



**MAPEO TIC
BOLIVIA**

MAPPING OF THE DIGITAL TECHNOLOGY ECOSYSTEM IN BOLIVIA 2023



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Mapping of the Digital Technology Ecosystem in Bolivia 2023

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We would like to express our outmost sincere gratitude to all of the entities and persons who had provided their information, experiences, ideas and above all, their valuable time. This fifth Mapping edition, which includes a chapter centered within the Fintech ecosystem, while reflecting our hope to strengthen and expanding this sector in Bolivia.

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1. Prologue



1.1 SOLYDES FOUNDATION

From its creation, the programs and projects of the SOLYDES Foundation comply with the objective to create sustainable and inclusive solutions that generate opportunities for the men and women of Bolivia, betting toward digital innovation and transformation, as the propelling force needed for social development. It is a sort of development, whose direction is proven with the growing influence of the startups, within the global industrial structure and its power to reconfigure industry and economics.

In 2019 the SOLYDES Foundation made a commitment to the support of the ecosystem of technological innovation in Bolivia, working on the basis of three strategic lines of action, where SOLYDES as the Accelerator, has been the first one, and it consists of a startups' development program; the second one provides support to the capital investment to entrepreneurs through ESCALATEC S.A.; and third one, it refers to the permanent work dedicated to the evolution and expansion of the innovation of the ecosystem of our country.

This document is intended to provide greater support to industry; the information provided is a valuable guide for startup founders, capital investors of entrepreneurs, the academic sector and any individual or entity that may be interested in understanding and participating within a vibrant and fast-growing ecosystem.



1.2 FUNDA-PRÓ

FUNDA-PRÓ experienced significant changes in its strategy over the last years. Still our strategy focuses on supporting the vast Bolivian majority to access development opportunities. The Foundation has prioritized the development of human talent as this is one of the facts that generates well-being in a society. Therefore, and in consistency with this vision, it focusses its attention to on supporting initiatives that prioritize the Promotion of information and communication technology (ICT) ventures and, consequently, the digital transformation of Bolivian economic players.

Our approach is based on the recognition that ICTs and other technologies have a power of transformation that generates wealth and social development. FUNDA-PRÓ's strategy, in line with Bolivia's established priorities, looks to promote innovation and technological development to improve the Bolivian's quality of life. The Foundation envision that, innovative technologies such as artificial intelligence (AI), among others, will have a huge contribution in the promotion of technological ventures and projects that generate positive impacts on society as well as on environment.

FUNDA-PRÓ believes that digital transformation of companies and institutions will boost the optimization of their procedures, while achieving greater efficiency, scope, and effectiveness in their services. Likewise, we believe that technological advances are inclusive, and by this meaning we promote the participation of women and young people in the technological field, highlighting this strategic economic sector as an interesting source of potential employment.

In summary, FUNDA-PRÓ has evolved to actively promote information and communication technologies that come hand in hand with the digital transformation of Bolivian companies and institutions. Its vision focuses on the development of human talent and the support of enterprises that use technology as a key tool to generate wealth, employment, and a positive social impact across the country.

For the fifth consecutive year and due to the strong collaboration between the institutions involved, we offer the latest version of the Digital Technology Ecosystem Mapping in Bolivia 2023, as a contribution to improve the ecosystem that shelters new Bolivian entrepreneurial activities.

FUNDA-PRO trust that the information included in this document shall provide effective assistance to anyone who seeks to support Bolivian development.



1.3 EMPRENDER FUTURO

ChatGPT was announced in November of 2022 and ever since then; various initiatives have been developed throughout. Companies, startups, entrepreneurial activities and people have been trying to develop valuable proposals day-by-day, while applying these technological changes. We are amidst an increasing wave of generative types of technology propelled by artificial intelligence models that bring about a whole array of innovations that favor any type of industry.

By 2023, the educational sector had been undergoing a drastic change led by new forms of technology such as ChatGPT, which has forced us to change our strategies on a short, intermediate and long term basis. On a short term basis, we need to have a transcendental change in the overall transference of knowledge, which would entail modifying the current evaluation methodologies in benefit of future generations. On a mid and long term basis, we need to adopt Artificial Intelligence tools, and having a better approach to develop personal skills, such as critical thinking, which is crucial in every form of industry.

The current revolution that we are undergoing with generative technologies from Artificial Intelligence, they go hand in hand with data generation and administration. Such forms of emerging technology offer new opportunities for the proper administration of knowledge, while improving the learnings skills and innovation of companies.

Facing the current technological evolution, the overwhelming amount of information and its disruptive impact in every type of industry, it is important to also identify the benefits and opportunities to users and beneficiaries. This is why reports such as Digital Technology Ecosystem Mapping in Bolivia are significant to the ecosystem, because it monitors and it provides information to confront current and future challenges.

It is yet one more year, and we are still committed to the construction of a better future for everyone. As the Emprender Futuro Foundation we added our support toward the development of this ICT Mapping-2023. This document is in keeping with our mission to create opportunities by generating greater talent through the use of technology, while incrementing its impact in our society and strengthening one of the most strategic pillars of modern industry, and the overall development of our country and the world, which is the realm of technology.

BIM

◇ Asset Management

1.4 BIM

After three years of the pandemic and the worldwide expansion of COVID-19, countries in Latin America and their economies, continue to deal with significant challenges to overcome the aftermath of these disastrous events. In accordance to the perspective in the growth reduction projected for 2023, which would have reached barely 1.8% in comparison to 3.9% from 2022, it is also expected for various economic sectors to experience many difficulties. This also includes significant increments in interest rates at a global level, a trend that continues to be on the rise and of significant impact to the venture capital sector and the potential financing of startups.

However, within this environment, it is clearly seen that the entrepreneurial ecosystem in the country continues to show constant growth and general improvement. The participation of new key players, which includes the significant role that accelerators play in the country and the expansion of various startups at international level, which has permitted between 2022 and 2023 for Bolivia to position itself as a relevant actor within the ecosystem of Latin American, while seeking on a midterm basis to translate this into significant movement of capital that would help to strengthen the local ecosystem.

On the other hand, the systemic problems related to liquidity scarcity experienced throughout 2023 globally amongst various financial systems, together with the increase of the interest rates, this represents a greater challenge to the sector. The appetite for high-risk investments with extraordinary assessments that seek to have extraordinary yields, through sales of such assessments, these are operations that have become a thing of the past. The current situation, especially in Latin America, invites this sector to adhere to the reality of our countries and to seek out greater financial sustainability on a short and mid-term basis. This, however, may entail that the startups that may survive their first years of operation may be fewer, even if some of them may reach some success at greater scale on a mid-term basis. In addition to this, those entrepreneurial activities that may have a strong corporate or environmental component or those that may be able to align their goals with Sustainable Development Objectives (SDO) which would have a better chance to have greater scalability.

Having said this, there is a long way to go, and the strengthening of our ecosystem will support those local startups locales that may be able to achieve the objectives of sustainable growth. At Bolivian Investment Management (BIM), which is part of the Panamerican Group, we have focused our efforts on investments that seek to obtain a positive impact and that would aid to have progress and growth among the various economics sectors of the region. BIM has evaluated and done more than 300 investments of institutions along 14 different countries in Latin America and we believe that in order to continue to strengthen our ecosystem and to help the startups to survive the current and complex macroeconomic environment within the sector, and for this it is necessary to have greater financial sustainability on a short term basis, which would generate a greater impact, while adapting the reality of Latin America and especially Bolivia.



1.5 ICCO

The connectivity differences within Bolivia especially along urban and rural areas, this is very significant, close to 90% of the rural homes do not have an internet connection, which accentuates the gaps of poverty and inequality between the country side and the city. Young people within rural zones face many obstacles when trying to find proper and gainful employment and/or to succeed with their entrepreneurial activities.

On the other hand, there are clearly marked difficulties to launch and consolidate a business. This is particularly more evident among technology based models based. However, the pandemic has marked a turning point for the use of digital-based business models to begin to take off and for their consolidation at the national level, although private and/or public initiatives are needed to have a true social and economic impact.

The projects implemented by ICCO, with the support of BID, ASDI and FIDA, seek to generate technological innovation that would reduce the rural-urban connectivity gap and that would increment social and economic opportunities for young people in semi-urban and rural areas, while providing access to technology to the disadvantaged people and communities.

This year ICCO once again has been a part of institutions that enable the elaboration of the Digital Technology Ecosystem Mapping, intended to provide greater information to all of the key players of the digital ecosystem, based on the effort of such organizations, but particularly aimed at providing an incentive to startups and to allow them to locate a niche audience and a significant market within rural areas and perhaps through technological innovations they may be able to have a more dynamic economic and social development along such regions.

An aerial, high-angle photograph of a city's street grid, viewed from a slightly elevated perspective. The image is heavily stylized with a deep blue color overlay, giving it a monochromatic, architectural feel. The perspective is looking down at an angle, showing the repetitive patterns of buildings and streets. The text '2. Introduction' is superimposed in the lower-left quadrant of the image.

2. Introduction



“Our tomorrows are the product of the thoughts, feelings and actions that we have today, either individually or collectively. This belief is presented with questions about our options and abilities. Which kind of future we wish to create and who has the capacity to create it?”

**“Handling of the Unknown”
- R. Boot, J Lawrence and J. Morris**

During our fifth year of development of the Digital Technology Ecosystem Mapping, we have been able to express that our ecosystem, just like a condor, it has been ascending and getting stronger, it has reached new heights and it has extended its scope.

Within this year's report, we have been concentrating our attention to information and communications technology (ICT), as one of the main sources of innovation in Bolivia. However, we also acknowledge the crucial role of Fintech companies in the creation of a new vision of what could be accomplished within the country, and we have developed a special chapter about this very issue.

Finally, we have highlighted some of the most successful cases that have emerged this year within the ecosystem, which are a huge source of inspiration and a reminder of everything that may be accomplished with greater effort and dedication and within the adequate conditions.

This report is an invitation to have an in-depth understanding of the evolution of the ecosystem, while becoming aware of the progress and the challenges that we have, and the need to join efforts to continue to grow. Perseverance, patience and trust ought to be the values that feed the necessary growth within this environment and it helps to produce an abundant number of positive results such as solid startups, which helps to provide greater wellness that our society expects and needs.

3. Methodology

We now include some of the most relevant aspects of the methodology used for the creation of the current report.

3.1 Scope of the Research

Starting with the geographical scope as initially defined in the three capital cities of the Departments of: La Paz, Santa Cruz and Cochabamba, the work was then extended to the other Departments of Bolivia, with the exception of Pando. The analysis was started with the review of the information, sources, data and the instruments used in the previous reports (2019, 2020, 2021 and 2022) and the sampling framework was updated (by including a list of the observation units), as well as the measuring tools, by following this process:

- Validating which measuring instruments respond to the objectives established within the Scope of the Research proposed for this term
- Establishing the relations between the variable of this research
- Defining the minimum sampling size in accordance to the participating groups of interest
- Reviewing the baseline indicators and their evolution over time (determining expected values)

3.2 Key players of the digital-technological ecosystem in Bolivia

The defined target population for this Mapping is the same as the one that had been proposed within the first four versions of the report. Specifically:

- Identified startups and new ones that will soon be identified
- Academic area (universities)
- Government institutions that provide direct support
- Incubators
- Accelerators
- Investors

Within this version of the document, we have included the Fintech sector, with a specific analysis in such regard.

3.3 Methods used to collect information

Questioners have been used, and they have been distributed through various electronic means, mainly through a platform that oversees the information's consistency, intelligent introduction of information and the generation of a well sorted out data base.

For each type of actor, a specific instrument has been designed and adapted to collect appropriate information. The process included the completion of 64 startups surveys and 33 to other institutions within the ecosystem, which were filled out and further improved with 12 in-depth interviews to key actors of the same environment.

3.4 Processing of qualitative and quantitative information

The processing of qualitative information had been completed in two stages: i) analysis of the results of the current research; and ii) analysis of the results for this mapping in regards to the previous ones. For each of the types of actors, output tables were created and indicator of the aggregated total, in addition to the variables of the specified interests.

One of the main tasks was to identify new startups (updating of the sampling framework) and their current status, as well as whether or not this would include other institutions within the ecosystem. A series of startups and institutions created between 2020 and first semester of 2023 were used for this objective, while reviewing the same sources from the previous Mapping versions.

A group of experts was selected from the same ecosystem to gather data about qualitative issues and the in-depth interview technique was used. The gathered information was processed in accordance to their specific characteristics.

The qualitative information was processed by appropriate tools and indicators. Great effort was applied to generate indicators, which may have greater continuity in the future, and this would eventually enrich the analysis of the evolution of the ICT ecosystem in Bolivia and this would be applied to future versions of this report.



4. Reference Framework

It is important to see the global and regional context of the startup's ecosystem to properly understand the development of the ICT ecosystem in Bolivia.

4.1 Global context of the startup ecosystem

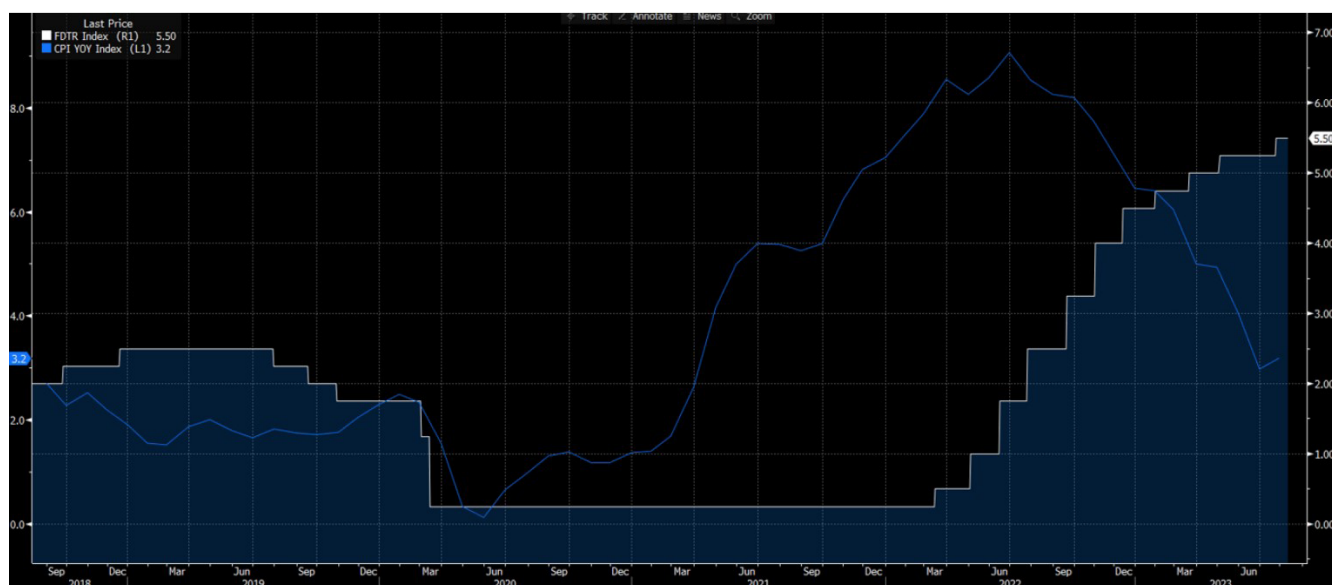
The global startup ecosystem had a significant shift in 2023, mostly because of the global economy and the related reduction in financing.

For the last two years, some of the main countries in the world, such as the United States, the United Kingdom, Germany and France, as well as some emerging economies in Latin America, such as Mexico, Brazil and Chile, have been suffering an inflation caused by the enormous amount of money introduced by the central banks of those countries, to counteract the effects of the pandemic of 2020, and the war, in 2022.

In keeping with that, the central banks began to increment their interest rates, to control the inflation. In March of 2022 the United States started such an increase, which was quickly imitated by other countries, and they have retain such changes until now (see Graphic 1). Such increase has increased financing and investments costs, mainly among the more volatile sectors or among the high risk industries.

In accordance to Startup Blink¹, this economic context has caused the startups financing to become less accessible, which has led to a funding winter².

Graphic 1: Reference interest rates vs annual inflation in the United States 2016-2023



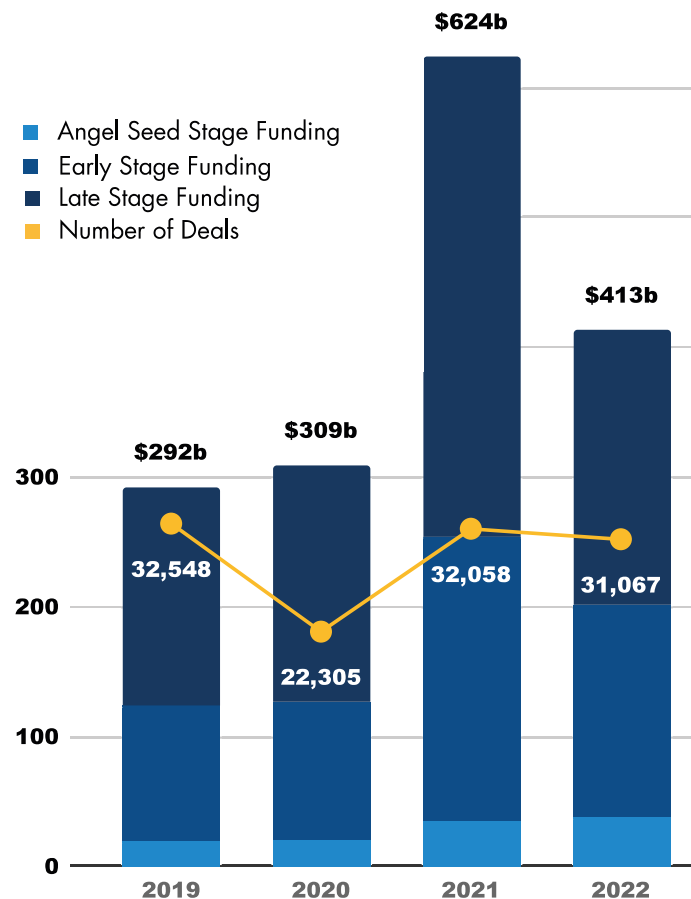
Source: Bloomberg

¹ StartupBlink is a research center of the global startup ecosystem, in its latest report Global Startup Ecosystem Index 2023; it shows the situation of the ecosystem by countries and cities.

² This situation shows an extensive period of reduced capital flow for the startups.

The effects of the economic context may be seen in the strong decrease of the global financing of startups in 2022, which has dropped to USD 413 billion, after having reached a record number of USD 624 billion in 2021. This steep decrease is mostly because of the startups financing within their growth stage (late stage funding), the startups have received less financing, and their value has dropped. In contrast, early stage financing (early stage funding) had slightly decreased while the financing during the seed financing (angel seed funding) has been incremented (see Graphic 2).

Graphic 2: Financing volume of the startups 2019-2022

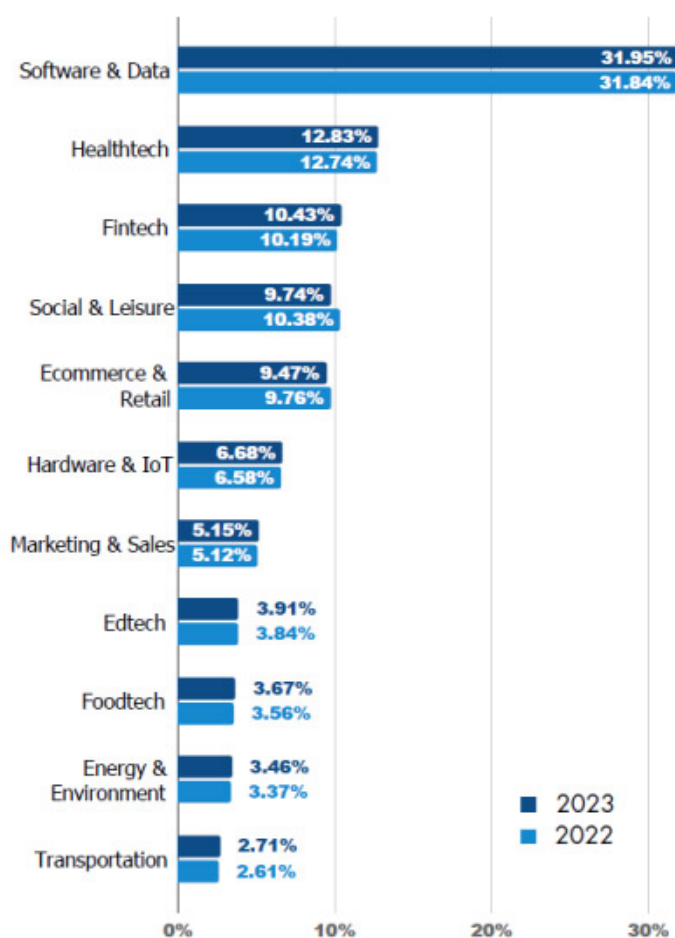


Source: StartupBlink

The different sectors of the industry had all experienced slight changes. In 2023 the sector software and data technology had remained in the industry with the highest participation by reaching 31.95%, which was followed by the health sector (healthtech 12.83%) and finances (Fintech 10.43%) (see Graphic 3). The trend within the sector software and data technology had shown significant change among the whole industry, while centering their attention on technology based on the development of artificial intelligence, in contrast with technology based on web 3.0, metaverse, blockchain, virtual reality and augmented reality.

The trend within the industry of startups also shows an increasing interest in artificial intelligence, which is showing an increment on technologies based on the reduction of the impact to climate shifting (climate tech), the latter with special attention by various governments.

Graphic 3: Participation of startups per industry



Source: StartupBlink

4.2 Regional context of the startup ecosystem

In regards to the performance of startups among the countries within the region, they have had the same global performance. It is important to highlight that the startups still have a reduced participation within the global ecosystem, because of the index developed by StartupBlink, Latin America has reached a participation of 7.7% in 2023, represented in 77 cities in Brazil, Chile, Mexico and Colombia, among the most important ones that include startups.

The reduced participation of the region at the global level generates a great potential and a challenge to include more countries, like Bolivia³ while supporting the growth and development of the startups.

³ According to the Startup Ecosystem Index 2023 report, Bolivia appears for the first time in said report with the participation of three main cities: La Paz, Cochabamba and Santa Cruz.

5. Regional Reference Framework 2023

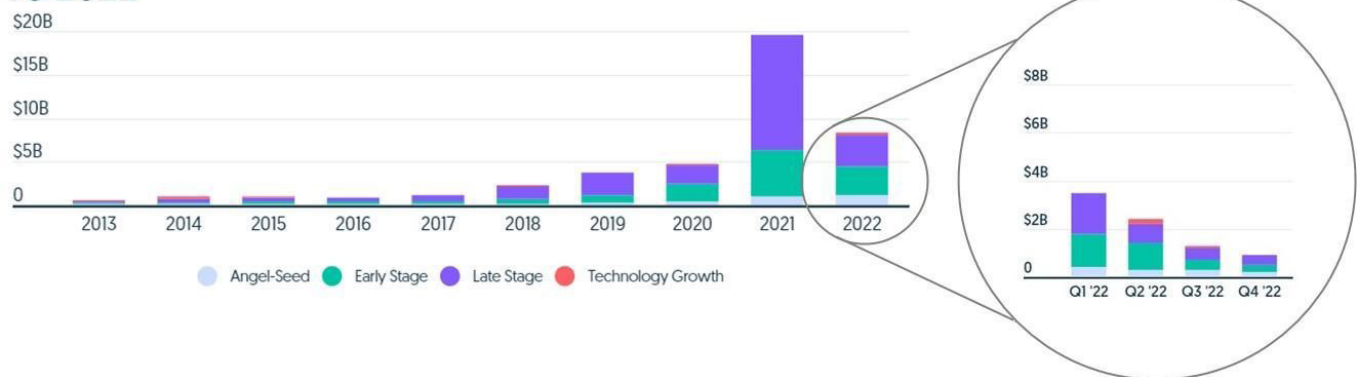
5.1 Overview of the events of 2022

At the global level, the venture capital investment has dropped by 35% in 2022 in comparison to 2021 and in the case of Latin America the reduction percentage was greater, reaching 79%, with USD 8.28 billion of investment, in accordance to Crunchbase⁴.

2021 left a good historical precedent, because it is the term with the greatest amount of startups investments in the region, with almost USD 19,500 million, while in 2022 started with great optimism in comparison to its eventual conclusion. As it could be seen in the following Graph, the reductions in investments has swiftly decreased from one quarter to the next, especially on the late stage investments.

Graphic 4: Latin America Venture Dollar Volume 2013 to 2022

Latin America Venture Dollar Volume 2013 To 2022



Source: StartupBlink

Regardless of the drop in venture capital invested in comparison to 2021, last year –without a doubt- the second best year for the startups in Latin America, while raising USD 8,300 million with a total of 1,251 investment rounds, and total of 657 startups that had raised funds for the first time.

We now include the data that describes the greatest accomplishments throughout the region in 2022:

- Brazil, Mexico and Colombia were the countries that had captured the largest percentage of venture capital with a total of 77%.
- The leading sector with direct capital investment had been Fintech, capturing 43%.
- A historical maximum has been reached within the angel seed funding stage by reaching USD 1,200 million within this term.
- 74% of the venture capital instead in Latin America in 2022 was for sectors such as Fintech, eCommerce, HRtech, proptech and logistics, reflecting a modest contraction in their participation of 80% in 2021, in accordance to Lavca.

⁴ <https://news.crunchbase.com/venture/latin-america-venture-funding-slows-q4-2022/>

- USD 1.16 billion was the angel seed funding, 9% higher than 2021, which is historically the highest. By taking a closer look, it is possible to see that financing had an increase of 113% during the first semester of 2022, in accordance to the data provided by Crunchbase.
- More than USD 700 million was funded in venture debt contracts, less than in 2021, which registered USD 826 million, while in 2020 it was USD 110 million, in accordance to Lavca.

5.2 The protagonists

These numbers of course are a reflection of the news that included well known startups and founders. For example, the Chilean unicorn: NotCo, founded by Matias Muchnick, Karim Pichara and Pablo Zamora, which extended its D Series round by USD 70 million, to propel the B2B platform. In total, foodtech, which uses AI, has already gathered more than a billion dollars and in 2022 it closed with a joint venture with Kraft Heinz. In total in Chile, in accordance to the Chilean Association of Venture Capital, USD 1,019 million were invested in 2022, which is 0.6% less in comparison to 2021.

At the same time, among other neighboring nations such as Argentina, more than USD 163.8 million was financed in the first semester of 2022, in accordance to the Argentinian Association of Private Capital, Betweenpreneur and Seed Funding (ARCAP). The Geo-payment operations, the payments acceptance infrastructure within Latin America, announced a capital round of USD 35 million led by Riverwood Capital, and from Pomelo, which leveraged USD 15 million, with a few landmarks seen last year.

In the case of Peru, the Peruvian Association of Angel Seed and Betweenpreneurial Capital Funding (PECAP) provided a total of USD 87 million invested in 41 startups in 2022, which included Talently, which raised a seed round of USD 3 million that created a tech talents' marketplace in Latin America.

Further North, in Mexico, the Fintech company: Fairplay, founded by Manolo Atala and Andrew Devlyn, which is a company that finances e-commerce and marketplaces, gathered USD 35 million with an A Series; Jüsto, which is an on-line supermarket within Latin America founded in 2019 by Ricardo Weder, closed a B Series investment of USD 152 million and in 99 minutes it closes a C Series Round for USD 82 million, to improve its technology and development, open new markets and purchase a new electronic and sustainable fleet. These are some of the landmarks of the ecosystem, which during the 2022 semester it had increases with a total of USD 1,708 million, which has surpassed the investments from previous years, with the exception of 2021.

5.3 New unicorns

The region has seen the birth of some new unicorns in various places within the region. In Chile, Betterfly collected USD 125 million within a C Series Round and it had an evaluation higher than USD 1.000 million, becoming the first "social unicorn" of the region.

In Argentina, Technysis became a unicorn when the whole company was sold for USD 1,100 million to SoFi Technologies. Colombia also added a second unicorn: proptech company: Habi, founded in 2019 by Brynne McNulty Rojas and Sebastian Noguera, which reached an evaluation of more than USD 1,000 million after having closed a C Series Investment for USD 200 million. It is important to remember that Rappi is the first unicorn of the coffee-producing country.

Mexico was the country in Latin America with the highest number of startups evaluated at a billion dollars in 2022. It had three unicorns: Nowports, a logistics startup that collected an investment of USD 150 million; Stor, a Fintech company that received USD 120 million; and Yaydoo, which has merged with the American company: PayStand and, through new derived investments of this operation, it had reached an evaluation that surpasses USD 1,000 million.

5.4 Chile sanctions the Fintech Law

Another landmark moment within the regional ecosystem has been accomplished within the legislative field, because Chile has approved the Fintech Law after two years of debate in Congress, enabling it to become one of very few countries in South America with a specific Fintech-startups regulatory framework.

This initiative is intended to update the financial regulations, while acknowledging the new business models that have emerged within the market. Some of the main guidelines of the Law, include the incorporation of the regulatory perimeter of the Commission for the Financial Market (CMF).

5.5 What happened in 2022 versus the surplus of 2021?

2021 represents in many regions of the world, the year in which the vaccination would eventually defeat the pandemic caused by COVID-19. The source for economic reactivation at a global level has allowed having greater movement and investment on the resources in all of the sectors, empowered by monetary political sources that in expansion and in keeping with the interest rates close to zero and Latin America is not the exception.

However, toward the second half of the year as strong inflation trend shook markets at a global level, the numbers throughout the region started to show concerning indicators and the months went by, several strategic changes emerged to have an economic post-pandemic response without leading to a systematic inflation. The monetary policies took a turn, with the implementation of contractive strategies intended to prevent inflation and in such regard the benchmark interest rates of the local markets started to gradually increase with a trend that up until now (June of 2023) continue to be on the raise.

Toward the second half of 2021, the value of currencies started to increase throughout the region, and this trend continued in 2022 and in 2023 it had a direct impact within the venture capital industry, specifically within two areas:

1. Plummeting of the extraordinary evaluations that were brought about from multiple investments, which did not comply with the reality of the local markets or with the reality of the startups themselves, especially among late stage companies.
2. Economic cycles which did not fit the expectations of accelerated exits from venture capital investments, especially from late stage investments.

It is because of the factors included within the late stage sector, that a much greater impact has been suffered of the early stage or of the angel seed funding (the sector with the least impact). The angel seed funding stage allow for the investors to improve their structures with an investment that includes a greater amount of time to mature (between 5 and 7 years), which would allow a startup to overcome the effects of the macroeconomic environment – or economic cycle – that we are experiencing nowadays and to aim to have other interesting exits.

In regards to numbers, Crunchbase revealed that there us USD 1.16 billion of investment within the angel seed funding stage, 9% more than in 2021, which is a new historical achievement. If we take a closer look, it is possible to see that this financing had an increase of 113% during the first semester of 2022, while USD 3.22 billion were allocated to early stage rounds (A Series or B Series). This represents a decrease of more than 40% since 2021. Regardless of that, during the first semester of 2022 the overall outlook had improved with a total growth of 48%.

There was also a halt by large investors from the region, because SoftBank Latin America Ventures, as well as Tiger Global Management, which are two of the most significant actors within the industry, had shown a diminished appetite toward investment in the region because of the impoverishment at the summit, within the current environment of evaluation and exit opportunities.


In conclusion, the increased value of currencies ta a global level has generated an increase in the interest rates, which are also the result– or the mitigating action – of a possible systematic inflation, which drastically decrease the means to attract venture capital investments, which seek to obtain elevated returns within short periods of time. This has a greater and even stronger impact within the late stage sector, because the maturity terms are much shorter, with lower returns that are now forced to compete with elevated interest rates. Finally, it is possible to confirm that the current environment has allowed to have greater transparency in the evaluation of the startups that have not truly responded to their own potential to generate further income, but instead they have responded to a possible sale or exit at exorbitant amounts, which are currently no longer possible or accessible.

5.6 What could we expect in 2023?

The environment within 2022 has been the same. During the first quarter the venture capital investments had had the lowest volumes in comparison to the last few years with a very limited number of operations. For example, in accordance to the data from SlingHub, Mayo has been the worst month for financing throughout the region since July of 2020, because USD 253 million were raised, with a drop of 82% in comparison to 2022.

In addition to this, this year has been emblematic because it has generated great uncertainty for those who form part of the ecosystem of venture capital and startups; it has provoked a collapse of Silicon Valley Bank (SVB) and because of the potential systematic problems of scarcity of liquidity within the financial systems at a global level.

The investments outlook within venture capital, it is not the best in recent times. However, this does not limit the growth of Latin American startups, it instead propels a new redesign that would help to have sustainability of a short and midterm basis of truly innovative products, which would reduce the need to increment the raising of money through funding rounds that would provide an excessive value to the company and, at the same time, it would strengthen the possibility for exits or early sales with evaluations provided in keeping with the reality of the region.



6. Quantitative Results of the Ecosystem

6.1 Startup

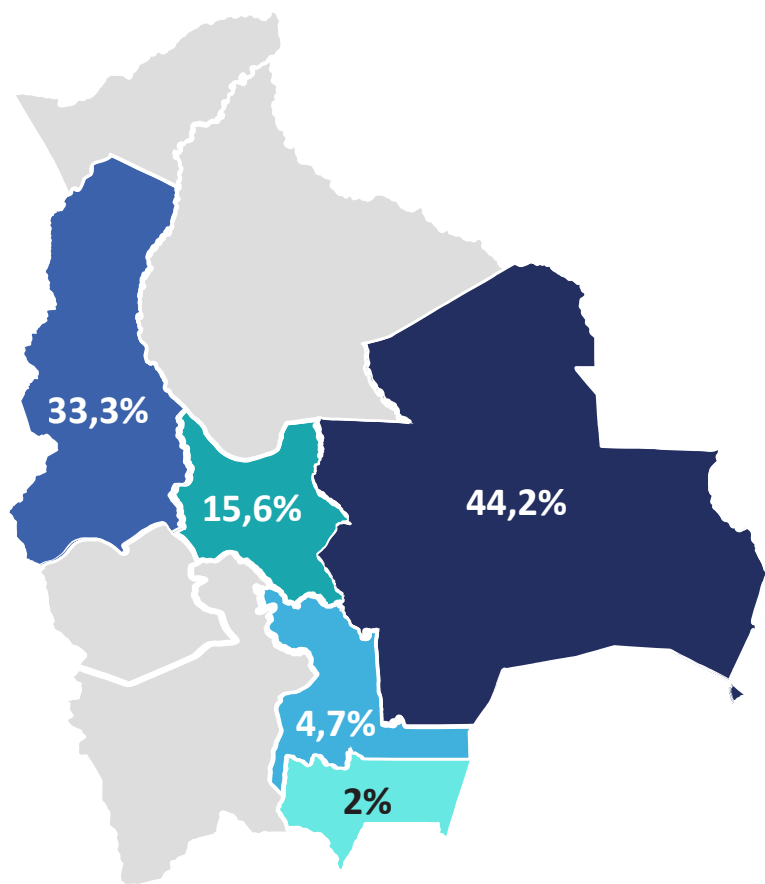
The quantitative results of the ecosystem show how the startups have evolved in Bolivia, including how many new ones have been identified and how many of the existing ones have become inactive. At the same time, it has been possible to identify in which cities they may be located and their total participation within the country.

Table 1: Number of startups per term

Startups identified in 2019	152
+ New startups identified in 2020	67
- Startups initiatives in 2020	59
Startups identified in 2020	160
+ New startups identified in 2021	50
- Startups initiatives in 2021	55
Startups identified in 2021	155
+ New startups identified in 2022	106
- Startups initiatives in 2022	76
Startups identified in 2022	185
+ New startups identified in 2023	51
- Startups initiatives in 2023	89
Startups identified in 2023	147

Source: Its own elaboration - Mapping ICT

Graphic 5: Distribution of Startups for the cities of Bolivia



Source: Its own elaboration - Mapping ICT

City	%	Quantity of startups
Santa Cruz	44,2	65
La Paz	33,3	49
Cochabamba	15,6	23
Sucre	4,8	7
Tarija	2	3
Total	100	147

Source: Its own elaboration - Mapping ICT

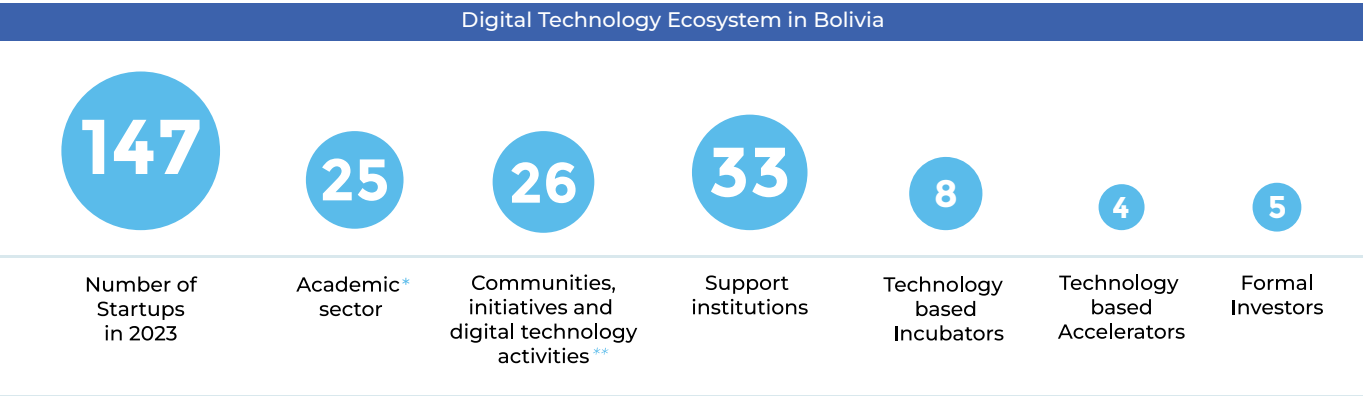
6.2 Key players of the ecosystem

Just like with the startups, we have identified key actors that re part of the ecosystem and their activity within them.

Actors of the ecosystem 2023	
Number of startups	147
Government institutions of direct support (national, local)	4
Academic sector*	25
Communities, initiatives and digital technology activities**	26
Support institutions	33
Incubators	8
Accelerators	4
Investor/Financier	5

*This includes universities, institutes and other educational institutions.

**Communities were not accounted for or the city chapters.



* This includes universities, institutes and other educational institutions..

** Communities were not accounted for or the city chapters.

6.3 Evolution of the ecosystem

The evolution of the startups and the key players or actors of the ecosystem show that within the last five years, 2019 thru 2023, there has been stability, with a mild decrease in the number of startups in the last year.

At the same time, the participation of the startups among the various sectors of the industry shows that over half of them are within three kinds, and the most relevant may be Fintech, with 30%, followed by Edtech with 14% and eCommerce/Marketplace with 14%. The participation within is in keeping with the global and regional trends, and it is one of the sectors that has shown the most development and it has had the highest demand for financial solutions both as companies as well as individual persons.

Actors of the ecosystem	2019	2020	2021	2022	2023
Number of startups	152	160	155	185	147
Government institutions of direct support (national, local)	6	5	8	4	4
Academic sector	27	31	30	26	25
Communities, initiatives and digital technology activities*	51	19	26	26	26
Support institutions	15	57	40	32	33
Incubators	3	9	13	10	8
Accelerators	4	3	8	4	4
Investors	0	3	5	5	5

*Within the ICT Mapping-2019 version of the report, communities were accounted for, including city chapters

Table 2: Vertical (sector/industry) to which startup belongs

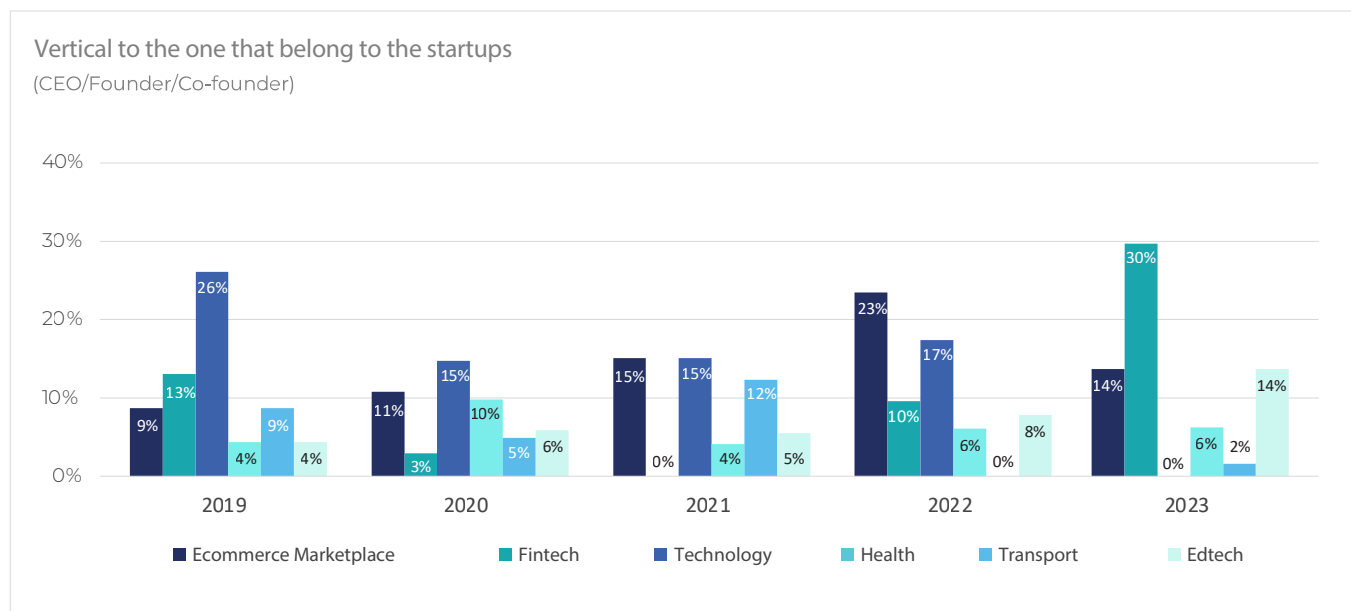
Year	eCommerce Marketplace	Fintech	Technology*	Health	Transportation	Edtech	Others
2019	9%	13%	26%	4%	9%	4%	35%
2020	11%	3%	15%	10%	5%	6%	51%
2021	15%	0%	15%	4%	12%	5%	48%
2022	23%	10%	17%	6%	0%	8%	35%
2023	14%	30%	0%	6%	2%	14%	36%

* In 2023 this category was not considered, because of that there is not a record of those startups, which were re-categorized in other sectors.

Source: Its own elaboration - Mapping ICT

The number of startups among the different sectors of the industry has shown growth in the participation of Fintech and Edtech within the overall composition of the startups in 2023, in comparison with the predominance of those startups dedicated to eCommerce and Marketplace in previous years.

Graphic 6: Vertical (sector/industry) to which startup belongs



Source: Its own elaboration - Mapping ICT

The startups within the health sector have remained stable, while registering a mild increase in their participation.

The decrease within eCommerce/Marketplace sector in 2023 actually reflects a drop because of the increased participation of Fintech and Edtech.

Another significant aspect is to consider the behavior of the startups in regards to the business model that they have applied⁵. The sort of relevant business of the startups over the five years of the B2B model, with a participation of 51% and the B2C model with a participation of 43%, they serve as evidence of the following table.

Table 3: Type of client serviced by startup

To which sort of client is this business model aim?

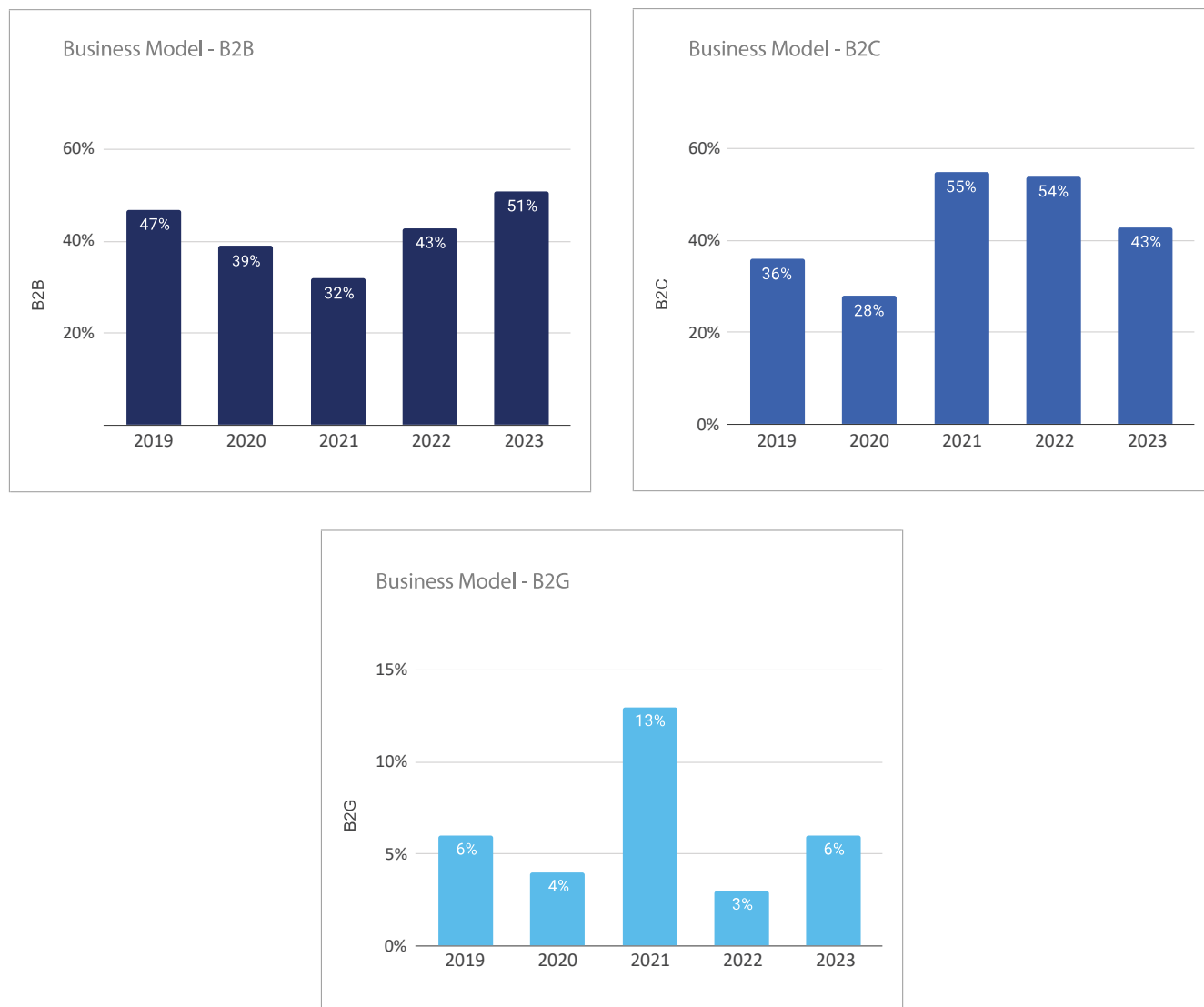
Year	B2B	B2B2C*	B2C	B2G
2019	47%	11%	36%	6%
2020	39%	29%	28%	4%
2021	32%	0%	55%	13%
2022	43%	0%	54%	3%
2023	51%	0%	43%	6%

* Since 2021, the startups that used to be regarded as a combination of B2B2C . They have ratified their use of the B2C model.

Source: Its own Elaboration (Mapping ICT)

⁵ Four models are included: 1) Business to Business (B2B); 2) Business to Business by combining Business to Consumer B2B2C; 3) Business to Consumer (B2C) and 4) Business to Government B2G

Graphic 7: Type of client serviced by startup



Source: Its own elaboration - Mapping ICT

It has also been observed that in the last three years an increase has been registered of the startups focused on B2B, in comparison of an apparent stagnation and decline of those who offer services or products to the final consumer (B2C), while B2G has remained at an average of 6%.

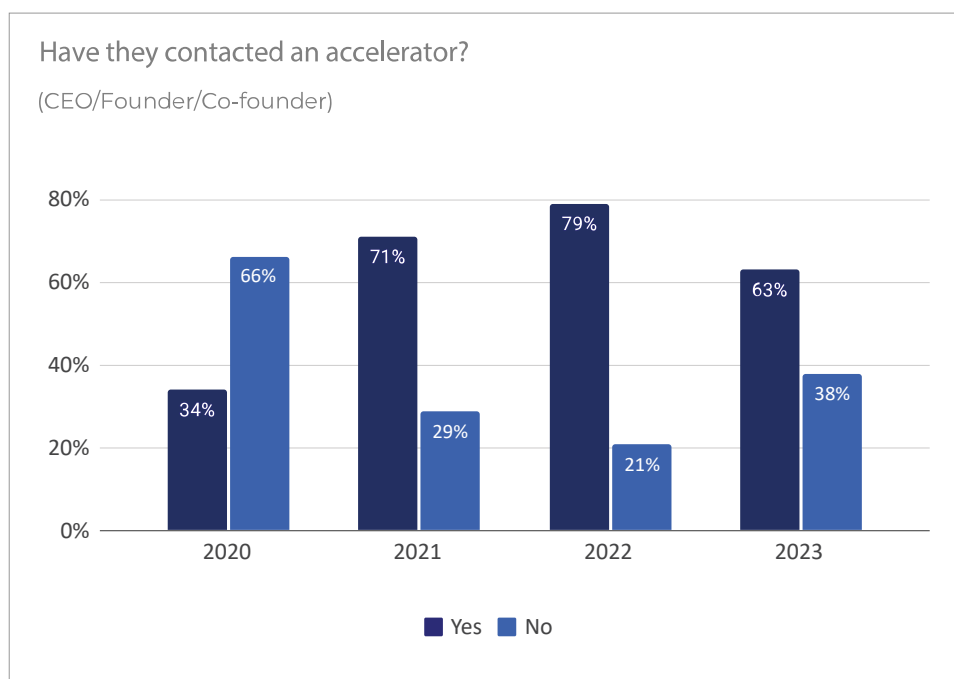
Following with the form in which the startups have managed their own businesses, which shows greater interest as they have obtained greater counseling, even though in 2023 there is a higher level in comparison to the previous year, the percentage of startups that has sought some counseling with an accelerator is slightly higher in comparison to the average from previous years (62%). The decrease is mostly because of the maturity of the consulted startups, which do not require an acceleration process, as they have already undergone such process.

Table 4: Percentage of startups that have acted as Accelerators

Have they contacted an entrepreneurial accelerator?

Year	Yes	No
2020	34%	66%
2021	71%	29%
2022	79%	21%
2023	63%	38%

Source: Its own elaboration - Mapping ICT

Graphic 8: Startup percentage connected to the accelerators

Source: Its own elaboration - Mapping ICT

The startups have a reduced structural organization, 60% of them have less than 10 employees working on a full-time basis, which is a trend caused mostly by the costs that it represents to sustain a large team of people, especially at the beginning of business operations. During previous terms a similar relationship was kept (2020: 6.6; 2021: 5.7; 2022: 7.2).

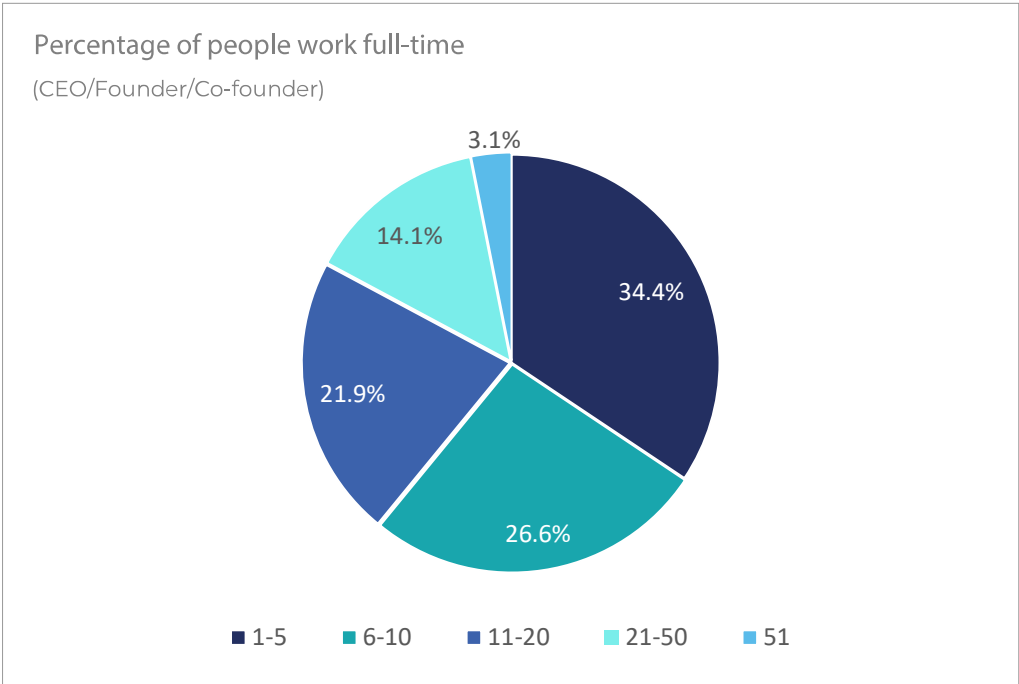
Table 5: Average number of people whom work fulltime at the startups

How many people work within the team on a full-time basis?

Range	Percentage of people work full-time
1-5	34,4%
6-10	26,6%
11-20	21,9%
21-50	14,1%
51	3,1%

Source: Its own elaboration - Mapping ICT

Graphic 9: Average number of people whom work fulltime at the startups



Source: Its own elaboration - Mapping ICT

In regards to the participation of women within the organizational structure, the startups included within this consultation have shown a greater percentage of men, with a ratio of three men for every two women. Such trend has shown some growth in the last few years in regards to the number of positions occupied by women, although the increase has been minor, which leads us to think about the need to develop further incentives that would promote the incorporation of women. Within the area of promotion systems, this has remained very similar to previous years (14%), which show that for every woman there are 5.5 men who work in the same area.

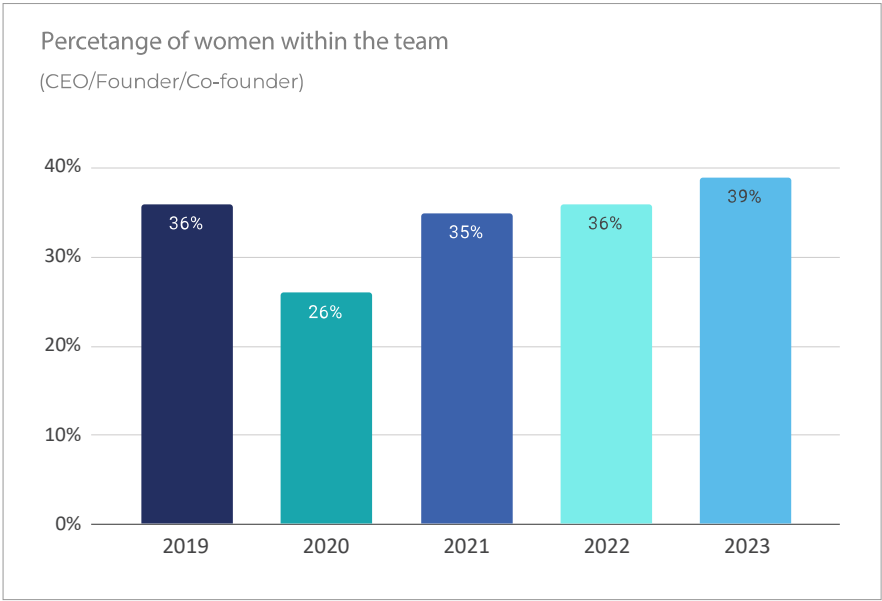
Table 6: Percentage of women within the team

Which percentage of the company’s team includes women?

Year	Percentage of women within the team
2019	36%
2020	26%
2021	35%
2022	36%
2023	39%

Source: Its own elaboration - Mapping ICT

Graphic 10: Percentage of women within the team



Source: Its own elaboration - Mapping ICT

7. Qualitative Results of the Ecosystem

7.1 Causes that determine the growth and death of ICT startups in Bolivia

A startup is a new company that seeks to generate disruptive innovation within the, either through products, services or technology. It is considered that it ought to be agile, scalable and with a potential for accelerated growth.

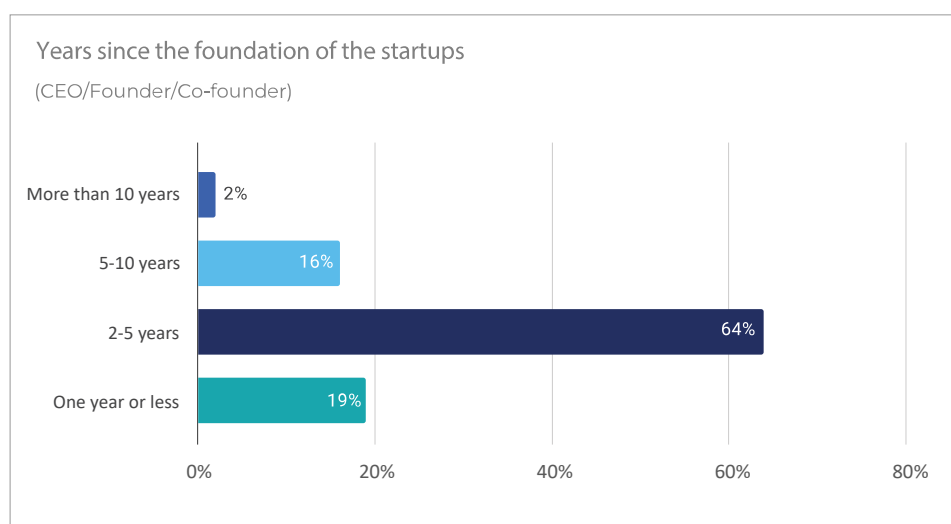
The startups seek to swiftly validate their own Business Models and to have some traction within the market to attract investors and resources that would allow them to grow. However, not all of them reach the necessary level of success, which is why they are usually considered to have a very strong entrepreneurial spirit and a great capacity to adapt to changes within the entrepreneurial environment.

7.1.1 Betweenpreneurial years of the startups

The creation of startups benefits the economy, society and, especially, business development and growth within the country. These initiatives generate innovative spaces and technological progress, while creating innovative and disruptive solutions to specific problems. At the same time, they help to generate jobs, while reducing social and economic gaps and strengthening their competitive position through the creation of first level entrepreneurial activities.

Graphic 9 shows that 19% of the startups have been around for a year or less. Most of them have worked for 2 to 5 years (64%) and just a few of them have six years or more in the market (18%).

Graphic 11: Years of existence of the startup



Source: Its own elaboration - Mapping ICT

Table 7: Years of existence of the startups

Concept	Value
1 Year or less	19%
2-5 Years	64%
5-10 Years	16%
More than 10 years	2%

Source: Its own elaboration - Mapping ICT

7.1.2 Financing as the main factor of scalability

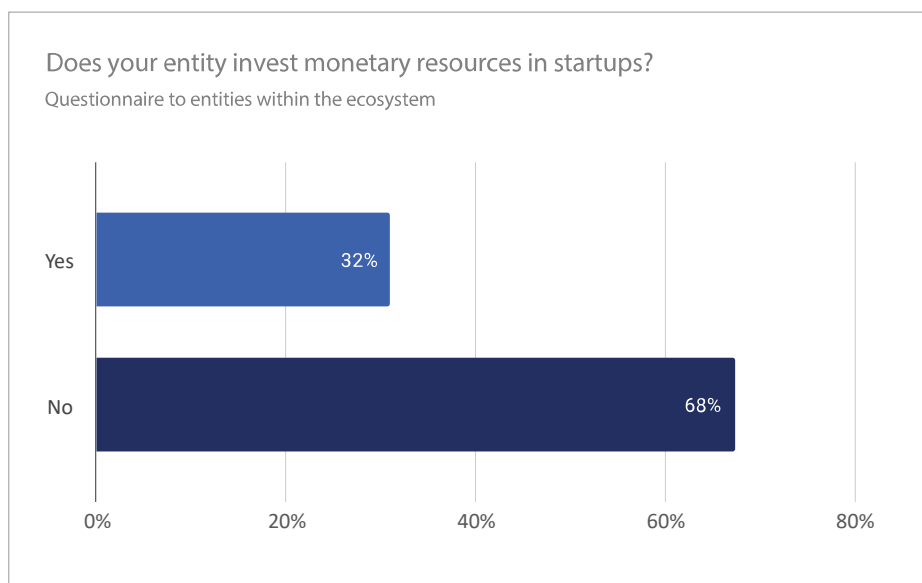
The financing for a startup is significant, starting in its initial stages up until their maturity and during their growth process. At the beginning it helps to propel them and surpass some of the initial obstacles, which includes the development and improvement of products and services, the hiring of human talent, the research and development of markets and the implementation of marketing and sales strategies, as well as other aspects related to the scalability of the business.

Later on, the company needs to begin attracting talent and key experts and the financial resources would allow offering competitive salaries, programs of options over actions and professional growth opportunities that ought to be attractive enough to summon highly qualified professionals. This contributes to the strengthening of the team, propelling innovation and improving the perspectives to have greater success as a company.

Whenever the resources are obtained from external investors or well-known institutions; this helps to generate an external evaluation and it also increments the credibility on the company; which leads to greater trust within the market and greater collaboration, and therefore the growth of the company. This would not only help to expand the network of financiers, but also the network of mentors and the relationship with other companies from within the same field.

In accordance to the interviews done with key player of the ecosystem, the outlook has not changed in regards to the previous term, because simply 32% may provide financial resources to the startups (Graphic 10).

Graphic 12: Activity of investments of the Support institutions to the startups



Source: Its own elaboration - Mapping ICT

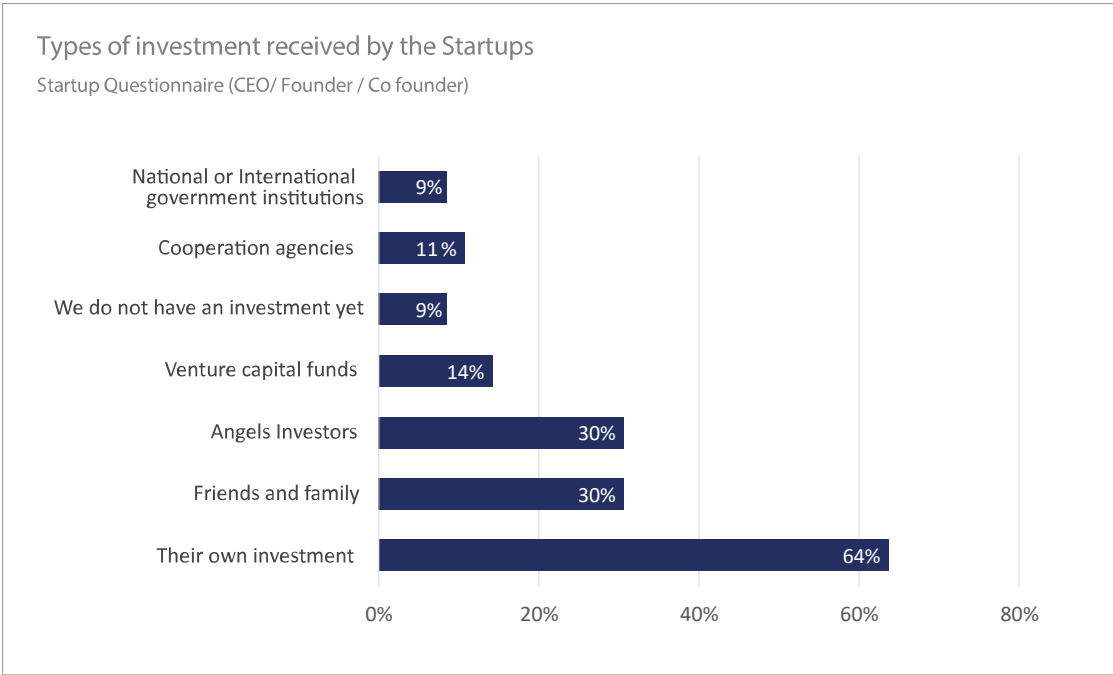
Table 8: Investment activities of the supporting institutions of startups

Concept	Value
Yes	32%
No	68%

Source: Its own elaboration - Mapping ICT

In accordance to the startups interviews, close to 33% has their own investments for their operations; 31% has received additional investments regarded as their own investment, in other words, 64% has their own investments, while 9% does not have any kind of investment. Graphic 11 shows a sample of 64% (angel investors, venture capital, government institutions or cooperation agencies) that have contacted an investor which would be able to provide angel seed funding. However, the type of investor that has been contacted, for the most part, may include relatives and friends (30%) and angel investors (30%).

Graphic 13: Types of contacted investors



Source: Its own elaboration - Mapping ICT

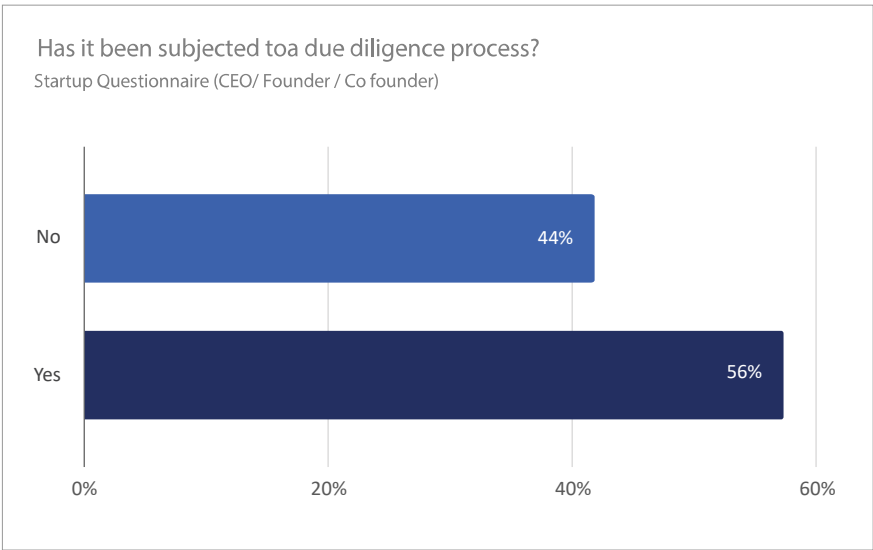
Table 9: Types of contacted investors

Concept	Value
Their own investment	64%
Friends and family	30%
Angel investors	30%
Venture capital funds	14%
We do not have an investment yet	9%
Cooperation agencies	11%
National or International government institutions	9%

Source: Its own elaboration - Mapping ICT

As it could be seen in Graphic 12, 44% of the startups have not been subjected to a due diligence process, which means that they have not had a close contact with the venture capital investments funds to obtain funding, which is the greatest need for scalability for the entrepreneurial activities within the ecosystem.

Graphic 14: Startups that have had due diligence experience



Source: Its own elaboration - Mapping ICT

Table 10: Has it been subjected to a due diligence process?

Concept	Value
Yes	56%
No	44%

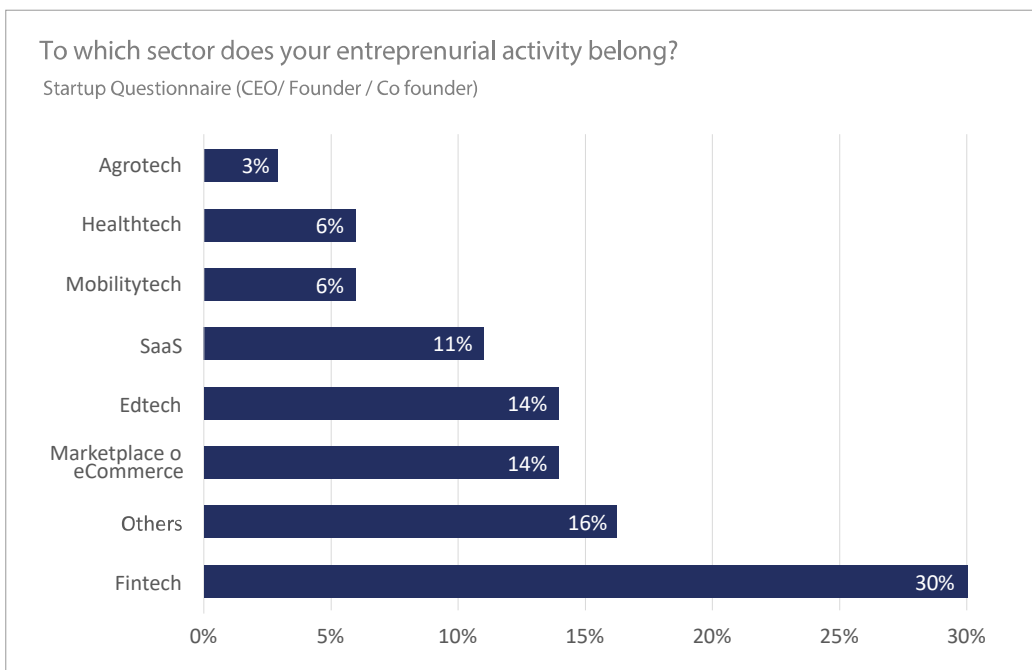
Source: Its own elaboration - Mapping ICT

7.2 Analysis of startups through vertical structures

It is essential to analyze each of the vertical lines of startups, which would allow distinguishing the markets in which they currently specialize. Knowing this makes it easier to identify the current opportunities within the market, having access to specialized resources and, especially, allowing the possibility to generate personalized counseling, establishing contacts and sharing experiences.

As it is seen in Graphic 13, the sectors with the highest number of startups during this term are within the Fintech area (30%), followed by eCommerce/Marketplace (14%), Edtech (14%) and SaaS (11%). There are also other sectors, which have a lower degree of representation, such as Agrotech, Healthtech, Mobitech and others, which represent 31%.

Most of the startups work within the national market; however, 21 have also reached international market, which includes the United States, Mexico and some Latin American countries such as Paraguay, Brazil, Peru, Chile, Colombia, Venezuela, El Salvador and Nicaragua.

Graphic 15: Vertical (sector/industry) to which the Betweenpreneurial activity belongs

Source: Its own elaboration - Mapping ICT

Table 11: Vertical (sector/industry) to which the Betweenpreneurial activity belongs

Concept	Value
Fintech	30%
Others	16%
Marketplace or eCommerce	14%
Edtech	14%
SaaS	11%
Mobilitytech	6%
Healthtech	6%
Agrotech	3%

Source: Its own elaboration - Mapping ICT

One of the most representative sectors in accordance to the vertical columns, it is Fintech, which is constantly spreading even further in its search for technological innovations, as well as in its need to promote financial access including for people who do not have any banking services or who have not been properly assisted, while focusing in providing an easier experience to each user, as well as a more convenient and personalized service, which includes more intuitive interfacing systems, simpler digital tools and agile processes.

The participation of Fintech reduces costs within the sector and it helps to optimize certain processes, but especially to gather and analyze large quantities of data about the users, whose information may be

used to offer more personalized financial services that would also be better adapted to the individual needs of the clients.

Some of the most representative entities within the national market include 19 companies whose main function is to analyze data, financing and nano financing to various sectors, collection services, payments collection services, savings and, especially, the creation of credit records and parallel payment services.

There is also a significant participation of these companies within Marketplace and/or eCommerce which seek to adopt innovative forms of technology, such as artificial intelligence, automatic learning and personalized data bases. Such innovations allow improving the experience of each user, the operational efficiency and the quality of the offered services, which would have a greater impact in the creation of new companies, while generating better business opportunities.

There is also evident that there is a broad participation of Edtech companies that seek to improve the current access to education, through pedagogic innovations and, especially, with the development of certain relevant skills, while preparing students to the existing challenges of the labor market and their future, which requires more digital skills and specific abilities.

7.3 Startups and their relationship with the rural area

This year this mapping research included the gathering of information through some questions related to the way in which startups generate an urban-rural connection and it has been possible to prove that 42% generate a direct connection.

There are currently several companies within the areas of Agriculture and Transportation that are linked to the development within the rural area, which include:

- **VAKA**, digital platform and cellphone application which connects cattle production projects with micro-investors.
- **Hola Tractor**, agricultural-technological company focused on providing easy access to agricultural machinery to small and mid-size producers, through their cellphone application and their on-line platform. It seeks to maximize agricultural production among rural communities, while reducing child labor practices and the empowerment of women's leadership.
- **DeltaX**, works mainly in the handling of large cargo; this may have some impact in the rural area, if it would be able to focus its services toward the transportation of products from the rural area to the urban area.

The companies that directly link the rural area and that may generate a positive impact include:

- **Ultra**, which works mainly in financial inclusion.
- **S.Solar**, a limited liability corporation that works in importations, commercialization and installation of solar systems equipment and/or solar energy technology, intended to reduce the carbon footprint.
- **Receta Digital**, platform and application used by physicians, dentists and pharmacies to expedite medical prescriptions.
- **Minkedu**, a space for mothers, fathers and teachers to develop teaching skills through online micro-classes, which would enable them to create activities and explore learning experiences.
- **Elemental School**, a pioneer academic sector in Bolivia that works in the upbringing of boys, girls, young people and adults within the technological area, which has been created with the objective to accelerate greater digital inclusion of the new generations, while developing digital technological skills that are relevant in the 21 Century.

Some surveys were applied among the ecosystem members, to identify the lack of startups that may be related to the rural sector and some of the main ones include:

Bottle necks	Possible solutions
The lack of infrastructure in telecommunications within remote rural areas continues to be one of the greatest challenges for the development of startups.	Establishing partnerships to would simplify joint investments of various types of infrastructure, the development of educational programs and the access to technological devices at affordable prices.
There is a significant digital gap in terms of access and technological skills. There is limited access to certain devices such as computers, although there is much access to portable smart devices, but with some limitations in regards to knowledge and skills to the proper use of the currently available technology.	Creating training and digital literacy programs that would include workshops, online course and face-to-face training to teach to rural communities how to use and take advantage of the existing technology in an effective and safe manner.
Even though the access to the internet is available, there may be a lack of understanding and it is not readily available within rural areas.	Strengthening the creation of localized and relevant online contents for rural communities. This includes working with the support of local and regional organizations, and with the aid of experts in indigenous languages to develop educational and cultural contents that would provide a specific interest among the users.
The lack of educational programs and technological training within rural areas may limit the proper use of the many opportunities of the internet.	Generating new educational programs that would allow the improvement of technological skills within the rural area, this may allow promoting new academic programs at local schools.
The migration of the country side to the city is related to the lack of economic opportunities, employment, basic services, educational deficiencies and lack of infrastructure, which leads to a lack of people who may want to generate technological innovations within the country side.	Generating improvements and better opportunities among the communities which would allow the return of young people to their communities who would in turn help to support their development.
Lack of support of the startups that may be consolidated within urban areas and to allow them to become profitable and to eventually extend to rural areas.	Generating development opportunities within rural areas and greater use and control of technology may garner the interest of startups to enter into this market.



8. Success Stories: Bolivia's Digital Technology Ecosystem

8.1 Startup Internationalization Success Stories

Internationalization is the key for startups to grow, entrepreneurs seek growth and the conversion of startups into scaleups. Startups that already have traction and have demonstrated results have already taken this ambitious leap to expand their operations to other countries such as Paraguay, Peru, Chile, Mexico, El Salvador and Guatemala.

It is also important to emphasize that in 2021, Yaigo announced the first Bolivian EXIT, thus consolidating its expansion beyond our borders and becoming a historic event for the Bolivian entrepreneurial ecosystem. Other important startups that expanded and internationalized their operations in the region are: Deltax, EnviosPet, Industrias Quantum Motors S.A. and Mobi Latam. In the following summary we detail their main characteristics.

Internationalization of startups

Lifetime	Average 4 to 5 years
Number of Exits	1
No. Startups with International Operations	5
Funding stages	Seed and Pre Seed Series
Type of investment	SAFE, Private Equity, Angel Investment
Verticals	<ul style="list-style-type: none"> • Mobility Tech • eCommerce/MarketPlace • Logistics and Transportation • SaaS
Business Model	Mostly B2B



Yaigo

Bolivian delivery and ecommerce startup, that integrates the customer, the retailer and the online delivery person.



Team



- Ariel Valverde
- Erick Valverde
- Saúl Paniagua
- Max Jungermann



It is very important to be constantly learning and in contact with the different actors of the entrepreneurial ecosystem in the region, especially with the founders of startups in other countries, as well as having a clear exit strategy from the moment you start your startup".



Ariel Valverde
CEO & Founder YAIGO

Startup Information



Founded date
2019

Vertical
Ecommerce, delivery

Domestic Coverage
9 departments

International Coverage
Paraguay, Guatemala and El Salvador

No. of Employees
120

Business Model
B2C, B2B

- Services**
- Delivery B2B
 - Delivery B2C
 - Marketplace
 - Yaigo Tickets
 - Yaigo Play

Financial Structure



Capital Raising Seed
1MM round, expansion and growth stage

No. of Financing Rounds
1

Type of financing
Private equity

Total amount of financing
1MM

Scaling Up Model
Bootstrap

Year of EXIT
2021

Contact information

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Website

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Yaigo

Bolivian delivery and ecommerce startup, that integrates the customer, the retailer and the online delivery person.



Startup Journey



2017	Foundation of the company	Legal foundation of the company
2018	Development of the Platform	Testing in controlled environments
2019	Launch of the Platform	Expansion at national level being the first delivery to have full coverage in Bolivia
2020	Launch of Paraguay, Guatemala, El Salvador and consolidation of the Bolivian market	International expansion, exponential growth and consolidation as the most downloaded app in Bolivia
2021	Sale of the company	We achieved the EXIT with the highest valuation and impact in the Bolivian ecosystem, putting our country on the map of the region.

Awards



- Top 5 latam startups in INCAE
- Best technological solution INNOVATIC
- Best technological development Maya awards
- Recognition for the Smart Delivery service by the Legislative Assembly of Bolivia.

Startup EXIT Key factors



- Positivism to always be able to see the good in every situation, learn from the times we were told no and try to take advantage of all the lessons learned.
- Surround yourself with people who complement you and know how to listen.
- Be constantly listening to the market, adapt to change and act quickly to meet new needs.

Lessons Learned



- Dream big with a clear vision.
- Focus on not losing the vision no matter how much you have to adjust the business model, always looking at market opportunities.
- Build a first class team.

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DeltaX

Deltax DeltaX is Latin America's digital transportation platform



Team



- Luis Fernando Ortiz – CEO & Founder
- Nuregdi Camacho – Head of Operations
- Patricia Rejas – Head of Growth
- Marycruz Dorado – Head of Finance
- Alejandro Ardaya – Head of Sales
- Kevin Subieta – Tech Lead
- Paola Flores – Product Manager
- Daniela Guzmán – Customer Success Manager



Everything can be achieved, it's just a matter of focus and resources."

Luis Fernando Ortiz
CEO & Founder DeltaX



Startup Information



Founded date

2020

Vertical

Logistics and Transportation

International Coverage

Peru, Chile, Paraguay

No. of Employees

41

Business Model

B2B

Services

- Digital freight brokerage
- Software-as-a-Service
- Factoring

Financial Structure



Capital Raising

Series Seed

No. of Investment Rounds

1

Type of Investment

Equity, Free equity, Angel

Total amount of Investment

\$1.5M

Scaling up Model

- Platform, we connect freight generators with transportation companies and independent carriers.
- M&A, we evaluate potential acquisitions and mergers of transportation companies in the countries where we operate.
- Geographic expansion, we currently operate in Bolivia, Peru, Chile and Paraguay.

Contact information

Luis Fernando Ortiz

Contact Email

lfortiz@deltax.la

Website

<https://www.deltax.la>

DeltaX

DeltaX is Latin America's digital transportation platform.



Startup journey



- | | | |
|------|--|---|
| 2020 | <ul style="list-style-type: none"> Launched the first version of the App for carriers | <ul style="list-style-type: none"> We succeeded in recruiting +1K carriers |
| 2021 | <ul style="list-style-type: none"> Launched the first version of the FMS to manage DeltaX's transport operations | <ul style="list-style-type: none"> Recruited +2K carriers Grew 3x in sales vs. previous year |
| 2022 | <ul style="list-style-type: none"> Closed our first round of investment Launched SaaS version of our FMS so that other companies can use our technology Entered the Scale Up program of Endeavor Peru Opened offices in Peru and Paraguay and recruited local team Won Proinnovate's Peru Plug 3G program, which supports foreign startups in their entry into Peru | <ul style="list-style-type: none"> Recruited +4K transporters Raised \$1.5M in our first round Grew 2.5x sales vs. previous year |
| 2023 | <ul style="list-style-type: none"> Won the Ignite5 program of Startup Chile by Corfo Won the TECLA6 award from Caja los Andes in Chile Opened offices in Chile We won the Masschallenge program in Mexico to boost our entry into this country | |

Awards



- | | |
|--|--|
| <ul style="list-style-type: none"> Top4 Great Place to Work Bolivia 2023 Top20 Great Place to Work in Latin America 2023 Top6 Best Places to Work in Bolivia with Innovative Culture 2023 | <ul style="list-style-type: none"> TECLA6 Award from Caja los Andes as Best Foreign Startup entering Chile 2023 Endeavor Scale UP, Peru 2022 Startup Chile 2023 |
|--|--|

Lessons Learned



- We must be agile and creative to face the challenges we face.
- We must all be focused on the experience of our customers and users, to ensure a good product.

Contact information

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Website

<https://www.deltax.la>

EnvíosPet

One stop shop for pet lovers, where you can find all the products and services a pet needs.



Team



- Andres Estenssoro - CEO
- Juan Javier Estenssoro - COO
- Gustavo Calderón - CTO



The power to raise capital depends on the effort and results you achieve every day you achieve day by day with your team. It does not depend on anyone else.”



Andres Estenssoro
CEO & Founder ENVIOSPET

Startup Information



Founded date

2020

Vertical

Pet ecommerce and SaaS for pet retailers for pet stores

Domestic Coverage

Santa Cruz

International Coverage

Paraguay

No. of Employees

22

Business Model

B2C y B2B

Services

- Ecommerce for pet products
- Appointment scheduling (SaaS) for pet services

Financial structure



Capital Raising

Pre seed

No. of Investment Rounds

1

Type of financing

SAFE

Total amount of investment

\$470,000

Contact information

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andres.estenssoro@enviospet.com

Website

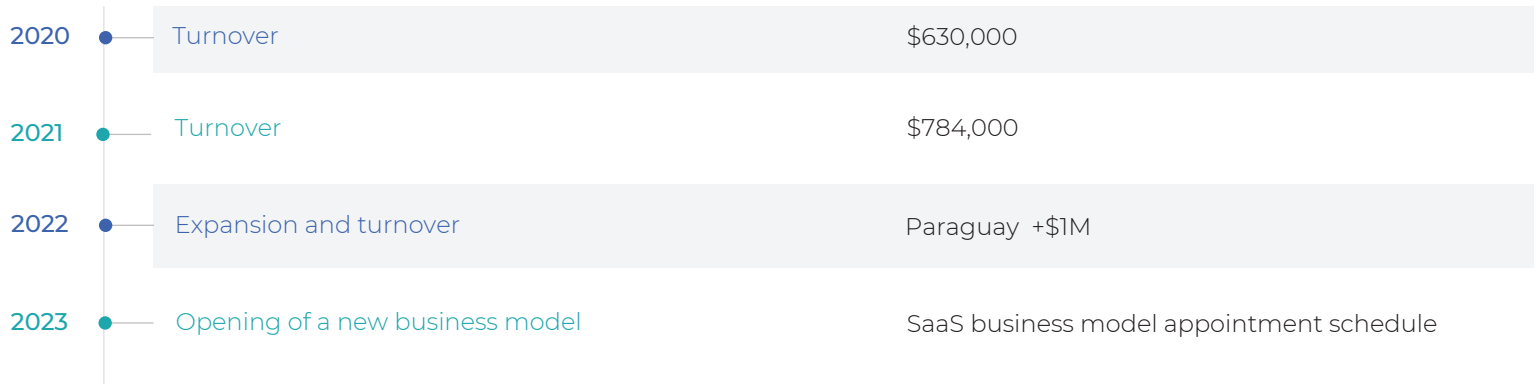
<https://enviospet.com>

EnvíosPet

One stop shop for pet lovers, where you can find all the products and services a pet needs.



Startup Journey



Awards

- Top 30 finalist in GEN (more than 100,000 participants)

Lessons Learned

- Lesson 1: The team is your most important asset.
- Lesson 2: Traction is the way to give credibility to investors.
- Lesson 3: When you have a new project, spend the most time planning.

Contact information

Andres Estenssoro

Contact Email

andres.estenssoro@enviospet.com

Website

<https://enviospet.com>

MOBI LATAM

We create mobility solutions based on IOT integrating Hardware and Software for last mile and urban transportation applications



Team



- Ariel Revollo - CEO
- Claudia Requejo - Growth Hacker
- Carlos Olivera - CTO
- Felix Gil - VP Global
- Nicole Bersatty - Product Owner
- Gerardo Beltrán - OPS Manager
- Juan Luis Viera - Production Manager



Your focus is the greatest asset you can have."

Ariel Revollo
CEO & Founder MOBI



Startup Information



Founded date
2020

Vertical
Mobility as a Service

Domestic Coverage
Santa Cruz, Cochabamba y Tarija

International Coverage
Paraguay, Peru

No. of Employees
9

Business Model
B2B2C

Services

- Sharing Mobility
- Moped Subscription

Financial Structure



Capital Raising
Seed

No. of Investment rounds
2

Type of investment
VC

Total amount of investment
1 M USD

Scale-up model
Fleet Partners

Contact information

Ariel Revollo

Contact Email

ariel@mobi.lat

Website

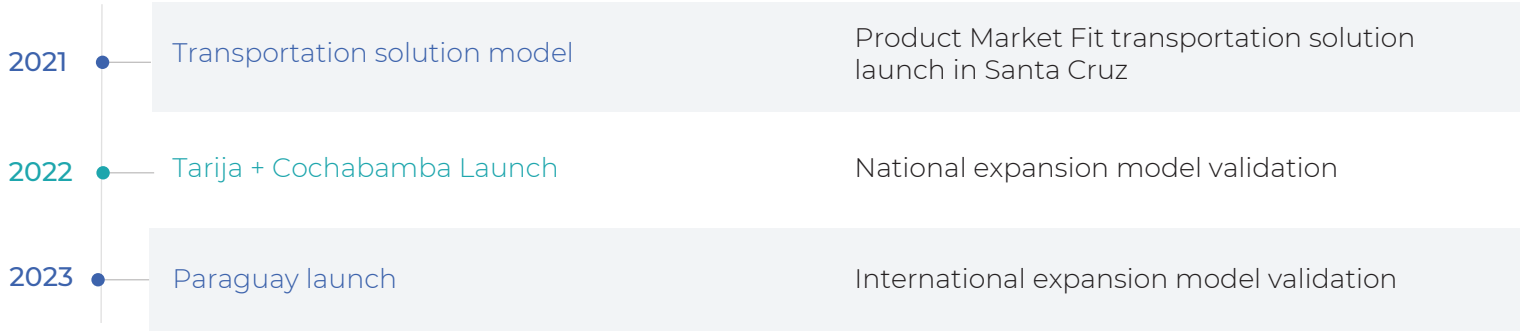
<https://mo-bi.com>

MOBI LATAM

We create mobility solutions based on IOT integrating Hardware and Software for last mile and urban transportation applications



Startup journey



Awards



- Best Mobility Startup 2022 COMMOTION MIAMI

Lessons Learned



- Fundraising is full time job
- 70% Senior 30% Junior
- Prioritize OKRs

Contact information

Ariel Revollo

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Website

<https://mo-bi.com>

Quantum Motors Industries S.A.

Industrias Quantum Motors S.A. is a Bolivian company founded in 2019, specialized in the manufacture and commercialization of electric vehicles. In addition to its line of electric cars, they also manufacture electric trimotorcycles. The company represents two leading brands of electric motorcycles and has a presence in 5 countries in LATAM.



Team



- José Carlos Márquez Díaz - CEO
- Carlos Ricardo Soruco Deiters - COO
- Javier Peláez - CFO
- Nicole Van der Veen - Foreign Trade Manager
- Darío Gómez Pacheco - Production Manager
- Lilian Mihaic Arzabe - HR Manager
- Yamilé Torrez Ayllón - Sales Manager



To ensure the success of a project, maturity and experience are fundamental. It is crucial to gain experience over time and be open to learn and understand how things work in the specific industry we are working in. Remaining curious about global trends is also key to keeping up to date."



José Carlos Márquez Díaz
CEO & Founder QUANTUM

Startup Information



Founded date
2019

Vertical

- E-Mobility Solutions
- Electric Mobility Systems (EMS)
- Electric Mobility as a Service (eMaaS)

International Coverage

El Salvador, Mexico, Paraguay and Peru

No. of Employees
60

Business Model

B2B in corporate sales - B2C in sales to individuals

Services

- Manufacture and commercialization of electric vehicles, including cars, motorcycles and trimotorcycles.
- Development of technological projects with solutions based on electromobility.
- Assembly of high quality and guaranteed lithium batteries, according to consumer demand.

Financial structure



Capital Raising
Pre-Seed

No. of investment Rounds
1

Type of investment
Private - Founding Partners

Total amount of investment
3 million US dollars (\$)

Scaling up Model

- Horizontal Scaling up: Based on geographic expansion throughout Latin America and product diversification.
- Vertical Scaling up: From the creation of Quantum Batteries, achieving greater control of the process and value chain. This is done by controlling the manufacture of a key component of electric cars.

Contact information

Quantum Motors Information
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Contact Email

info@tuquantum.com

Website

<https://tuquantum.com/>

Quantum Motors Industries S.A.

Industrias Quantum Motors S.A. is a Bolivian company founded in 2019, specialized in the manufacture and commercialization of electric vehicles. In addition to its line of electric cars, they also manufacture electric trimotorcycles. The company represents two leading brands of electric motorcycles and has a presence in 5 countries in LATAM.



Startup journey



2019	Industrias Quantum Motors S.A. is established.	<ul style="list-style-type: none"> Bolivian company, a pioneer in the manufacture and commercialization of electric vehicles. Quantum began operations in Bolivia in an area of 5,000 m², with the right technology to manufacture and assemble electric vehicles. The first 20 vehicles were sold in 3 months of operation.
2020	Quantum arrives in Peru	The first store is inaugurated in Lima. During the first year, more than 260 electric vehicles were sold in the first year.
2021	Quantum arrives in Paraguay, El Salvador and Mexico.	More than 600 electric vehicles are sold
2022	The lithium battery pack factory "QuantumBatteries S.R.L." is founded and makes its first export.	The barrier of 1000 units sold is passed. With a sale of 1200 units of electric vehicles in 2022.
2023	The first exports are made from El Salvador to Guatemala and Honduras. Generating more brand presence in Central America.	It is projected to break the internal sales record for electric vehicles.

Awards



- Manuela Gandarillas" award from the Municipal Government of the city of Cochabamba. 2021
- Kamay" Awards 2020. Recognition for technological development and contribution.
- Tribute to the Chamber of Deputies RHC #013/2021-2022
- Recognition of the contribution to economic development. Bolivian-Paraguayan Binational Chamber. 2022

Lessons Learned



- The importance of planning and its crucial impact on the processes.
- Creativity and enthusiasm of young people as key elements for innovation.
- The competitive potential of Bolivian products.

Contact information

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Website

<https://tuquantum.com/>

9. Fintech Ecosystem

9.1 Reference framework

In accordance to the Inter-American Development Bank⁶, the Fintech ecosystem of Latin America and the Caribbean has evolved and grown in the last three years. The number of platforms has experienced a steady level of growth, at a rate of 112% since 2018, while observing that the number of Fintech institutions is related to the size of the economies and their regulatory development, among other factors. 80% of the Fintech institutions are centered in Brazil (31%), Mexico (21%), Colombia (11%), Argentina (11%) and Chile (7%). There are obviously platforms that attend to urgent problems throughout the region, which includes financial inclusion and the decrease in the access gap and the use of financial products in favor of women. The investment in Fintech platforms has increased and it has reached USD 1,600 million in 2021, while showing a great growth potential within this sector.

In accordance to the Digital Technology Ecosystem Mapping 2022, the Fintech ecosystem had a participation of 10% in regards to other vertical columns, while in 2023 a participation of 30% had been recorded, which also represents a growth of 20 percent points, which positions it as the most relevant vertical column in terms of participation within the digital ecosystem. However, their development depends on various factors, mainly those that are related with greater growth and collaboration with the formal financial sector and the regulatory structure and the State, which would help to generate an adequate and inclusive context for Bolivian Fintech initiatives.

In accordance to the results from the Mapping of the Fintech ecosystem - 2023, 84% of the surveyed entities have been legally created and 84% were constituted within the central axis of the country, with much greater participation (52%) in the city of Santa Cruz de la Sierra. The main Fintech segments (48%) are more focused in solutions such as loans, payments and transferences of funds, most of them (52%) financed with the founders own resources. This also shows a greater participation by women in leadership and decision-making positions (68%) and significant balance in human talent because of technical training (40%) and business training (48%) which is the way in which Fintech entities operate.

Finally, more opportunities than barriers were detected within the Fintech ecosystem, which would help to promote development at a national and international level, mainly because it has been possible to achieve greater financial inclusion, access to funds that promote growth and the relationship with other Fintech entities and the financial sector, with the participation of companies within the private sector, regulatory entities and various other institutions that promote greater presence and the adoption of the services provided by Bolivian Fintech entities.

⁶ Fintech in Latin America and the Caribbean: a consolidated ecosystem for recovery, Finnovista; Inter-American Development Bank; BID Invest, April 2022

9.2 Background in Bolivia

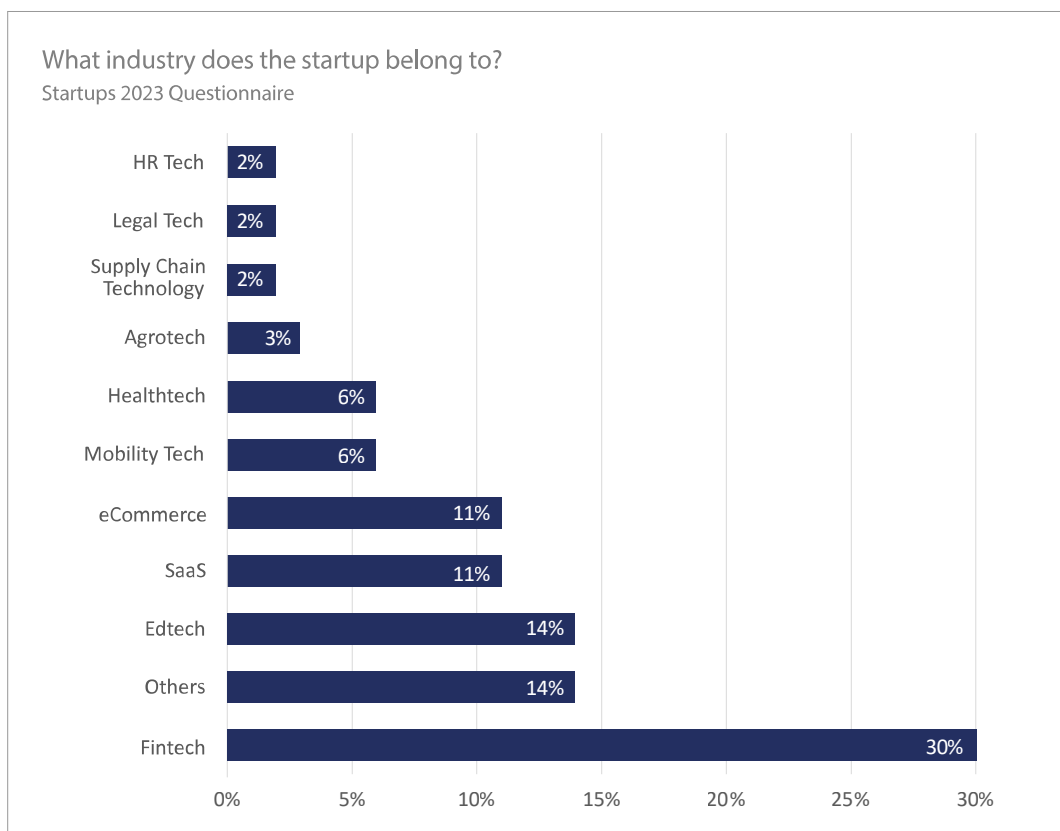
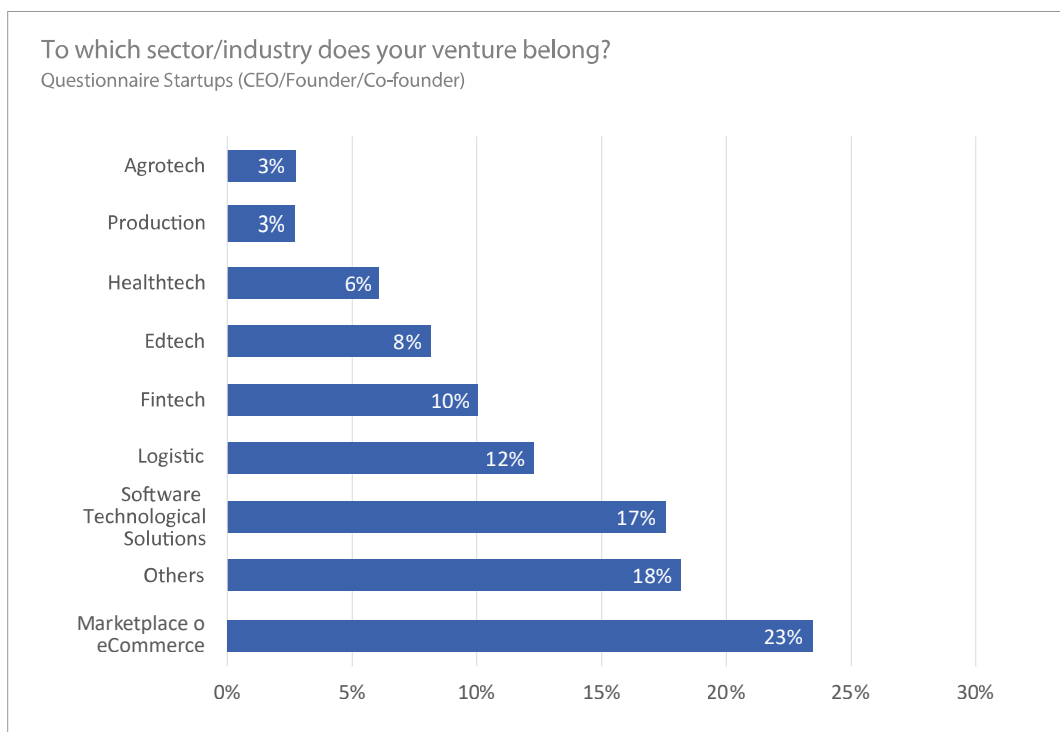
The digital technology ecosystem in Bolivia changes a dynamic rate every year, the new technologies and the innovations within the existing business models are catalyzing factors that have propelled the entrepreneurial launching of new Fintech products and services, as well as the participation of various key players, institutions and companies. In essence, Fintech entities are organizations that combine business models and technology to innovate, develop and expand their financial services. The approach of the current participants reflects the current opportunities within the Bolivian and international markets, where Fintech entities have the potential to help solve diverse problems and the lack of access by certain people under an approach with a different outlook, and an innovative and agile point of view based on new products and services.

In recent years the Fintech ecosystem, as a part of the Bolivian digital ecosystem, it has been able to include new participants and industries. It is especially important to understand their capacity to connect the offer and the demand through an array of agile solutions, with a better user experience and less friction. The use and application of new technologies, it is without a doubt, a propelling factor of this ecosystem and the route that provides the most financial inclusion, intended to provide a closer series of means between the financial service and the people, companies and the whole of society as well.

9.3 Evolution of Fintech in Bolivia

As it had been mentioned, a 20% growth of this vertical element between 2022 and 2023; makes it into a main element within the Bolivian ecosystem, thanks to the interest of several entities of the financial sector.

Graphic 16: Digital Ecosystem Mapping of 2022 vs 2023

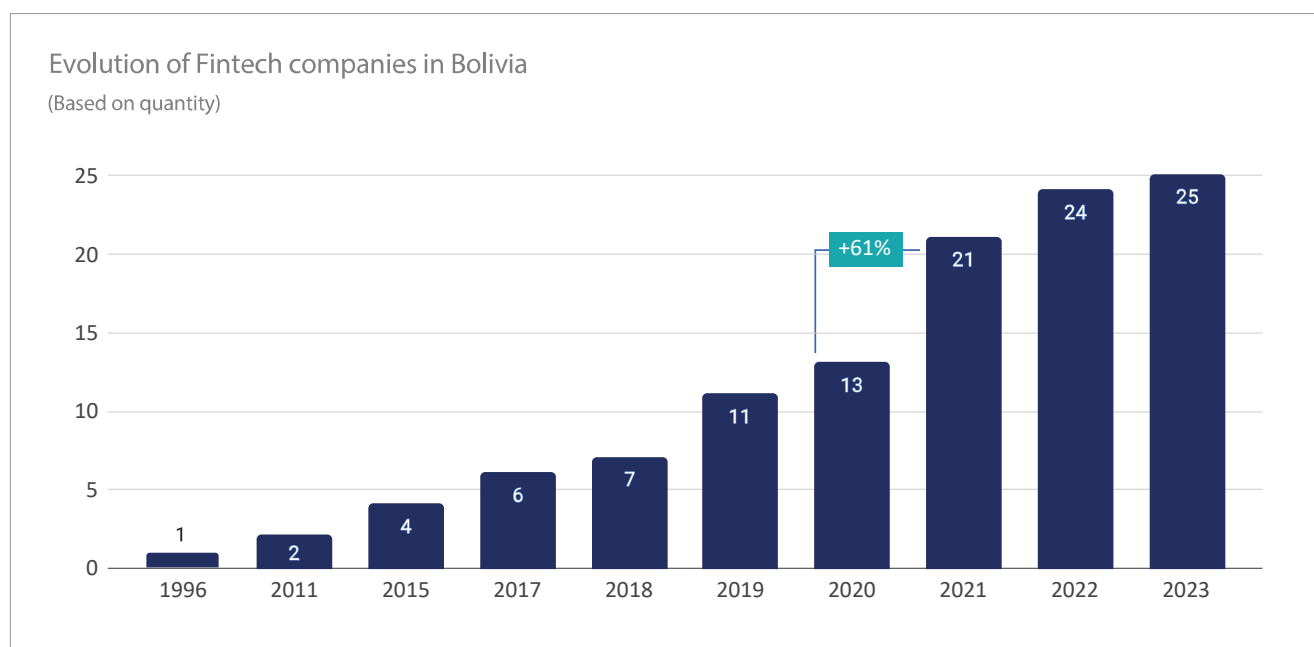


Source: Its own Elaboration based on the Mapping of the Bolivian Digital Ecosystem between 2022 and 2023.

It is important to mention that the initial approaches to Fintech solutions were originated in 1996, when the first services of this kind were implemented with digital payment browsers (when the term Fintech had not even been used yet), such innovation at that time allowed to implement other new services, many of which were implemented through electronic banking sites of various Bolivian-financial institutions.

Overtime, the first Fintech services began to spread out, while providing greater coverage and modern transaction platforms. As of 2020 a great amount of growth was seen (61%) that included new services brought about because of the COVID-19 pandemic, which accelerated the road map for digital transformation among the various financial institutions, as well as the identification of new needs of final users, which required solutions to may simplify the access to an array of diverse financial products and services. The current Fintech mapping for 2023 included the registry of 25 initiatives that regardless of their seniority or size, which has demonstrated that in Bolivia it is possible to implement Fintech business models within a regulated scheme of financial services, while expediting various opportunities from the accelerators, the private sector and other institutional platforms that support the organizational development of the Fintech ecosystem within the country.

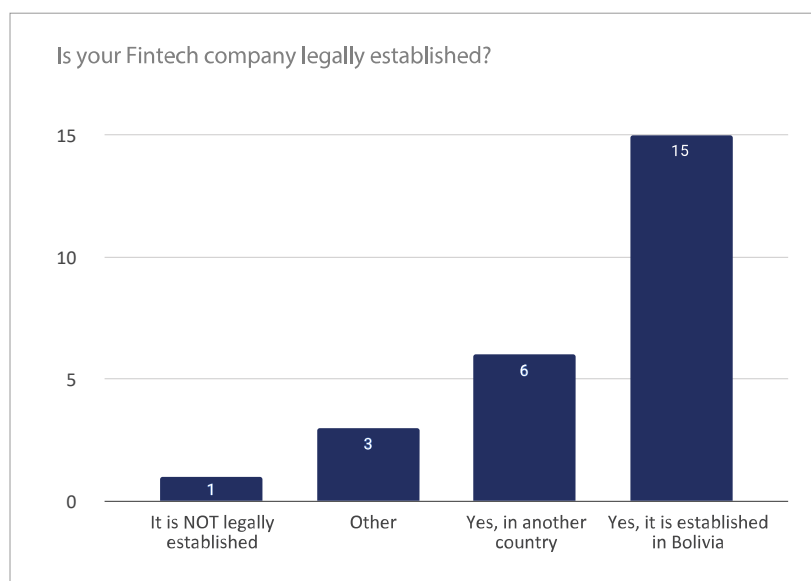
Graphic 17: Historical evolution of every Fintech



Source: Its own Elaboration, bases on the Fintech Mapping - 2023

In accordance to the results registered within the 2023 Mapping, 84% of the Fintech surveyed companies had indicated that they concluded their formalization process, 15 of them are now legally established in Bolivia and six are able to legally operate abroad. Such results reflect, on the one hand, the seriousness and the commitment of such companies, and also that fact that even though we do not have a Fintech law in Bolivia, we have been able to implement formal services. This shows the capacity of Fintech entities to adapt to current conditions and to properly develop their business models.

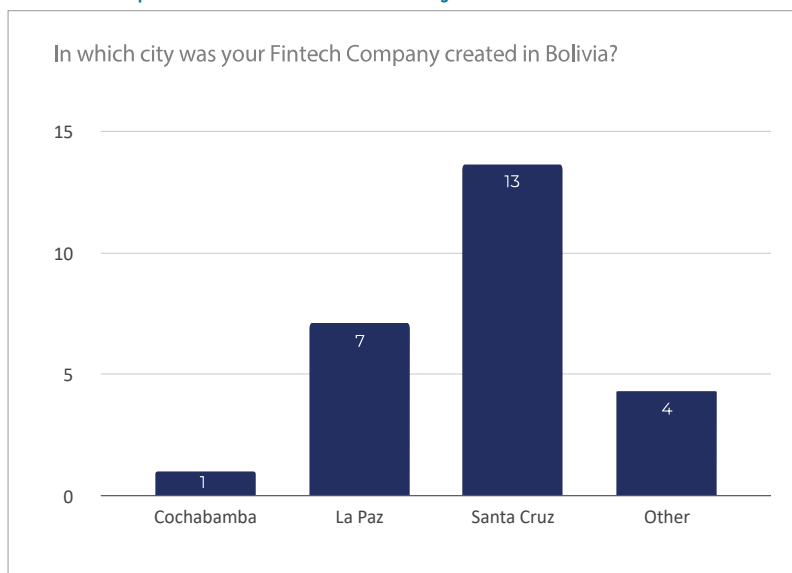
Graphic 18: Legal constitution of every Fintech



Source: Its own Elaboration, based on Fintech Mapping - 2023

On the other hand, independent to their place of legal constitution, all of the surveyed Fintech companies are based and currently operate within the country, 13 of which were created in Santa Cruz de la Sierra (52%), following by La Paz with seven entities and one in Cochabamba. The cities in the central axis of the country constitute 84% of the surveys within the Fintech Mapping - 2023. However, their services have a national reach.

Graphic 19: Cities where every Fintech were created

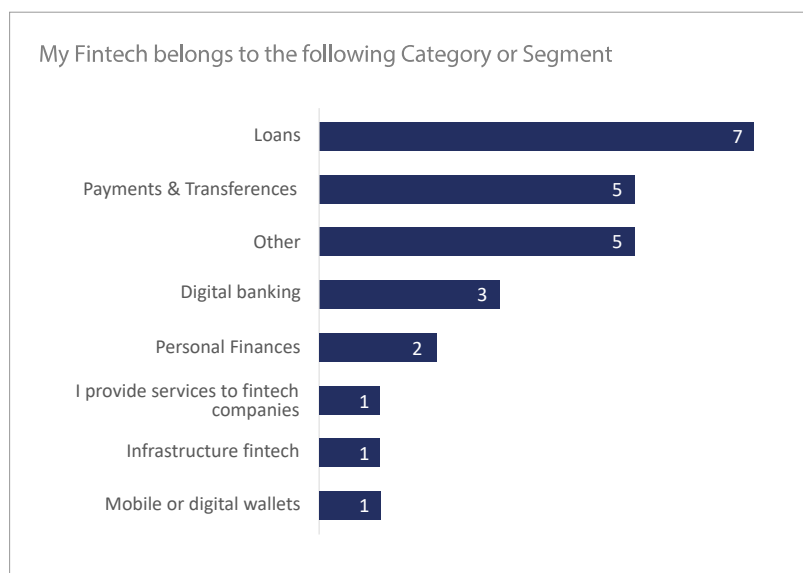


Source: Its own Elaboration, based on Fintech Mapping - 2023

9.4 Fintech segments

In accordance to the results from the Fintech Mapping - 2023, 12 companies were identified as being focused on providing loan and credit solutions as well as payment services and electronic transference of funds, which reflects that their business models are subject to the use of these components and financial services as foreseen by legally authorized financial institutions within Bolivia. Such entities had helped to provide access to various components that already have varying levels of operation and of applicable regulations, which are issues that protect the final user and they provide greater safety in reliance among the final users.

Graphic 20: Segment of the Fintech



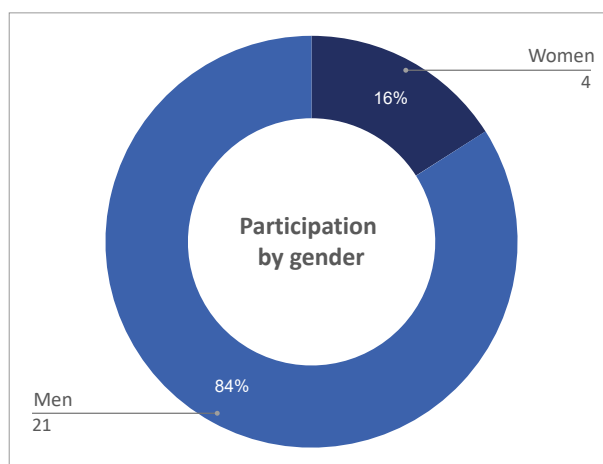
Source: Its own Elaboration, based on Fintech Mapping - 2023

9.5 Impact on gender and age

One of the most significant aspects of the Fintech ecosystem in Bolivia, it is in regards to gender issues, while observing a greater participation of men (84%) than women (16%). However, in regards to leadership and executive roles, there is a more homogenous participation, while seeing that women have played a more significant role in the creation of the Fintech industry in Bolivia.

Of the 25 identified Fintech entities, 10 include women in their creation and/or foundation, which represent 40%.

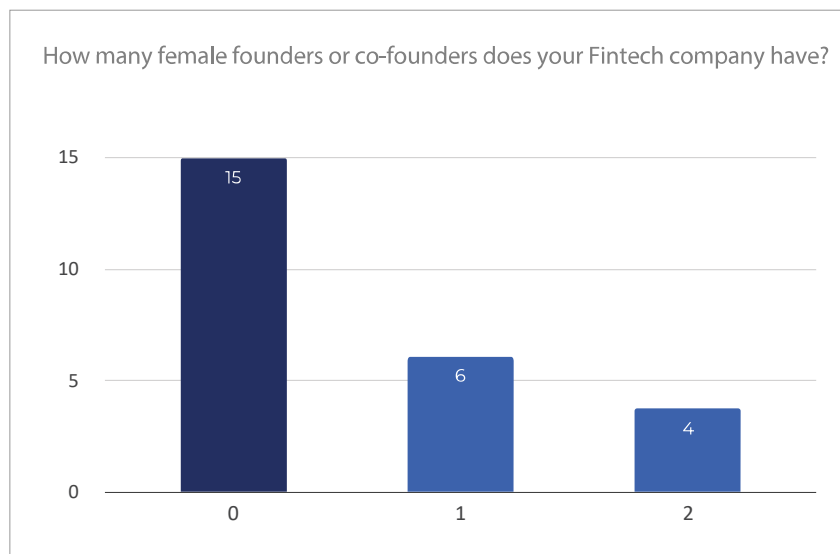
Graphic 21: Fintech in accordance to gender



Source: Its own Elaboration, based on Fintech Mapping - 2023

Six Fintech companies have a founder or co-founder and four have more than one female founder or co-founder. In comparison to men, 15 (60%) indicated that they had been exclusively created by men. These results reflect the Fintech business models that may be implemented based on more homogenous professional traits, which do not define or favor any particular gender when implementing the Fintech business model.

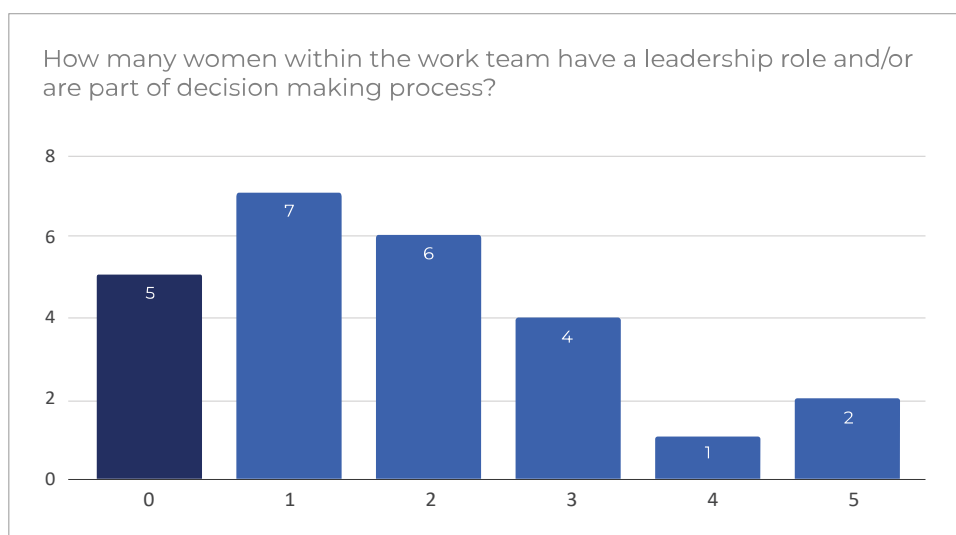
Graphic 22: Fintech in accordance to female gender



Source: Its own Elaboration, based on Fintech Mapping - 2023

The Fintech ecosystem essentially has a predominant technological base, which requires financial knowledge and previous experience. Such aspects greatly determine the sort of talent and leadership that is needed to implement any Fintech entity and to expedite their development over time, which is an issue that is particularly highlighted in regards to the participation of women, who have assumed a significant and quite important role in their very active participation, especially in regards to positions of leadership and/or decision-making positions.

Graphic 23: Fintech in accordance to female gender and leadership roles



Source: Its own Elaboration, based on Fintech Mapping - 2023.

In accordance to the results from Fintech Mapping - 2023, 20 organizations have within their team's women who are currently working there, and who occupy leadership positions and/or who are in charge of the decision-making process. This represents 80% of all the Fintech companies.

At the same time, seven Fintech companies have at least one woman occupying a leadership position and six of them have at least two women in that sort of position. While taking into consideration that the average size of a Fintech company in Bolivia when they are created is equal to five persons and at the moment of this mapping, the average size they have, it is close to 10 people, and it is also important to highlight the participation and leadership roles of women among all of these institutions.

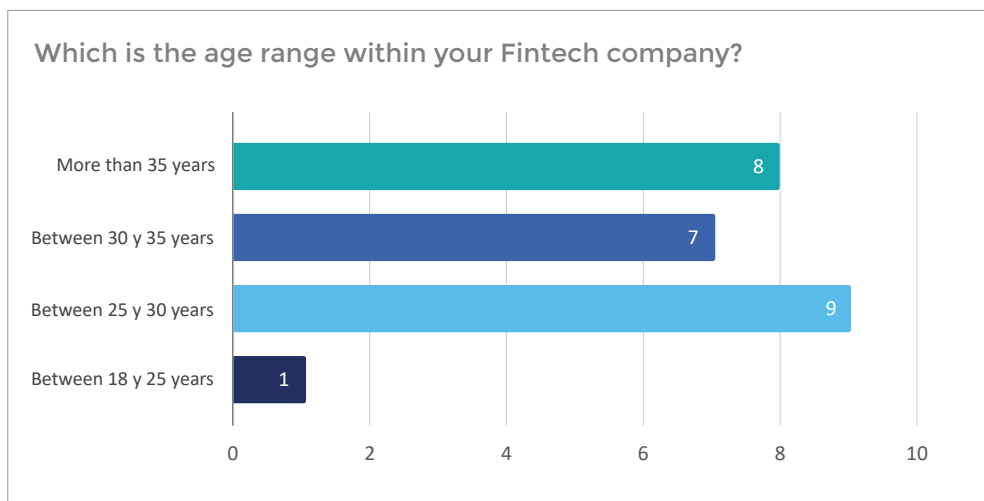
Composition of work teams among Bolivian Fintech companies

How many people were founders or co-founders when your Fintech company was created?		How many people form part of the work team at your Fintech company? (excluding founders)	
1 person	6	1 to 3 people	4
2 people	4	4 to 7 people	6
3 people	3	8 to 10 people	5
4 people	7	More than 10 people	10
5 people	5		
General Total	25	General Total	25

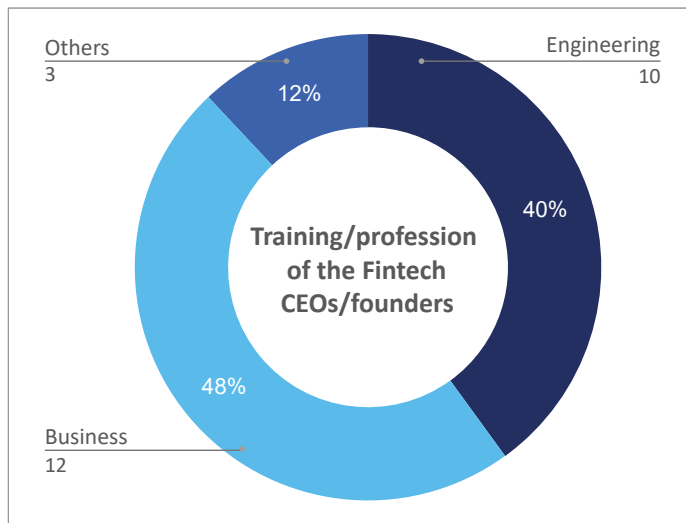
Source: Its own Elaboration, based on Fintech Mapping - 2023

In regards to the age of the people who form part of the Fintech companies in Bolivia, the Mapping 2023 research shows that 96% of the people that form part of an entity have an average age of 25 and 30 years (nine Fintech companies).

Graphic 24: Fintech in accordance to age range



Source: Its own Elaboration, based on Fintech Mapping - 2023

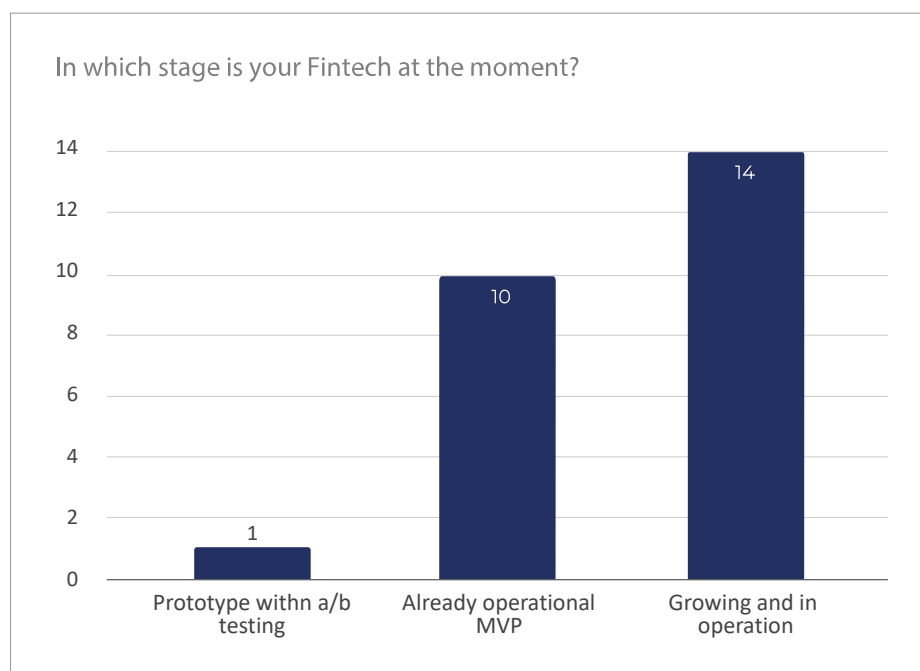
Graphic 25: Fintech in accordance to upbringing

Source: Its own Elaboration, based on Fintech Mapping - 2023

The education and profession of the CEOs and/or founders of the surveyed Fintech companies reflects an interesting balance in regards to the level of education and experience among the engineering areas (systems, industry, electronics, commercial, etc.) and this includes the business and/or economics sciences (business administration, economics, auditing, marketing, etc.), which is in keeping with the type of Business Models of the Fintech companies, not having technical training is not a factor that may limit nor that may hinder the development of the organizations.

9.6 Financing stages and sources

The results of the survey also show that 96% of the Fintech companies in Bolivia are already in operation (24 entities), 10 of which are in their early operational stage with at least one viable product (MVP) and 14 are under complete operational conditions.

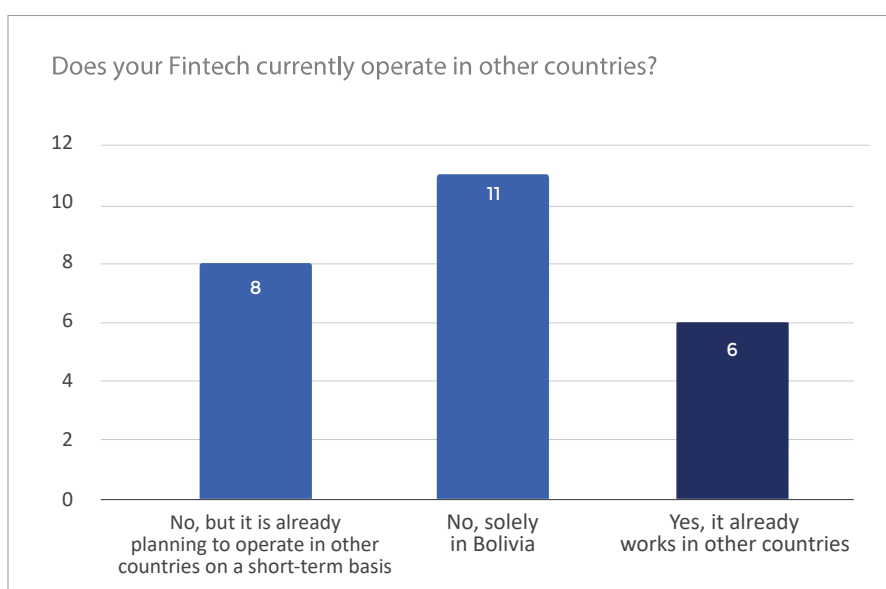
Graphic 26: Fintech per stage

Source: Its own Elaboration, based on Fintech Mapping - 2023

It is important to highlight that seven of the fourteen Fintech companies, which are already working, were created prior to the COVID-19 pandemic and they are part of the same companies that have been providing loan services especially through payment browsers and digital banking. On the other hand, the remaining seven Fintech companies were created after the pandemic, with highly innovative business models centered on displaying Fintech models and services, mainly through the vertical payment columns, as well as in loan and transference of funds services.

19 of those 25, which represent 76% of the surveyed entities, currently provide their services to the national market, which has a direct relationship with the current development stage of Fintech companies in Bolivia. It is also important to highlight the presence of six entities that provide their services in other countries, mainly the United States, Uruguay and Mexico.

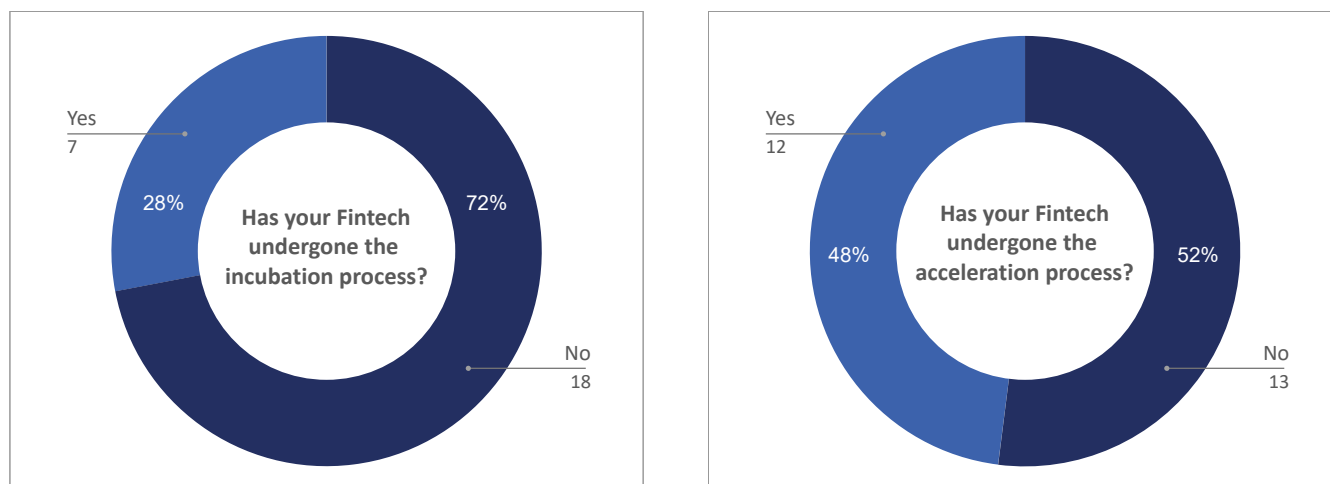
Graphic 27: Fintech in accordance to the place of operation



Source: Its own Elaboration, based on Fintech Mapping - 2023

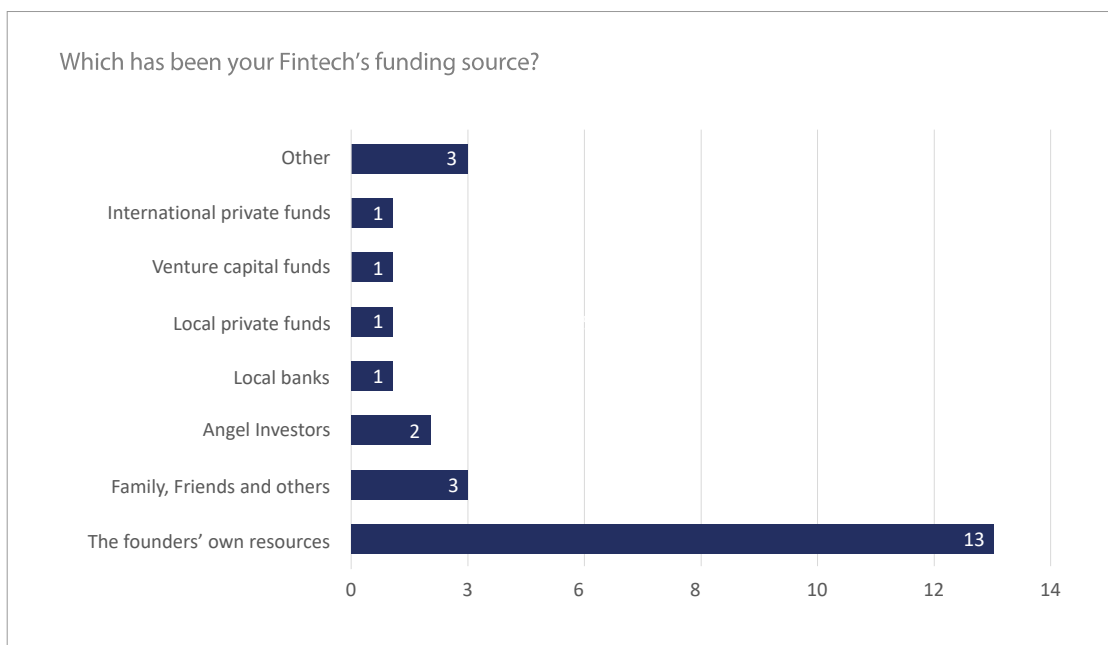
It is good to mention that the international reach and expansion of Fintech companies does not depend solely on the development stage in which they may be, it also includes their planning and how they prepare and organize their time. Of the 25 surveyed entities, seven have indicated that they had undergone a sort of incubation stage prior to starting their operations, as it is seen within Graphic 26. On the other hand, of the 25 surveyed companies, 12 had indicated that they had surpassed the acceleration stage prior to starting their operations, which also emphasizes the fact that nine (75%) were implemented through Bolivian accelerators, which are entities dedicated to the development of internal and external skills of the startups during the stage prior to the beginning of their operations and/or to the expansion of their operations, mainly those that have a technological base relevant to the Business Models, that includes Fintech companies.

Graphic 28: Fintech in accordance to the incubation and acceleration process



Source: Its own Elaboration, based on Fintech Mapping - 2023

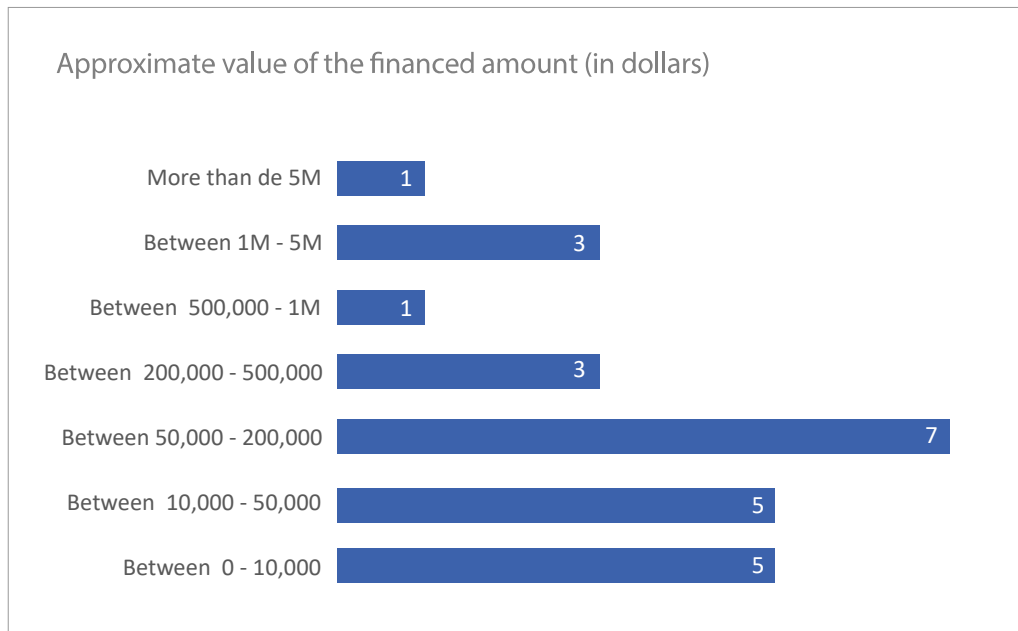
Graphic 29: Fintech in accordance to the financing source



Source: Its own Elaboration, based on Fintech Mapping - 2023.

The identified financing sources have provided easy access to financial resources in favor of 17 Fintech companies, which includes amounts ranging between zero and USD 200,000. Within the lower range of financed amounts, there are five Fintech companies that have received financing that has reached USD 10,000.

Graphic 30: Fintech in accordance to their funding value

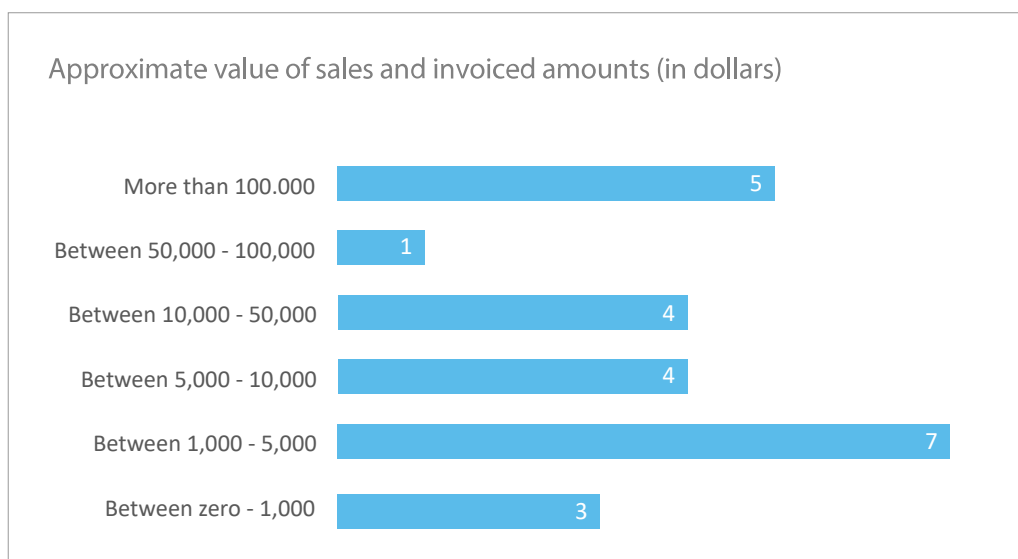


Source: Its own Elaboration, based on Fintech Mapping - 2023

9.7 Income and clients

Of the 24 Fintech companies that are currently working (one is at the moment within the prototype process and A/B Testing), 7 generate income with a range of USD 1,000 to 5,000, which is a product, which reflects the maturity level, in accordance to the stage they occupy and also in accordance to the adoption level of their products and services by the users and final clients.

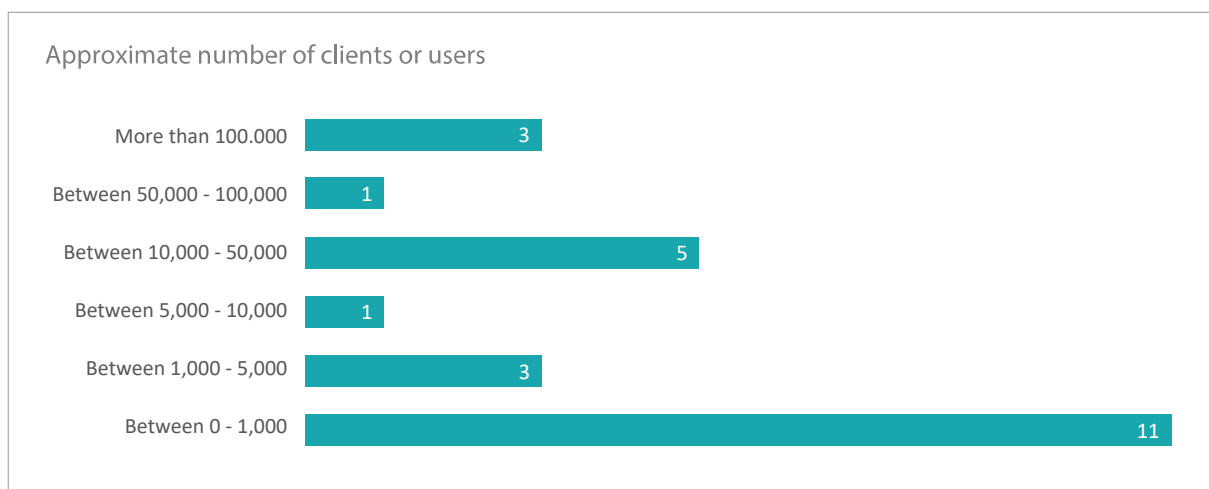
Graphic 31: Fintech in accordance to sales or billing



Source: Its own Elaboration, based on Fintech Mapping - 2023

Within this chapter there are five Fintech companies whose monthly incomes are greater than USD 100,000; this is mostly because they had started their operations over 12 years ago, on average. It is possible to confirm that such companies have led the way for the new generations of Fintech services, at a time in which the financial technology and software and communications infrastructure were not accessible to the digital entrepreneurial activities (the term Fintech had not even been coined at that time) nor had it been applied in favor of final users, who were solely serviced through legally authorized financial institutions within the country. This aspect is reflected by the number of clients from companies that had started with even greater anticipation, such as the three Fintech entities that serve 100,000 users every month.

Graphic 32: Fintech in accordance to the amount of clients



Source: Its own Elaboration, based on Fintech Mapping - 2023

It is the 11 Fintech companies that provide their services to 1,000 clients per month; all of which had been recently created (since 2019 on average) and they currently operate within the Bolivian market. In essence, 76% invoice less than USD 100,000, 84% have fewer than 100,000 clients, 60% have less than 10 collaborators, and 76% have local operations.

In contrast, other Fintech markets, such as Argentina, in accordance to the report from the Argentina Chamber of Fintech issued in March of 2022 that indicates that almost 50% of the entities invoice less than USD 500,000, they have less than 5,000 clients, 57% have less than 80 collaborators and they have local reach (58%).

In accordance to the research from Fintech Radar-Chile, which has 67 new companies, that ecosystem has a growth pace of 38% per year, while reaching 179 startups in 2021. Chile has had the Fintech Law since October of 2022.

In the case of Mexico, the Fintech sector closed 2022 with 650 companies, which means an increase of 26% in comparison to 2021, when there were 512, in accordance to the data provided by Finnovista, which is an entity that is specialized within this particular sector. Mexico has a Fintech Law since March of 2018.

The cases of Argentina, Chile and Mexico reflect a potential growth of the Fintech industry within the region, which is in keeping with the size of the market, the economy, population and time in which they have been developing their Fintech products and services in their own countries. This includes the case of Bolivia and the best practices, opportunities and the development of the Fintech business models, which may be identified with broad availability in accordance to the experience within the market, and the information and knowledge that has been developed so far.

9.8 Opportunities and barriers

The surveys done through the Fintech Mapping - 2023 were complemented by the CEOs and founders of Bolivian Fintech companies, which regard the Fintech business models as an ideal instrument to generate greater financial inclusion, ease access to new and/or better financial services in the country, mainly because of the capacity that they have to expand swiftly than other digital business models, through technology and access to specialized human talent (56% of the answers). Such aspects are allowing –gradually – the possibility to generate a greater adoption and experience through the use of the services centered on the client.

At the same time, the Bolivian Fintech companies are focused on the innovation and creation of new digital channels to provide access to their valuable proposal to final clients. Therefore, they work by developing various partnerships with financial entities and companies within the private sector that simplify the implementation of their business models, in such regard, 68% of the CEOs and founders believe that the necessary aspects to improve their participation in the market, it is related to the development of a regulatory framework, that would be specific enough and that may allow to increment their coverage and the development of their operations with greater reliability and safety for the final clients. At the same time, they believe it is necessary to develop new mechanisms within financial education amongst the population, as well as the means needed to generate greater opportunities to generate employment opportunities and the coverage of services based on gender equality.

48% of the CEOs and founders believe that the main barriers or limitations for the greater development of Fintech in Bolivia are linked to these issues:

- Access to funds that are needed to implement and expand their services.
- Availability of specialized technical resources and government initiatives that would help to promote Fintech's development.
- Lack of trust by the Bolivian population in the use of Fintech services.

Such aspects depend greatly in the participation and collaboration needed from the formal financial sector and of a proper regulatory structure that would help to generate an adequate context for the development of Fintech services in Bolivia, as it occurs in other countries that have a law that already promotes growth and development (Mexico and Chile); or the adaptation of the structure norms and regulations that would allow the participation of Fintech services, as it is the case of Brazil.

Finally, they highlighted the general social and economic conditions that are appropriate to develop Fintech products and services. Greater citizens' participation support from public and private institutions, the inclusion of additional Fintech subjects, modules and contents at public and private universities, all of these elements are needed to generate new knowledge related to financial technology and entrepreneurial activities to create and develop new business models.

The Fintech Bolivian Chamber formally created in April of 2023, may be the most representative organization that gathers all of the opportunities and barriers identified in this mapping, helping to the expansion and strengthening of the Fintech ecosystem within the ecosystem's digital framework in Bolivia, to enable for Fintech products and services to reach a greater amount of people, with greater quality and frequency in the use of such elements.

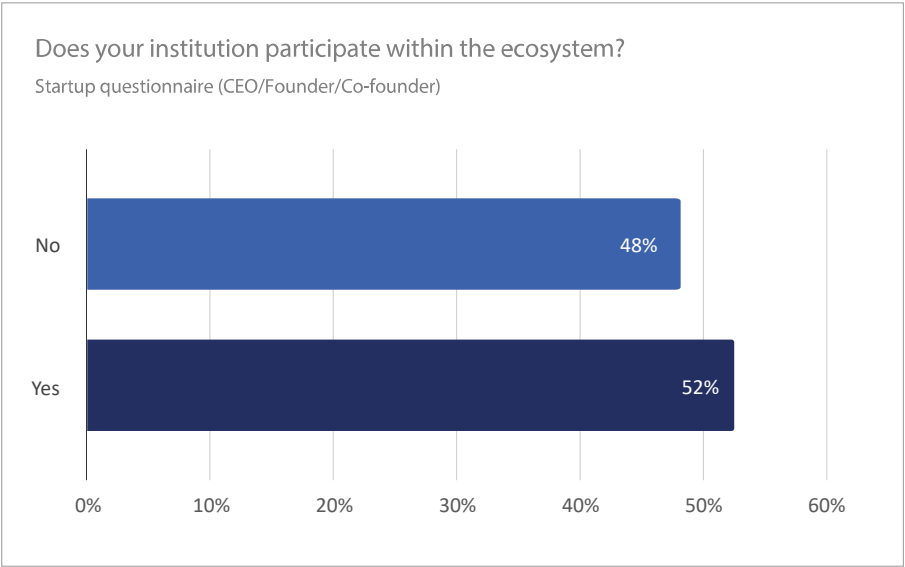


10. Social Capital of the Ecosystem of Software and Communications Technology

The social capital refers to relationships and connections among the key players within the startups ecosystem; this includes entrepreneurs, investors, mentors, academic and government institutions, and other relevant key players. Such social capital is essential, because it allows having greater access to resources and knowledge, while providing support and synergies, it promotes learning and feedback, in addition to institutional support, and the strengthening needed for startups growth. In such regard, within this section, it is possible proceed toward the identification of belonging to the ecosystem; on the other hand, it helps to improve the trust level among the various key players.

The ICT Bolivian ecosystem shows a high level of belonging: 52% of the people and institutions consolidated declare that they feel that they are a part of the ecosystem, as shown in Graphic 31.

Graphic 33: Belonging to the ecosystem



Source: Its own Elaboration (Mapping ICT)

Table 12: Belonging to the ecosystem

Concept	Value
Yes	52%
No	48%

In regards to the previous year, the number of institutions that take part within the ecosystem has been incremented from 26% in 2022 to 52% in 2023.

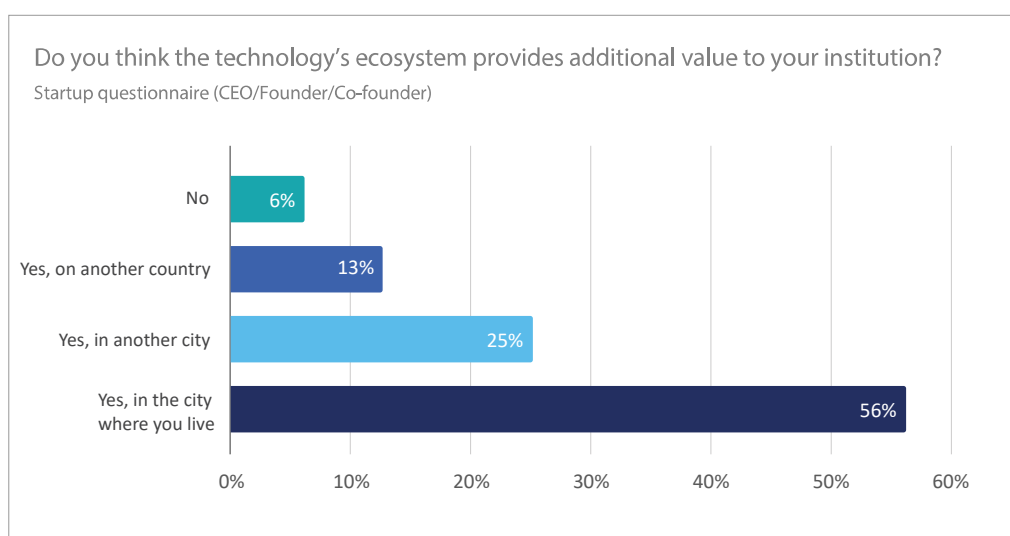
One of the most significant reasons that has been identified to strengthen the ecosystem, it is the number of years in which the companies have participated within the market and, as it is seen on the following table, 45% of the startups have less than two years within the system and only 18% have been in the market for five years.

Table 13: Years since the creation of the startup

Concept	Value
1-2 Years	45%
3-5 Years	38%
5-10 Years	16%
More than 10 years	2%

10.1 Measuring of the pertinent dimension of the partnership's capital

Graphic 34: Perception of support of the value to the institution's ecosystem



Source: Its own Elaboration (Mapping ICT)

Table 14: Perception of the value of the ecosystem within the institution

Concept	Value
Yes, in the city where you live	56%
Yes, in another city	25%
Yes, in another country	13%
No	6%

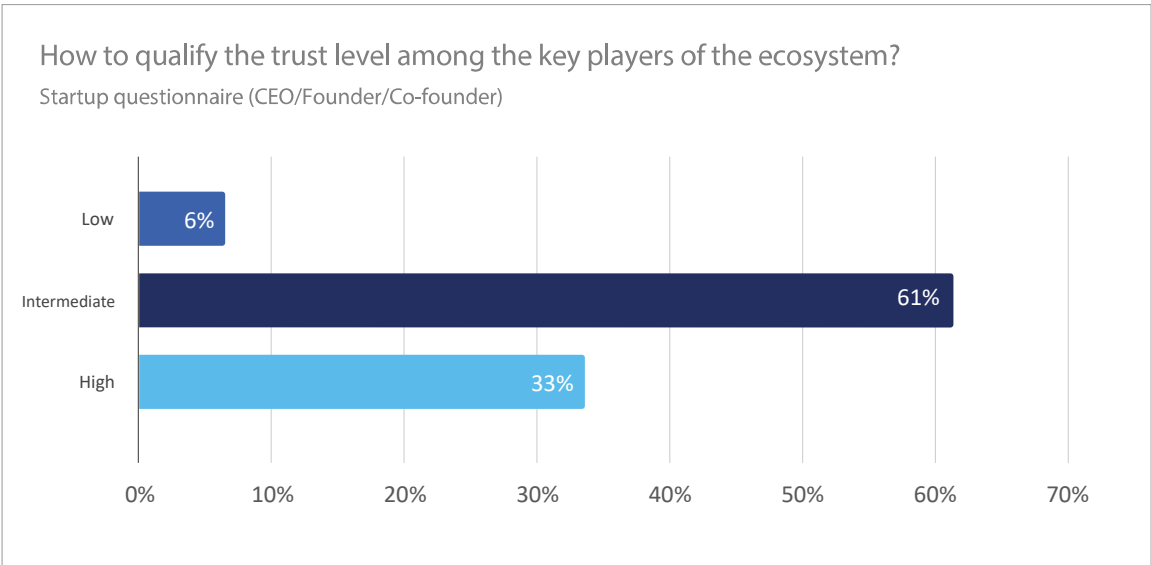
94% of the participants regard that the ecosystem provides value to their own institution. This indicator has increased by 5% in comparison to the previous year, when it reached 89%. At the same time, 81% consider that the national ecosystem, either within the city where the startup resides, or in another country, they support their entrepreneurial activity and 13% feel that the ecosystem from other countries supports their own entrepreneurial activity.

10.2 Measuring of the reliable dimension of the partnership’s capital index

The startups ‘ecosystem in Bolivia must be reliable and able to support the development and growth of startups. Such factor is essential to attract investments, while providing an incentive for other companies to enter into the entrepreneurs market, while promoting greater collaboration and a network of contact and solid commercial relationships, within an adequate institutional environment.

The level of trust in the ecosystem reached 94% in 2023, a factor that has improved in comparison to 2022 when it reached 89%. The institutions that consider the reliability have been at an intermediate level and it has actually increased from 58% in 2022 to 61% in 2023. (Graphic N°33).

Graphic 35: Trust level among the key players of the ecosystem



Source: Its own Elaboration (Mapping ICT)

Table 15: Level of trust in the key players of the ecosystem

Concept	Value
High	33%
Intermediate	61%
Low	6%

It is possible to see that the high trust level has increased from 21% to 33%, which expresses an overall improvement within the environment where trust in the ecosystem is crucial to attract and retain talent, strengthen innovation and promote a collaborative work environment. The level of trust is related with the interaction with investors, clients, partners and other key players of the ecosystem.



11. Conclusions

Some of the results of the research included within ICT Mapping-Bolivia 2023; include the following:

- The global startups ecosystem had a significant reduction of its growth rate during the last year. Without a doubt, the world's economic context that has led to the increase in interest rates has provoked a decrease in the offering of resources, especially among sectors aimed at innovation, while decreasing the overall financing of startups. Such reduction has forced them to focus on retaining their stability, a lot more than their growth.
- All of the industries have positive and negative cycles and, in this case, we are attending to the first cycle in the contraction of venture capital within the region, which is an issue that garners great attention, , especially after a very good year such as 2021. The advantage of this sector is the fact that those who finance entrepreneurial activities, they have a long term vision, which is an essential requirement to have a greater degree of recovery in the future.

The quantitative dimensions

- The results of the Number of startups identified for 2023 (150 startups) show, a clear relationship between the global contraction of the ICT ecosystem and it also ratifies the "capacity installed in Bolivia", while maintaining the results per city. Following the regional trend, a significant amount of growth is observed through the startups growth related to Fintech, which is a significant link within the ecosystem; it also has the necessary maturity within the development of startups focused on eCommerce and Marketplace and the follow up of vertical initiatives. It is expected that in the following years, the startups within the logistics and distribution area may have a more protagonist role within the ecosystem.
- While maintaining a "light" structure, with just a few employees, Bolivian startups continue to show great growth in regards to their average size, which means an opportunity to generate quality employment for Bolivian men and women.
- The professionalization trend is ratified among the entrepreneurs as it had been seen during the previous term. The participation of incubators and accelerators allow the qualitative improvement of the entrepreneurial activities.
- Slowly, but steadily, women have earned through their own merits more spaces amongst the startups. Even though there are still many challenges to overcome in regards to their participation as founders, among the teams of new companies, it has been seen that there are better conditions and greater equality in their overall participation.

In regards to qualitative dimensions

- Because of the recent development of the market, the approach of the B2B model has resulted as more feasible than the B2C model, but it may be expected that as the ecosystem would mature and develop further; the B2C models may progress with greater strength. The other trend refers to sustaining the light structure in the number of employees, which would allow greater flexibility to adapt to various situations.
- It is evident that the increased participation of women in the entrepreneurial activities, which in the last year at a rate of 3%.
- Most of the startups have been around for less than two years in the market, which means that they are very young. For these institutions, it is important to have investments to allow them to have greater scalability. However, the members of the ecosystem are important for the startups and they support them but there are very few who actually provide financial resources to invest. This leads to the fact that most of them would finance their activities with their own capital, or with money from relatives, friends or angel investors.

- The link of the startups within the rural area has improved and, in comparison to previous years, there is a greater interest toward the opportunities of this links intended to find new markets. This happens regardless of the limitations that have been identified in previous terms and that remain until now.

In regard to the Fintech

- The sector has grown significantly, mainly because it is linked to digital channels that are generated thanks to the partnerships with financial institutions and companies within the private sector.
- Because it is a supervised sector, certain actions are necessary in regards to the regulations realm that would allow having greater acceleration within the growth and development process, however, even though these elements area available, the launching of Fintech entrepreneurial activities continues to move on.
- When speaking about several key players within this vertical column, they have obtained greater trust from the Bolivian population; it is for now the greatest challenge of the Fintech entrepreneurial activities, to allow their growth to the pace needed by the propellers.

The social capital of the ecosystem continues to be high and it may be a decisive factor when highlighting the growth of everyone involved in the achievement of such results. The belonging and the trust continue at significant and favorable levels for the development of the Bolivian ecosystem.

GLOSSARY OF ICT TERMS

ICT Mapping is a document that, based on the environmental characteristics, it includes a great array of terms that come from English and that have incorporated into our language, and they have become very common expressions. In such regards and to promote a better understanding of this combination of languages, which also shows an integration that is not just technical, but also social and cultural among the technical communities, entrepreneurs, investors and others, which had help in the development of this glossary that we provide to our readers.

1. **Agrotech.** Union of the word agriculture and technology. The objective is to increase the efficiency in the procedures of cultivation, production, processing and distribution of natural foods. The traditional way in which these processes are developed has multiple opportunities for improvement that seek to develop through various innovations.
2. **Angel investor.** They are angel investors who actively seek opportunities to provide financing to entrepreneurs or emerging companies. They are often high net worth individuals looking for new ways to expand their wealth while also looking to help launch a promising business.
3. **B2B.** It is an abbreviation of the Business Model - known as business to business, which translates as «business to business», so the main objective of B2B is to create business relationships between companies.
4. **Benchmark.** The word benchmark comes from English and means «reference point», that is, reference of a successful product or technique.
5. **Benchmark (Interest rate benchmarks).** It is the reference interest rate, which is essential for the proper functioning of the financial market and is used by banks and other participants in the same market.
6. **Blockchain.** It means “chain of blocks”, it is a shared or distributed database where the registered information is stored in blocks, linked to each other cryptographically, and validated in a decentralized way through a common protocol. In other words, it is a way to store information securely, with greater traceability and accessibility.
7. **Co-founder.** It is the next person after the founder or founder, who supports the promotion or establishment of a business or an organization. It can also be called a joint founder or joint founder.
8. **Climate tech.** It refers to new technologies that are aimed at reducing global greenhouse gas emissions, addressing the impacts of global warming, as well as meeting the difficult challenge of decarbonizing the world economy.
9. **Deals with venture debt.** It is a loan whose majority consists of debt that is repaid with interest and a small fraction is dedicated to acquiring shares in the company. This is a new and interesting model for entrepreneurs who want to access financing without significantly reducing their shareholding, as occurs in venture capital rounds in which investors become part of the company as shareholders.

10. **Due diligence.** It is a legal term that means «due diligence», this concept refers to a prior audit before formalizing a signature, contract or investment process.
11. **eCommerce.** Electronic commerce is the practice of buying and selling products over the Internet. It is also called «eCommerce» to each online store that is dedicated to this business.
12. **Edtech.** Educational technology seeks to promote education, facilitate learning, and improve performance through the creation, use, and management of appropriate technological processes and resources.
13. **Early stage funding.** Early-stage startup financing involves companies that have a prototype or service model that has been tested, as well as a business plan. Although the business may be generating revenue in its early stages, it may not yet be profitable.
14. **Fintech.** It is a sector made up of companies that use technology to improve or automate financial services and processes. The term Fintech refers to a rapidly growing sector that is geared towards the interests of consumers and businesses.
15. **Foodtech.** It is a broad term that encompasses all those agents that apply technology to the agri-food value chain, from production to distribution and consumption of food, through innovation in products, logistics, marketing or business. In other words, everything that offers a new value chain, providing efficiency, food safety and a significant improvement in sustainability.
16. **Founder.** A founder is the person who started or launched the business in the first place. Founders are often the ones who come up with the idea for a company, launch it, and drive the broader vision of the company's goals. They are often in charge of the big picture, they are responsible for establishing the core team and establishing the resources they need to be successful.
17. **Funding Winter.** Winter financing or funding refers to a period of market corrections in the inflow of capital that reduces the probability that new companies will obtain higher valuations in the short and medium term.
18. **Healthtech.** The healthtech industry refers to the use of digital technologies and solutions to improve medical care and health-related services. This includes mobile applications, telemedicine, artificial intelligence, wearable devices, and hospital management software, among others. It seeks to increase efficiency, reduce costs, improve the quality of care, and facilitate access to health services for all.
19. **HRtech.** It refers to technology-leveraged human resources solutions to optimize processes in this functional area in organizations. HR Tech startups offer solutions that help HR specialists automate processes, work more efficiently, and provide a better experience for employees or candidates.
20. **IA or AI.** Artificial intelligence is the ability of a machine to present capabilities similar to those of human beings, such as reasoning, learning, creativity, and the ability to plan. AI allows technological systems to perceive their environment, interact with it, solve problems and act with a specific purpose.
21. **Joint venture.** It is a strategic association of a temporary nature (short, medium or long term) between two or more companies, which maintain their individuality and legal independence but which act together, under the same direction and rules, to carry out a certain commercial operation, in which the investments, control, responsibilities, personnel, risks and expenses and benefits are distributed. It is translated as a joint venture, a joint investment or "business collaboration".

22. **Late stage funding.** It is a late-stage company, a business that has been in operation for several years and is showing signs of steady revenue growth.
23. **Marketplace.** It is a great platform in which different brands, companies or stores can sell their products or services; It's a kind of online shopping mall.
24. **Mobitech.** It is an innovative mobile monetization platform that enables a variety of publishers, including app developers, carriers, and app development platforms, to increase monetization through advanced targeting technology and unique offering propositions.
25. **Mobility tech.** The term mobility refers to the use of technology to meet urban transportation challenges that are the product of population growth and innovative advances in transportation technology.
26. **Proptech.** It combines the concepts «property» and «technology» and refers to companies that use technology to improve or reinvent services within the real estate sector. Some of the most prominent technologies used by proptech include machine learning and geolocation.
27. **Roadmap.** It is a roadmap or document that works as a schedule for planning a project. It lists the tasks to be carried out within the framework of a specific project, both in the medium and long term. This document can be used in any area of development, but is typically used in projects related to software implementation.
28. **Seed round.** Seed round is the initial phase of attracting financing by a startup. This allows the company to try to raise capital primarily to develop a minimum viable product. In other words, a seed round is an early stage of financing a startup.
29. **SaaS.** Software as a Service (SaaS) is a cloud-based software model that delivers applications to end users through an Internet browser. SaaS providers host services and applications so that customers can access them on demand. With a SaaS offering, you don't have to think about how the service is maintained or how the underlying infrastructure is managed; You just have to think about how you are going to use the software.
30. **Seed stage.** It is the initial stage of a project, it is the business idea and the development of a product or service. It is the first step, where normally the team is very small and where the first draft is put together. At this start there is still no 100% defined business plan.
31. **Startup.** It is a newly created company that, thanks to its scalable Business Model and the use of New technologies, has great growth potential. This business typology is gaining strength in recent years.
32. **Venture debt.** It is a loan that consists mainly of debt that is repaid with interest, to which is added a small portion destined to acquire shares of the company.

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