

KBS contribute to an increase in productivity thanks to cross-sectoral linkages and because of their ability to create, use and spread knowledge. In this regard, the role of KBS sectors can be relevant in countries such as Argentina that have domestic markets big enough to favour both the corporate learning process in KBS sectors and the generation of spillovers and linkages.

**Argentina is Latin America's second largest KBS exporter, after Brazil. In 2021, its exports reached USD 5.1 billions.**

## Global exports of KBS

Figures in USD billions. 2016-2021 data.



## Global registry of KBS exporters

Figures in USD millions and in percentage of total (2020 data).

1	USA	527,130	15.8%
2	UK	281,495	8.5%
3	Ireland	232,604	7.0%
4	Germany	206,852	6.2%
5	The Netherlands	189,918	5.7%
6	China	178,306	5.4%
7	India	169,699	5.1%
8	France	149,552	4.5%
9	Singapore	123,531	3.7%
10	Japan	120,125	3.6%
27	Brazil	18,555	0.6%
41	<b>Argentina</b>	<b>6,230</b>	<b>0.2%</b>
45	Costa Rica	4,896	0.1%
50	Mexico	3,977	0.1%
55	Chile	3,322	0.1%
65	Uruguay	2,270	0.1%
66	Colombia	2,150	0.1%
67	Panama	1,880	0.1%

Source: UNCTAD.

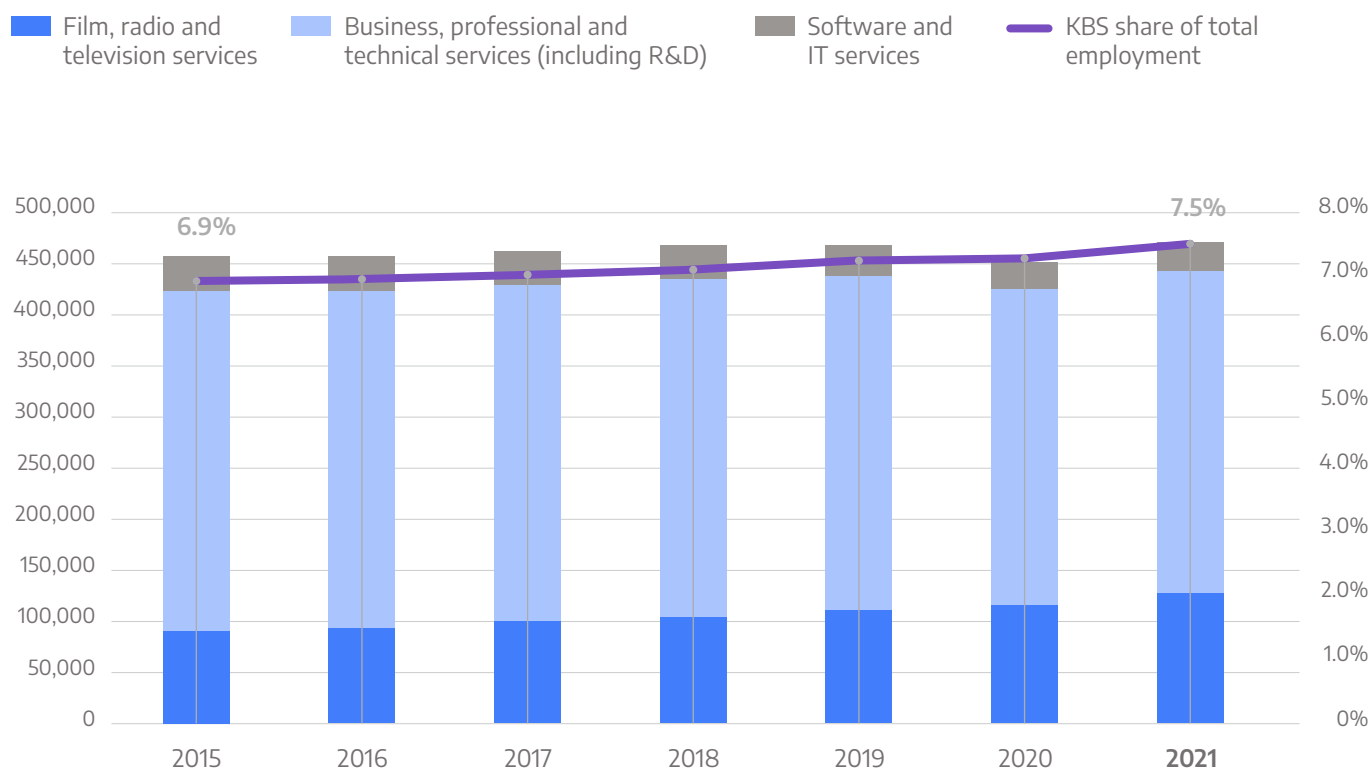
## Employment

In 2021, the sector’s total employment amounted to 472,038 jobs. The best performing subsectors compared to 2019 were research and experimental development (20.3%), computer activities (14.4%) and business services (2.1%).

The total formal employment in the IT sector was 127,908 jobs (27% of KBS employment) and represented a new all-time high, led by the sub-sectors of computer consultancy services and computer activities (both up 15% relative to 2019).

## Registered wage employment in the private sector

Figures in thousands of people.



Source: OEDE, MTEySS (2021).

## Remuneration

The average annual compensation of registered employees in KBS private sector firms was close to USD 16,000 in 2021, 15% higher than in 2020 and 25% above the average for the economy. This dynamic was registered in almost all sectors, and most strongly in software and IT services.

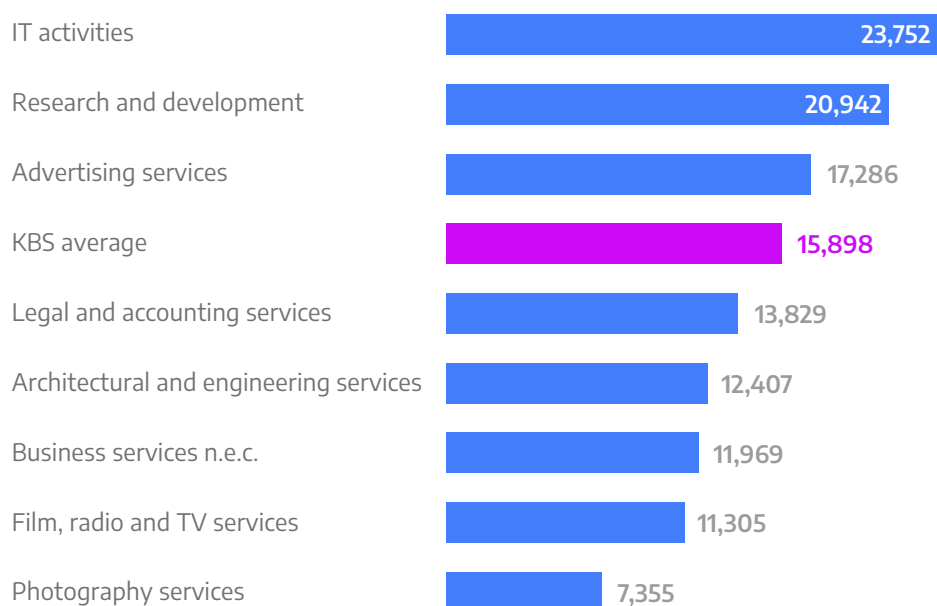
IT Services (ITS) were the best paid KBS subsector—85% above the average wage in the economy (+19 p.p. compared to the same period of the previous year), with an average annual remuneration of USD 23,570.

Regarding business, professional and technical services (including R&D), they grew by 11% YOY, reaching USD 13,200 per year. Film, radio and television services grew by 11% YOY, with wage levels of USD 11,300.

**Professional services are the largest employers in the sector, accounting for 67% of total employment.**

## KBS gross annual remuneration

Figures in USD.



Source: OEDE, MTEySS and BCRA.



# MAIN CHARACTERISTICS OF THE SECTOR IN ARGENTINA

## Companies

In 2019, the KBS sector comprised nearly 47,000 firms: half of them work in legal and accounting services, 14% in business services, 13% in IT activities, 12% in architectural and engineering services, and the remaining 13% in film, radio and television, advertising, photography, and research.

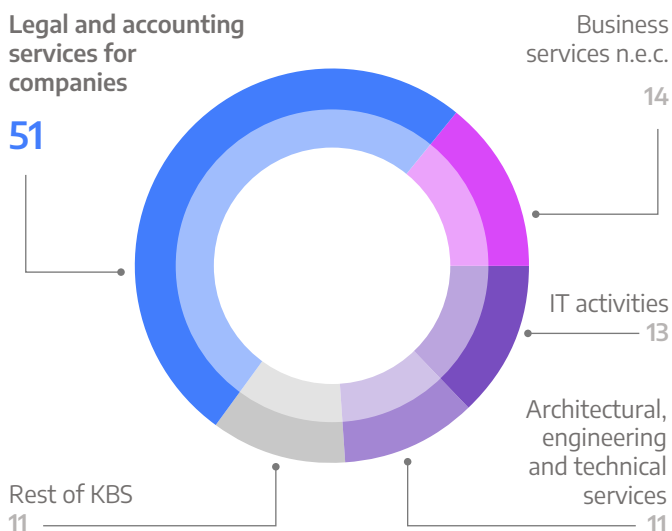
A total 95% of KBS companies are micro and small-sized (less than 50 employees), while large companies represent 1.6% of total. The sub-sector with the greatest proportion of large companies is Software and IT Services, given the considerable presence of foreign companies with development centres integrated into global networks providing services for large clients.

**Legal and accounting services is the segment with the largest number of companies in the KBS sector.**

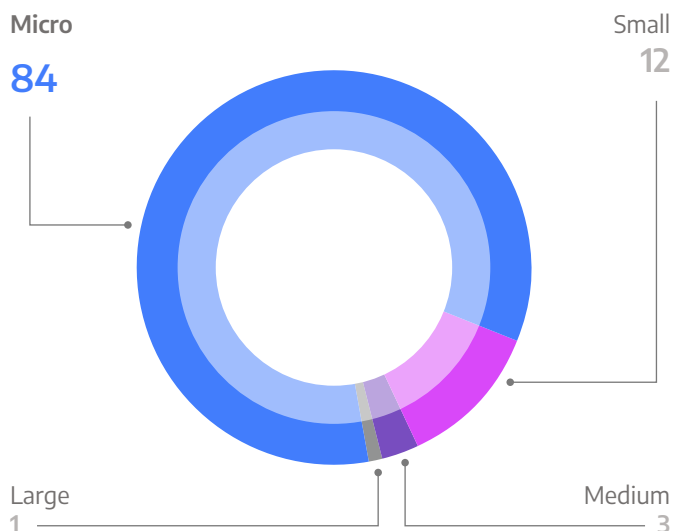
## SBC companies

Figures in percentage.

### KBS COMPANIES BY SEGMENT



### DISTRIBUTION OF COMPANIES BY SIZE



Source: OMC (2021).

## MAIN CHARACTERISTICS OF THE SECTOR IN ARGENTINA

Several of the largest companies in the global KBS market are currently operating in Argentina, serving both domestic and foreign markets. Most of the main companies (IBM, Accenture, Hewlett Packard, etc.) export services associated to Business Process Outsourcing and Information Technology Outsourcing. However, there are companies such as J.P. Morgan or CRISIL Irevna that provide Knowledge Process Outsourcing services in the financial area, while others export legal analysis services. For example, Intel has a branch in the province of Córdoba dedicated to software development for IT security that has 270 employees—more than 30% of them hold a post-graduate degree.

Moreover, several multinational companies have established their shared services centres in Argentina. They consolidate and standardise certain internal company functions (accounting, HR, purchasing, IT, finances, etc.) to then provide said services to other company branches located around the world. The main activity of some of these companies may differ, such as Chevron, Arcos Dorados, Exxon Mobil, Telefónica, Cargill, Quilmes or Philip Morris.

Furthermore, there are many foreign laboratories and Contract Research Organisations that conduct clinical trials in Argentina. Likewise, several large international advertising agencies have subsidiaries or companies linked locally, with the aim of exporting creativity from the country (Wunderman Thompson, R/GA, etc.). On the other hand, several foreign production companies dedicated to the audiovisual business have set up subsidiaries in the country, or have bought or partnered with local firms (Fox, Disney, etc.).

Meanwhile, several Argentine companies have established a regional and/or global presence through the development, implementation and integration of software applications and the provision of different types of IT services, in some cases with their own offices abroad. In general, these companies also provide high-level consultancy and advisory services. Some of the most noteworthy examples are Grupo ASSA, Globant and Grupo Prominente.

In addition, an important group of companies with national capital (Ideas del Sur, Polka Producciones, etc.) has made progress in the audiovisual markets. Moreover, INVAP, Techint and Tecna are examples of local companies exporting engineering in different sectors: nuclear, energy and others. Finally, there are cases of successful, highly internationalised local companies that were pioneers in Latin America in the areas of e-commerce and online travel (Mercado Libre, OLX and Despegar).

## Geographical distribution

In Argentina, KBS are a federal activity as they are present in all the provinces of the country.

The sector involves around 47,000 companies, 99% of which are MSMEs. Many of these companies are grouped in clusters. Around 40 clusters—spread over 19 of the 24 jurisdictions—bring together 1,460 companies across the country. The provinces of Buenos Aires and Córdoba hold the majority of clusters that have IT as their main activity. The most important companies from the sector are located in CABA and Greater Buenos Aires, although many of them have branches in different provinces.

An interesting example is the municipality of Tandil, Buenos Aires, which—in only a few years and with help from the National University of Central Buenos Aires—has developed a singular IT hub where companies with global reach operate. Another example is the mature technology pole in Córdoba, a province that is at the forefront of stimulating the digital economy. In the province of Santa Fe, Sunchales is another example of local development—the hub is home to CITES Impulsa, a private entity within Grupo Sancor Seguros that is focused on the start-up and development of businesses based on new technologies.

**50% of exports are destined for the US and are concentrated in sales of professional services, mainly intra-firm trade.**

Furthermore, the province of Misiones has Silicon Misiones, an initiative that seeks to integrate technological industries with entrepreneurs in the province, and to articulate the actions of the Information and Communication Technology Hubs, the Misiones School of Robotics, the Misiones Innovation High School, and the Misiones Technology Park. Silicon Misiones is South America's first silicon, and already has more than 20 associated companies, including Globant, Intel, Samsung, Personal and Telefónica.

## Main companies by KBS sector: Location and origin of capital

SECTOR	MAIN COMPANIES	ORIGIN OF CAPITAL	LOCATION
<b>Professional</b>	J.P. Morgan EY AEGIS APEX	USA UK India Argentina	C.A.B.A., Córdoba, Mar del Plata, Bahía Blanca, Resistencia, Rosario and Tucumán
<b>IT</b>	Globant Mercado Libre Belatrix	Argentina Argentina Argentina	C.A.B.A., La Plata, Tandil, Bahía Blanca, Rosario, Mendoza, Córdoba, Resistencia, Tucumán, Paraná, Rafaela, San Luis, Santa Fe
<b>Audiovisual</b>	TyC Sports Polka ESPN	Argentina Argentina USA	C.A.B.A., Buenos Aires
<b>Geological and prospecting</b>	Wellfield Services Sísmica	Chile Argentina	C.A.B.A. (services provided in mining provinces)

## Foreign trade

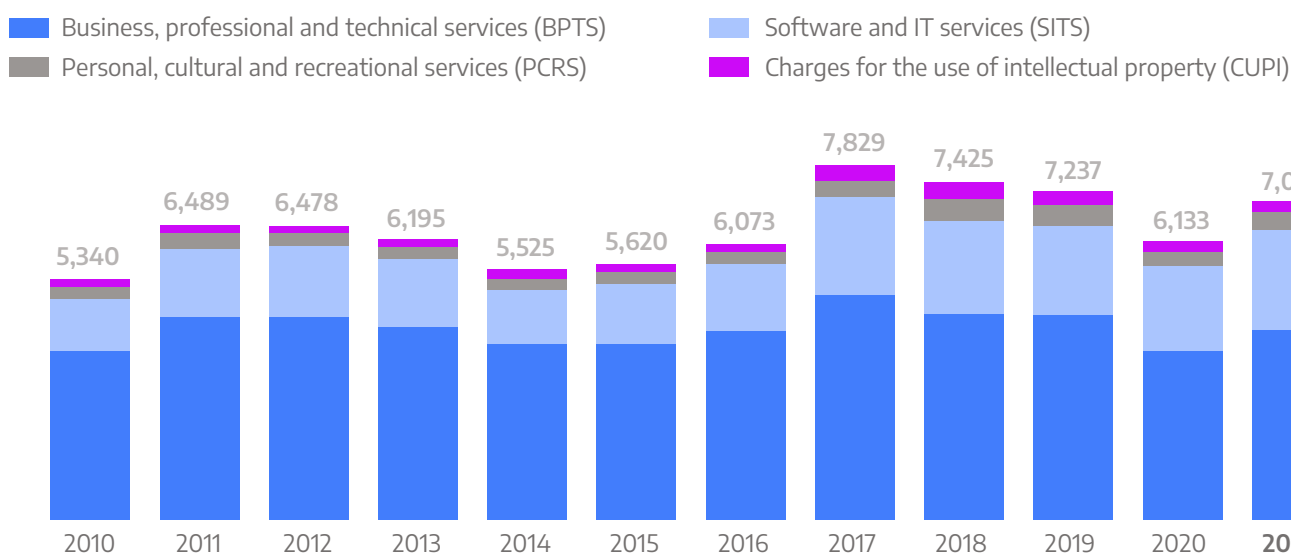
Argentine KBS exports exceeded USD 7 billion in 2021, above the average of the last ten years (USD 6.5 billion). In the last decade, its share in services exports has increased from 42% in 2010 to 75% in 2021.

The United States have a large share not only due to the size of its economy, but many other factors that favour bilateral exchange. A large portion of KBS flows corresponds to intrafirm transactions, many of which correspond to local subsidiaries of American companies that operate with their headquarters. Argentina's time zone and shared culture also favours exchange with the United States (and other countries in the Americas) if compared to other economies in Asia or Europe. Furthermore, the weight of the American market is related to taxes, as the United States does not withhold income tax on services provided from abroad (although it does when it comes to royalties).

**Argentina exports to more than 90 countries. Around 20% of exports are destined to other Latin American countries.**

## KBS exports in Argentina

Figures in USD millions.



Source: Own elaboration based on data from INDEC.

As shown on the graphic, Uruguay and Argentina are the only ALADI members with comparative advantages shown in the KBS exports at the aggregate level and in all sub-sectors, except for Charges for the Use of Intellectual Property (CUIP). It should be noted that Argentina has a comparative advantage in the sector when the Comparative Advantage Index is greater than 1.

English according to Education First) Argentina has an important network for creating talent across the country. In 2019, the Argentine higher education system had a population of 2.2 million students, out of which 23.2% were pursuing a career in science and technology. Currently, the country has 132 universities, 61 of which are public institutions.

### Human capital

According to the Global Skills Index 2019 prepared by Coursera, Argentina ranks first in technological skills worldwide thanks to its performance in Systems Engineering and Operating Systems. In addition, it is the leading Latin American country in Data Science and English proficiency (the only country with a high level of

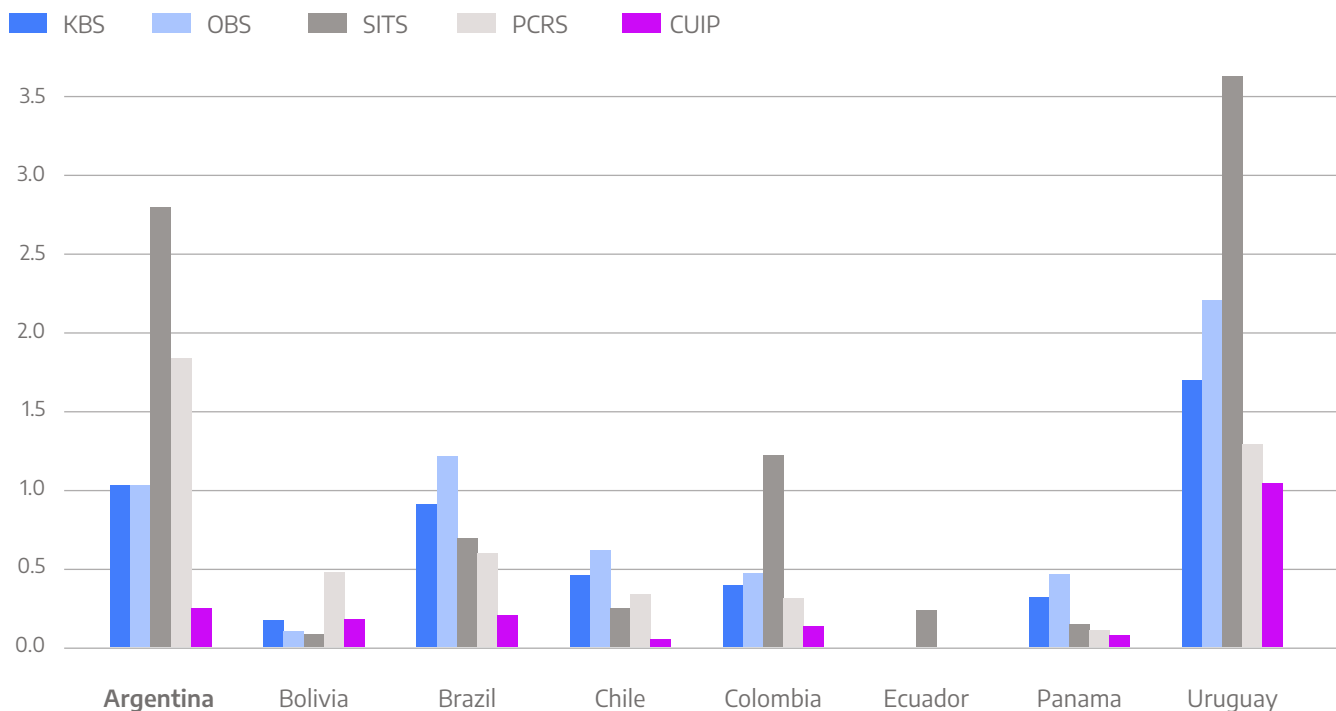
**National Council for Scientific and Technical Research - CONICET:** It has more than 300 research sites and institutes in the country..

**National Institute of Technical Education - INET:** It has 3,467 professional technical schools, 2,842 of which are public and 625 are private.

Geographical proximity to the United States—including shared time zones—and cultural proximity to North America and Western Europe are competitive attributes of Argentina.

### Index of comparative advantaged shown by KBS

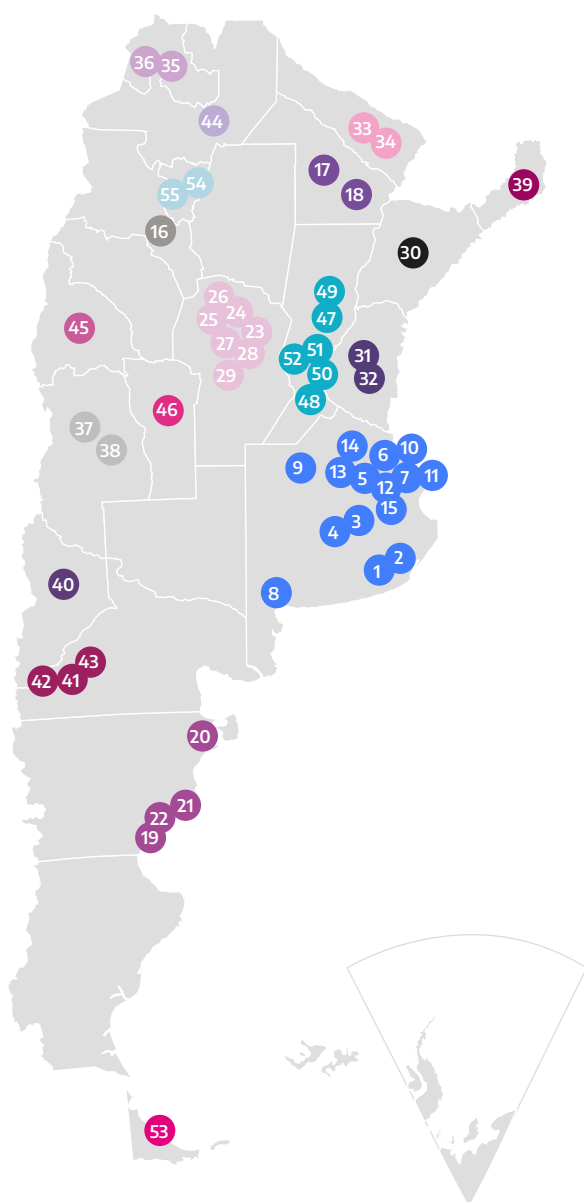
Figures in USD millions (2018 data).



Source: Rozemberg and Gayá (2019).

## Technology hubs

Argentina has an important network of technology hubs and clusters.



## Geographical distribution

- 1 National Institute for Fisheries Research and Development (INIDEP)
- 2 Association of Information and Communication Technologies of Mar del Plata (ATICMA)
- 3 Chamber of Companies in the Tandil Technology Hub (CEPIT)
- 4 Science and Information Technology Park of the National University of the Centre of Buenos Aires
- 5 Centre of Development in Information and Communication Technologies (CDTIC)
- 6 Pilar Biotechnology Hub
- 7 IT Hub - La Plata
- 8 Technology Hub - Bahía Blanca
- 9 Technology Hub - Mar del Plata
- 10 Technology Hub - Junín
- 11 Association of Video Game Developers of Argentina (ADVA)
- 12 Argentine Chamber of Biotechnology
- 13 Audiovisual District
- 14 Technological District
- 15 IT Hub - Buenos Aires
- 16 Technological cluster - Catamarca
- 17 Technology Hub Civil Association - Chaco
- 18 IT Hub - Chaco
- 19 CCT CENPAT - National Patagonian Centre, Science and Technology Centre of the National Scientific and Technical Research Council
- 20 INBIOP - National Patagonian Centre, Science and Technology Centre of the National Scientific and Technical Research
- 21 Council Biology Centre of Marine Organisms
- 22 Technology Park - Puerto Madryn
- 23 Association of Young Entrepreneurs (AJE) - Córdoba
- 24 Chamber of IT, Electronic and Communication Industries of the Centre of Argentina
- 25 Technological cluster - Río Cuarto
- 26 Technological cluster - San Francisco
- 27 ICT cluster - Villa María and nearby area
- 28 Córdoba Technology Cluster
- 29 Córdoba Audiovisual Hub
- 30 IT Hub - Corrientes
- 31 Paraná Technology Hub Civil Association
- 32 Medical Technology Cluster - Oro Verde
- 33 Chamber of IT, Software Developers and Audiovisual Services (CIDSAF)
- 34 Science and Technology Hub - Formosa
- 35 Chamber of ICT Companies cluster- Jujuy
- 36 Lithium Services Hub
- 37 Filmandes
- 38 ICT Hub - Mendoza
- 39 KBS cluster - Misiones
- 40 Infotech cluster - Neuquén
- 41 CCT Northern Patagonia - Science and Technology Centre of the National Scientific and Technical Research Council
- 42 Civil Association of Companies of the Technological Cluster in Bariloche
- 43 Bariloche Technological cluster Technology
- 44 Hub - Salta
- 45 Chamber of ICT Companies in San Juan (CASSETIC)
- 46 Institute for the La Punta IT Park
- 47 Chamber of IT Development Companies in Rafaela (CEDI)
- 48 Chamber of IT Companies in the Litoral
- 49 Southern IT Companies cluster (Santa Fe)
- 50 Santa Fe ICT cluster (CTSF)
- 51 Technological Park of Centre Litoral (SAPEM)
- 52 Technological Hub - Rosario
- 53 Technological Centre - Tierra del Fuego
- 54 Technological Centre - Tucumán
- 55 Association of IT Companies in Tucumán (AETTI)

Source: Argencon, based on data from the former Secretariat for Productive Transformation (2019).



## Feature KBS segments

Business and professional services, software and IT services (SITS), audiovisual services and support to primary activity services stand out due to their growth, dynamism and job creation opportunities.

### Business and professional services

These focus on legal, auditing and accounting services, among others. Legal and accounting services, architectural and engineering consultancy and market research studies are the most developed business services in the country, the ones that create the most jobs and those with the greatest export output. They represent about 60% of exports and employment among all knowledge industries. Professionals in this sector have high technical qualifications. The large availability of resources across the country provides this sector with great production and elasticity capacities to seize opportunities.

### Software and IT services (SITS)

This segment includes consultancy, data processing, software supply, and web portals. Almost 50% of IT services in Argentina are software development for various clients, mainly demanded by the financial and telecommunications sectors.

Total sales are equitably distributed between the domestic and foreign markets. The United States is the destination for almost 50% of software exports. This sector represents 30% of national KBS exports, but its growth speed is outstanding, driven by the constant evolution of digital technologies.

The sector has been experiencing a significant expansion since the Act on Software Industry Promotion in 2004. It grew by more than 100,000 jobs and exported USD 1.8 billion per year. Its development is resilient as it has gone through very diverse and hostile economic cycles without losses in employment or production. It is undoubtedly one of the economic sectors with the best performance in Argentina's productive matrix in the last two decades.

#### BUSINESS AND PROFESSIONAL

	<b>Jobs created</b>	more than 537,000
	<b>Fast-growing companies</b>	represent 10% of the entire economy
	<b>Wages</b>	similar to average

#### Potential

Specialised in higher added value activities. New business units across the country.

#### Trends

Automation in some segments with low added value, such as call centres.

#### Companies with the most jobs

- EY
- ADECCO
- EXXON
- MOBILE
- DELOITTE
- PWC
- J.P. MORGAN
- KPMG
- MARVAL O´FARREL
- MAIRAL

Source: Own elaboration. Employment data from MTEySS's OEDE 2020.

#### SOFTWARE AND IT SERVICES (SITS)

	<b>Jobs created</b>	more than 106,000
	<b>Fast-growing companies</b>	2.2% of the sector, which is 3 times larger than average
	<b>Sala Wages</b>	49% higher than average

#### Potential

Specialised in strategic areas such as aerospace, nuclear, agro-industry, healthcare, environmental and safety activities.

#### Companies with the most jobs

- ACCENTURE
- CAT
- TECHNOLOGIES IBM
- COGNIZANT
- GLOBANT

#### Production niches

New development segments: cybersecurity, artificial intelligence, big data, among others.

Source: Own elaboration. Employment data from MTEySS's OEDE 2020.

### Audiovisual Services

This sector includes TV, film and video productions, sound recordings, and music and video game editing. It is a local competitive and creative sector. Its potential lies in the growth of online platforms and new technologies, as well as its multisectorial impact capacity through transmedia narratives and storytelling.

#### AUDIOVISUAL SERVICES

	<b>Jobs created</b>	more than 2,000 are related to video games
	<b>Companies</b>	more than 500 production companies 120 video game studios creation rate 4 pp. higher than average
	<b>Wages</b>	6% higher than average

#### Potential

Growth of online platforms and new technologies. Multisectorial impact capacity through transmedia narratives.

#### Companies with the most jobs




- POLKA
- ENDEMOL
- PROM TV
- NON STOP
- IDEAS DEL SUR
- PEGSA
- ESPN
- TORNEOS Y COMPETENCIAS

Source: Own elaboration. Employment data from MTEySS's OEDE 2020.

### Support to the Primary activity Services: Mining and hydrocarbons

These include geological, prospection and drilling services, soil studies, reservoir evaluations, among others. Companies in the country are highly specialised. Their development is key for the growth of the mining and hydrocarbons industries.

#### PRIMARY ACTIVITY: MINING & HYDROCARBONS

	<b>Jobs created</b>	more than 1,800
	<b>Companies</b>	more than 120 production companies 59 in mining 58 in oil and gas
	<b>Wages</b>	56% higher than average

#### Potential

Argentina has 22% of global lithium resources. Vaca Muerta will double oil and gas production in five years.

#### Companies with the most jobs

- LAHUE S.R.L.
- NET-LOG S.A.
- WELLFIELD SERVICES LTDA.
- DISAB
- SUDAMERICANA
- IBC ARGENTINA
- UGA
- SEISMIC S.A.

Source: Own elaboration. Employment data from MTEySS's OEDE 2020.

## Public policies - Training of human resources

### “Argentina Programmes” Plan 4.0

This is a national and federal programme that aims to provide training in programming languages and knowledge, testing and digital skills to boost employability in the software and technology sector.

The programme is promoted by the National Ministry of Economy with the support of a specialised advisory council. Its main objectives are to train more than 70,000 people, articulate market needs and generate added value.

### Regime for the promotion of biotech companies

The programme is aimed at promoting innovative industries that apply biotechnology to their products, such as human and animal health, agriculture, environment and renewable energy, among others. To achieve this, it provides a series of tax benefits for the purchase of new capital goods for modern biotechnology projects: early amortisation of income tax over a period of one year, early refund of VAT and the granting of a tax credit voucher equal to 50% of the expenses incurred for hiring R&D services with institutions of the National Public System of Science, Technology and Innovation.

### Financing of the National System of Science, Technology and Innovation

In early 2021, the bill was unanimously passed. It aims to establish the progressive and sustained increase of the national budget for science and technology until in 2032 it reaches at least 1% share of the annual Gross Domestic Product (GDP).

The investment increase in science, technology and innovation is expected to promote the federalisation of the scientific and technological system, develop the productive matrix, create quality jobs, make visible scientific advances, promote the training of professionals, increase infrastructure and equipment, generate incentives for private investment, encourage the participation of women and the LGBTBI+ population, prioritize scientific and technological research, and contribute to the development of the National Plan for Science, Technology and Innovation.

## Cost and infrastructure

### Connectivity National Plan - CONECTAR

This programme will have an investment of USD 300 million until 2023 and will promote the reactivation of the Argentine Satellite Plan and the construction of a new satellite for the development of telecommunications. It is expected to build 4,408 kilometres of optical fibre and add more than 490,000 people to the connectivity central network.

## Economic activity and business environment

### Knowledge Economy Promotion Regime Act

Act No. 27,506 was passed in October 2020 with the aim of promoting new technologies, generating added value, fostering quality employment, helping SMEs develop and increasing the exports of companies from the KBS sector.

All companies from the Knowledge Economy are eligible to receive a monthly bonus to cover national taxes, a discount of up to 60% in income tax and the elimination of their service export duties. These benefits will be valid for 10 years and will be subject to validation by the Registry every two years. In addition, the companies will have to make annual presentations in order to prove that they are still eligible.

### Trust Fund for the Promotion of the Knowledge Economy - FONPEC

The fund was launched by the Ministry of Productive Development with the aim of strengthening the national industry of products and knowledge-based services. It had an initial contribution from the National Treasury of ARS 230 million. It will also have contributions made by the companies registered as beneficiaries of the Knowledge Economy Promotion Regime, pursuant to Act No. 27,506.

### “Boosting Knowledge Economy” Programme

This initiative aims to offer a new supporting strategy for key players in the national productive system, promoting the creation of prototypes, products and services for the domestic and foreign markets. It also seeks to modify the production and logistics processes and the generation of technological platforms. The benefits of the programme include the granting of non-refundable contributions for projects that consolidate activities framed within the Knowledge Economy. The first call was aimed at strengthening the satellite and aerospace industry, while the second was focused on fostering the development and strengthening of the video game industry.

Argentina has numerous opportunities in different sectors with great potential. First, the biotechnology sector has demonstrated a great response capacity to the COVID-19 pandemic. It has placed Argentina as one of those countries with greater potential for developing biotechnological solutions, such as diagnosis kits, treatment with hyperimmune horse serum and the early development of vaccines. With more than 200 biotech companies, Argentina is among the top 20 countries in the world with the largest number of this type of companies.

Secondly, Argentina has great potential in agricultural innovation, one of the most prestigious and traditional sectors in the country, where the link between science, technology and production has been extremely favourable. Thirdly, the IT sector has been the most dynamic one in recent years and has ample room to continue growing in the short and medium terms. Furthermore, there is still a wide gap between market demands and the supply of qualified human resources.

All of this raises two relevant issues. On the one hand, the sustained demand for exportable professional services—boosted by the significant growth in global offshoring of services due to the pandemic—represents an important opportunity and is a segment in which Argentina has a solid competitive position and available resources to grow. On the other hand, it is worth highlighting the remarkable growth of R&D, an area in which the link between the productive system and the scientific-technological system has ample room for development in Argentina.

Argentina is the third country in the region with the highest internet connection rate and the first when fixed broadband subscriptions are considered. In addition, it has a solid public and private digital infrastructure. This helps reduce the digital gap between large urban areas and smaller towns across the country and enables the creation of more remote jobs.

<b>CHARGES FOR THE USE OF INTELLECTUAL PROPERTY (CUIP)</b>	Charges for the use of property rights	
	Charges for reproduction licence and/or distribution and related rights	
<b>TELECOMMUNICATIONS, IT AND INFORMATION</b>	Telecommunications	
	IT	
	Information	
<b>OTHER BUSINESS SERVICES (OBS)</b>	Research and development (R&D)	
	Professional and consultancy services in business administration	Legal, accounting and administrative
		Marketing, market research and opinion polls
	Technical services related to trade and other business services	Architectural, engineering and other technical services
		Waste management and decontamination services, agricultural and mining services
		Operative lease services
Trade-related services		
<b>PERSONAL, CULTURAL AND RECREATIONAL SERVICES (PCRS)</b>	Audiovisual and related services	
	Other personal, cultural and recreational services	

**Source:** Gayá (2021).



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### **Secretariat of Industry, Economy of Knowledge and External Trade Management**

[https://www.argentina.gob.ar/produccion/  
organigrama/industria](https://www.argentina.gob.ar/produccion/organigrama/industria)

### **Silicon Misiones**

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## Technology / Knowledge Based Services

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**We promote the  
internationalization of  
Argentine companies  
and facilitate private  
investment in Argentina**

