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Giga: Entry Strategy in Bolivia

Course: Global Strategy

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1. Executive Summary

This report presents a strategic entry plan for Giga to achieve its mission of connecting all schools in Bolivia to the internet, bridging the digital divide, and enhancing educational opportunities for children, particularly in marginalized rural and indigenous populations. The report looks at Bolivia's socio-political context, stakeholder mapping, potential funding sources, and proposes actionable strategies to mitigate challenges and capitalize on opportunities in the country.

Despite notable progress in human development, Bolivia still faces a significant lack of digital connectivity. This reality is particularly reflected in the education sector, as public schools, mostly in rural and marginal areas, do not have adequate access to the internet. The whole situation was worsened by the Covid-19 pandemic, which set back education for an estimated 15 years. This digital inequality hinders equality in education, limits the development of digital skills, and affects the overall socio-economic progress of the country. However, Bolivia's national priorities, including the Patriotic Agenda 2025, the Economic and Social Development Plan (PDES) 2021-2025, and the upcoming Bicentennial celebrations, emphasize education, technology, and the reduction of inequality. Constitutional recognition of telecommunications as a human right and existing programs like PRONTIS provide the basic frameworks for Giga's intervention.

Based on the research and evaluation carried out, the main outcome is that the Bolivian landscape presents a valuable opportunity for Giga to leverage the political commitment to telecommunications access, along with the expert knowledge of key stakeholders on local educational issues. However, Giga's strategy will need to contemplate the complex operating environment in Bolivia, which presents a concentrated telecommunications market, stagnant infrastructure, bureaucratic processes, and financial limitations of the public sector. By demonstrating a clear path towards achieving universal school connectivity and aligning with national development goals, Giga can help mobilize further commitment from the government, private sector and international partners, making the initiative sustainable in the long term.

Two roadmaps are outlined in order for Giga to effectively enter the country. The primary option presents the optimal course of action which should be implemented in regular circumstances. The secondary path is envisaged as an alternative solution, which is activated in case the implementation of the first path is not feasible, such as in extraordinary or limiting conditions.

The primary roadmap includes entry through key public sector stakeholders. Priority is given to the Ministry of Public Works, Services and Housing (with a focus on the dedicated program National Telecommunications Program for Social Inclusion - PRONTIS), the Ministry of Education, the Government Regulatory Authority (ATT), and the state-owned operator Entel S.A. Furthermore, this path frames Giga's objectives to align with national priorities, with the aim to build an offer that resonates with Bolivia's strategic and primary goals in the key aspects of national development, cultural preservation, and economic opportunities. Finally, this option explores Giga's positive intervention in Brazil to advocate for mechanisms that provide sustainable financing for connecting schools. This includes a potentially feasible reform of the existing funding allocation, or the identification of new revenue streams dedicated to educational connectivity.

The secondary road map is focused on an alternative means to reach key government entities. This backup strategy proposes to establish a powerful coalition with UNICEF Bolivia, a multilateral organization, and the Patiño Foundation, a private actor, to strengthen Giga's position when accessing public sector bodies. In order to build this alliance, Giga should emphasize the importance of harnessing different organizational designs to advance quality education and the development of digital skills for Bolivia's youth.

2. Giga Background

Giga is a global initiative launched in 2019 by the United Nations, in partnership between UNICEF and the International Telecommunication Union (ITU). Their primary goal is to connect every school in the world to the internet; thus, providing students with access to information and educational opportunities.¹ Giga's priority is aimed at reducing digital inequalities, considering the fact that approximately half of the schools operating in the world do not have an effective internet connection, particularly in poor and marginalized areas.² Their advantage is highlighted in real-time data, given that Giga maps schools and thus develops innovative financing models with the assistance of companies and non-governmental organizations, which jointly contribute to reducing the global digital divide.³ Furthermore, Giga also works closely with governments to create effective regulatory frameworks and transparent procurement systems, ensuring that connectivity is sustainable and affordable in the long run.⁴ The importance of Giga's mission lies in the fact that schools are the centers of a community: when a school connects online, surrounding local communities and services are also able to connect, building digital inclusion as well as stimulating local economic growth. On a global scale, Giga sustains the UN Digital Cooperation Agenda and the SDG's by enhancing education, reducing inequalities, and opening up new opportunities for young people across the world.

3. Country Introduction

a. Background Information

The Plurinational State of Bolivia (hereafter "Bolivia") is a landlocked South American country. It is home to more than 12 million people, of which 35% are under 18 years of age.⁵ The majority of the population lives in the Andean region and a significant 60% identifies as indigenous⁶, with 36 indigenous groups that predominantly speak Quechua and Aymara, besides the primary Spanish language.⁷ The country values youth development and education, and the 2009 Constitution was the country's first to contain a specific section on the rights of children and adolescents.⁸

Bolivia has made notable progress within a decade in Human Development Indicators, advancing from 0.699 in 2013 to 0.733 in 2023 -positioning it in the 108th place out of 193 countries and territories. Similarly, the average years of schooling improved from 8.42 years in 2013 to 10.02 years in 2023, which reflects expanded education access. Concerted efforts have led to economic growth, poverty reduction, improved access to basic education, better health, and increased life expectancy.⁹ Despite these advances, Bolivia continues to face substantial development challenges, particularly in rural and remote areas, where the majority of the population resides.

b. Current Government

The current government in Bolivia has been led by President Luis Alberto Arce Catacora -the country's 67th president- since November 2020. He is an economist, banker and academic that belongs to the Movement for Socialism (MAS) party, who took office in November 2020 after winning approximately 55% of the vote.¹⁰ Arce's administration has set key priorities, including economic recovery and stabilization, social development, political reform, and digital and infrastructure development. However, Arce's administration faces plenty of challenges due to internal party divisions with supporters loyal to the former president Evo Morales -Bolivia's 65th president-, as well as opposition from the Comunidad Ciudadana (CC) and Creemos coalitions.¹¹ In recent years, the government has focused on the country's recovery following the significant health, socio-political, and economic impact of the Covid-19 pandemic.¹² The biggest risk to the government has been the decline in foreign exchange reserves, which was at a record low of \$46.80M USD as of December 2024 (Annex 1).¹³

It should be noted that national elections will be held in Bolivia on August 17th, 2025, which could potentially imply important changes in the country's political agenda and priorities during the next presidential term, especially if the current political party changes.

c. National Priorities

The priorities of Bolivia's national government are articulated in the Patriotic Agenda 2025 -the long-term plan for the country's development.¹⁴ This agenda is implemented through medium-term plans set out in the Economic and Social Development Plan 2021-2025 (PDES) "Rebuilding the Economy to Live Well, Towards Industrialization with Import Substitution", which align closely with the Sustainable Development Goals (SDGs).¹⁵

The PDES is encompassed in ten strategic axes that revolve around economic recovery and industrial transformation, social development and human well-being, sovereignty, governance and cultural identity, and sustainable development and environmental stewardship. All of these aspects emphasize a key ancestral concept in Bolivian culture -to Live Well (or *Vivir Bien*)- which refers to a socio-economic development model that prioritizes harmony with nature and community, seeking a balance between human and environmental well-being instead of focusing solely on economic growth.¹⁶

Moreover, this year marks Bolivia's bicentennial (200 years of independence), which will be celebrated on August 6th. Thus, the national government has adopted the motto *Rumbo al Bicentenario* (Towards the Bicentennial) to promote the implementation of projects that focus on crucial areas of development, such as education and technology.¹⁷ Likewise, private, academic, and non-profit institutions use this event as a guiding principle and promotional strategy for their projects.

The concept of *Vivir Bien* and the bicentennial are key aspects for Giga to consider in order to reach crucial stakeholders in Bolivia, especially in the present year.

d. Education and Connectivity Landscape

The digital connectivity landscape in Bolivia has limited development. According to the Inter-American Development Bank's 2020 Broadband Development Index, the country ranked 18th out of 26 Latin American and Caribbean (LAC) countries. Fixed broadband infrastructure, in particular, faces significant limitations in both coverage and performance. However, mobile broadband shows comparatively stronger development, exceeding average levels in both the LAC region and OECD countries. This presents a strategic opportunity for Giga to expand digital connectivity through mobile networks.¹⁸

Despite being landlocked, Bolivia has taken steps to improve its digital infrastructure. In 2020, it established a direct fiber optic connection to the Pacific Ocean through an agreement with Peru, aimed at enhancing service quality and reducing internet costs.¹⁹ Additionally, in 2013, the country further expanded its connectivity capacity by launching its own satellite, Túpac Katari.²⁰

Nonetheless, limited internet connectivity remains a major barrier to improving education quality. Nationwide, a low percentage of schools are connected to the internet, and even when access exists, connection speed is not optimal.²¹ This situation contributes significantly to educational stagnation and disparities, as reflected by a 2017 UNESCO assessment showing that learning outcomes among Bolivian students in Grades 3 and 6 fall below regional averages.²² In addition, the evaluation showed that students from indigenous populations are at a disadvantage compared to the rest of the student body.²³

The COVID-19 pandemic further showcased Bolivia's longstanding digital divide, with gaps in digital skills and access based on location and socio-economic status.²⁴ For example, 70% of urban households had internet access, compared to only 21% in rural areas. Fiber optic infrastructure remains absent in many municipalities. Moreover, economic inequality is evident: while 9 out of 10 of the richest households had a home connection, only 1 out of 10 of the poorest did.²⁵ These challenges affected not only students, but also teachers, many of whom lacked training and familiarity in using digital tools to support remote learning.²⁶ Bolivia may experience an educational setback of nearly 15 years due to the pandemic.²⁷

Together, these factors suggest that poor connectivity is a major bottleneck for educational progress, widening the existing gaps in access and opportunity across the country.

4. Stakeholder Engagement Strategy: Primary, Secondary, and Tertiary

For a comprehensive engagement strategy and to ensure a successful project implementation, the present in-depth research and analysis shows the need to identify three main types of stakeholders: primary, secondary, and tertiary. This classification is built by taking into consideration each stakeholder's level of importance within the Bolivian landscape and the order in which the Giga Team should consider engaging with them. As such, the stakeholders' selection criteria consist of: (1) the respective leverage each entity holds within the telecommunications nation-wide landscape and/or within the country's educational sphere, and (2) their respective ability to provide funding to help successfully implement the Giga-proposed project with the country.

Primary Stakeholders

As a first step, the Giga Team should prioritize the public sector, to align themselves with the political will and power dynamics that exist within the country. It is advised to start by engaging with the **Ministry of Public Works, Services and Housing**, which has as one of its main goals to address “the needs of rural areas, working toward universal access to telecommunications, within the framework of the Living Well initiative.”²⁸ Under the supervision of the same Ministry, the presence of **Bolivia’s Government Regulatory Authority (ATT)**²⁹ and the **Vice Ministry of Telecommunications** is observed.³⁰ The latter entity oversees the National Telecommunication Program for Social Inclusion (**PRONTIS**),³¹ which is not only responsible for a dedicated program on telecommunications, through the means of a legal mandate, but also holds the much-needed funding that can help support telecommunications projects within the country.³² It is important to note that PRONTIS executes its projects in collaboration with the state-owned telecommunications service provider **Entel S.A.**,³³ who benefits from having its own funding because it leads within the telecommunications space by holding an estimated 54% of the market share.³⁴ Last but not least, Giga should engage and collaborate with **Bolivia’s Ministry of Education**,³⁵ which has as its guidelines to improve, strengthen, and anchor efforts towards quality education.³⁶ (For details on each primary stakeholder, see *Table in Annex 2*).

Secondary Stakeholders

Research shows that the Bolivian telecommunications marketplace is highly concentrated and dominated by the aforementioned Entel S.A., followed by its two main private competitors³⁷ that the Giga Team should engage with: **Tigo**³⁸ (25% market share³⁹) and **Viva**⁴⁰ (21% market share⁴¹). Moreover, a major private entity that the Giga Team should consider collaborating with is the Patiño Foundation, a Swiss-based foundation with Bolivian roots that has defined education as being its main priority in 2025.⁴² And, of course, the engagement strategy with all key stakeholders may be facilitated with the support of **UNICEF Bolivia**,⁴³ who is not only a trusted partner for the Bolivian government but has set as its main priorities education and learning, as discussed in length in section 6 (Roadmap 2). (For details on each secondary stakeholder, see *Table in Annex 2*).

Tertiary Stakeholders

If needed, the third level of stakeholders to consider engaging with are local foundations and NGOs, such as: **Fé y Alegría Bolivia**, and **Enseña por Bolivia**, as well as other multilateral organizations such as the **OAS** and **ILO**. These tertiary stakeholders can provide valuable supplementary support. However, they are not essential to the core connectivity infrastructure deployment in the schools. These organizations operate adjacent to the main connectivity ecosystem, offering complementary expertise, resources, and networks that can enhance the Giga project’s outcomes without being critical path dependencies for basic implementation. (For details on each tertiary stakeholder, see *Table in Annex 2*.)

5. Potential Funding Sources

Funding for the execution of telecommunications projects in Bolivia is allocated to a select number of government-led institutions. Even though funding is limited, the potential to mobilize the available funds towards school connectivity presents an important opportunity for Giga.

On the one hand, Bolivia lacks a dedicated telecom universal service fund (USF). Instead, a multisectoral National Fund for Regional Development (FNDR) exists to finance public infrastructure projects within the framework of the PDES 2021–2025 and the Patriotic Agenda 2025. However, only a small portion of the FNDR budget is allocated via PRONTIS for telecommunications: for 2021, about 0.03% of FNDR (roughly \$84,000 USD) was dedicated to telecom projects.⁴⁴ In practice this means development projects rely heavily on the funds mobilized through other state-owned institutions rather than a robust USF.

On the other hand, the Bolivian government allocates specific funds for telecommunications projects through PRONTIS. This program presents two financing modalities in order to support the deployment of public projects in the priority areas of universal access to telecommunications services and digital literacy, among others.⁴⁵ The first modality is through the grant of partial financing or co-financing for telecommunications companies with majority state participation, selected through direct invitation. Thus, this modality gives priority to the state-owned company Entel. The second modality is through the grant of partial financing or co-financing for telecommunications service operators, selected through a bidding process. Therefore, the privately-owned telecommunications companies, Viva and Tigo, would be able to apply for this type of funding.

Two recent projects showcase the effectiveness of mobilizing funds through PRONTIS and Entel. In 2024, Entel committed approximately \$29M USD to expand infrastructure, including fiber-to-the-home and mobile services in municipal capitals, with \$1M USD already invested and another \$1M USD planned for 2025. Additionally, Entel has independently financed the \$5.5M USD project “Mobile Access Expansion 2023” to add new radio base stations throughout the country. Complementing these efforts, PRONTIS has entirely financed the project “Installation of Radio Base Communications” to support rural connectivity in communities with 50 to 2,000 inhabitants, with the final phase scheduled for 2025.⁴⁶

Additionally, in 2021, the Ministry of Public Works, Services and Housing conducted a project to expand the capacity and access to fiber optics in two municipalities: Saipina and Moro Moro. The project was carried out with the support of the General Directorate of Telecommunications Services (DGSTEL) and Entel, within the framework of projects financed by PRONTIS. To execute it, the ministry identified the saturation of the mobile telephone service by conducting inspections of quality, technical feasibility and verification of conditions for the installation of infrastructure, as well as meetings with the local mayor.⁴⁷

6. Primary Roadmap

Framing the Narrative for the Value Proposition

The celebration of Bolivia’s Bicentennial can be a key entry point for Giga to leverage to pitch its value proposition to key public stakeholders. This event is a large source of pride for the nation and can bring

forth a pivotal moment to reflect on its progress and set the tone for future development goals. School connectivity across Bolivia is not only an infrastructure issue but also a strategic blockage to achieving educational equity and fostering future economic prosperity. Despite national commitments like the Patriotic Agenda and the Economic and Social Development Plan that emphasize education and reducing inequality, significant disparities still exist, particularly in rural areas and indigenous communities. Due to a lack of transparency within government in Bolivia, it is challenging to derive exact commitments and figures of consistent funding dedicated specifically to fiber optic infrastructure for educational institutions. In 2023, the national budget included approximately \$187M USD to telecommunication and transportation projects, some of which was said to be committed to PRONTIS.⁴⁸ While the government has committed funding to increasing infrastructure for radio stations to improve cellular connectivity, there remains a gap in a significant push for fiber optic connectivity.⁴⁹

Action Plan and Value Propositions for Engagement with Public Entities

Giga is positioned to offer an attractive value proposition to the Bolivian government and key public stakeholders through presenting a credible path to achieving universal school connectivity that aligns with national priorities. Key steps of an action plan for engagement include:

1. Engaging with key public organizations, particularly the Ministry of Public Works and the Ministry of Education, by leveraging the Bicentennial celebration and National Agenda targets to pitch assistance in reaching current goals and setting new targets for school connectivity projects. This could be particularly attractive as the country approaches elections and the current administration looks for positive press to pitch to voters. It is crucial to gain support from these organizations and partner with them to prioritize school connectivity and secure government funding for infrastructure projects.
2. Framing Giga's objectives to align with national priorities. Increased school connectivity positively impacts educators ability to offer multilingual curriculum and prioritize heritage preservation for students, particularly in indigenous communities. Further, increased connectivity facilitates digital upskilling, leading to increased workforce readiness, economic opportunities, and participation in the global tech ecosystem. Lastly, increasing school connectivity contributes to achieving the objectives set out in the PRONTIS Strategic Plan 2015–2025, as well as the Ten Strategic Axes listed in the PDES 2021-2025.
3. Collaborating with government entities ATT, ENTEL, and most importantly, PRONTIS to reform budget allocation of funding towards school connectivity as a matter of public urgency. In order to promote the public ownership and accountability of school connectivity, Giga could offer its services in reforming internal budgets to unlock a sustainable source of funding for infrastructure projects and ongoing expenses. Moreover, Giga could use its experience in Brazil as a successful example of government funding allocation toward connectivity projects, given the cultural and geographic proximity between this country and Bolivia.
 - a. **Champion of innovative financing and policy reform (Brazil case study):** Giga's experience in Brazil shows its success in working with governments to solve major

connectivity challenges and promote local ownership of solutions. Giga contributed to discussions that led to the reform of Brazil's Universal Service Fund (FUST), which had collected billions in underutilized funds.⁵⁰ Through advocacy and reform, the FUST law was changed to require 18% of annual funds to be dedicated to public school connectivity.⁵¹ The reform unlocked a reliable funding source to cover ongoing monthly expenses. Brazil was further able to mobilize proceeds from its '5G spectrum auction' to cover capital expenditures for infrastructure projects.⁵² This combination of reforming FUST for operational costs and using spectrum auction proceeds for infrastructure created a solid solution for achieving universal school connectivity. This successful case study demonstrates how Bolivia could potentially reform its FNDR or PRONTIS mechanisms to create a sustainable funding stream for school connectivity projects.

In order for Giga's value proposition to resonate with government officials and other key stakeholders, the narrative must align with the goals of the current administration and support the current economic and social realities of the groups they are looking to serve. Pitching the alignment of school connectivity with the momentum of the National Agenda and the Bicentennial patriotism could be a particularly effective and impactful strategy for Giga. In order to help build broader support for enabling school connectivity regardless of political changes, highlighting the development of future workforce productivity and participation in the global tech ecosystem is crucial. Giga's strengths in being a facilitator and enabler by bringing proven strategies and global partnerships will complement existing efforts to foster digital inclusion, economic opportunity, and educational advancement for Bolivians youth.

7. Secondary Roadmap

Framing the Narrative for the Value Proposition

Building relationships with public sector stakeholders in Bolivia can be characterized by transparency challenges, bureaucratic processes, and the need for initial efforts to forge bonds of trust. Nevertheless, establishing relationships with these actors is crucial for Giga to enter the country. Thus, a recommended contingency plan has been developed in order for Giga to reach public sector stakeholders through a different approach.

The following contingency plan put forward a strategy to enter Bolivia through UNICEF Bolivia, a multilateral organization, and the Patiño Foundation, a private sector actor, leveraging their networks and exploring possibilities for them to collaborate in joint projects. Once a powerful coalition has been established with these actors, Giga could be able to approach public sector stakeholders more effectively and with stronger support.

Action Plan for Engagement with Multilateral and Private Actors

1. The entry point would be through UNICEF Bolivia. The UNICEF country office is a trusted partner to the Bolivian government, with whom it cooperates to implement the Country Program 2023-2027.⁵³ This program has Education and Learning as one of its core pillars, seeking to enhance equitable access to quality education by removing barriers and improving skills development;

thus, fostering inclusive and resilient school environments. UNICEF seeks to achieve the objectives of its key focus areas by mobilizing resources and commitments from different stakeholders to implement cost-effective models, with the private sector listed as one of its main partners.⁵⁴

2. In parallel, Giga could partner with the Patiño Foundation, a Bolivian institution founded in 1931 and headquartered in Geneva. The foundation is a key player in Bolivia's development, with initiatives in Education and Culture, Pediatric Health, and Agroecology,⁵⁵ placing particular emphasis on education this year. Since 2010, it has run a prestigious Master's scholarship program in Switzerland and Belgium, with alumni now holding top positions, including rectorships at leading Bolivian universities -*Universidad Privada Boliviana* and *Escuela de la Producción y la Competitividad*. Its network of over 120 influential alumni in both public and private sectors offers Giga strategic pathways to connect with key decision-makers, particularly in the public sphere.
3. The last step would be to reach public sector actors through the coalition formed between Giga, UNICEF Bolivia, and the Patiño Foundation. By harnessing the valuable contacts and the powerful informal networks held by both local institutions, Giga could reach key individuals in the public sector bodies explored in the primary roadmap. On the one hand, both Giga and the public sector institutions previously identified could benefit from the expert knowledge on educational issues, priorities, and objectives that UNICEF and the Patiño Foundation hold, as this knowledge is specific to the Bolivian context. On the other hand, the coalition could benefit from the availability of funding from publicly-owned sources, such as PRONTIS. Upon reaching public sector actors through this alternative means, the contingency plan would connect with the action plan and value propositions described in the primary roadmap.

Value Proposition for Engagement with Multilateral and Private Actors

Giga's mission to connect every school in the world aligns with the educational objectives of UNICEF Bolivia and the Patiño Foundation. Thus, the project is well positioned to offer an attractive value proposition that tackles the following aspects:

1. **School connectivity as a stepstone towards the advancement of quality education:** Giga identified a problem that resonates with UNICEF Bolivia and the Patiño Foundation: "The lack of internet connectivity limits the opportunities [for children and adolescents] to learn and fulfil their potential."⁵⁶ In a similar manner, UNICEF Bolivia's theory of change has the overall vision of supporting children and adolescents, particularly the most vulnerable, to develop to their full potential.⁵⁷ Likewise, the Patiño Foundation has as its mission to work for the benefit of the new generations in Bolivia, offering programs at different education levels that seek to harness the potential of students and professionals. Thus, showing the connection between the three purposes will allow Giga to establish a powerful coalition.
2. **Complementarities between different organizational designs:** It is crucial for Giga to highlight how a coalition among the three institutions would leverage the different opportunities provided by two multilateral organizations and a local foundation. On the one hand, Giga would be able to

provide knowledge on the broader school mapping ecosystem, giving the coalition a worldwide view of the connectivity situation. Additionally, Giga would bring past success experiences from countries that share similar characteristics to Bolivia, such as Kyrgyzstan, a mountainous country with remote and inaccessible villages, or the previously explored case of Brazil. On the other hand, UNICEF Bolivia and the Patiño Foundation would be able to provide expert knowledge on the situation of education from a local perspective. The exchange of global and local information would be further facilitated by the fact that the Patiño Foundation is headquartered in Geneva and that UNICEF Bolivia belongs to the broader institutional framework of UNICEF.

- 3. Opportunities for the development of digital skills:** Giga could captivate UNICEF Bolivia and the Patiño Foundation by showcasing how school connectivity poses the opportunity to advance the development of digital skills as a next step after attaining internet connectivity. This proposal reflects the priorities of both institutions. UNICEF Bolivia has set as its main outcome in the Education and Learning pillar for “boys and girls, including adolescents (...) to improve learning and acquire the skills and abilities necessary to transition to adulthood [by 2027].” To achieve this, a core output is to “ensure quality learning and develop transferable skills [including digital skills] in students.”⁵⁸ Similarly, the Patiño Foundation’s educational activities are focused on content structured around the promotion of creativity based on new technologies.⁵⁹ Thus, Giga could tap into the interests of both institutions by exploring the possibility to execute programs that promote the development of digital literacy as a result of improved internet connectivity.

8. Conclusion

The Bolivian landscape presents important opportunities for Giga to achieve its mission of expanding school connectivity, while supporting the country in its mission to advance youth development and education. Bolivia positions school connectivity as part of a broader political commitment to telecom access. The Constitution recognizes telecommunications as a human right. Furthermore, the state has created a dedicated program -PRONTIS-, allocated first to the state-owned company -Entel S.A.- for the execution of telecommunications projects. Finally, the national development agendas -Patriotic Agenda 2025 and Economic and Social Development Plan 2021-2025- reaffirm broadband expansion as a pillar of reducing inequality. By leveraging these opportunities, Giga will be able to overcome bureaucratic processes, limited funding, and geographical constraints in the country.

To capitalize on these opportunities, this report considered two strategic entry pathways. The first strategy targets direct entry through key public actors, such as the Ministry of Public Works, the Ministry of Education, ATT, and Entel. Its key value proposition lies in aligning Giga’s goals with Bolivia’s national priorities, offering a credible path to achieving universal school connectivity, supporting heritage preservation, advancing digital skills for better employability, and advocating sustainable funding models inspired by successful examples, such as the reform of the FUST Fund in Brazil. Alternatively, the second strategy proposes establishing a coalition with UNICEF Bolivia and the Patiño Foundation to use their networks and local expertise to more effectively access the public sector. This strategy offers value by combining Giga’s experience in global school mapping with UNICEF and the Patiño Foundation’s deep

knowledge of the local educational context, thereby strengthening advocacy for quality education and the development of digital skills for young people in Bolivia.

By implementing the recommended strategies, Giga will be able to leverage the political commitment to telecommunications access, along with the expert knowledge of key stakeholders on local educational issues, while overcoming bureaucratic processes, limited funding, and geographical constraints in Bolivia.

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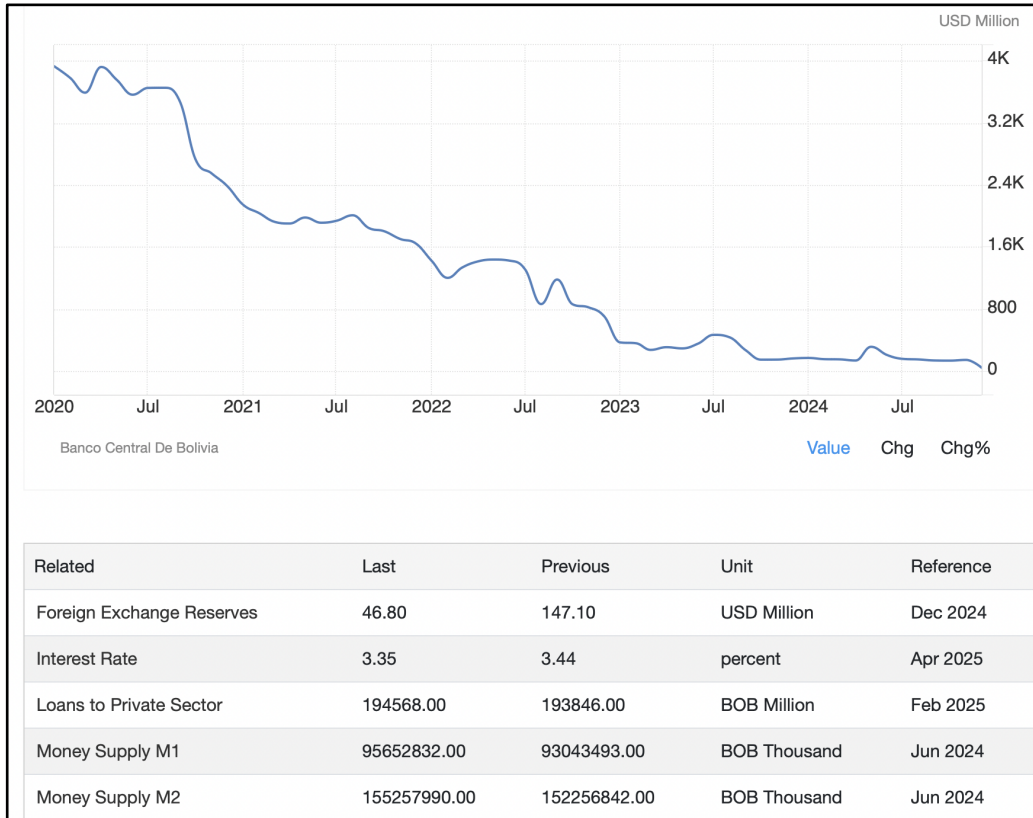
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Annex 1

Figure 1: Bolivia Foreign Exchange Reserves 2020 - 2024



Annex 2

Figure 2: Mapping of Fifteen Stakeholders to Help Implement the Giga Project in Bolivia

N°	Stakeholder	Type	Role Description	Importance
1	Ministry of Education	Government	It oversees the country's educational infrastructure and its education policy. It is a core strategic partnership for Giga to help them implement their project nation-wide. ⁶⁰	Primary
2	Ministry of Public Works, Services and Housing	Government	The Ministry of Public Works, Services, and Housing works towards addressing the needs of the rural Bolivian areas, by working toward the access of local communities to telecommunication services. ⁶¹	Primary
3	Vice Ministry of Telecommunications	Government	The Vice Ministry of Telecommunications is positioned under the Ministry of Public Works, Services and Housing, and has as its main goal to help promote the universal access to affordable and high quality telecommunications services, with a mandate focused on creating a National Broadband Plan, to help connect large and intermediate-level cities. ⁶²	Primary
4	PRONTIS	Government	Programa Nacional de Telecomunicaciones de Inclusión Social, (The National Telecommunication Program for Social Inclusion), PRONTIS, is a subsidiary of the Ministry of Public Works and focuses on "funding government efforts to extend internet access in the country. Resource allocation under this scheme to develop universal access is first given to telecommunications service providers	Primary

			in which the government has a majority stake. For any activities that the state is unable to carry out, tenders are then held to identify providers that can implement the project. While PRONTIS has a strong focus on building connectivity in rural areas and for remote populations, it also conducts work in urban settings.” 63	
5	Entel S.A.	State-Owned Telecom Provider	“Empresa Nacional de Telecomunicaciones S.A.” (Entel S.A.) is the largest telecommunications service provider, headquartered in La Paz, Bolivia. It can help with creating internet connectivity infrastructure all over the country, as well in underserved rural areas. 64	Primary
6	ATT	Government Regulatory Authority	“Autoridad de Regulación y Fiscalización de Telecomunicaciones y Transportes” (ATT) is Bolivia’s Regulatory Authority for Telecommunications and Transportation. It is the country’s telecom framework and it is in charge of approving partnerships linked to telecommunication and the bandwidth use, as such it is a core stakeholder as it can help enable or delay the implementation of telecommunications projects. 65	Primary
7	Tigo (or Millico)	Private Telecom Provider	“Millicom International Cellular S.A.,” also known as Tigo, is a large Bolivian private telecom provider that may be a partner to help implement the Giga project in both urban and semi-urban areas. 66	Secondary

8	Viva (or NuevaTel)	Private Telecom Provider	“Empresa de Telecomunicaciones NuevaTel PCS de Bolivia S.A.”, known also as VIVA or NuevaTel, ⁶⁷ is another major Bolivian telecommunications company and wireless network operator that can serve as a secondary level stakeholder to help Giga project implementation in various geographical zones not reached by Millicom.	Secondary
9	Fundación Patiño	Private Foundation	The Fundación Simón I. Patiño (Patiño Foundation) presents a valuable potential partnership for the Giga project in Bolivia. As a well-established Swiss-based foundation with deep Bolivian roots and education as its top priority for 2025, it might bring crucial assets to school connectivity efforts. ⁶⁸	Tertiary
10	UNICEF Bolivia	Multilateral Organization	Since the Giga project is co-created by UNICEF, its Bolivia office can provide administrative, political, technical, and financial on the ground support, both with the local government and educational facilities. ⁶⁹	Secondary
11	Enseña por Bolivia	NGO	Enseña por Bolivia is a non-profit organization dedicated to improving education for all Bolivians irrespective of their backgrounds. ⁷⁰ Giga can leverage Enseña por Bolivia’s experience to navigate relationships between schools, government entities, and private sector partners.	Tertiary

12	Fundación Pueblo	Philanthropic NGO	“Fundación Pueblo” a Bolivian non-profit organization that has been operating for over 20 years in the most disadvantaged areas of the country. It can help the Giga team learn about where the most disadvantaged communities are located and how to interact with them. Also, the organization can help act as an intermediary between Giga, its partners and the local population. ⁷¹	Tertiary
13	Fe y Alegría Bolivia	Grassroots Network	“Fe y Alegría” is a large grassroots network that started in Venezuela in 1955 and since 1966 it also works in Bolivia to help create educational services for the marginalized communities. Same as with Fundación Pueblo, it can act as an intermediary between Giga, its partners and the disadvantaged local population. ⁷²	Tertiary
14	Organization of American States (OAS)	Multilateral Organization	Bolivia has been a full member state of the Organization of American States (OAS) since its establishment. Through OAS, Giga can leverage its connection to Inter-American Telecommunication Commission (CITEL), which promotes telecommunications development across the Americas, and its Educational Portal of the Americas, which supports digital learning resources. ⁷³ Furthermore, the Department of Human Development, Education and Employment could serve as a valuable partner due to its interest in collaborating with local institutions to advance quality education in the region. ⁷⁴	Tertiary

15	International Labour Organization (ILO)	Multilateral Organization	Relationship between the International Labour Organization (ILO) and Bolivia offers valuable dimensions for the Giga school connectivity initiative. The ILO's focus on developing digital skills for employment aligns naturally with Giga's connectivity goals, creating pathways for school internet access to translate directly into economic opportunity. ⁷⁵	Tertiary
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Annex 3

Figure 3: PESTEL Analysis of Bolivia Regarding the Educational and Connectivity Landscape

Dimension	Characteristics
Political	<ol style="list-style-type: none"> 1. Education system heavily influenced by government policies; 2. 2009 Constitution recognized telecommunications access as a human right; 3. Instability of the political landscape; 4. High urban area connectivity versus the rural area.
Economic	<ol style="list-style-type: none"> 1. 23% of national budget allocated to telecommunications;^{76} 2. GDP: \$3,686;^{77} 3. Only 40% of the population has access to the internet;^{78} 4. Economic inequality.
Social	<ol style="list-style-type: none"> 1. Pronounced inequality in geographic dimensions (rural versus urban)^{79} and socioeconomic dimensions (wealthier versus poorer households); 2. Indigenous population faces challenges, such as language barriers.
Technological	<ol style="list-style-type: none"> 1. Limited telecommunications infrastructure; 2. 13.5 million mobile connections;^{80} 3. 8.77 million people connected to the internet;^{81} 4. Growing 4G connectivity in urban areas, with 5G still in the early planning stage.
Environmental	<ol style="list-style-type: none"> 1. Effects of climate change result in extreme weather conditions; 2. Growing environmental awareness; 3. Potential for renewable energy through the exploitation of lithium reserves.
Legal	<ol style="list-style-type: none"> 1. 2009 Constitution recognized telecommunications access as a human right;^{82} 2. Telecommunications regulation through Law No. 164 of 2011 (General Telecommunications and ICT Law);^{83} 3. Weak enforcement; 4. Data privacy and protection regulation in development stages.