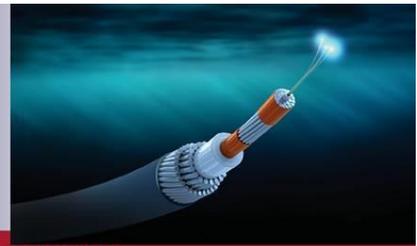


IV. DELEGATION

DELEGATION LIST	
Undersecretariat of Telecommunications (Subtel) - Chile	
Natalia López	Head, Telecommunications Development Fund Division
Andrés Contreras	Project Engineer, Telecommunications Development Fund Division
Pablo Perez	Legal Counselor, Special Projects Unit - Cybersecurity
Jesús Sarmiento	Legal Advisor, Legal Division
Jorge Campusano	Professional Advisor, Department of Market Studies, Regulatory Policy and Studies Division
Sofia Moraga	Regulation Analyst, Regulatory Policy and Studies Division
Agency for the Regulation and Control of Telecommunications (ARCOTEL) - Ecuador	
Ricardo Freire	Executive Director
Ministry of Telecommunications and Information Society (Mintel) - Ecuador	
Romel Espinosa	Director of Supervision and Evaluation of Telecommunications Companies
National Telecommunications Corporation (CNT EP) – Ecuador	
Martha Moncayo	General Manager

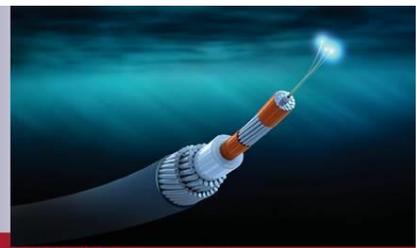


DELEGATE BIOGRAPHIES

About Subtel: The Undersecretariat of Telecommunications (Subtel) of Chile was established in 1976 as part of the Ministry of Transport and Telecommunications. Its mission is to coordinate, promote, boost and develop the telecoms sector in Chile. Its main functions are to propose policies in telecommunications within the Government's guidelines, to exercise the direction and control of its enforcement, supervise the public and private operators in the telecom sector and verifying their compliance with the relevant laws, regulations and standards. While Subtel oversees market competition/development in a context of service convergence, there is a need to ensure fair competition for business of all sizes within the telecommunication sector as well as provide competitive conditions for end customers. This applies to the main segments of the telecoms market including last mile access; backbone systems; and international capacity.

The organization is leading the development of an undersea cable, Asia-South America Digital Gateway, through the Pacific Ocean with the aim of making Chile the telecom port of South America. They are preparing an auction of spectrum to facilitate the deployment of commercial 5G mobile networks. They are writing new cybersecurity rules aimed at telecom operators as part of a national initiative towards digital transformation for both the private and public sector.

Subtel is developing the appropriate backbones for increased capacity for both the domestic and international level and is in a bidding process for terrestrial fiber optic systems to link Chile to neighboring countries, especially in the context of the Asia-South America Digital Gateway. They are currently seeking investors, customers and providers that could be interested in the Asia-South America Digital Gateway. They are introducing new mobile technologies such as 5G and analyzing the potential impact on traffic consumption at a national level. Subtel's current priorities include: deployment of a National Optic Fiber System (over 10,000 kms, about 6,214 miles), deployment of new technologies to rural and isolated areas, leading the Asia-South America Digital Gateway, and managing a multidisciplinary team working to improve internet connectivity conditions to 632 locations all over the country.



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Natalia López

Head, Telecommunications Development Fund Division
Undersecretariat of Telecommunications, Government of Chile

Ms. Natalia Lopez has over 10 years of experience in telecommunication sector. She currently is the Head of the Telecommunications Development Fund Division, where she aims to drive initiatives to improve the Chile's telecommunications infrastructure. She oversees both the subsidized initiatives and private-funded projects, propelling the deployment of the telecommunications services for everyone in the country, especially those inhabitants in the last mile of transmission networks. For instance, some projects she has led include Southern Optic Fiber, National Optic Fiber, Wi-Fi-free national network, Internet access to national public schools. She is also leading the Asia South

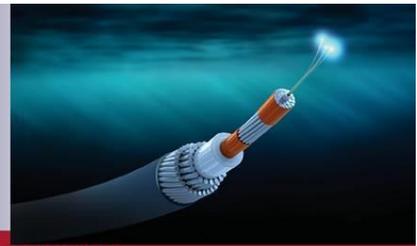
America Digital Gateway Project.

Ms. Lopez also participates in the Country Commitment Program, leading a multidisciplinary team working to improve internet connectivity conditions to the communities with 50 or more inhabitants, which due to geographical and/or economic criteria, are either unserved or underserve. The team is comprised of governmental agencies, universities, telecommunications services providers, and other private corporations. They design, implement, and asses pilot programs, adopt innovative technological solutions. The goal is to reduce the digital divide in isolated and underserved areas, by delivering such localities and people with internet connectivity to improve their education, health, and social welfare. Previously, she was as a Management Control Corporative for Telefonica and the Leader of Network Commercial Planning Department in the Business Segment for Entel.

Ms. Lopez holds a degree in Management Control and Information Systems Engineering from the University of Chile, a Master's in Consulting Strategic Business and Institutional Communication from the University Rey Juan Carlos, Spain, as well as an international Master in Business Administration from ESERP Madrid School of Business and Social Sciences.

Delegate Interests: Ms. Lopez is interested in submarine cable rollouts, international capacity business models, Asia South America Traffic Forecast, cybersecurity rules especially in submarine cables, broadband international capacity to develop 5G, content delivery networks and future datacenters technology models, and new telecommunications solutions for rural areas. She would like to see fiber optic landing sites, submarine fiber optic cable manufacturing, international capacity management, data center operations, and urban and rural 5G antennae sites. She is also interested in meeting with financial institutions and potential investors in the digital gateway project.

Division Profile: The Telecommunications Development fund oversees driving initiatives to improve the Chile's telecommunications infrastructure with the main purpose of closing the digital divide in unserved areas. The fund is commissioned to development both the subsidized initiatives and private-funded projects, propelling the deployment of the telecommunications services for every country inhabitant, especially the most needed in last mile and transmission networks.



Pablo Perez

Legal Counselor, Special Projects Unit – Cybersecurity
Telecommunications Undersecretariat, Government of Chile

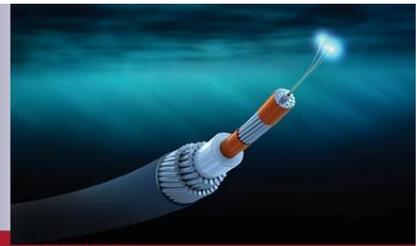
Mr. Pablo Perez has served as legal counselor in the Special Projects Unit of the Telecommunications Undersecretariat (Subtel) of Chile since January 2019. His main duty is to provide legal assistance to the units of other divisions in the development of projects that are not part of regular lines of work. He writes regulations for the telecommunications sector based on the technical standards.

Mr. Perez previously served as legal advisor of a regional office and for the legal division in the same agency. Between 2010 and 2014, he worked as a private lawyer in civil matters. Between 2004 and 2010, Mr. Perez worked as legal advisor for the Innovation and Entrepreneurship Management of the Chilean Economic Development Agency (CORFO). In this role, his main job was to act as Secretary of Minutes for various Subsidies Allocation Committees. His job was to express in a legally sound manner the grounds expressed by the Commissioners for approving or rejecting grant applications.

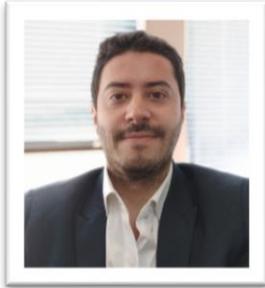
Mr. Perez has attended seminars on international commercial arbitration and administrative law. In the latter, he passed with the highest distinction with a Compilation of Jurisprudence on Administrative Procedure. Over the years, he has taken several courses on comparative legislation in telecommunications, industrial property, copyright and other matters.

Mr. Perez has a Law Degree from the Law School of the Universidad de Chile.

Delegate Interests: Mr. Perez is interested in topics such as cybersecurity rules for telecom operators, learning about examples of cybersecurity current threats, cyber security challenges on 5G networks, cybersecurity certification procedures for telecommunication hardware, and authorization procedures for 5G hardware deployment, such as how do operators ask for permission for installing poles, towers, antennae. He would like to learn more about low band 5G networks, C band 5G networks, as well as sea cable manufacturers, deployment and servicing. He is interested in visiting urban and rural 5G antennae sites and 5G 28GHz antennae / base stations samples.



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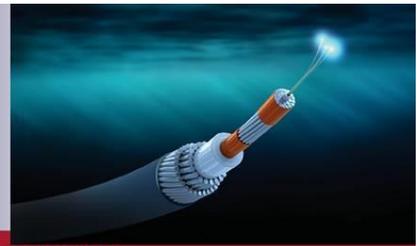


Jesús Sarmiento

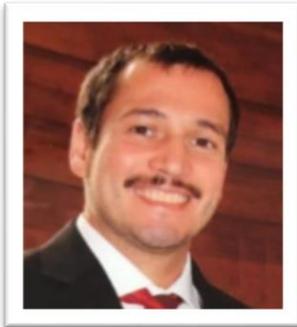
Legal Advisor, Legal Division
Undersecretariat of Telecommunications, Government of Chile

Jesus Sarmiento is currently working as a strategic projects lawyer for the Legal Division of the Undersecretariat of Telecommunications of Chile. His role includes providing legal advice to the Undersecretary on various matters, such as regulation and public tenders, with the aim of giving feasible and comprehensive solutions to the authority. He also conducts analysis, coordinates, and leads the legal aspect of international bidding process of the “Submarine Cable Project Economic, Technical, and Legal Feasibility Study: The Asia-South America Digital Gateway.” In addition, he provides legal support on strategic projects to various Subsecretariat divisions. While his initial interest was focused mainly on regulation law and policies, now this opportunity has allowed him to explore different aspects in the telecom industry. Mr. Sarmiento received a law degree from University Adolfo Ibáñez.

Delegate Interests: Mr. Sarmiento is interested in learning more about regulatory challenges regarding submarine cables, how submarine cables take care of cybersecurity, and the main legal problems related to planning the construction of submarine cables. He would like to meet with fiber optic manufacturers and law firms. He would like to visit a fiber optic landing site, operations with traffic forecasts, traffic management, and learn more about cybersecurity protection for international transmission systems. Technologies that interest Mr. Sarmiento include fiber optic transmission, undersea cable rollout, data center operators, and cybersecurity.



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Jorge Campusano

Professional Advisor, Department of Market Studies
Regulatory Policy and Studies Division
Undersecretariat of Telecommunications, Government of Chile

Jorge Campusano currently serves on the subsea fiber optic project between Chile and Asia where he is preparing the basis for the economic, technical and geopolitical feasibility study, the selection of international consultants, and the monitoring of the study. Mr. Campusano has extensive and varied experience in the telecommunications sector, including technical, commercial and regulatory in both private and public sectors, as well as developing mobile solutions, business processes, management control, capital expenditures, wholesale marketing, and strategic contract negotiation.

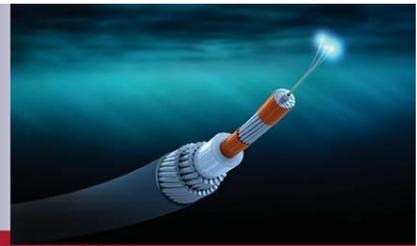
Some of professional achievements includes developing: a strategic contract between Telefonica Chile and VTR (Liberty Group) for a 3,000 km backbone network over fiber optics and six years of operation; master agreements between Telefonica and global wholesales operators for leased lines products, as well as leading certification of products; and contract negotiation between Telefonica and Claro for fiber optic coverage in the southern area of South America (Punta Arenas, Isla Grande de Tierra del Fuego and Ushuaia).

In 2001, Mr. Campusano graduated as an electrical engineer from Universidad de Chile with a mayor in telecommunications and maximal excellence recognition. In 2006, he received a master's degree in business engineering from the Industrial Engineering Department of the University of Chile. In 2012, he was designated the best student in a postgraduate degree of marketing in the Economic Department of the University of Chile.

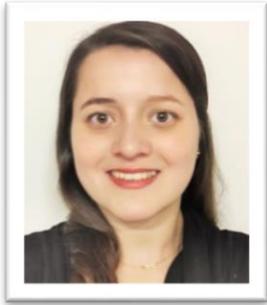
Delegate Interests: Mr. Campusano is interested in learning more about business case modeling, traffic projections, pricing (Asia-South America and transit routes), subsea infrastructure, funding of subsea systems, and cybersecurity. Technologies of interest include subsea fiber optic technologies, data centers and cybersecurity. He is also interested in hearing about any conceptual analysis on the global impact of the ASADG project (data traffic of South America and transit routes). He would like to visit subsea cable manufacturing and components manufacturing companies, landing stations, subsea NOC, and datacenters of global over-the-top (OTT) providers.

Division and Department Profile: The Regulatory Policy and Studies Division is currently in charge of developing telecommunications studies, sectoral statistics and indicators, spectrum administration such as new measures to develop 5G market, new regulation for minimum broadband speed, protection of telecom network critical infrastructure, termination charges for the fixed and mobile network, and general support of the financing model for the Asia South America Digital Gateway.

The department oversees estimation of fixed and mobile termination charges, provides economic and financial analysis to new telecom regulations, as well as economic, financial and geopolitical analysis for the Asia – South America Digital Gateway. They are introducing new mobile technologies as 5G and analyzing the potential impact on traffic consumption at a national level. They are also developing the appropriate backbones for increased capacity for both domestic and international level.



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Sofia Moraga

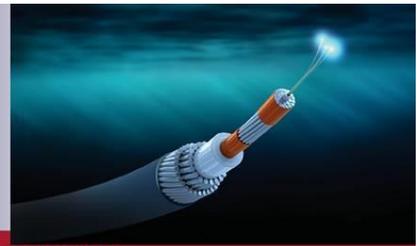
Regulation Analyst, Regulatory Policy and Studies Division
Undersecretariat of Telecommunications, Government of Chile

Sofia Moraga is currently serving as an economic regulation and tariff analyst for the Regulatory Policy and Studies Division of the Undersecretariat of Telecommunications of Chile. Her main activities include estimation of fixed and mobile termination rates, incorporating economic and financial analysis in new telecom regulations, and, analysis of economic, financial and geopolitical for the Asia – South America Digital Gateway.

Ms. Morega’s initial interest was on economic regulation but now, this opportunity has allowed her to explore different economic aspects related to the telecom industry including demand forecast, market competitiveness, pricing, etc. One of her key professional achievements was drastically lowering termination charges by nearly 80% (over the 2018 tariff period), which will contribute to market competition and potentially lower end-customer prices.

Ms. Morega studied commercial engineering (economist) at the University of Chile and is currently completing her master’s degree in finance.

Delegate Interests: Mr. Morega is interested in gaining an all-encompassing perspective of the players involved in the development of submarine cables and their operation. She would like to learn how to mitigate potential risks associated the planning, roll-out and operation, especially as it relates to the Asia-South America Digital Gateway system. She is interested in the following topics: fiber optic transmission; data center operators, international capacity pricing; demand forecast for international broadband (transoceanic systems); capacity demands associated to new and innovative telecom services; and, digital traffic exchange, opportunities and challenges between Asia and Latin America. She would like to learn more about the operation of fiber optic landing sites, traffic forecasting, traffic management, and cybersecurity protection for international transmission systems. She is interested in meeting fiber optic manufacturers and transoceanic systems operators.



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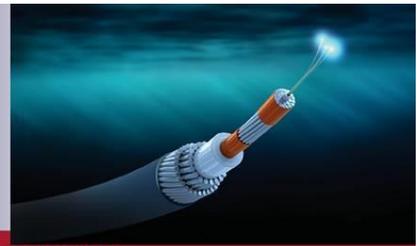
Andrés Contreras

Project Engineer, Telecom Development Fund
Undersecretariat of Telecommunications, Government of Chile

Andreas Contreras is project engineer for the Telecom Development Fund. His main role is project planning and technical support of telecommunication projects promoted by the government in unserved areas. He designs technical solutions and prepares technical terms of reference for implementation by carriers through a tendering process. He also supports telecom-service acceptance tests and authorization decrees that specify technical parameters for carriers to operate their networks. Some of the projects he has supported include Southern Optical Fiber, National Optical Fiber, Wi-Fi-free national network, Satellite Link to Eastern Island, and Internet access to national public schools. He is currently a member of the Asia South America Digital Gateway Project team.

Mr. Contreras previously worked as a researcher for the Department of Electrical Engineering at University of Chile. He holds a bachelor's degree in electrical engineering and a master's degree in electrical engineering from the University of Chile.

Delegate Interests: His goal is to design a suitable telecom solution to allow all people to have access to information technologies. Subtel is a regulatory body that doesn't have information like that of an operator. Therefore, the information for developing the project could be difficult to research. He hopes the meetings with experts during this visit will provide some of this important information. He is interested in learning more about business models of submarine cable carriers, submarine cable technical state-of-art solutions, and cybersecurity measures for submarines cables. He would like to visit key facilities of a submarine cable landing station, infrastructure-sharing facilities of submarine cables (how multiple submarine cables could share a common facility, and datacenter facilities and how are interconnected to submarine cable landing stations. Technologies of interest include undersea technologies (DWDM, Coherent technology and ROADM), datacenter technologies and HVDC (High Voltage Direct Current) for undersea systems. He is interested in meeting content providers that are interested in underground fiber, as well as subsea cable operators that would be interested in being customers to the Asia South America Gateway.



Ricardo Freire

Executive Director

Agency for the Regulation and Control of Telecommunications (ARCOTEL), Government of Ecuador

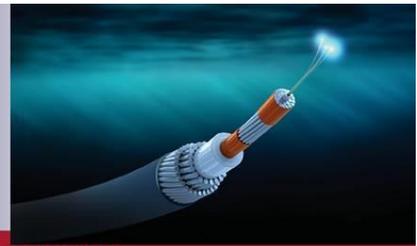
Bio not provided.

Delegate Interests: Mr. Freire would like to meet with regulators and with equipment and new technology providers. He is interested in 5G deployment and licensing processes, Internet of Things (IoT), and artificial intelligence. He noted that Ecuador needs to change its regulations to allow new technology deployments.

Organization Profile: The Telecommunications Regulation and Control Agency (ARCOTEL) is the regulatory agency responsible for the regulation and control of telecommunication equipment. It also monitors the use of radio spectrum frequencies to ensure accordance with country specific resolutions. The agency prepares, approves, modifies and update the National Frequency Plan. It also prepares proposals for economic valuation for the allocation and use, use and / or exploitation of the radio spectrum, rates for use of frequencies and rights for granting and renewal of qualifying titles. It exercises control of the provision of telecommunications services, including international long distance service, so that these activities and services are subject to the legal system and to what is established in the corresponding qualifying titles.

ARCOTEL is currently in the bidding process for the radio spectrum for the television and sound broadcasting service. ARCOTEL is developing a radio spectrum assessment process for the bands planned for the deployment of 5G technology and is modifying the secondary regulations for the entry of new technologies such as 5G and IoT, IA, etc. The Telecommunications Regulation and Control Agency will issue regulations to combat the theft of cellular equipment. Some of the biggest challenges are combating theft of cellular equipment and identifying IMEIs duplicates, assessment of the radio spectrum bands for 5G, and breaking entry barriers for new technology.

The main objectives of the tariff regime are economic-financial sustainability and efficiency. It is desirable that the design of the tariff structure meet formal objectives: practicality, simplicity, intelligibility, feasibility of application, public acceptance, non-existence of controversies of interpretation, effectiveness in reaching the income goal, stability in rates and income, equity between different user groups avoiding excessive discrimination between them and promoting efficient consumption practices. Mobile telephone service is the main means of communication for the Ecuadorian population, which promotes economic and industrial growth in the country. That is why it is very important for ARCOTEL, to have mechanisms for the allocation and licensing of mobile spectrum efficiently, to justify the investments needed to expand access to mobile services in both urban and rural areas, considering an improvement of the quality and variety of the services offered. Among the objectives of the Universal Service Plan, prepared by the Ministry of Telecommunications and the Information Society, is to “Extend the availability of access to the telecommunications services that make up the Universal Service, so that they are accessible, affordable and of quality, for the Ecuadorian population.” That is why, within its regulation and control process, ARCOTEL has tended to stimulate the expansion of mobile broadband services and make them accessible, affordable and of better quality.



Romel Espinosa

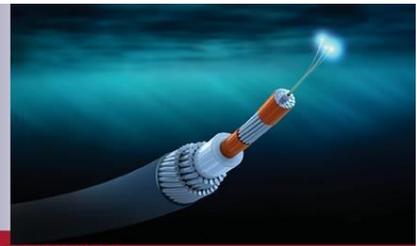
Director of Supervision and Evaluation of Telecommunications Companies
Ministry of Telecommunications and Information Society, Government of Ecuador

Romel Espinosa has served as Director of Supervision and Evaluation of Telecommunications Companies for the Ministry of Telecommunications and Information Society since May 2019. In this position, he has learned about public telecommunication company, and its services (e.g. mobile, internet, GPON, fixed phone, Direct to Home, cloud, and others). As a technical expert, he leads a team to design and implement solutions to provide Internet access to rural areas. He also helps find foreign companies to provide telecom services and invest in Ecuador. He also has experience formulating policies for the telecommunication sector in Ecuador.

Mr. Espinosa is a telecommunication engineer and holds a master's degree in telecommunications engineering technology from Rochester Institute of Technology in Rochester NY.

Delegate Interests: Mr. Espinosa's goals for the visit are to learn more about providing internet access to rural areas, universal service, telecom regulation as well as fiber optics and submarine cables, He would like to visit a cable landing station and see a fiber optic nodes manufacturer. Technologies that interest him include submarine cables, DWDM, and photonics.

Organization Profile: The Ministry of Telecommunications and Information Society is a public institution related to the telecommunication sector. The Ministry is responsible for making policies, plans, programs and projects to develop the telecom industry in the country. The Ministry's focus is to provide connectivity to rural areas and the amazon region. Currently, the Ministry is developing a plan to connect the rural areas based on three strategies focused on wireless services and fiber optics services. In some places, they are planning to implement fiber optics solutions depending on location of fiber optics nodes.



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Martha Moncayo

General Manager

Nacional Telecommunications Corporation (CNT EP), Government of Ecuador

Martha Moncayo currently serves as general manager of the Nacional Telecommunications Corporation (CNT EP). She is the first women to serve in this position at CNT EP, which is one of the 500 largest companies in Ecuador. The company operates fixed telephone services (local, regional and international), internet, satellite television and mobile telephones.

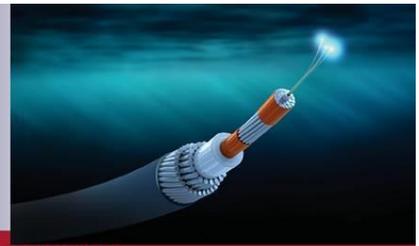
Throughout her professional career, Ms. Moncayo has accumulated extensive experience in projects that cover all levels of management. She has designed and implemented initiatives to increase profitability, and managed investments and operation expansions. All of which have resulted in increased benefits for shareholders, customers and company teams. Ms. Moncayo has held several prominent positions including: manager of TC Mi Canal; general manager of Ceestra; general manager of the Parque Industrial de Quito Cía. Ltda; and, director of investment promotion in charge of Invest Ecuador. She also served as general manager of Medios Públicos EP, a multimedia conglomerate in which she reformed its editorial line, infrastructure, personnel management and commercial policy. Ms. Moncayo holds a degree in journalism and communication organization and a master's degree in business administration from the Instituto Universitario de Posgrado (IUP) of Madrid, Spain.

Delegate Interests: Ms. Moncayo is interested in learning more about state of the art submarine cable network technologies, such as coherent modulation to maximize spectral efficiency and technologies to increase the capacity per cable under the conditions of limited feeding power and space in a cable. She would like to visit equipment providers and is interested in technologies, such as Optical / ROADM technologies, space division multiplexing, and pump farming amplifiers. She would like to meet with financing institutions who could support cable projects, as well as a submarine cable station to learn more about its operations and equipment. She would also like to learn more about open cables, specifically the use of GOSNR (Generalized Optical Signal-to-Noise Ratio) to assess the performance of a submarine system without a Submarine Line Terminal Equipment (SLTE) provider.

Organization Profile: The CNT EP is the public telecommunications company in Ecuador that offers fixed telephone services local, regional and international, Internet Access (Dial-Up, DSL, mobile Internet), satellite television and mobile telephone services. CNT EP's 2020 Commercial Plan details its investment plans in technology and expansion of the network, focused mainly on providing fiber optics to homes, GPON for high speed internet services, expansion of mobile networks 4G LTE, and high internet speed for mobile services. CNT EP is interested in two initiatives for deploying submarine cable infrastructure: submarine cable to connect Ecuador with the United States; and, a submarine cable to connect Ecuador with the Galapagos Islands. CNT EP is currently analyzing the implementation of a new submarine cable from Ecuador to the United States, which will provide to CNT EP international infrastructure for 25 years, with sufficient capacity for the growth of Internet traffic in the long term, achieving flexibility, autonomy, independence and better costs. The system characteristics includes: a pair of dedicated fibers; maximum capacity per fiber pair of 18 Tbps; latest technology with lambdas of at least 100 Gbps; open system model (open cable) requirement; and, a system lifespan of 25 years. CNT EP is also currently analyzing the implementation of a submarine cable to the Galapagos Islands, which would replace satellite technology and provide better services to the islands' population. The system characteristics includes: a pair of



LATIN AMERICA Subsea Fiber Optic Cable Reverse Trade Mission



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dedicated fibers; latest technology; a requirement for the model to allow an adequate balance between capacity and cost; and a system lifespan of 25 years.

Priorities for CNT EP include growing its business in a market that is changing quickly, improving its productivity by making its processes more efficient, and achieving sustainability of its business. In the short term, the company is looking to consolidate its presence in the market and expand its telecommunications network and clients. In the long term, CNT EP wants to become a telecommunications service provider that can provide all services in one, transforming life through technology.