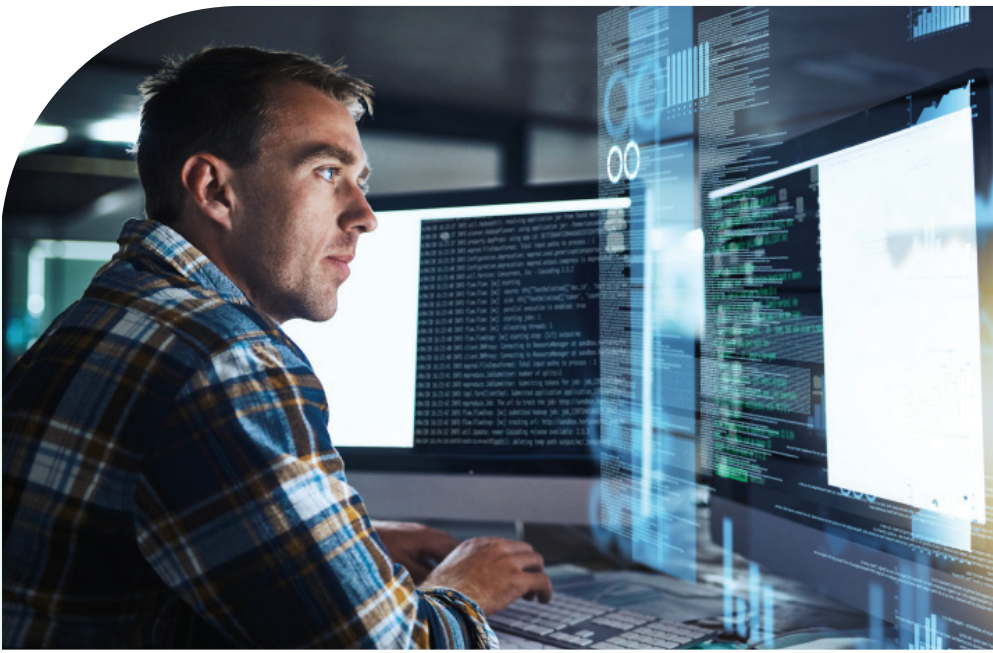


ICT SECTOR IN URUGUAY



MAY 2023



Uruguay XXI
INVESTMENT, EXPORT AND COUNTRY
BRAND PROMOTION AGENCY

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WHY CHOOSE URUGUAY FOR THE ICT SECTOR?

A solid history of **political, social and macroeconomic stability**, as well as the existence of a consolidated and **dynamic innovation ecosystem** make Uruguay a regional technology hub and a global provider for IT solutions. This growth process has allowed Uruguay to become the **leading software exporter per capita in Latin America**.

Its **strategic location** as a gateway to the region, intermediate time zone between the United States and Europe and state-of-the-art technological infrastructure, facilitate access and business with major global markets.

Easy access to decision makers. The country offers a coordinated and accessible technological and entrepreneurial ecosystem, with attractive investment opportunities, not only for existing companies (mergers and acquisitions), but also for the development of new ventures. The characteristics of a small, open and transparent country make **Uruguay an ideal destination to innovate and test new technologies**. Recently, innovation and new venture acceleration capabilities have been strengthened with the start of operations by NewLab and Microsoft Lab (AI/IOT).

A favorable regulatory framework. Investment in Uruguay, both domestic and foreign, is declared of national interest. The country guarantees equal treatment for local and foreign investors, and a wide range of incentives are available for different types of activities. For the ICT sector there are specific tax exemptions (e.g., for software exports, exemption from IRAE -Income Tax on Economic Activities, for its acronym in Spanish) and the possibility of operating under the free trade zone regime, among other incentives.

Talent. Uruguay provides universal and free access to all levels of education. This has made it possible to develop generations of highly qualified and multilingual talent. In science, technology, engineering and mathematics, Uruguayan talent is highly regarded by investors due to their adaptability to new technologies and processes, as well as to their high level of specialization in the different verticals of the sector. On the other hand, in terms of access and development of human capital, companies exporting services from Uruguay to the world have received support for the implementation of tailor-made training programs for existing staff and new recruits.

Quality of life. Uruguay is a safe country that offers excellent living conditions for executives and their families, with access to first class health and education services. So much so that Montevideo has been selected the city with the best quality of life in Latin America (Mercer Index) and Punta del Este has recently become the city where many executives and founders of global and regional technology companies have settled.

1. EXECUTIVE SUMMARY

- The Information and Communication Technologies (ICT) segment had an early development in Uruguay, with a strong export profile that puts it in a relevant position in the region. **Uruguay is the largest software exporter per capita in Latin America and the fourth largest exporter in dollars in Latin America (2021).**
- In recent years, the sector has shown strong dynamism, growing well above the overall economy. According to the latest available figures published by the Uruguayan Chamber of Information Technologies (CUTI, for its acronym in Spanish), the sector's turnover amounted to almost US\$ 1.95 billion in 2021, which is 3% of Uruguay's GDP.
- CUTI categorizes companies in the sector into four segments: horizontal application software, vertical application software, IT services, and IT infrastructure. According to CUTI, the segments with the highest turnover are IT services and IT infrastructure.
- Exports have grown steadily over the last 10 years. According to the latest data from CUTI, US\$ 1,006 million were exported in 2021. The IT services and vertical application software segments represent the highest turnover in other markets. The main export destination is the United States, which accounts for 59% of the total. The United Kingdom, Chile and Colombia are other relevant markets. According to data published by the Central Bank of Uruguay (BCU, for its acronym in Spanish), IT services exports totaled US\$ 959 million in 2022, registering a 20% growth compared to 2021.
- The sector gathers around 530 companies that employ approximately 24,000 people. If microenterprises are included, employment amounts to 27,400 people, according to information from the Ministry of Labor and Social Security.
- This is a very intensive sector in terms of qualified talent. The share of people in the ICT sector who graduated from university in the first half of 2022 was 38%, compared to only 5% for the total employed population. In this sector, 94% of workers are fluent in English and 51% are proficient in Portuguese.
- According to the Continuous Household Survey (ECH, for its acronym in Spanish) done by the National Statistics Institute (INE, for its acronym in Spanish) in the first half of

2022, the main task performed by workers is software development, followed in relevance by application programming.

- The evolution of the demand for talent exceeds the internal supply. Both the public and private sectors have worked on various programs to close this gap. For instance, the "Jóvenes a Programar", "Sembrando TIC", "Holberton" and "SoyHenry" initiatives. Likewise, in 2022 the [Uruguay Bootcamp Program](#) was launched with funding from INEFOP (National Institute for Employment and Occupational Training). In turn, the private sector has created in-house programs for the "on the job" training of young people, in many cases coming from some of the aforementioned programs. On the other hand, both the ICT ecosystem and the quality of life in the country are attractive for talent from other countries to settle here. In recent years, professionals from Argentina, Venezuela, Cuba and India have stood out.
- Both the availability and access to technological infrastructure place Uruguay in a privileged position in the region, with greater speed and access to the Internet and growing use of technologies and the development of technological capabilities.
- In terms of e-government, Uruguay also stands out worldwide and is part of Digital Nations, a group of ten leading countries in technological development. In addition, the country ranks third in the Americas (after the U.S. and Canada) in the E-Government Survey, a United Nations ranking on the effectiveness of e-government.
- There is a formidable public-private ecosystem that stands out due to its high level of collaboration (according to a study by GED and MIT) and for having the advantage of easy access to decision makers, in a context of political stability and favorable performance of macroeconomic indicators.
- Among the success stories are national companies (dLocal), and important multinationals such as Globant, Tata Consultancy Services, Mercado Libre, among others, as well as startups that were acquired or merged with foreign companies (MonkeyLearn and KONA, to name a few).

2. ICT SECTOR IN URUGUAY

2.1. DEFINITION

According to the National Council for Innovation, Science and Technology (CONICYT, for its acronym in Spanish), Information Technology (IT) refers to the acquisition, processing, storage, communication, deployment and use of information using various technologies. These include all aspects traditionally covered by the disciplines of computer science, information systems, electronics, telecommunications and signal processing, in all their forms, as well as some applications of basic sciences to these fields. IT and Information and Communication Technology (ICT) are often used interchangeably. However, "ICT" is a broader term that emphasizes the role of communications.

The main components of ICT are:

- **Networks:** refers to transmission routes, where information travels. They can be fiber optic cables, wireless and mobile cellular connections, or satellite.
- **Physical device** is comprised of smartphones, computers, and network elements such as base stations for the information transmission service.
- **Computer programs** are the flow of all these components and are responsible for giving instructions from the operating systems to the Internet.

The combination of this technology has enabled various applications such as videoconferencing, teleworking, e-learning, e-commerce and information processing systems.

In this sense, the relevance of ICTs lies in the fact that they enable and facilitate knowledge, information and communication, which are increasingly important elements in global economic and social interactions. Digital innovation is in the process of transforming almost every sector of the economy by introducing new business models, products, services and, ultimately, new ways of creating value and jobs.

The dynamic growth and the impact of software investments on the productivity and added value of companies and the economy in general explain the interest of policymakers in this sector, which is among the fastest-growing and is characterized by a strong increase in added

value, job creation and R&D investment. Both software packages and related services are gaining market share in the ICT markets as a whole.

Software is a crucial component of ICTs and encompasses the development and design of operating systems, applications and software solutions, as well as their marketing. The Organization for Economic Cooperation and Development (OECD) defines software as the production of a structured set of instructions, procedures, programs, rules and documentation contained in various types of hardware for the purpose of enabling the use of equipment for electronic data processing.

2.2. BUSINESS SEGMENTS IN ITC COMPANIES

Thus, the terms "IT Services" and "ICT Sector" refer to the set of companies that commercialize software design and development services, perform testing services, IT consulting and other implementation services, as well as maintenance, support, training and commercialization of software licenses. These services are all exportable and are part of what is known as Global Export Services, classified in the Software and Information Technology Outsourcing (ITO) segments, which include the operations of technology companies, either through the provision of development services or the commercialization of technological solutions¹.

The CUTI defines four business segments of ICT companies in Uruguay.²

Segment		Description
Horizontal Software	Application	Companies that offer technological solutions focused on solving specific functionalities (e.g. ERP, CRM, development engine, etc.). A few of these are: GeneXus, Kona, IBM, Datalogic.
	Application	Companies that offer technological solutions for specific industries. A few examples are: Bantotal, Ripio, Sabre, Verifone, dLocal.

¹ [Uruguay XXI Global Export Services Report:](#)

² Based on Mordezki and Matthesen's classification (PEP-ICT for Global Services Program, 2012).

IT Services

Companies that provide customized technological services to their clients or with certain technical specialization, such as IT consulting, design and development.

Companies who do this include: Globant, TCS, Overactive, UruIT, *Código del Sur*.

IT Infrastructure

Companies that provide services in IT environments, both in traditional infrastructure and in the cloud (e.g. hosting, security, storage, telephone and cloud services, networks, etc.).

A few examples are: Latechco, Microsoft, ZTE, AT, HG, Arnaldo C Castro.

IT services provide cross-cutting solutions in different sectors of the economy, resulting in the existence of subsectors defined by the interaction of technology with different activities. The most relevant ones for Uruguay are detailed below.

Smartcities: technological solutions that improve the performance and life in cities in different aspects, making them more digital and sustainable. Solutions in this segment usually arise from the combination of urban planning and ICT connectivity actions. As an example, see: [HG](#)

Gaming: this is the video game industry, one of the fastest growing sectors within the entertainment industry. Uruguay has a specialized chamber -the Uruguayan Chamber of Video Game Developers (CAVI, for its acronym in Spanish), which brings together the main companies in the country. Some of the sector's worldwide success stories are the IronHide Game Studio's Kingdom Rush trilogy, Pomelo Games' Outlanders and Batoví Games' Charrúa Soccer. Uruguay has also become an interesting location for foreign companies in the industry, as is the case of the Argentine company Etermax, the Argentine-American company Jamcity and the case of Globant, which provides development services for videogames. For an overview of Uruguayan videogame studios and their developments, as well as the international companies currently established in Uruguay, visit this [link](#).

Agtech: the sector owes its name to the combination of the concepts Agricultural Technology or digital technology applied to the agricultural sector. It brings together all the companies that develop solutions for agriculture. In a country like Uruguay, with a long history of agricultural and livestock production, this is a segment with a huge potential for development, both in terms of new solutions implemented in agriculture, as well as for attracting Agtech initiatives that can take advantage of the benefits that Uruguay offers in terms of climate, soil and availability of suitable spaces for testing new technological solutions. For example, the company [ActualRed](#), based in Paysandú, which has a connected machinery solution that currently follows the productive development of more than 600 pieces of agricultural equipment that move in Uruguayan fields. Another example: [The Climate Box](#), a Uruguayan technology company that came up with an innovative solution to assess and manage the risk of frost in high-value crops.

Fintech: Uruguay has long been a country that provides financial services, which has been combined with the existence of technology companies, both local and international, focused on the development of innovative solutions in technology for the financial sector. According to a survey conducted by ECLAC, around 70 fintech companies were reported in Uruguay, most of them specialized in the development of technological solutions for financial institutions³. Recently, an event organized by the Fintech Chamber and the da Vinci Foundation was held to analyze the current situation of the sector in Uruguay⁴.

Healthtech: this sector includes companies that develop solutions for the healthcare industry. Uruguay has very interesting cases of companies that develop innovative solutions for this segment, with a special focus on competitive markets such as the United States, where such solutions often have to be approved by the Food and Drug Administration. Examples such as [Integer](#), which has a prototyping and development center for medical devices, [Ingenious](#), a digital agency specialized in the design and development of digital products for the *Healthtech* segment in the United States, and DecemberLabs, which specializes in wearables⁵, are examples of the technology developed in Uruguay. On the other hand, Uruguay has advanced in the digitalization of its health system, by digitalizing electronic medical records and through the advancement of telemedicine.

³ M. Lavalleja "Fintech Overview. Main challenges and opportunities for Uruguay", Studies and Perspectives series-ECLAC Office in Montevideo, No.48 (LC/TS.2020/53; LC/MVD/TS.2020/3), Santiago, Economic Commission for Latin America and the Caribbean, 2020.

⁴ For further information please click on this [link](#).

⁵ *Wearable technology* encompasses a set of electronic devices that are attached to some part of our body and interact continuously with the user and with other devices in order to perform a specific function.

Artificial Intelligence: for the past 30 years the Uruguayan ICT industry has been developing global solutions, and the field of artificial intelligence (AI) has grown aggressively as one of the most advanced technologies. First, this was achieved by the impulse of the academia community, which ensured that Uruguay obtained and continues to maintain a consolidated ecosystem in the sector with sustained governmental support that aims to improve Uruguay's research capabilities, as well as the application of AI in different fields. According to the report "[Uruguay: IT Sector Talent Report](#)" prepared by Microsoft and CUTI, Uruguay leads the region in terms of people with AI skills per 10,000 inhabitants.

In addition, a growing number of companies are developing AI solutions from Uruguay to the world. Some examples are: DSense, GeneXus, Globant, Idatha, Mercado Libre, TryoLabs and Ultra Beauty.

Cybersecurity: Cybersecurity is the practice of defending computers, servers, mobile devices, electronic systems, networks and data from any malicious attack (or malware). The role of cybersecurity is to promote the proper achievement of organizational goals and, increasingly, to foster a competitive advantage. The report [Cybersecurity: companies, public sector and healthcare institutions](#) published by the Agency for Electronic Government and the Information and Knowledge Society (AGESIC, for its acronym in Spanish) analyzes its status in Uruguay.

3. ECONOMIC RELEVANCE OF THE ICT SECTOR

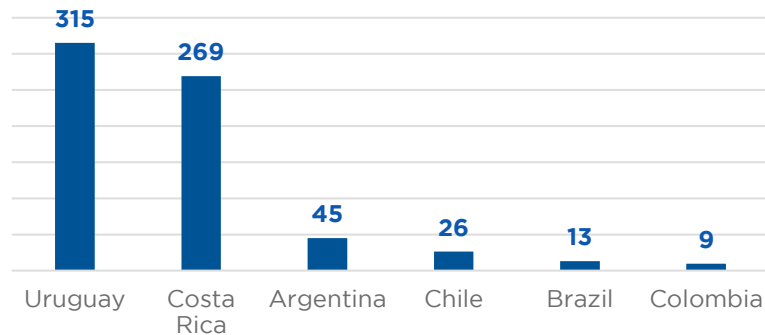
3.1. HISTORY OF THE SECTOR IN URUGUAY

With the establishment in 1967 of the Computing Institute and the university degree in Computer Science -which was later replaced by the Programmer Analyst and Computer Systems Engineer degrees- Uruguay was a pioneer in Latin America in the development of academic offerings associated with the ICT area. This favored the emergence of national ICT companies and the establishment of development centers in large companies. A generation of business leaders with experience in the technological needs of different vertical sectors was developed.

In 1969 the Uruguayan Software Chamber was created, which today is the CUTI. This association is made up of more than 400 companies in the sector and its mission is to promote the development and growth of the technology industry in Uruguay. In 1999, the sector was declared of national interest and was granted a special regime with tax incentives (Decree 84/999). Since 2002, companies in the sector have been eligible for tax exemptions. In particular, under Decree No. 150/007, the export of software and related services are exempt from income tax for businesses (IRAE). For specific regulations for the ICT sector see: [Regulatory Framework](#).

These factors made the emergence of professional capabilities possible, as well as making internationally competitive technology development companies a reality, taking advantage of the small size of the local market in order to implement and test their solutions, and which today make up the current business fabric. In this context, Uruguay achieved an early internationalization compared to other countries in the region, a process that began in the late 1980s. The sector maintained a dynamic growth that today makes Uruguay the leading exporter per capita of software and IT services (SSI) and the fourth largest exporter in dollars in Latin America.

Graph N°3.1
Software Exports in Latin America
 (2021, US\$ per capita)



Source: United Nations Conference on Trade and Development (UNCTAD).

At the same time, Uruguay made significant progress in policy and incentives development that promote a healthy business climate for investments. Add this to the trajectory of a stable and serious country with clear rules and regulations, and this has promoted Uruguay to become a regional hub, where the following operations are carried out (sometimes at the same time): regional distribution and logistics centers - regional headquarters and shared services centers - development centers - services and/or infrastructure operations.

Technology companies can set up their global operations in Uruguay that cover the entire ICT value chain, establish commercial and/or logistics offices, as well as service operations (SSC and ITO), and even R&D and testing centers for new technologies. They will also find themselves immersed in a dynamic innovation ecosystem that offers attractive M&A opportunities. Some of the largest international operations in Uruguay include Tata Consultancy Services (TCS), Sabre, Mercado Libre, Globant, Pedidos Ya (Delivery Hero), Netsuite and Verifone (see [success stories](#)).

3.2. COMPANIES, INVOICING AND EXPORTS

According to data from the Ministry of Labor and Social Security (MTSS, for its acronym in Spanish), 533 companies operating in the ICT sector were registered in Uruguay in 2022. Seventy percent as small companies, with fewer than 20 employees, 27% as medium-sized, with fewer than 100 employees, and the remaining 4% as large, with over 100 employees.

Table N°3.1
ICT Companies by size
 (2022)

Size	Company	Share %
Large	23	4%
Medium	142	27%
Small	368	69%
Total*	533	100%

Note: Small companies are defined as employing between 1 and 19 employees, medium-sized companies between 20 and 99, and large companies over 100. Micro enterprises are excluded (7,586 micro enterprises linked to the IT sector).

Source: MTSS.

This section supplements the information provided by the MTSS with data provided by the Uruguayan Chamber of Information Technologies. The ICT sector report prepared by CUTI (2021) is based on a survey of 265 companies that are members of the chamber. Half of the companies in the sector that are members of the chamber are micro and small in size and the other half are medium or large, which makes the sales data of these companies a very good approximation of what is happening in the sector as a whole. According to this data, the production of IT companies stood at US\$ 1,944 million in 2021, a figure that represents close to 3% of Uruguay's GDP. Production showed a strong growth rate in recent years and, after a drop in 2020, it recovered in 2021 surpassing the pre-pandemic levels of 2019. Thus, the IT sector's turnover grew 8% year-on-year in 2021, due to both higher sales in the domestic market and higher exports.

In terms of production segments, IT services occupied the largest share of production, with sales of US\$ 1.01 billion in 2021. Sales in this segment grew 18% over 2020, driven by growth in exports. This segment accounted for the majority of companies in the sector. IT Infrastructure was the second in importance, with 32% of the turnover, but concentrated fewer companies. It was followed by vertical application software, with 12% of turnover, and horizontal application software, with 4%.

Graph N°3.2
ICT sector Turnover
 (US\$ Millions)

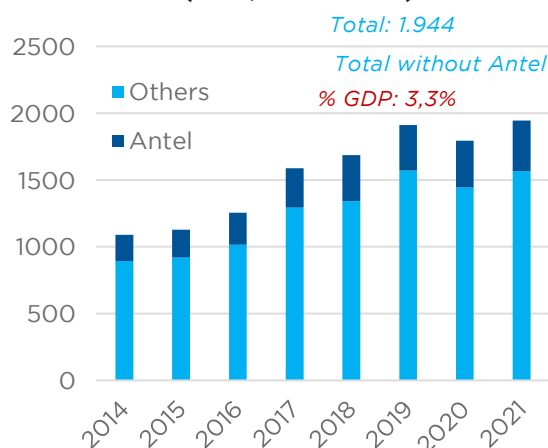


Table N°3.2
Turnover by business segment 2021

	Turnover			Companies
	US\$	Share %	Var. % 21vs20	
IT Services*	1.010	52%	18%	138
IT Infrastructure*	619	32%	5%	18
Vertical	239	12%	-14%	46
Horizontal	75	4%	11%	63
Total	1.944	100%	8%	265

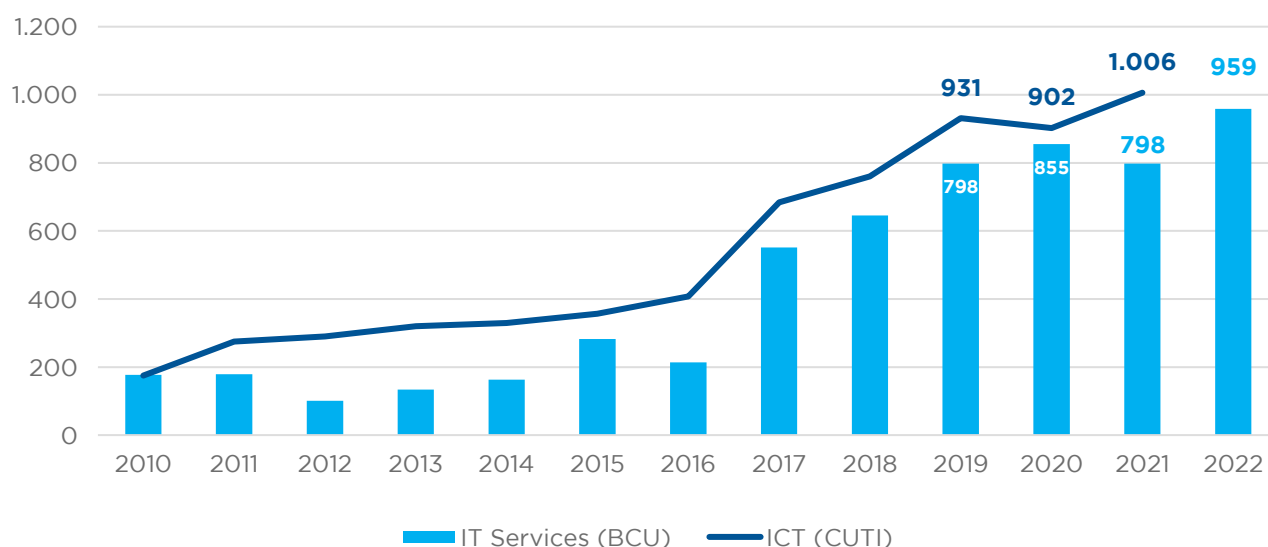
* Includes Antel.
 Source: CUTI 2021.

If we look at the data by segment, in 2021 **IT services** ranked first in terms of invoiced amounts. This was essentially due to higher exports in this segment. In 2021, 75% of IT services went to the foreign market. **IT infrastructure** ranked second in 2021. These services were almost entirely directed to the domestic market. **Vertical application software services** followed in importance and most targeted the external market. Finally, **horizontal application software services** were mainly oriented towards the domestic market and had the smallest share of total turnover.

The sector's sound performance was largely due to the sustained increase in foreign sales in recent years. It is worth noting that there are some difficulties in accurately measuring ICT sector exports based on official records, since the sales of these companies can fall into several statistical classifications. This report analyzes two sources of data: the statistics reported by the BCU (Uruguayan Central Bank) and the survey conducted by CUTI.

Exports of IT services published in the BCU's Balance of Payments show a significant increase over the last decade. Although in 2021 they showed a 7% year-on-year decrease and stood at US\$ 798 million, they grew significantly again in 2022 and reached US\$ 959 million (a figure that shows a 20% increase in the year-on-year comparison).

Graph N°3.3
ICT Exports
 (US\$ millions)



Note: CUTI figures include sales made through subsidiaries of Uruguayan companies abroad. This category of sales accounted for approximately 5% of exports in 2021.

Source: BCU and CUTI.

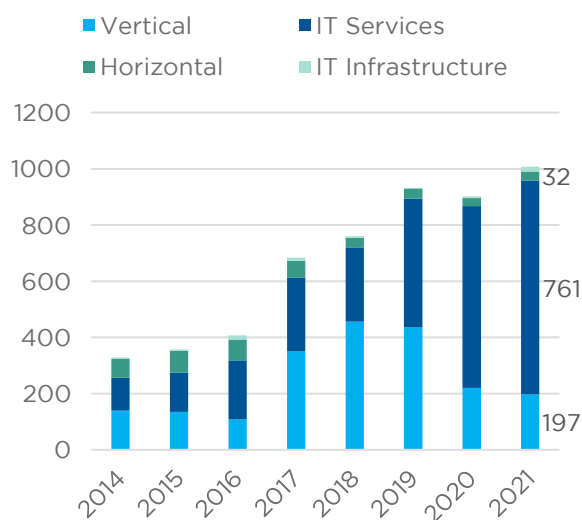
Meanwhile, export data obtained from the CUTI survey also show significant growth over the last decade and a total of US\$ 1.006 billion in 2021, 12% above the figure for 2020. The survey allows data to be analyzed by segment and by export destination. Considering the data published by CUTI, the sector's exports increased steeply between 2010 and 2021, with more pronounced increases since 2016.

The increase in exports in 2021 is exclusively due to higher sales of IT services software. Exported IT services showed a growth of 18% over the previous year and came to represent 75% of the sector's exports (in 2019 that percentage was 35%). Meanwhile, exports of vertical application software services showed a retraction for the third consecutive year (10% year-on-year) and accounted for 82% of the segment's sales. Thus, these two sectors accounted for 96% of the sector's total exports. Foreign sales of horizontal application software services grew in 2021 (10%).

Table N°3.3
Export focus by business segment (Market Share %)

Business segment	% Exported	% Exporting Companies
IT Services*	75%	82%
IT Infrastructure*	3%	36%
Vertical	82%	79%
Horizontal	43%	62%
Total	52%	74%

Graph N°3.4
Export by business segment
 US\$ Millions



Source: CUTI 2021.

ICT sector sales were mainly directed towards the United States, which was the main export destination in 2021 with purchases of US\$ 590 million. The United Kingdom was the second destination in 2021, followed by Chile, Colombia and Canada.

Table N°3.4
Top 10 export destinations

Destination	2020		2021	
	Mill US\$	Share(%)	Mill US\$	Share(%)
United States	672	75%	590	59%
United Kingdom	48	5%	175	17%
Chile	40	4%	43	4%
Colombia	9	1%	30	3%
Canada	14	2%	24	2%
Argentina	11	1%	16	2%
Free Trade Zone in UY	3	0%	15	2%
Peru	12	1%	15	2%
Spain	23	3%	14	1%
Puerto Rico	0	0%	12	1%
Other	70	8%	71	7%
Total	902	100%	1.006	100%

Source: CUTI.

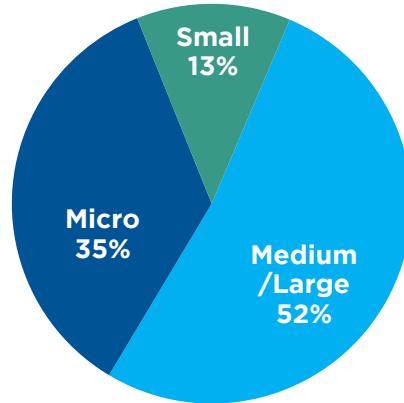
4. TALENT

4.1. JOB CHARACTERISTICS IN THE INDUSTRY

According to the report "[Uruguay: IT Talent Report](#)" prepared by Microsoft and CUTI with data from the job offers portal LinkedIn, Uruguay is the country in the region with the highest proportion of people with IT skills per 10,000 inhabitants (64 people per 10,000 inhabitants), although it is still far from the values found in the United States (187 people per 10,000 inhabitants). In addition, the document highlights that Uruguay has 2.3 people per 10,000 inhabitants with artificial intelligence skills, positioning it as the country with the highest proportion, followed by Chile (2) and Brazil (1.8).

Regarding employment in the sector, according to MTSS data, in 2022 the ICT sector employed around 27,400 people. When breaking this down by company, it turns out that the majority of workers are in medium and large sized companies, which employ 52% of the workers in the sector. The participation in small companies was 13% and the percentage of employment associated with microenterprises was 35%. If microenterprises are excluded, the total number of workers in the sector is slightly more than 17,500. Data from the survey conducted by CUTI mentioned in the previous section show that companies in the sector employed approximately 17,000 people in 2021 (with 79% dependent workers and 21% hired independently). The universe of the survey is made up of member companies of the chamber and therefore differs from the MTSS records, but it still provides a very good approximation of what is happening in the sector.

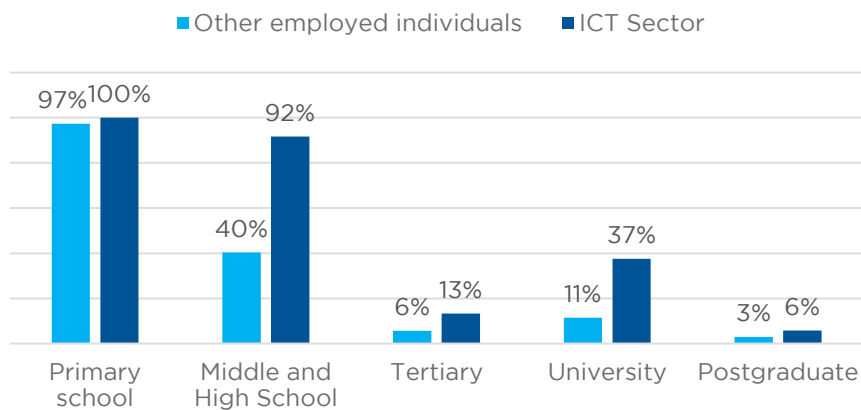
Graph N°4.1
Employment by company size
(2022, % of total = 27.414)



Source: Uruguay XXI based on MTSS 2022.

Employment in this sector is very strong in highly qualified human capital, which contributes to considering ICTs as a driver of development. The share of people who have a university degree in the ICT sector was 37%, and in the total employed population this figure was 11%.

Graph N°4.2
Employment and level of education
Percentage of employed individuals by education level completion



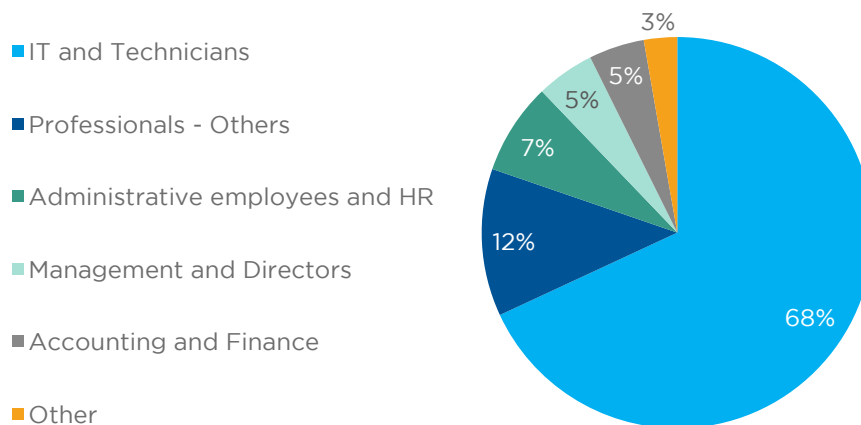
Source: Uruguay XXI based on ECH2022.

According to information provided by the analysis of talent in the ICT sector carried out by Microsoft and CUTI, 61% of people with IT skills in Uruguay have an undergraduate or graduate degree, while 17% have a master's or doctorate degree.

The main universities where people with IT skills are trained are: the University of the Republic (30%), ORT Uruguay University (26%) and the Catholic University (6%). If we look specifically at the institutions where people acquired their specific IT skills, the University of the Republic and the ORT Uruguay University stand out again, followed by the Technological University (UTEC, for its acronym in Spanish), and non-university institutes such as Coderhouse and Hack Academy become a part of the mix.

Employment is mainly focused on IT services tasks, with a predominance of software developers, application programmers, systems analysts and technicians. Meanwhile, the professionals who occupy a very relevant proportion of employment are electronic engineers. Other tasks such as administration and accounting occupy a large section of workers in the sector as well.

Graph N°4.3
Employment by type of job
(% of the total = 22.463)



Source: Uruguay XXI based on ECH 2022.

Table N°4.1
Employment by job type - IT and professionals

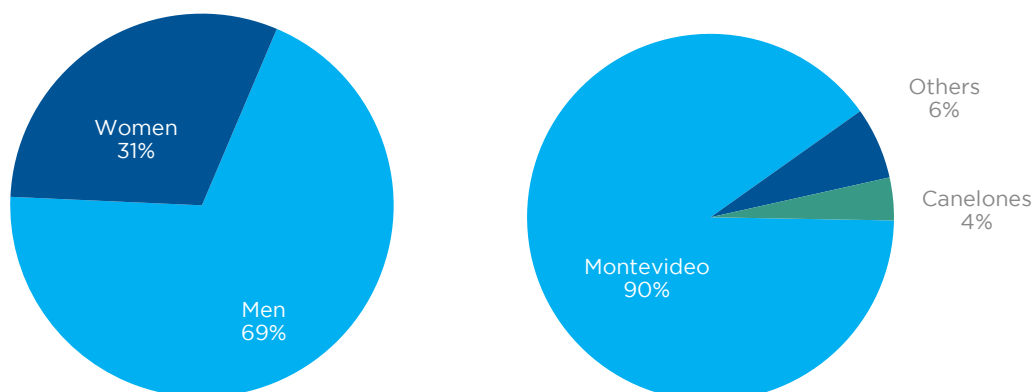
Task/Title	Jobs	Share (%)
Total - IT and Technicians	15.293	100%
Software developers	4.449	29%
Application programmers	3.170	21%
ICT Operations Technicians	2.242	15%
Systems Analysts	2.126	14%
Network and computer systems technicians	774	5%
Web and multimedia developers	629	4%
Web technicians	498	3%
ICT user support technicians	430	3%
Software and multimedia developers and analysts	385	3%
Database designers and administrators	215	1%
ICT installers and repairmen	150	1%
System administrators	141	1%
Telecommunications engineering technicians	84	1%
Professionals - Others	2.739	100%
Electronics engineers	1.791	65%
Advertising and marketing professionals	248	9%
Graphic and multimedia designers	207	8%
Others	493	18%

Source: Uruguay XXI based on ECH 2022.

On the other hand, according to the "[IT Job Monitor](#)" drawn up by CUTI and Advice regarding the demand for talent, between November 2021 and October 2022, 19% of all openings analyzed came from companies that carry out activities related to information technologies. The total volume of openings related to IT increased 66% on a year-to-year comparison.

Regarding the gender gap in the sector, the report published by CUTI and Microsoft establishes that Uruguay is slightly below the average gap in the region, but far from the United States. According to MTSS data, women have a low participation in the sector (31% in 2022). Within this framework, there are currently several initiatives focused on the empowerment of women employed in the STEM area. Some of these include: Girls in Tech, IT Women and the Interinstitutional Roundtable of Women in Science, Technology and Innovation. There are also parity quotas in promoted programs (such as *Sembrando*). In 2021 a program was launched with funding from the European Union called [Women in the IT sector](#).

Graph N°4.4
Employment by gender and department
 (2022, total % = 27.414)



Source: Uruguay XXI based on MTSS data for 2022.

Regarding employment by department, Montevideo concentrates 90% of the workers in the sector and Canelones another 4%. Thus, the two most populated departments together account for more than 90% of employment in IT services.

4.2. LANGUAGE SKILLS

The Uruguayan workforce has shown a steady increase in its ability to master other languages, particularly English and Portuguese. English is taught in almost all public primary schools and is supported by *Ceibal* (see below). The vast majority of private primary schools also included English in their curricula. In addition, many primary schools added Portuguese to their curricula. In both public and private middle and high schools, teaching English is compulsory.

Being fluent in several languages has become one of the almost exclusive requirements to work when offering IT and other global services. In this regard, it is worth mentioning some of the results obtained in the first Telephone Language Survey (ETI, for its acronym in Spanish) done by INE and funded by Uruguay XXI in 2019. This nationwide survey was conducted on the basis of a subsample of the ECH, which makes it possible to cross-check the results with the variables of interest that are surveyed in the ECH. It looked at the level of knowledge of foreign languages -specifically English and Portuguese- among people between 15 and 60 years of age, living in urban areas of Uruguay.

The "[Talent Report in the IT sector in Uruguay](#)" prepared by Microsoft and CUTI analyzes the language skills of people with IT skills who have an active account on LinkedIn. A majority (68%) reported having knowledge of English. On the other hand, significantly lower proportions claimed knowledge in other languages: 15% say they have knowledge in Portuguese, 4% in French, 3% in Italian and 2% in German.

The results of the ETI in 2019 indicate that 66% of people have knowledge of a language other than Spanish. Likewise, 32% of people in Uruguay speak two or more languages without counting Spanish. Information was collected for six specific languages: English, Portuguese, German, French, Italian and Mandarin. Knowledge of English is the most widespread, reaching 56% of the reference population, followed by Portuguese, which reaches almost 30%. Almost everyone involved in activities related to information technology and communication technology speak more than one language, and the sector is characterized as having the highest levels of language skills of all global services.

Table N°4.2

Employed individuals who speak more than one language by type of activity
 (% of the total employed in each category)

ISIC Rev 4* Section		Knowledge of a foreign language	English	Portuguese
J	Information and communication	98%	94%	51%
K	Financial and insurance activities	84%	72%	42%
M	Scientific, technical and professional activities	89%	86%	40%
N	Admin and support services activities	58%	43%	41%
Overall Services		79%	70%	42%

*Includes all sub-sectors (ISIC 4).

Source: Telephone Language Survey (ETI 2019), INE.

In Uruguay, this sector is characterized by workers with a very high educational level compared to the rest of the population, who, additionally, speak more than one language. The following section refers to the educational and job market offers in this sector in Uruguay.

4.3. EDUCATIONAL AND EMPLOYMENT OPPORTUNITIES

Uruguay has a mixed educational offer from the initial level to university, with free public and private centers. As previously mentioned, Uruguay was a pioneer in Latin America in terms of developing academic programs associated with ICT. Programs and courses related to ICT at the technical, undergraduate and graduate levels have increased in recent years (both in private and public institutions) and have also expanded to the rural areas, and to the interior of the country, mainly thanks to the University of Technology (UTEC, for its acronym in Spanish) and the University of Labor of Uruguay (UTU, for its acronym in Spanish).

The institutions that offer IT training in Uruguay are:

- University of the Republic - UdelaR
- University of Labor of Uruguay - UTU
- Technological University - UTEC
- ORT Uruguay University - ORT
- Catholic University of Uruguay - UCUDAL
- University of the Enterprise - UDE
- University of Montevideo - UM
- CLAEH University
- Center for Higher National Studies (Ministry of National Defense).

Based on the report on [Academic Training in the ICT sector](#), produced by the IT Observatory of the CUTI and the [Statistical Yearbook of the Ministry of Education and Culture 2021](#), data on the IT academic offer in the country was collected in order to analyze future trends. The following table summarizes the structure of the academic offer in ICT. The annual increase in the number of students enrolled and graduates is noteworthy. In 2021, more than 1,200 students graduated with degrees in the sector (including technical, undergraduate and postgraduate degrees). This figure represents 240 more people than the previous year.

Table N°4.3
Educational courses in the ICT sector

COURSES OFFERED		2020			2021		
EDUCATIONAL LEVEL:		Admissions	Enrollment	Graduates	Admissions	Enrollment	Graduates
TECHNICAL CAREERS	Men	1.033	2.776	332	1256	3.683	389
	Women	312	650	123	522	1.332	198
	Total	1.345	3.426	455	1.778	5.015	587
UNDERGRADUATE	Men	1.814	10.390	290	1.885	8.871	264
	Women	881	3.984	120	677	2.843	134
	Total	2.695	14.374	410	2.562	11.714	398
POSTGRADUATE	Men	160	232	85	198	267	116
	Women	88	101	59	145	120	52
	Total	248	333	144	343	387	168
Totals		4.288	18.133	1.009	4.683	17.116	1.153

Source: Compiled by the authors based on CUTI and Statistical Yearbook of the MEC 2021.

As for the availability of training at primary and high school level, Uruguay is the first country in the world to provide a laptop computer to every child, adolescent and teacher in the public system (and also to train teachers in the use of this tool), thanks to the Educational Connectivity Plan for Basic Information Technology for Online Learning, known as the *Ceibal* Plan, for its acronym in Spanish. The plan was inspired by the "One Laptop per Child" project launched by MIT and has been implemented since 2007. One of its main achievements is reducing the digital divide associated with income level ([see section on technological infrastructure](#)). The *Ceibal* platform has also been implemented in English, which contributes to the bilingualism of the Uruguayan population.

Other initiatives have emerged from the public sector to promote ICT training. The program [Youth should learn Programming](#) was created by *Ceibal* with the support from CUTI, the IDB Group's Innovation Lab and the National Institute of Employment and Vocational Training (Inefop, for its acronym in Spanish) and offers training in the ICT sector to people aged 18 to 30 throughout the country with the aim of creating awareness since 2017. Youth should learn Programming (JaP, for its acronym in Spanish) has been providing training in programming and testing for six years and has been working for five years inserting these new profiles in the sector. It has more than 4,000 graduates from all over the country with statistically validated results. In terms of employability, JaP graduates show a 17% increase in employment, a 34% increase in jobs related to IT, either by working in companies in the industry or in related tasks, and a 28% reduction in low-skilled positions). Regarding the fulfillment of their

educational trajectory, among JaP graduates, the percentage of those who enter tertiary or university education is 18% higher than among those who do not graduate from the program.

In 2022, [Uruguay Bootcamp](#) was launched to create a quick access to training and working in information technology. In a short bootcamp period, people are trained in the essential skills required by the industry to assume an important role in a team and achieve goals. It is financed with financial support from INEFOP scholarships.

Another program devoted to training for the ITC sector was b_IT, 100% online, promoted by CUTI and with financial support from Inefop. The program started in 2017, lasted for two years, awarded 2,200 scholarships and trained 1,500 students in Python Devs, 250 IT Analysts and 900 developers.⁶

[Promoting ICT](#) is also a training program that aims to making more people aware of the importance of training in programming. The program was sponsored by the Presidency through the *Sembrando* project together with CUTI, Globant, Mercado Libre, IDB and Manpower Group. The graduate profile is junior programmer. In 2021, 600 spots were offered with a full ride for young people from the 19 departments, while in 2022, 90 specialized scholarships were added.

There are also other talent training options driven by the private sector. [Holberton](#) is a Silicon Valley code programming school with presence in several countries, and it arrived in Uruguay in 2020. It was founded by investors with experience in technology and education in companies such as LinkedIn, Yahoo! and Docker, with the purpose of bridging the digital divide by offering educational programs with rapid insertion into the workplace through an innovative methodology. In Uruguay they have an academy in Jacksonville, in Zonamerica. To apply it is not necessary to have the ability to pay or to have previous work and/or educational experience; the requirements are being over 18 years old and having a basic command of English.

[SoyHenry](#) is an online academy from Argentina that offers an e-learning platform with the particularity that the student pays for the course once they get a job. This academy offers the full stack web developer career course in exchange for a percentage of the student's future salary for a certain period of time.

⁶Read more: [A course to enter the world of ICTs and reconvert in the workplace](#) - El País.

Hack Academy is an educational institution that was founded in 2016 in Montevideo, and it specializes in online and face-to-face programming courses, part-time or full-time. Its mission is to train programmers and insert them into the IT labor market in the shortest possible time. Most of its courses are focused on people with little or no previous programming knowledge, in addition to its courses focused on people with previous experience.

Senpai is an institution with over six years of experience that has offices in several Latin American countries. In Uruguay, it specializes in offering courses in Digital Marketing, Programming, Digital Products, Videogames and Data science. It also develops customized training for companies looking to foster growth in a certain area depending on their business model, situation and needs.

In 2014 [Coderhouse](#) created the first Digital School in Argentina and it provides effective education in an accessible and fast manner. In 2019, they started teaching 100% in person and online courses and had their first students outside Argentina. They have courses in UX/UI design, programming, data analysis, among others.

As part of the strategy to leverage private efforts for greater employability of human resources, Uruguay relies on Inefop as one of the main funders of training programs (for more information visit this [link](#)).

Another initiative to highlight is the UTEC bootcamp, which seeks to train people in skills and tools that allow them to become software programmers and was implemented by 4Geeks Academy (for more information visit this [link](#)).

[Finishing Schools](#), a tool developed through a strategic alliance between Uruguay XXI and Inefop looks to facilitate the development and access to talent for new ventures with export emphasis that are geared towards the generation of new jobs. The program supports the needs of companies by co-financing the execution of training plans aimed at developing technical competencies or soft skills for workers, in order to add them to their staff. It allows financing -on a non-reimbursable basis- up to 70% of the training costs of plans at the request of the company. In addition, the program has a specific modality that promotes intensive digital training (bootcamps) in companies, which provides for higher subsidy amounts, subject to special requirements.

Through Uruguay XXI, the sector also relies on other support for access to talent, such as the [Smart Talent](#) labor portal where companies can post job opportunities focused on global

services free of charge. The portal offers the possibility of taking various tests to measure the skills of registered candidates. It also serves as a tool to promote the global services industry through a series of awareness-raising activities. The website was launched in March 2015 and currently has 50,000 registered candidates, with 557 global services companies (of which 265 are IT), and over 4,000 job opportunities posted since then (of which 3,500 are IT).

Table N°4.4
Smart Talent- Users, businesses and opportunities
 (2015-2022)

Smart Talent (ST)	2015-2022	2022
ST Users	50.689	4.306
Job Opportunities	4.676	752
IT Job Opportunities	3.535	675
IT Opportunities /Opportunities	76%	90%
Companies that use ST	557	44
IT Companies on ST	265	19

One available online tool on this portal is the [Educational and Job Guide](#) that presents the main job positions required in the global service industry. They are ordered by sector of activity, with a brief description and the training required for the each. The guide was prepared by Smart Talent based on a survey of the main companies in the sector identifying the training based on *Info Educa* (*Progresas-UdelaR* and the National Youth Institute [INJU] - Ministry of Social Development). Also, the potential to access qualified talent is complemented by the ease of obtaining residency and visas (in the few cases in which they are required). Uruguay XXI assists companies in the process of residency and visa procedures, whether for permanent residency for Mercosur citizens or temporary residency.

Finally, in 2018 the Ministry of Education and Culture carried out a report on the [characteristics of non-formal education in Uruguay](#). In 2018, there were almost 6,700 people enrolled in non-formal education in the ICT knowledge area. There are another 1,540 enrolled in Engineering and related professions.

5. TECHNOLOGICAL INFRASTRUCTURE

Uruguay has a solid first-class technological infrastructure, as a result of an intensive strategy based on public investments that allowed the country to position itself among the first in Latin America in Internet penetration (ITU), in the percentage of household and business connected with fiber optics. In addition, it was the first country in the region to launch a 5G network in 2019. Uruguay has a household connectivity of 88% and a high share of fiber optic connections.

Uruguay is home to one of the best data centers in Latin America (boasting several international certifications) and submarine cable connectivity continues to expand. It has three submarine cables in operation: *Unisur* and *Bicentenario* (installed in 1994 and 2011) that connect it to Argentina and the *Tannat* cable (installed in 2017) that connects to the United States through Brazil. In 2020 an extension to Argentina of this cable was announced. In June 2021 Google announced the construction of *Firmina*, an international submarine cable that will link the west coast of the United States with Argentina, Brazil and Uruguay and was approved in December 2022 by the Executive Branch. *Firmina* will enable better connectivity and data traffic of Google products in a faster and more secure way, boosting Google's infrastructure in the region. On the other hand, Google collects statistics on the adoption of Internet IPv6 on an ongoing basis and Uruguay is number one in Latin America and among the top 25 countries in the world with better adoption of this protocol.

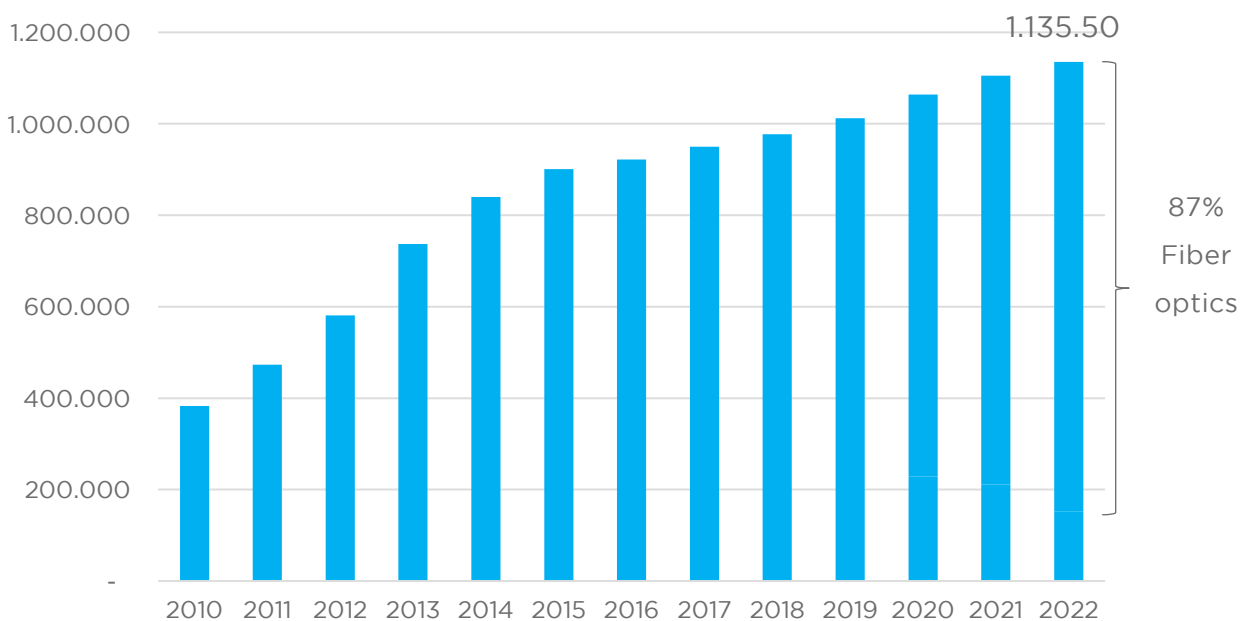
The development of digital government in Uruguay is led by the Agency for the Development of e-Government (AGESIC for its acronym in Spanish) and the country is part of [Digital Nations](#), a group established in 2014 and composed of the leading nations in digital development worldwide: the Republic of Korea, Estonia, Israel, New Zealand, United Kingdom, Canada, Mexico, Portugal, Denmark and Uruguay.

The United Nations Organization publishes since 2001 the "[E- Government Survey](#)", a study that measures the effectiveness of e-government in the delivery of public services and identifies patterns in the growth and performance of e-government. The dimensions taken into account for the construction of the total index (ranging from 0 to 1) are online services, telecommunications infrastructure and human capital. In its 2022 edition, Uruguay climbed to third place in the Americas, below the United States and Canada, leading in Latin America and the Caribbean (LAC). Another indicator to take into account is the first [Govtech Index of Ibero-America](#), published in 2020 by the Development Bank of Latin America (CAF). This

indicator measures and analyzes the integration of technology-based entrepreneurial ecosystems linked to the public management of governments, and also measures the degree of maturity of govtech ecosystems, the dynamism of startup and digital MSME markets with a public purpose and the level of innovation of public institutions. Uruguay ranked fourth in Latin America and the Caribbean in this index.

Uruguay has a high connectivity level worldwide and an outstanding performance in terms of fiber optic installation in households. Of the total number of fixed broadband services, which exceeds one million, 87% are transmitted by fiber optics. At the [2020 virtual conference of the FETH Council Europe](#), projections were presented for 2026 for the percentage of households with fiber optic for the European powers, which foresee values significantly lower than those currently achieved by Uruguay.

Graph N°5.1
Fixed broadband Services
 (2010 - 2022)

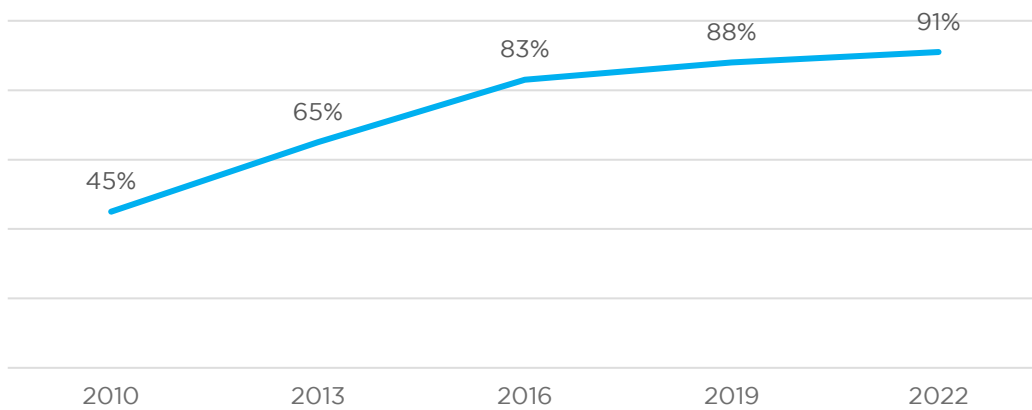


Source: Report on the Evolution of Telecommunications in Uruguay published by the Regulatory Unit of Communications Services (URSEC, for its acronym in Spanish).

Below are results of the [Survey of Uses and Information Communication Technologies 2022](#) (EUTIC for its acronym in Spanish), conducted every three years by INE and AGESIC. The latest edition focuses on the different ways in which Uruguayans access and use the Internet (measuring the period between 2010 and 2022), the weight of the main sociodemographic variables in determining these differences and the most notable changes in online behavior.

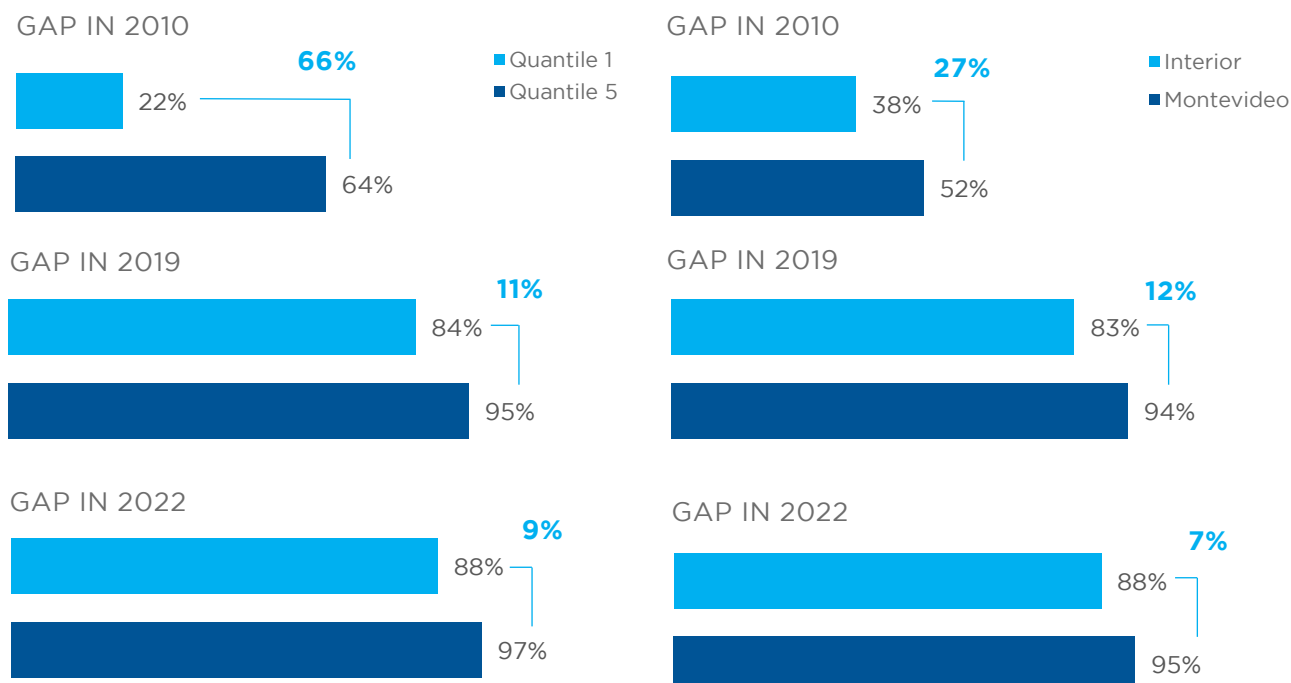
The survey reveals that Internet access has grown over the last 10 years, from 45% of households with an Internet connection in 2010 to 91% in 2022. In addition, the use of internet connection has increased, with 83% of the population going online daily. This increase was accompanied by a decrease in the digital access gap between households with different income levels and households in Montevideo compared to those in the interior of the country. The increasing use of varied devices, above computers with Internet access, prevails in the improvement of Internet access and narrowing of the digital divide according to income level.

Graph N°5.2
Internet Household Connectivity
(2010-2022, % of total homes)



Source: EUTIC 2010-2022.

Graph 5.3
Narrowing of the Internet access gap between households in quantile 1 and 5 and between Montevideo and the interior of the country.



Source: EUTIC 2010-2022.

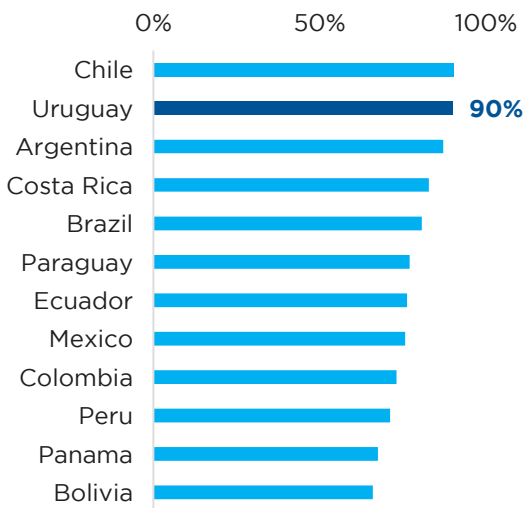
[Ceibal](#) played a key role in reducing the digital divide. In addition, in 2015 the *Ibirapitá* program was implemented, promoting the digital inclusion of retirees through the free delivery of tablets with an interface specially developed to be intuitive and user-friendly. According to EUTIC 2019, 26% of Internet users between the ages of 14 and 19 use a *Ceibal* device, while 25% of Internet users over 65 years of age use an *Ibirapitá* device.

Uruguay has made significant progress in democratizing access to new technologies and the massive use of digital government services. As the use of ICTs develops, both in terms of digital transformation and the widespread use of ICTs, so do cybersecurity threats in terms of quantity, sophistication and their impact at different levels. In this framework, it is worth mentioning the 2021 report prepared by AGESIC that qualitatively analyzes [Cybersecurity: companies, public sector and health institutions](#).

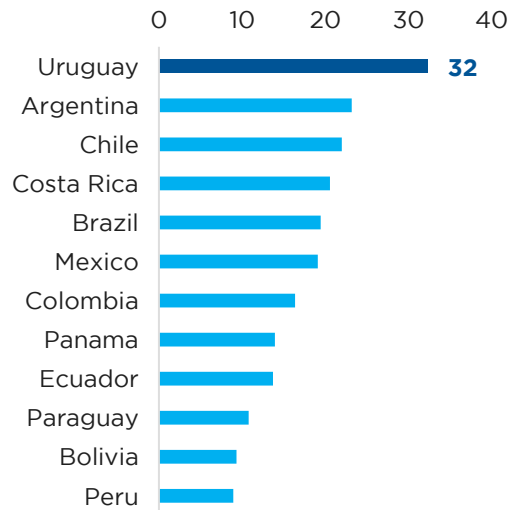
Uruguay's solid technological infrastructure was challenged in 2020 with the healthcare situation, given that the reduced mobility generated an increase in virtual traffic. In Uruguay, telecommunication networks responded to the significant increase in traffic without general

outages, allowing companies to shift to remote working. In the case of IT companies, according to the Quarterly IT Monitor prepared by CUTI, 70% of companies implemented remote work partially or totally between January and March 2021 (51% of companies opted for remote work in its entirety). Likewise, the United Nations Agency ITU, which centralizes worldwide data related to connectivity and technological infrastructure, which allows international comparisons, shows Uruguay in a strong position in the region.

Graph N°5.4
Individuals who use the Internet in Latin America (%)
 Select countries (2021)



Graph N°5.5
Fixed broadband subscriptions per 100 inhabitants
 Select countries (2021)



Source: ITU.

6. SUCCESS STORIES

6.1. ECOSYSTEM AND SUCCESS STORIES

Uruguay has an articulated and accessible technological and business ecosystem offering investment opportunities, not only for existing companies, but also for the development of new ventures. Economic ecosystems are made up of various stakeholders that interact with each other. Based on this interaction, innovation and growth can be fostered to a greater or lesser extent.

[The Global Ecosystem Dynamics Initiative \(GED\) and MIT D-Lab Local Innovation Group](#) prepared studies of innovation-based entrepreneurship ecosystems in different Iberoamerican cities. In their report for Montevideo, they highlighted the high degree of collaboration in the city's ecosystem as a strength (the highest collaborative dynamics of the ecosystems studied in Latin America). In addition, they noted that collaboration among stakeholders seeks to create synergies and improve long term results. According to the study, the city of Montevideo has a solid footing to be recognized as a benchmark innovation-based entrepreneurship ecosystem in Latin America.

An advantage of the innovative ecosystem in Uruguay is that there is easy access to decision makers. This, added to the characteristics of a small, orderly and transparent country, together with an optimal technological infrastructure, make Uruguay suitable as a destination for innovation and testing ground for new technologies. Thus, Uruguay has positioned itself internationally through important technology and digitalization projects that are closely associated with the modernization of the government and state-owned companies and that have technology developed by Uruguayan companies supporting them. Some examples are:

- The successful implementation of the "One Laptop per Child" program (in Uruguay, Ceibal). Uruguay is the first country in the world to provide free laptops to all students and teachers in public schools, from preschool to high school.
- Launching the first 5G network in Latin America.
- Full traceability of the meat production chain. This makes Uruguay the only country in the world that was able to secure the entire production chain by implementing a national

traceability system that combines the maturity of a national production sector -such as agriculture- with the sophistication of the information technology industry.

The appeal of Uruguay's innovative ecosystem attracts the attention of many multinational companies. In May 2021, Google acquired a 30-hectare property in the *Parque de las Ciencias* in Canelones, aiming to install a data center for the storage and management of the company's servers. It is estimated that, should this investment occur, it will result in the creation of 500 to 600 jobs, with the possibility of hiring up to 1,200 workers. According to the company's most recent statements (May 2023), "the data center project is still in an exploratory phase and Google's technical team is actively working with the support of national and local authorities". It should be noted that the telecommunications giant has only one data center in Latin America (located in Chile).

Uruguay's ICT sector is very dynamic. In April 2022, Globant announced a final agreement to acquire GeneXus. In turn, the international consulting firm Baufest, dedicated to innovation in software and digital solutions for companies, announced its support for technology professionals in Uruguay. In May 2022, the Uruguayan machine learning startup MonkeyLearn was acquired by the North American company Medallia, a venture focused on maximizing customer, employee and patient experience processes through a SaaS platform.

In addition, leading metaverse company The Sandbox acquired Uruguayan technology company Cualit, and Vesta Software Group, a subsidiary of Constellation Software, announced the acquisition of Uruguayan company Datalogic, a provider of software solutions for enterprise resource planning, human resources and payroll management in the region.

Cencosud announced the creation of a technology, digital and innovation hub in Uruguay. The company began operations in the country to develop and accelerate a digital ecosystem for the group's companies. From its offices located in Aguada Park, it will provide services associated with the development of digital products and businesses, such as e-commerce, marketplace, retail media and advanced analytics, which seek to provide unique experiences for its customers.

Finally, in mid-May 2023, Qubika was created by the merger of Moove It and December Labs, two leading technology companies in Uruguay, with the support of Recognize, a renowned investment fund based in New York. Qubika will be headquartered in Austin, Texas, with offices in the US and Latin America. They plan to hire 3,000 people over the next five years, a third of whom will come from Uruguay. Qubika, which works for a variety of industries, with a

particular focus on the Healthcare and Fintech segments, is now one of the largest software development companies in Uruguay. Recognize's investment in Qubika is the fund's first in Latin America.⁷

In addition, with the combination of initiatives already underway such as [New Lab Studios](#), [Microsoft IA/IOT Lab](#), [Open Digital Lab](#) and others under negotiation, a cluster of laboratories located mainly in the Technological Laboratory of Uruguay, which already houses numerous technology companies and institutions providing support to the sector, is expected to consolidate in the short term.

In this regard, [Uruguay Innovation Hub](#) is a new program that seeks to strengthen the idea of Uruguay as an innovation hub, and it was launched at the end of 2022. It is an inter-institutional public-private initiative supported by the National Agency for Research and Innovation (ANII), the Office of Planning and Budget (OPP), Uruguay XXI, the Ministry of Economy and Finance, the Ministry of Industry, Energy and Mining, and the Ministry of Education and Culture. The program seeks to promote science, technology, and innovation projects that will lead the country toward a knowledge-based economy and society, establishing itself as a global innovation hub. The program also integrates public-private co-investment opportunities, open R&D infrastructure and acceleration programs to foster the growth and internationalization of the innovation ecosystem in Uruguay.

Some of the **success stories** of companies in the sector are described below. These include national businesses, major multinationals and startups that were acquired or merged with foreign companies.

⁷ For further information please click [here](#).

Examples of companies:

d·local

dLocal: dedicated to the development of digital payment solutions in emerging countries. The company's clients include Uber, Spotify and Amazon, among others. In October 2020, this Uruguayan fintech became the first Uruguayan unicorn -a qualification that emerging ventures receive when they receive a valuation of over US\$ 1 billion- and in June 2021 it began to list its shares on the New York Stock Exchange. This is the first Uruguayan company to reach this milestone. In addition, the platform closed a deal with Amazon that allows foreign merchants to sell their products in Brazil for the first time. dLocal operates from its headquarters in Montevideo and has offices in San Francisco, São Paulo, London, Tel Aviv and Shenzhen.

Globant >

Globant: a company dedicated to developing software and creating digital experiences that reach millions of users (innovative technology services). Globant is a multinational of Argentine origin, founded in 2003 by its CEO Martin Migoya (along with other partners). In 2010 they landed in Uruguay for the first time (operating in the free trade zone named Aguada Park) and in 2021 they opened their second headquarters in the country, in the World Trade Center Free Zone area. Globant is considered one of the four Argentine unicorns, and has more than 16,000 employees worldwide, 700 of which are Uruguayan.



Mercado Libre: an Argentine e-commerce platform that has been connecting millions of users in the purchase and sale of products via the Internet since 1999. It has operations in 18 Latin American countries, currently employing over 16,000 people worldwide and has become a leader in the sector for the region as a whole.

nowports

Nowports: is a company that provides users with the exact location of their merchandise in real time as it is moved from port to port. In the case of Nowports, the seed investment meant

a capital injection of US\$ 8.6 million. In Series A it raised US\$ 23 million, in Series B US\$ 60 million and in Series C US\$ 250 million with a valuation of US\$ 1.1 billion, which led it to become a unicorn by mid-2022. Thus, Uruguay incubated two unicorns in the last two years. Each of these financing stages enabled the company to open new offices in different places in Latin America. The freight technology company now has ten offices in seven countries: Mexico, Chile, Colombia, Peru, Brazil, Panama and Uruguay.



Delivery Hero

Pedidos Ya: the Uruguayan online food delivery platform was acquired by the German company Delivery Hero, an online food delivery service based in Berlin. The company operates in over 40 countries. Since its inception, *Pedidos Ya* received funding of US\$ 329 million, which allowed it to reach US\$ 30 million in orders in the second quarter of 2020, to expand its delivery network to more than 35,000 delivery drivers and 60,000 stores in Latin America (restaurants, supermarket shopping, pharmacies and other convenience stores), to have a team of more than 2,500 people, and to reach a market valuation greater than US\$ 2 billion according to its stake in the German **Delivery Hero** group listed on the Frankfurt Stock Exchange.

Sabre

Sabre is a leading U.S.-based provider of technology solutions for the travel and tourism industry. It offers a wide range of business intelligence, mobile technology, distribution, and software-as-a-service solutions that are used by travel providers and buyers alike to plan, promote, and operate their businesses. It began operating in Uruguay in 2004 when it landed in the country with the idea of installing a call center and is currently located in *Zonamerica* where they have a global service center with approximately 930 employees providing customer service, sales, marketing and technology development services to subsidiaries and customers in over 90 countries and in 14 different languages.



Tata Consultancy Services (TCS). This company chose Uruguay in 2002 as a place to settle its first development center in Latin America. Today it is the main employer in the ICT industry and has offices in Uruguay and abroad, providing services to the rest of the world.



Infogain, an Indian technology company headquartered in Silicon Valley, chose Uruguay as the headquarters for its landing in Latin America in 2022. The technology company opened its first offices in Zonamerica in April 2022, and added another space in WTC Free Zone. Twenty-three people work in Uruguay, while another 25 work remotely from other countries such as Argentina, Mexico, Brazil, Chile and Colombia. In the next two years, the company expects to have a team of 150 people in the region, more than 100 of whom will be from Uruguay.⁸

Startups:⁹



Nocnoc is a technology platform for global retailers and brands looking to boost their sales in Latin America. Specifically, companies from China and the United States use Nocnoc to offer their products on dozens of e-commerce sites, avoiding logistical processes that could negatively impact their transaction volume.



Vopero is a circular and sustainable fashion marketplace designed for the resale of used clothing in perfect condition. This initiative allows new customers to access sustainable fashion at an affordable price, through a personalized catalog and a unique experience.

⁸ For further information please click [here](#).

⁹ For further information please click [here](#)



Tuna is an open-source software that gives companies - especially e-commerce companies - the ability to integrate multiple payment providers and anti-fraud tools into their platform.



Paganza is a mobile app that allows users to perform financial transactions and manage their invoices with different functionalities.



MonkeyLearn is a language processing platform that processes texts and organizes them on a large scale using trainable AI.



KONA provides banking solutions focused on customer experience from AI-enabled chatbots to new innovative payment solutions. The company was acquired by solutions provider Technisys (acquired in 2022 by US-based SoFi Technologies).



Bankingly is a platform that enables financial institutions to offer online and mobile banking services. Through these channels, customers can make domestic and international transfers, check account balances and transactions, pay for local services, manage their credit cards and apply for loans.

Mergers and Acquisitions:

The following table shows the latest announcements of mergers, acquisitions and investments linked to the ICT sector in Uruguay:

Table 6.1.1
Mergers, acquisitions and investments in the ICT sector
 (2021-2022)

Announcement Date	Target company	Transaction type	Buyer	Buyer's country	Activity
Nov-22	Datalogic	Acquisition	Vesta Software Group	UK	Software Solutions
May-22	Cualit	Acquisition	The Sandbox	Canada	Blockchain / Metaverse
May-22	MonkeyLearn	Acquisition	Medallia	USA	AI / Big Data
Abr-22	Genexus	Acquisition	Globant	Argentina	Software Solutions
Oct-21	K2B	Acquisition	Constellation Software	Canada	Software Solutions
Oct-21	GeneXus Consulting	Acquisition	Constellation Software	Canada	Software Solutions
Oct-21	Overactive	Acquisition	Perficient	USA	Software Solutions
Jun-21	Infocasas	Acquisition	Frontier Digital Ventures	Malaysia	Real Estate Software
Abr-21	dLocal Ltd	Minority share	Alkeon Capital; D1 Capital Partners; Bond; Tiger Global Management LLC	USA	Fintech
Mar-21	Kona	Acquisition	Technisys SA	Argentina	Fintech
Ene-21	S1Gateway	Minority share	Patagonia Capital Partners (PCP); Quadrant Management Inc; Inverlat SA	Argentina; USA.	Software Solutions

Source: EMIS.

7. OPPORTUNITIES

7.1. INVESTMENT OPPORTUNITIES MANAGED BY URUGUAY XXI

As of December 31st, 2022, Uruguay XXI has a portfolio of over 80 investment opportunities (ODI, for its acronym in Spanish) within the ICT sector, which accounts for 31% of the total opportunities in the portfolio. Most of the ODIs are within the software development subsector (with 37% of the opportunities in ICTs). Almost all of the opportunities in the pipeline come from Argentina and the United States, which respectively represent 39% and 31% of the total. Argentine companies continue to be interested in investing in the Uruguayan ICT sector.

Table N°7.1.1
ICT investment opportunities managed by subsector

Subsector	Share (%)
Software Development	37%
Technical Support	20%
Fintech	8%
Consulting Services	7%
R+D	5%
Data Center	5%
Cryptocurrency	4%
E-Commerce	4%
Edtech	2%
Other	8%

Source: Uruguay XXI.

If all the projects underway are completed, more than 3,700 new jobs could be created for this sector in Uruguay.

7.2. INVESTMENT ANNOUNCEMENTS IN THE TECHNOLOGY SECTOR

In 2022 the country attracted more than 60 investment projects from foreign companies (hereinafter "announcements")¹⁰, 33% of which were from companies in the technology sector. These came mainly from Argentina and North America, which respectively accounted for 36% and 32% of the technology sector announcements. Projects associated with IT centers accounted for 68%, although these companies also invested in global service centers (14%) and R&D service centers (9%).

Table N°7.2.1
ICT company investment announcements

Activity in Uruguay	Share (%)
IT Centers	68%
Global Service Centers	14%
R+D Services	9%
E-Commerce	5%
Other Services	5%

Source: Uruguay XXI

The investment announcements surveyed in 2022 are expected to create approximately 300 new jobs¹¹.

7.3. EXPORT OPPORTUNITIES MANAGED BY URUGUAY XXI

As of April 30, 2023, Uruguay XXI manages 71 export opportunities within the ICT sector, which accounts for 32% of the total opportunities in its portfolio. Of the total number of export opportunities in the ICT sector, the majority (66%) corresponds to software development or to the commercialization of technological products, while the remaining 34% are related to the video game industry. These export opportunities are geared towards 16 export destinations.

If a market analysis is carried out, 21% of the export opportunities are destined for Paraguay, followed by an equal share of 21% of opportunities corresponding to video game studios,

¹⁰ To obtain this data, information pertaining to investment opportunities identified by Uruguay XXI, databases (FDI Markets, Emis and Orbis) and press releases were compiled.

¹¹ Employment figures are approximations based on information provided by the investing company to Uruguay XXI, FDI Markets or published in press releases.

which, due to the dynamics of the sector's business model, target global platforms, not specific geographic markets. This is followed by Mexico with 20%, the United States with 18%, Ecuador and Colombia with 3% each, and then different markets with 1% of the export opportunities.

Table N°7.3.1
ICT export opportunities by destination

Destination	Share (%)
Paraguay	21%
Global	21%
Mexico	20%
United States	18%
Ecuador	3%
Colombia	3%
Puerto Rico	1%
Peru	1%
United Arab Emirates	1%
Canada	1%
Portugal	1%
Finland	1%
United Kingdom	1%
Russia	1%
China	1%
Chile	1%
TOTAL	100%

Source: Uruguay XXI.

8. ANNEXES

8.1. REGULATORY FRAMEWORK

For more information on the regulatory framework of the sector in Uruguay see: [Regulatory Framework](#).

8.2. INSTITUTIONAL FRAMEWORK

For more information on the institutional framework of the sector in Uruguay, see: [Institutional framework](#).

8.3. ICT EVENTS IN URUGUAY

For a list of the most relevant ICT sector events in Uruguay, see the following link: [Events in Uruguay](#)

9. URUGUAY AT A GLANCE

URUGUAY AT A GLANCE

Official name	Oriental Republic of Uruguay
Geographic location	South America, located between Argentina and Brazil
Capital	Montevideo
Surface area	176.215 km ² . 95% of the territory is productive land, suitable for agricultural exploitation
Population (2022)	3.57 million
Population growth (2022)	-0,1% (annual)
GDP per capita (2021)	US\$ 21.164
Currency	Uruguayan Peso (\$)
Literacy rate	0,98
Life expectancy	77,9 years
Government type	Democratic Republic with presidential system
Political division	19 departments
Time zone	GMT - 03:00
Official language	Spanish

MAIN ECONOMIC INDEXES

Index	2017	2018	2019	2020	2021	2022	2023*
GDP (Annual % Variation)	1,74%	0,16%	0,74%	-6,26%	5,28%	4,92%	1,97%
GDP (Millions US\$)	64.995	65.118	61.992	53.613	61.380	74.182	75.484
Population (Millions of people)	3,49	3,51	3,52	3,53	3,54	3,55	3,57
GDP per Capita (US\$)	18.606	18.573	17.619	15.184	17.324	20.867	21.164
Unemployment Rate - Annual Average (% EAP)	7,9%	8,3%	8,9%	10,4%	9,3%	7,9%	8,1%
Exchange Rate (Pesos per US\$, Average Annual)	28,7	30,8	35,3	42,1	43,6	39,5	40,9
Exchange Rate (Annual Average Variation)	-4,8%	7,3%	14,7%	19,2%	3,6%	-9,4%	3,5%
Consumer Prices (Accumulated annual Var %)	6,6%	8,0%	8,8%	9,4%	8,0%	8,3%	6,7%
Exports of goods and services (Millions of US\$)**	16.845	17.216	17.185	13.735	19.336	22.605	23.283
Imports of goods and services (Millions of US\$)**	13.367	13.964	13.499	11.364	14.903	18.716	20.057
Trade surplus / Deficit (Millions of US\$)	3.478	3.252	3.687	2.371	4.433	3.889	3.227
Trade Surplus / Trade Deficit (% of GDP)	5,4%	5,0%	5,9%	4,4%	7,2%	5,2%	4,3%
Overall Fiscal Result (% of GDP)	-3,2%	-3,9%	-4,4%	-5,8%	-4,1%	-3,4%	-
Gross Capital Formation (% of GDP)	16,3%	14,9%	14,3%	16,4%	19,2%	18,8%	-
Gross Public Sector Debt (% of GDP)	59,8%	59,1%	60,1%	74,5%	69,1%	64,3%	-
Foreign Direct Investment (US\$ Millions)***	-590	-11	2.018	746	2.244	3.839	-
Foreign Direct Investment (% of GDP)	-0,9%	0,0%	3,3%	1,4%	3,7%	5,2%	-

*Data shown in red.

Sources: BCU, INE, MEF and estimated data (*). Fiscal result data include the effect of Law N°19,590 (fifty-year-old's). In 2017 the BCU adopted the methodology of the 6th Manual for Balance of Payments. This methodology includes purchases and sales of goods and re-exports which are available since 2012. Data are net flows so they may be negative values (**).



Uruguay XXI
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